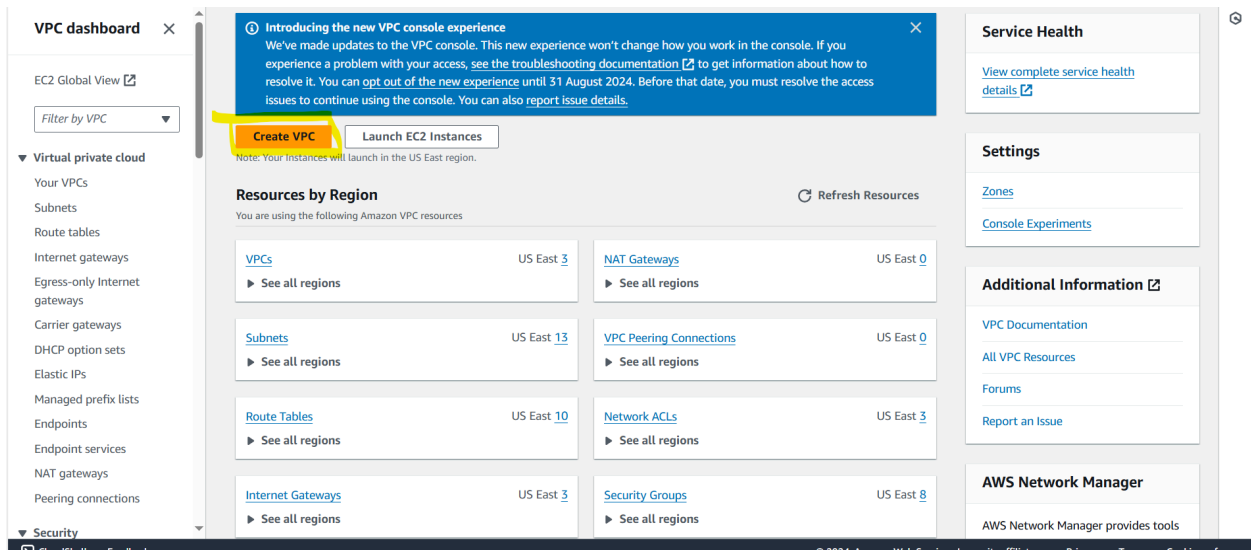
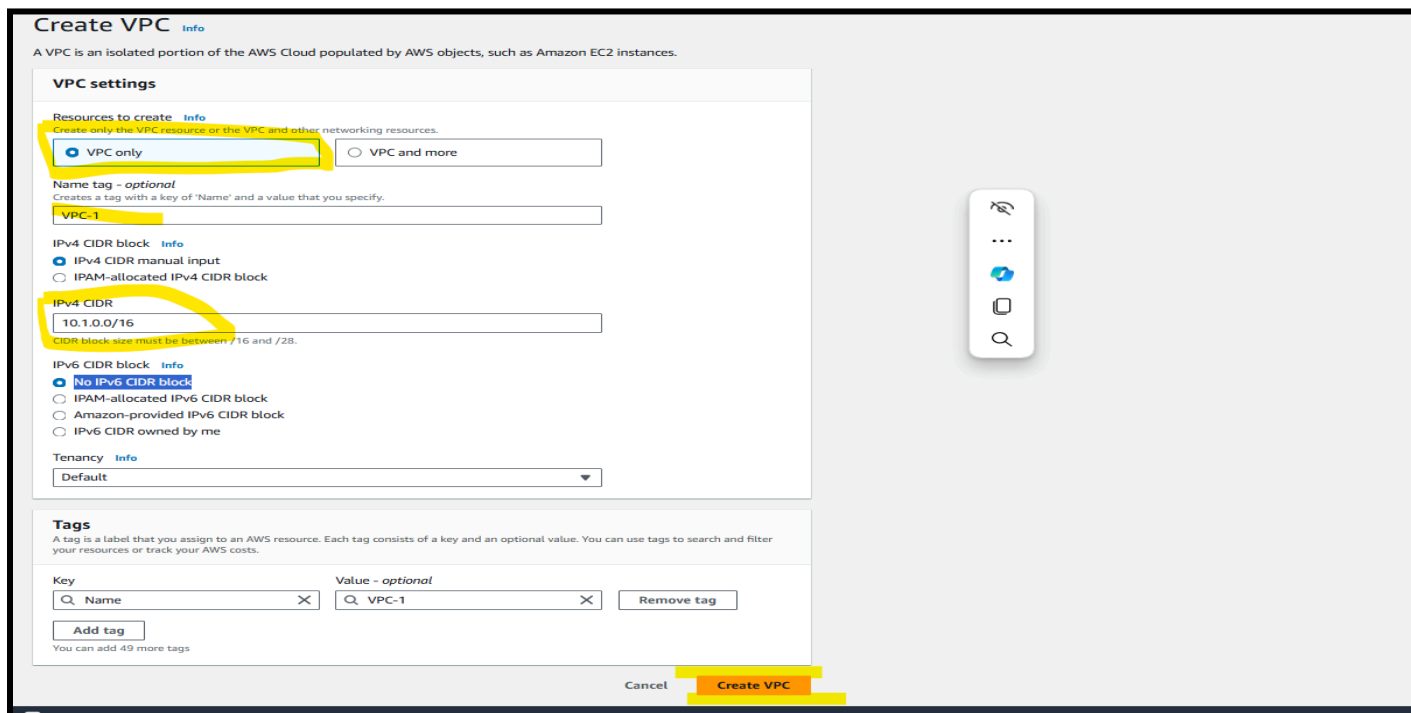


How to Create A VPC with Public and Private Subnets AND IGW and Route Tables

- 1- Login to the AWS Console
- 2- Go to VPC Section
- 3- Click on Create VPC



- 4-Give VPC Name and Give VPC CIDR Range 10.1.0.0/16



- 5-Click on Create VPC
- 6-Click On Actions in VPC
- 7-Select the Edit VPC settings

VPC > Your VPCs > vpc-061c5033df8adede6

vpc-061c5033df8adede6 / VPC-1

Details [Info](#)

VPC ID vpc-061c5033df8adede6	State Available	DNS hostnames Disabled	DNS resolution Enabled
Tenancy Default	DHCP option set dopt-0d9487cf4c5111373	Main route table rtb-029b18fab0d3d89c7	Main network ACL acl-0bfc191598f8e165
Default VPC No	IPv4 CIDR 10.1.0.0/16	IPv6 pool -	IPv6 CIDR (Network border group) -
Network Address Usage metrics Disabled	Route 53 Resolver DNS Firewall rule groups -	Owner ID 637423512556	

Create flow log

Edit VPC settings

Edit CIDRs

Manage middlebox routes

Manage tags

Delete VPC

Resource map [Info](#)

VPC [show details](#)
Your AWS virtual network
VPC-1

Subnets (0)
Subnets within this VPC

Route tables (1)
Route network traffic to resources
rtb-029b18fab0d3d89c7

Network connections (0)
Connections to other networks

- 8-Check the Enable DNS Hostname

VPC > Your VPCs > vpc-061c5033df8adede6 > Edit VPC settings

Edit VPC settings [Info](#)

VPC details

VPC ID
vpc-061c5033df8adede6
Name
VPC-1

DHCP settings

DHCP option set [Info](#)
dopt-0d9487cf4c5111373

DNS settings

☒ Enable DNS resolution [Info](#)
☐ Enable DNS hostnames [Info](#)

Network Address Usage metrics settings

☐ Enable Network Address Usage metrics [Info](#)

Cancel

Save

VPC > Your VPCs > vpc-061c5033df8adede6 > Edit VPC settings

Edit VPC settings [Info](#)

VPC details

VPC ID
vpc-061c5033df8adede6

Name
VPC-1

DHCP settings

DHCP option set [Info](#)
dopt-0d9487cf4c5111373

DNS settings

☒ Enable DNS resolution [Info](#)

☒ Enable DNS hostnames [Info](#)

Network Address Usage metrics settings

☐ Enable Network Address Usage metrics [Info](#)

Cancel Save

9-Click on Save

10-Click on Create Subnets

VPC dashboard

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

Endpoints

Endpoint services

NAT gateways

Peering connections

Security

Network ACLs

Security groups

You have successfully modified the settings for vpc-061c5033df8adede6 / VPC-1.

Last updated 11 minutes ago

Actions Create subnet

Subnets (13) [Info](#)

Find resources by attribute or tag

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR association ID	Available IPv4 addresses	Availability
<input type="checkbox"/>	sampi-private-2	subnet-050b7c509f104d7bf	Available	vpc-0b4f02b71833082a8 sampi	172.16.20.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-private	subnet-02d1a9f2d42d73e1f	Available	vpc-0d623535716183340 anji	10.1.10.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-db1	subnet-02c3a55d402ee49b6	Available	vpc-0d623535716183340 anji	10.1.5.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-private2	subnet-041a7a98c2f223228	Available	vpc-0d623535716183340 anji	10.1.20.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-public2	subnet-0e19bb7ba0256bb34	Available	vpc-0d623535716183340 anji	10.1.2.0/24	-	-	251	us-east-1
<input type="checkbox"/>	sampi-public-1	subnet-0d52f51657509920	Available	vpc-0b4f02b71833082a8 sampi	172.16.1.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-public	subnet-015547c2b2b185a0b	Available	vpc-0d623535716183340 anji	10.1.1.0/24	-	-	251	us-east-1
<input type="checkbox"/>	sampi-private-1	subnet-0732ecf8e0ea29f8	Available	vpc-0b4f02b71833082a8 sampi	172.16.10.0/24	-	-	251	us-east-1
<input type="checkbox"/>	anji-db-2	subnet-05574b16f51a63ff0	Available	vpc-0d623535716183340 anji	10.1.6.0/24	-	-	251	us-east-1
<input type="checkbox"/>	gampa-private1	subnet-04a127850e08ca6df	Available	vpc-035b3b79ee45f1a28 gampa	172.25.10.0/24	-	-	251	us-east-1
<input type="checkbox"/>	sampi-public2	subnet-07c02f2dfabc119f3	Available	vpc-0b4f02b71833082a8 sampi	172.16.2.0/24	-	-	251	us-east-1
<input type="checkbox"/>	gampa-public-2	subnet-08ec0f6db0b9edc27	Available	vpc-035b3b79ee45f1a28 gampa	172.25.2.0/24	-	-	251	us-east-1

Select a subnet

11-Select VPC

VPC > Subnets > Create subnet

Create subnet [Info](#)

VPC

VPC ID
Create subnets in this VPC.
vpc-061c5033df8adede6 (VPC-1)

Associated VPC CIDRs

IPv4 CIDRs
10.1.0.0/16

12-Give Subnet Name and IP range

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.

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
 65,536 IPs
< > ^ v

Tags - optional

Key	Value - optional
<input type="text" value="Q Name"/>	<input type="text" value="VPC-1-public-1"/>

You can add 49 more tags.

13-Like You can create how many you want I am, taking here 6 Subnets

Subnets (6) [Info](#)

Last updated less than a minute ago

<input type="checkbox"/>	Name	Subnet ID	State	VPC	IPv4 CIDR	IPv6 CIDR	IPv6 CIDR association ID	Available IPv4 addresses	Availability Zone
<input type="checkbox"/>	VPC-1-private-2	subnet-0802b947a523fd56b	Available	vpc-061c5033df8adede6 VPC-1	10.1.20.0/24	-	-	251	us-east-1b
<input type="checkbox"/>	VPC-1-public-2	subnet-01b0ccc78286a124a	Available	vpc-061c5033df8adede6 VPC-1	10.1.2.0/24	-	-	251	us-east-1b
<input type="checkbox"/>	VPC-1-DB-2	subnet-012139dccc6dk732d	Available	vpc-061c5033df8adede6 VPC-1	10.1.60.0/24	-	-	251	us-east-1b
<input type="checkbox"/>	VPC-1-public-1	subnet-064b5b07f40b1aebc	Available	vpc-061c5033df8adede6 VPC-1	10.1.1.0/24	-	-	251	us-east-1a
<input type="checkbox"/>	VPC-1-private-1	subnet-0b69daea59b37b521	Available	vpc-061c5033df8adede6 VPC-1	10.1.10.0/24	-	-	251	us-east-1a
<input type="checkbox"/>	VPC-1-DB-1	subnet-0addfabe265764ab3	Available	vpc-061c5033df8adede6 VPC-1	10.1.50.0/24	-	-	251	us-east-1a

14-Click on Create Internet Gateway

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.

Tags - *optional*

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 - <i>optional</i>	
<input type="text" value="Name"/>	<input type="text" value="VPC-1-IGW"/>	<input type="button" value="Remove"/>
<input type="button" value="Add new tag"/>		

You can add 49 more tags.

15-Attach the IGW to VPC

VPC > Internet gateways > Attach to VPC (igw-0a74fb751618f295f)

Attach to VPC (igw-0a74fb751618f295f) [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.

16-Click on Create Internet Gateway

[VPC](#) > [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.

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.

17-Here I am Taking 3 Route Tables VPC-1-Public and VPC-1-Private and VPC-1-DB

Route tables (3) [Info](#)

Last updated 2 minutes ago

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	VPC-1-Public	rtb-0f6994e67522177b3	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-Private	rtb-03cf71102324da8ca	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-DB	rtb-053b32fa33173e8ae	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556

18-Click on VPC-1-Public click on Edit subnet associations

Route tables (1/3) [info](#) Last updated 3 minutes ago [Actions](#) [Create route table](#)

Find resources by attribute or tag

rtb-0f6994e67522177b3 [rtb-03cf71102324da8ca](#) [rtb-053b32fa33173e8ae](#) [Clear filters](#)

Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input checked="" type="checkbox"/> VPC-1-Public	rtb-0f6994e67522177b3	-	-	No	vpc-061c5033df8ade66 VPC-1	637423512556
<input type="checkbox"/> VPC-1-Private	rtb-03cf71102324da8ca	-	-	No	vpc-061c5033df8ade66 VPC-1	637423512556
<input type="checkbox"/> VPC-1-DB	rtb-053b32fa33173e8ae	-	-	No	vpc-061c5033df8ade66 VPC-1	637423512556

rtb-0f6994e67522177b3 / VPC-1-Public

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

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

Find subnet association

Name	Subnet ID	IPV4 CIDR	IPV6 CIDR
No subnet associations You do not have any subnet associations.			

Subnets without explicit associations (6) [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 association

19-Add your public subnets VPC-1-public-1 and VPC-1-Public-2

VPC > Route tables > [rtb-0f6994e67522177b3](#) > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (2/6) [Filter subnet associations](#)

Name	Subnet ID	IPV4 CIDR	IPV6 CIDR	Route table ID
<input type="checkbox"/> VPC-1-private-2	subnet-0802b947a523fd56b	10.1.20.0/24	-	Main (rtb-029b18fab0c3d89c7)
<input checked="" type="checkbox"/> VPC-1-public-2	subnet-01b0cc78286a124a	10.1.2.0/24	-	Main (rtb-029b18fab0c3d89c7)
<input type="checkbox"/> VPC-1-DB-2	subnet-012139dc6dc732d	10.1.60.0/24	-	Main (rtb-029b18fab0c3d89c7)
<input checked="" type="checkbox"/> VPC-1-public-1	subnet-064b5b0740b1aedb	10.1.10.0/24	-	Main (rtb-029b18fab0c3d89c7)
<input type="checkbox"/> VPC-1-private-1	subnet-0b69daa939b376521	10.1.10.0/24	-	Main (rtb-029b18fab0c3d89c7)
<input type="checkbox"/> VPC-1-DB-1	subnet-0a0dfab2c65764ab3	10.1.50.0/24	-	Main (rtb-029b18fab0c3d89c7)

Selected subnets

subnet-01b0cc78286a124a / VPC-1-public-2 [X](#) subnet-064b5b0740b1aedb / VPC-1-public-1 [X](#)

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

20-Like add Remaing two tables add private into private subnets and DB into DB subnets

21-Select the VPC-1-Public select the click on route add intent gateway

Route tables (1/3) [info](#)

Last updated less than a minute ago [Refresh](#) [Actions](#) [Create route table](#)

rtb-0f6994e67522177b3

rtb-03c771102324da8ca

rtb-053b32fa33173e8ae

Clear filters

< 1 > ⌂

	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input checked="" type="checkbox"/>	VPC-1-Public	rtb-0f6994e67522177b3	2 subnets	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-Private	rtb-03c771102324da8ca	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-DB	rtb-053b32fa33173e8ae	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556

rtb-0f6994e67522177b3 / VPC-1-Public

Details

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (1)

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

< 1 > ⌂

Destination	Target	Status	Propagated
10.1.0.0/16	local	Active	No

VPC > Route tables > rtb-0f6994e67522177b3 > Edit routes

Edit routes

Destination

10.1.0.0/16

Target

local

Status

Active

Propagated

No

×

▼

×

Add route

Remove

Cancel

Preview

Save changes

21-Create Two Nat-Gateways

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.

The name can be up to 256 characters long.

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

subnet-064b5b07f40b1aecb (VPC-1-public-1) ▼

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-0c2e69fd95b3d51d4 ▼ 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	
<input type="text" value="Name"/>	<input type="text" value="Private-subnets-NAT"/>	<input type="button" value="Remove"/>

CloudShell Feedback © 202

22-Like one more Create

✔ Elastic IP address 18.233.32.228 (eipalloc-0e0ac1cbbfd2da5ff) allocated.

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.

The name can be up to 256 characters long.

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

subnet-01b0ccc78286a124a (VPC-1-public-2) ▼

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-0e0ac1cbbfd2da5ff ▼ 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	
<input type="text" value="Name"/>	<input type="text" value="DB-Subnet-NAT"/>	<input type="button" value="Remove"/>

23-Click on VPC-1-Private Select the Route add Nat-Gateway Private-Subnet-NAT

Route tables (1/3) [Info](#)

Last updated 3 minutes ago [Refresh](#) [Actions](#) [Create route table](#)

rtb-0f6994e67522177b3

rtb-03cf71102324da8ca

rtb-053b32fa33173e8ae

Clear filters

< 1 >

<input type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	VPC-1-Public	rtb-0f6994e67522177b3	2 subnets	-	No	vpc-061c5033df8ade6 VPC-1	637423512556
<input checked="" type="checkbox"/>	VPC-1-Private	rtb-03cf71102324da8ca	-	-	No	vpc-061c5033df8ade6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-DB	rtb-053b32fa33173e8ae	-	-	No	vpc-061c5033df8ade6 VPC-1	637423512556

rtb-03cf71102324da8ca / VPC-1-Private

Details

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (1)

Both Edit routes

< 1 >

Destination	Target	Status	Propagated
10.1.0.0/16	local	Active	No

VPC > Route tables > rtb-03cf71102324da8ca > Edit routes

Edit routes

Destination

10.1.0.0/16

Target

local

Status

Active

Propagated

No

X

X

X

X

Add route

Remove

Cancel

Preview

Save changes

23-Like VPC-1-DB click on Route add DB-Subnet-NAT

Route tables (1/3) Info

Last updated less than a minute ago

Actions

Create route table

Find resources by attribute or tag

rtb-0f6994e67522177b3

rtb-03cf71102324da8ca

rtb-053b32fa33173e8ae

Clear filters

< 1 >

<input checked="" type="checkbox"/>	Name	Route table ID	Explicit subnet associ...	Edge associations	Main	VPC	Owner ID
<input type="checkbox"/>	VPC-1-Public	rtb-0f6994e67522177b3	2 subnets	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input type="checkbox"/>	VPC-1-Private	rtb-03cf71102324da8ca	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556
<input checked="" type="checkbox"/>	VPC-1-DB	rtb-053b32fa33173e8ae	-	-	No	vpc-061c5033df8adede6 VPC-1	637423512556

rtb-053b32fa33173e8ae / VPC-1-DB

Details

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (1)

Filter routes

< 1 >

Destination	Target	Status	Propagated
10.1.0.0/16	local	Active	No

VPC > Route tables > rtb-053b32fa33173e8ae > Edit routes

Edit routes

Destination

10.1.0.0/16

Q 0.0.0.0/0

Add route

Target

local

Q local

NAT Gateway

Q nat-0ed48e982a8e61968

Status

Active

-

Propagated

No

No

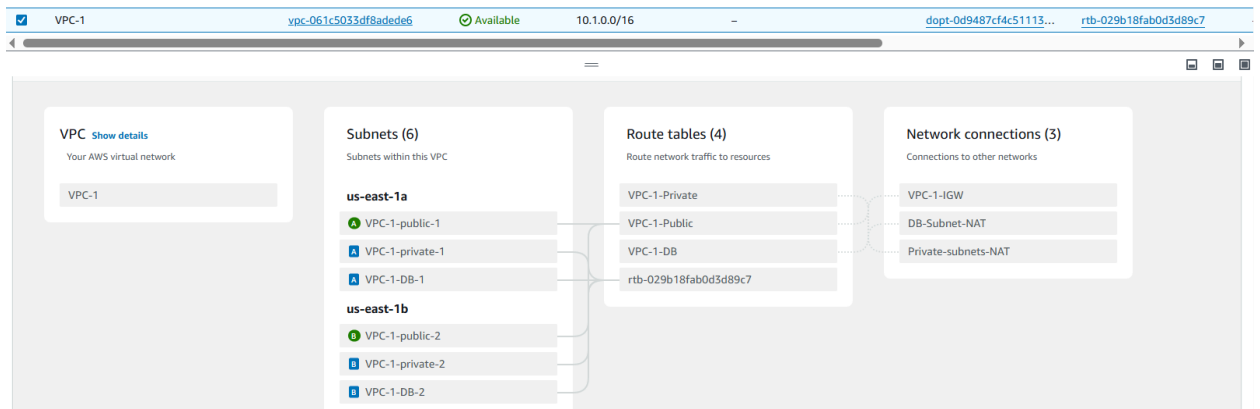
Remove

Cancel

Preview

Save changes

Now you can see the Full VPC Diagram





If you want Public IP whenever you want to launch the server you can select the subnets do this

VPC > Subnets > subnet-01b0ccc78286a124a > Edit subnet settings

Edit subnet settings [Info](#)

Subnet

Subnet ID	Name
 subnet-01b0ccc78286a124a	 VPC-1-public-2

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](#)