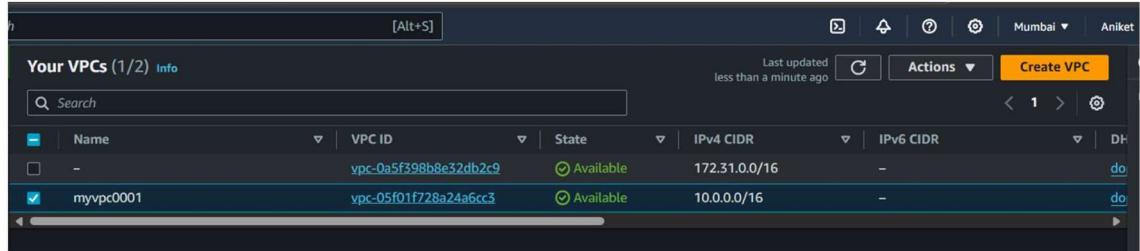
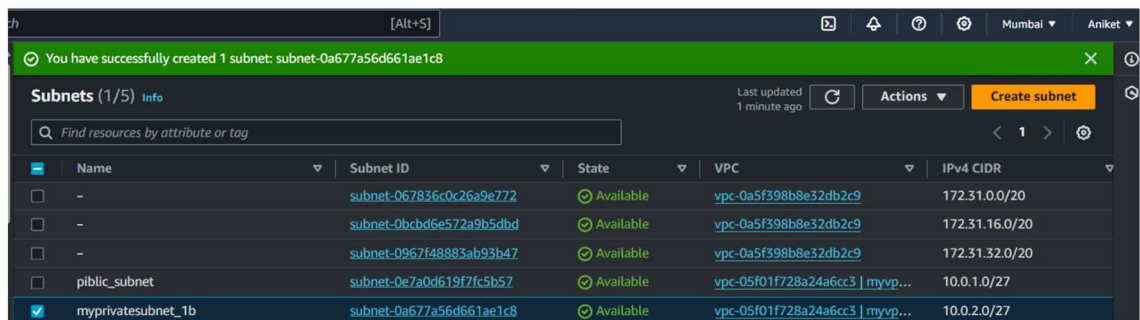


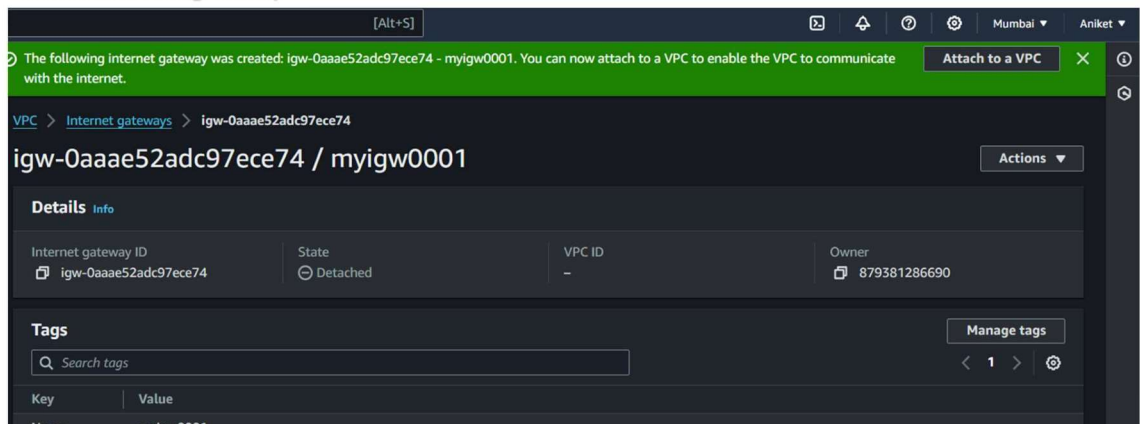
1. CREATE A CUSTOM VPC



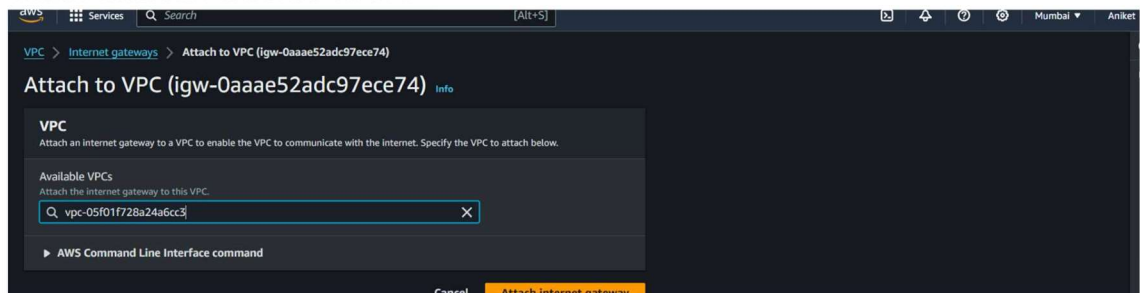
2. CREATE PUBLIC SUBNET AND PRIVATE SUBNET..



3. Create internet gateway



4. Attach INTERNET GATEWAY TO VPC



5. Create Private Route table and public routetable

The screenshot shows the AWS Management Console interface for a private route table. A green notification bar at the top states: "Route table rtb-03688a4d8404333db | private_route_table was created successfully." The breadcrumb navigation is "VPC > Route tables > rtb-03688a4d8404333db". The title is "rtb-03688a4d8404333db / private_route_table". The "Details" tab is active, showing the following information:

Route table ID	Main	Explicit subnet associations	Edge associations
rtb-03688a4d8404333db	No	-	-

Below the table, the VPC is listed as "vpc-05f01f728a24a6cc3 | myvpc0001" and the Owner ID is "879381286690".

6. Update routes in public route table

The screenshot shows the AWS Management Console interface for updating routes in a public route table. A green notification bar at the top states: "Updated routes for rtb-099e6bb3f78aa4707 / public_route_table successfully". The breadcrumb navigation is "VPC > Route tables > rtb-099e6bb3f78aa4707". The title is "rtb-099e6bb3f78aa4707 / public_route_table". The "Details" tab is active, showing the same information as the previous screenshot. Below the details, the "Routes" tab is selected, showing a list of routes:

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0aae52adc97ece74	Active	No

7. Edit subnet association in public route table

The screenshot shows the AWS Management Console interface for editing subnet associations for a public route table. The breadcrumb navigation is "VPC > Route tables > rtb-099e6bb3f78aa4707 > Edit subnet associations". The title is "Edit subnet associations". Below the title, it says "Change which subnets are associated with this route table." The "Available subnets (1/2)" section shows a table with the following data:

Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
myprivatesubnet_1b	subnet-0a677a56d661a...	10.0.2.0/27	-	Main (rtb-04b7e032096b8cc76)
public_subnet	subnet-0e7a0d619f7fc...	10.0.1.0/27	-	Main (rtb-04b7e032096b8cc76)

The "Selected subnets" section shows "subnet-0e7a0d619f7fc5b57 / public_subnet" with a close button.

8.CREATE A NAT GATEWAY

NAT gateway nat-09ab1e30ffdec5b28 | mynatgateway0001 was created successfully.

VPC > NAT gateways > nat-09ab1e30ffdec5b28

nat-09ab1e30ffdec5b28 / mynatgateway0001

Actions

Details

NAT gateway ID nat-09ab1e30ffdec5b28	Connectivity type Public	State Pending	State message Info
NAT gateway ARN arn:aws:ec2:ap-south-1:879381286690:natgateway/nat-09ab1e30ffdec5b28	Primary public IPv4 address -	Primary private IPv4 address -	Primary network interface ID -
VPC vpc-05f01f728a24a6cc3 / myvpc0001	Subnet subnet-0e7a0d619f7fc5b57 / public_subnet	Created Wednesday, September 18, 2024 at 17:05:59 GMT+5:30	Deleted -

9.ADD NAT GATEWAY TO PRIVATE ROUTE TABLE

Updated routes for rtb-03688a4d8404333db / private_route_table successfully

VPC > Route tables > rtb-03688a4d8404333db

rtb-03688a4d8404333db / private_route_table

Actions

Details Info

Route table ID rtb-03688a4d8404333db	Main No	Explicit subnet associations -	Edge associations -
VPC vpc-05f01f728a24a6cc3 myvpc0001	Owner ID 879381286690		

Routes Subnet associations Edge associations Route propagation Tags

Routes (2) Both Edit routes

Filter routes

Destination	Target	Status	Propagated
0.0.0.0/0	nat-09ab1e30ffdec5b28	Active	No

10.ADD SUBNET ASSOCIATION TO PRIVATE ROUTE TABLE

Edit subnet associations

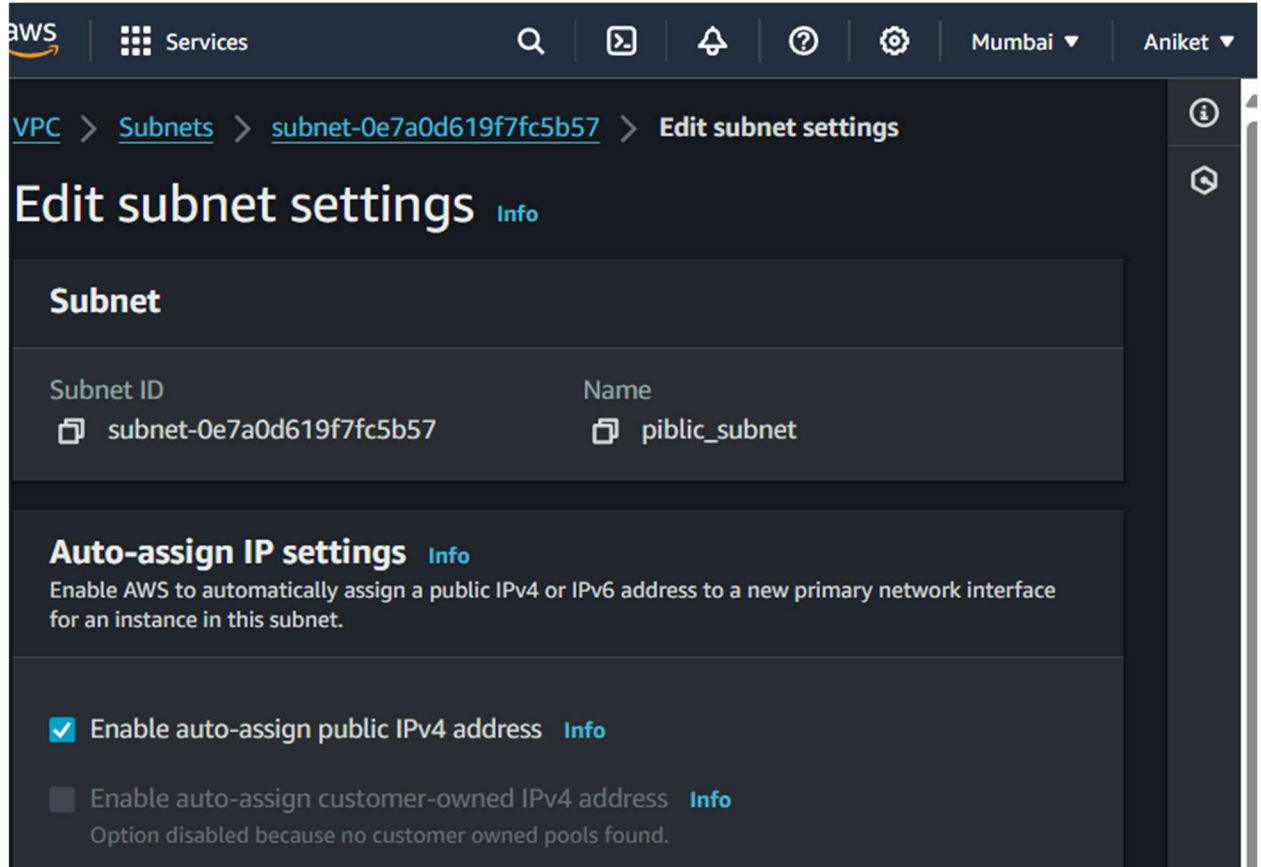
Change which subnets are associated with this route table.

Available subnets (1/2)

Filter subnet associations

	Name	Subnet ID	IPv4 CIDR	IPv6 CIDR	Route table ID
<input checked="" type="checkbox"/>	myprivatesubnet_1b	subnet-0a677a56d661ae1c8	10.0.2.0/27	-	Main (rtb-04b7e032096b8cc76)
<input type="checkbox"/>	public_subnet	subnet-0e7a0d619f7fc5b57	10.0.1.0/27	-	rtb-099e6bb3f78aa4707 / public_rout..

11.EDIT AUTO SIGNIN IN PUBLIC SUBNET



Edit subnet settings Info

Subnet

Subnet ID: subnet-Oe7a0d619f7fc5b57
Name: public_subnet

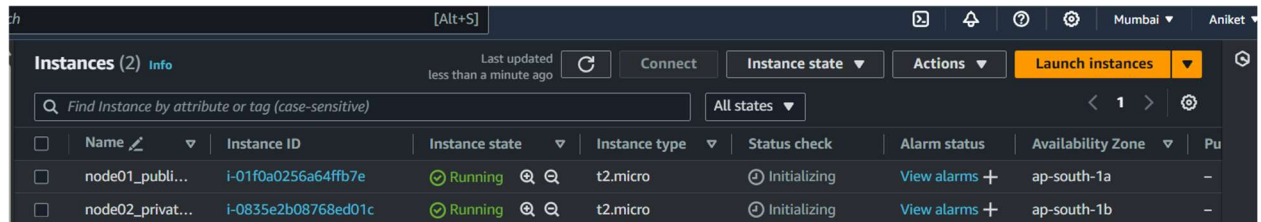
Auto-assign IP settings Info

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.

13.CREATE TWO INSTANCES PUBLIC INSTANCE AND PRIVATE INSTANCE AND SELECT THE CUSTOM VPC THAT WE HAVE CREATED



Instances (2) Info

Last updated less than a minute ago

Connect Instance state Actions Launch instances

Find Instance by attribute or tag (case-sensitive) All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input type="checkbox"/>	node01_public	i-01f0a0256a64ffb7e	Running	t2.micro	Initializing	View alarms +	ap-south-1a	-
<input type="checkbox"/>	node02_private	i-0835e2b08768ed01c	Running	t2.micro	Initializing	View alarms +	ap-south-1b	-

14. WE CANT CONNECT PRIVATE INSTANCE BECAUSE OF WE DON'T HAVE PUBLIC IP

WE CAN ONLY CONNECT THE PUBLIC INSTANCE VIA PUTTY

[illegible]

WE HAVE INTERNET ACCESS TO PUBLIC INSTANCE

```

su[ec2-user@ip-10-0-1-28 ~]$ sudo su -
[root@ip-10-0-1-28 ~]# ping googl.com
PING googl.com (142.250.70.68) 56(84) bytes of data.
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=1 ttl=113 time
=2.14 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=2 ttl=113 time
=2.15 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=3 ttl=113 time
=2.18 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=4 ttl=113 time
=2.22 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=5 ttl=113 time
=2.16 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=6 ttl=113 time
=2.26 ms
64 bytes from pnbomb-ab-in-f4.1e100.net (142.250.70.68): icmp_seq=7 ttl=113 time

```

WE HAVE CANT CONNECT THE PRIVATE INSTANCE BECAUSE OF PUBLIC IP THAT WE DON'T HAVE, WE CAN CONNECT THROUGH PUBLIC INSTANCE FOR THAT WE NEED PEM KEY

STEP 1 . CREATE A FILE ece.pem and copy the data form pem file and paste in the ece.pem that we created

```
root@ip-10-0-2-27:~  
[root@ip-10-0-1-28 ~]# chmod 400 ece.pem  
[root@ip-10-0-1-28 ~]#  
[root@ip-10-0-1-28 ~]# cat ece.pem  
-----BEGIN RSA PRIVATE KEY-----  
MIIEogIBAAKCAQEAAva49IUOCpaolwesBvzbspqWZjlX5vusWQs1I3iNxuEledZxv  
az5BuHMgkjr6fn0OI6dWRxdNhmN2UBKh4E268ec3LhS62JBpxbahtz3P4dpVRvI  
roAGC8VBeGmhwdtvF1OnfyEUt5EggXTgj14R3kE8k232n6AbslfHCsDOMnBRYaQs  
I9Rn9C09/aVBdMDbMuErpRo4i6OKGEwHng2zHzDL8IHyzgz6N4Oh0WPxkBbJakcF  
KLSlfaiBQWws7WhZ2JPZVo5rhjBpYdkzSM3FIYGN5zdV07gK0x+t8cm/PQY0cCxJ  
mwo/bpgM114B+gGJDA9eye2+oWH0jOG6DfUn9QIDAQABAoIBADTDd6pqnyzCeFMA  
RS9ehlV6Kb3yljUwXbb1VEqcxD/hKtNKA8AEzNo0M9qtV0zTW5JyO6hhLPU77/2h  
XmQfjgfuTPhy4qE5dCS2SNcXVE0/VwriQG51zRmQsyt0/SEDIBX3OZJDzPtQGPGV  
elQTQZWYxuIr3nUkcTOMJRIJJC6IBiF2Zj8nxy2oHeX+0Aj2sxvln6uNlcbvFH8r  
e5wsLClvF7av3Yzj5c77lIU4p/4q9HttcCUWldumlulJ3ou0d9PG6leBipmOr2l  
7U2spHx8TirF8SnV3ZvR9a2gPRug16qh0VH349Dx2EJViBywvXWha+5RPHRSxw7B  
zb2OeeECgYEA5qGfo1rtvRw0G6jkmPyRDa25b0gIIyUKF/bTUYCfyq5TiBMq9uC8  
l4Fl1FzPuPTOZW7Cs6rKW/GGlMtxyUmISxbkbfXa0EWWmFlffflH+0r9rzcjAi4Q  
vBq8O9e9ddHGUpdV1Bo7uAz6IpLodsWXpDUUe0bttepvtMVOxLbLO0CgYEA0ot6  
kOuTc06AVmYcmjRW7yLIEcmys2OWhksfpoxTdJAogBDeOE+Ssu0KChrhZUqME36y  
s4r5/HaMgNuEFFj79mUqrOxfzElOxghIqt8rMc5Rn2CiBLJ2sbgEHeLayVRng9X8  
WDaFCff+IVl/FRNoiEJ7xVbVcWfITRuwCWzQDikCgYBgGYCXZNAjOJlN3TZDuRoI  
BRd7kxww6MIn8iVjlKEAp1sPHE2OyV5MEXMHRhUYEIngIiLnEod3gFB/t7YWFZnB  
ECzm1Mb0ecqieLsd1AhYYYsLc4IW6nL2rn04wlCjw2FMENsmoje4HVatD+Hle7gQ  
KD38kDWE08bS+wmhr9LmkQKBgDLUdZyzIv/9fcJeElbEOBC3pvGUbJUBL//uZVTC  
IAVOGdkBOYUCwPntfDSb5fqcSsESH3Z1lPEwda9OT87RxNKxjeH9lwstxsZMhy6p  
fjYiBlag6Y7Ebx9su6GzePqOJAeSC8AIOYnQJIXMnP+rldr/of38fr9IPPVQr+k2  
mewxAoGAHMTpytelm23CoWjCcqlcJMXRRQnfscsk3oAjunZuiZ4TAP/Ehj5lAIX  
g0oxe7vClR93PMKIr/Qjd9neT2cMeok2PGP0qd00Eo5BIMyjsHs4l37Dg2ZlWF34  
HbFfgh3iRhVmQ/lNLp1CPuzGhc7aNw4WX6Fz3KR0a9ygPlfgEA=  
-----END RSA PRIVATE KEY-----  
[root@ip-10-0-1-28 ~]#  
[root@ip-10-0-1-28 ~]# ssh -i ece.pem ec2-user@10.0.2.27  
The authenticity of host '10.0.2.27 (10.0.2.27)' can't be established  
ED25519 key fingerprint is SHA256:GC3O8sN3utyaZw1fvqm/sh4W5mXuevTgb0  
This key is not known by any other names  
Are you sure you want to continue connecting (yes/no/[fingerprint])?  
Warning: Permanently added '10.0.2.27' (ED25519) to the list of known hosts
```

Change mod from ece.pem file

```
root@ip-10-0-2-27:~  
[root@ip-10-0-1-28 ~]# chmod 400 ece.pem  
[root@ip-10-0-1-28 ~]#
```

```
[root@ip-10-0-1-28 ~]#  
[root@ip-10-0-1-28 ~]# ssh -i ece.pem ec2-user@10.0.2.27  
The authenticity of host '10.0.2.27 (10.0.2.27)' can't be established.  
ED25519 key fingerprint is SHA256:GC3O8sN3utyaZwlfvqm/sh4W5mXuevTgbC.  
This key is not known by any other names  
Are you sure you want to continue connecting (yes/no/[fingerprint])?  
Warning: Permanently added '10.0.2.27' (ED25519) to the list of known hosts.  
  
      #  
    ~\   #####_       Amazon Linux 2023  
~~~ \   #####\  
~~~  _#####|  
~~~   \###/  
~~~    \#/          https://aws.amazon.com/linux/amazon-linux-2023  
~~~     V~'-'>  
~~~~  
~~~ ._. /  
~~~~/_/_/_/ /  
~~~~/_/m/'_
```

```
[ec2-user@ip-10-0-2-27 ~]$ hostname  
ip-10-0-2-27.ap-south-1.compute.internal
```

[illegible]

Now we can see internet access to the private server and we can also install packages SUCCESSFULLY

```
[root@ip-10-0-2-27 ~]# yum install telnet
Last metadata expiration check: 0:12:56 ago on Wed Sep 18 11:56:29 2024.
Dependencies resolved.
=====
Package                Architecture Version                        Repository                Size
=====
Installing:
telnet                  x86_64      1:0.17-83.amzn2023.0.2      amazonlinux                64 k
Transaction Summary
=====
Install 1 Package

Total download size: 64 k
Installed size: 121 k
Is this ok [y/N]: █
```

Thank you