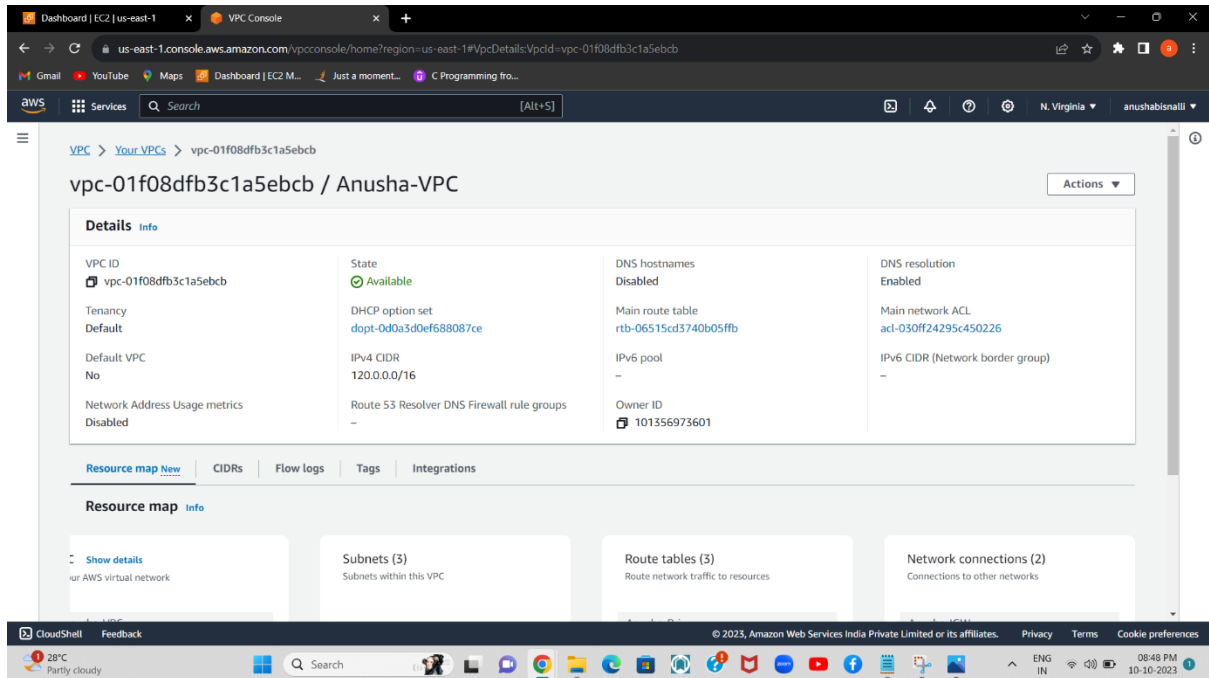
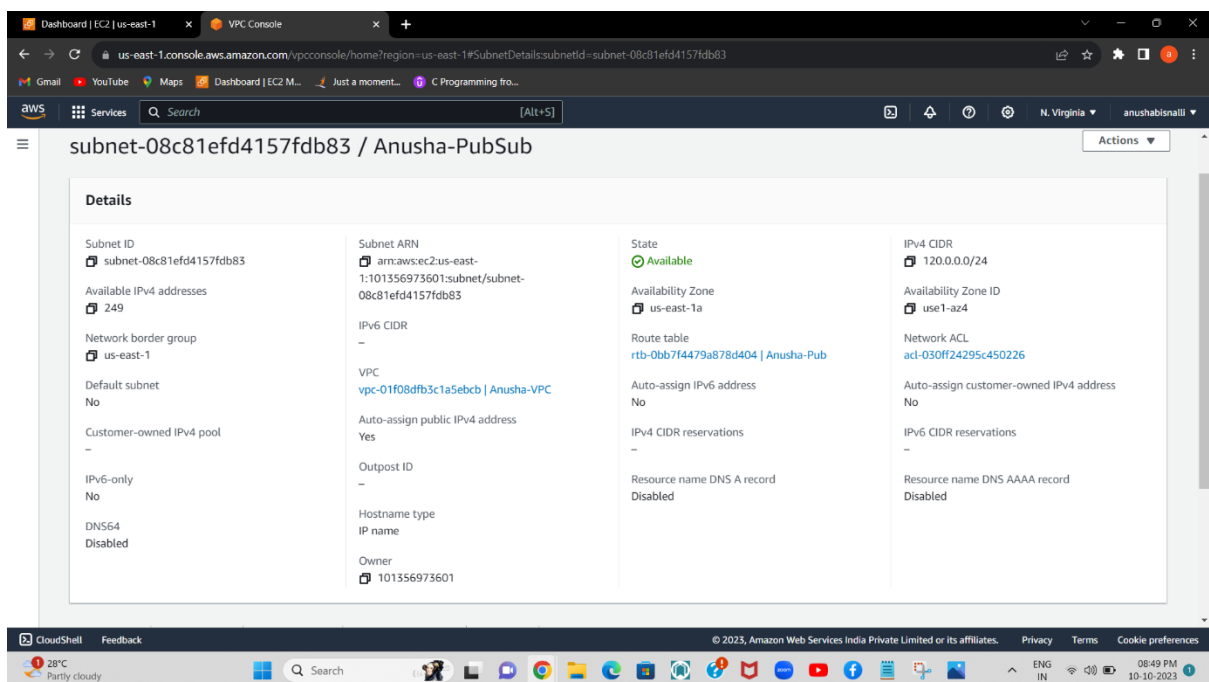


Assignment-1

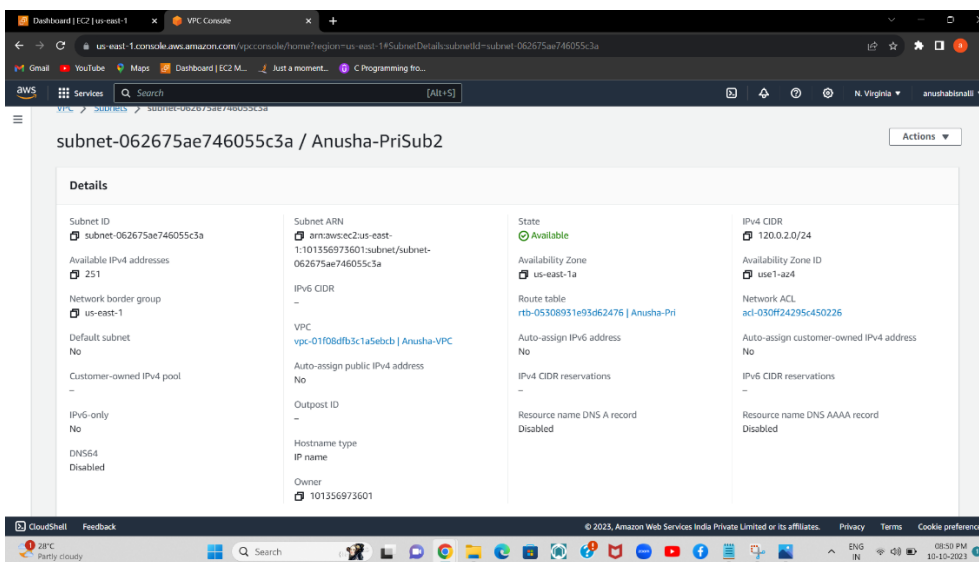
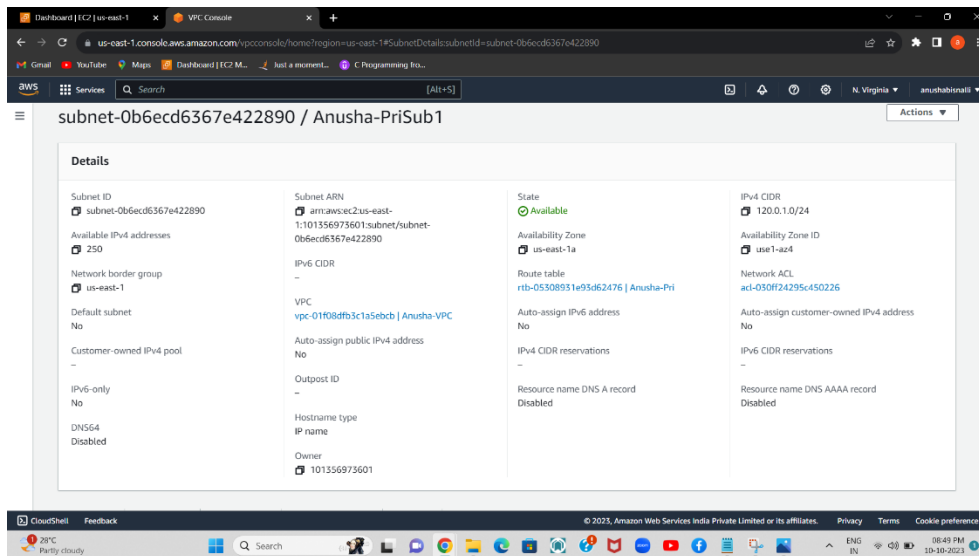
Problem Statement: Working for an organization, you are required to provide them a safe and secure environment for the deployment of their resources. They might require different types of connectivity. Implement the following to fulfil the requirements of the company.



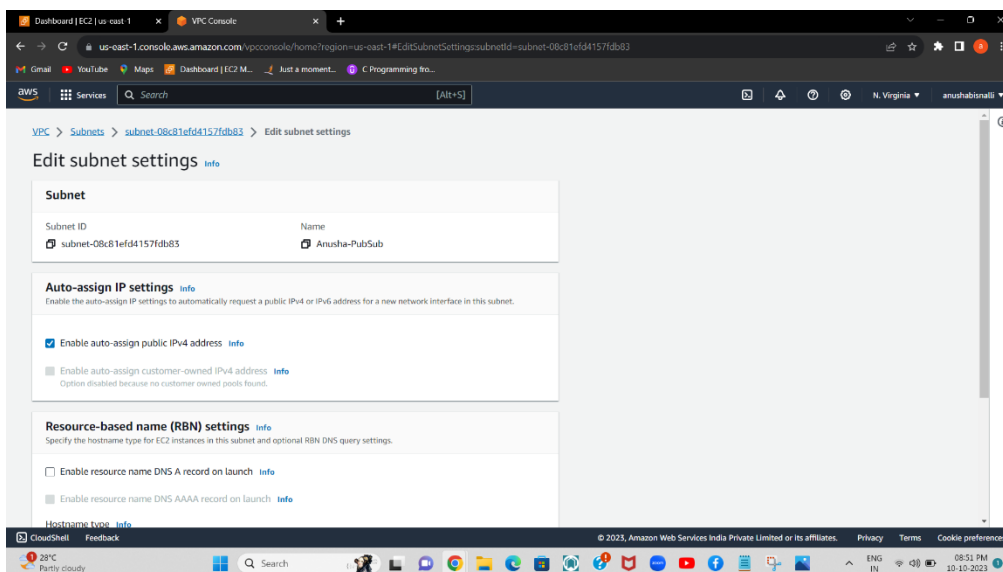
Step 1: creating VPC



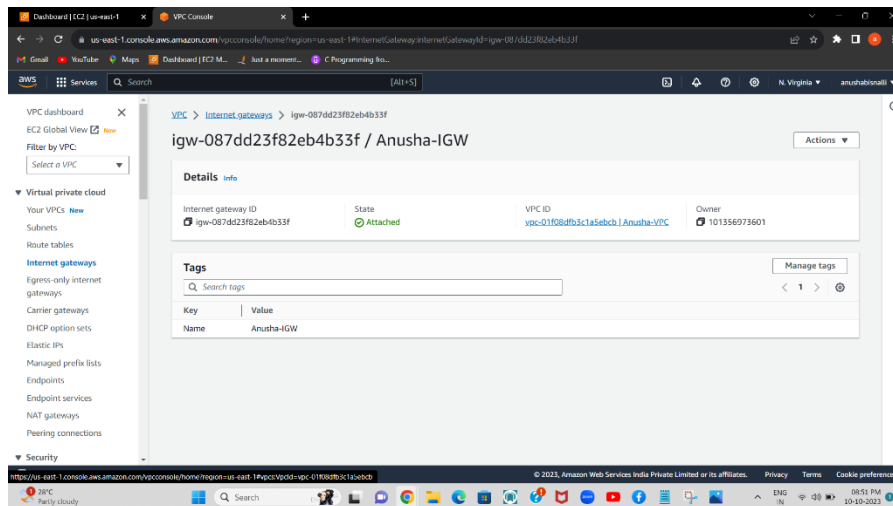
Step 2: Creating one Public Subnet



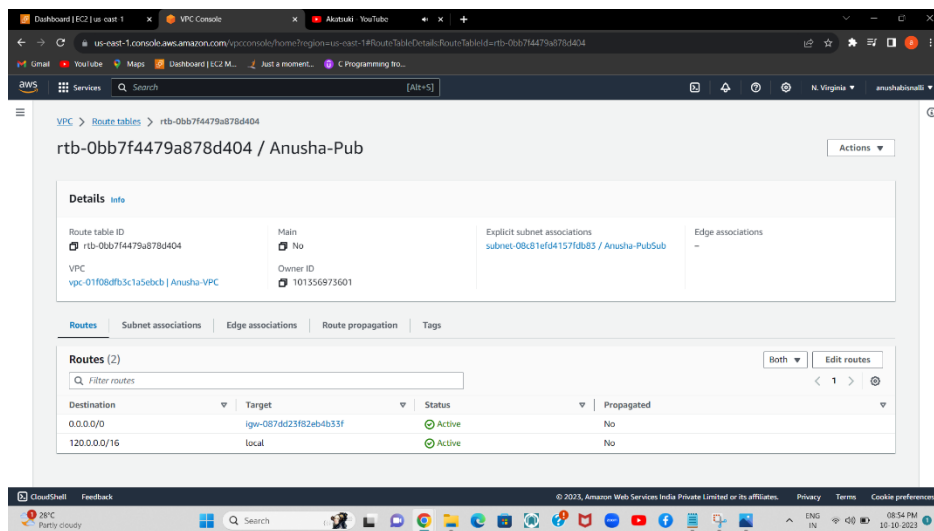
Step 2: Creating two private Subnets



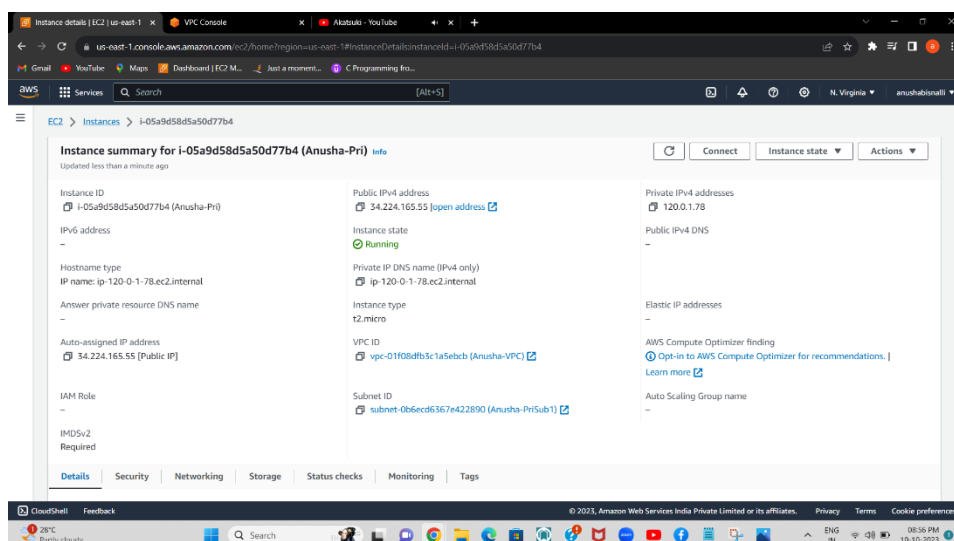
Step 3: Enabling IPv4 public subnet



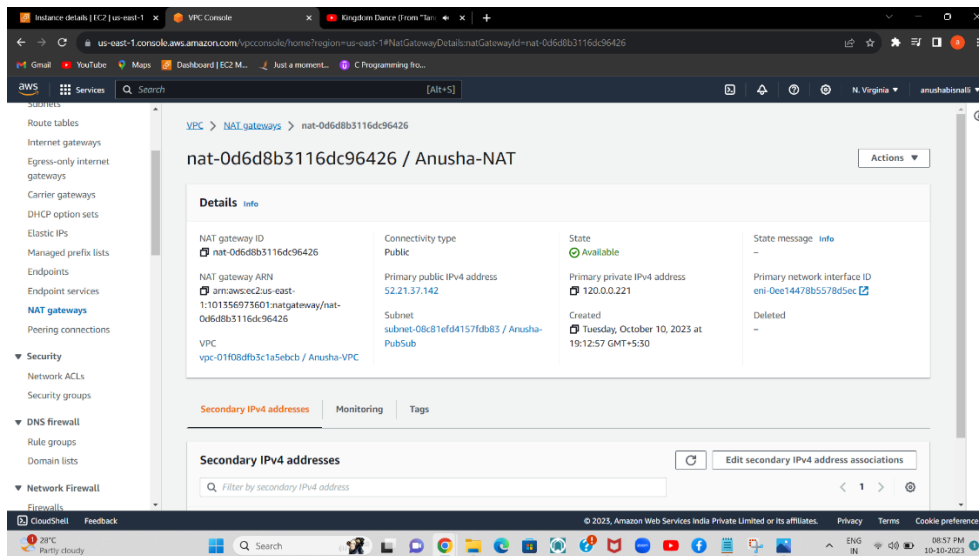
Step 4: Creating IGW & attaching VPC



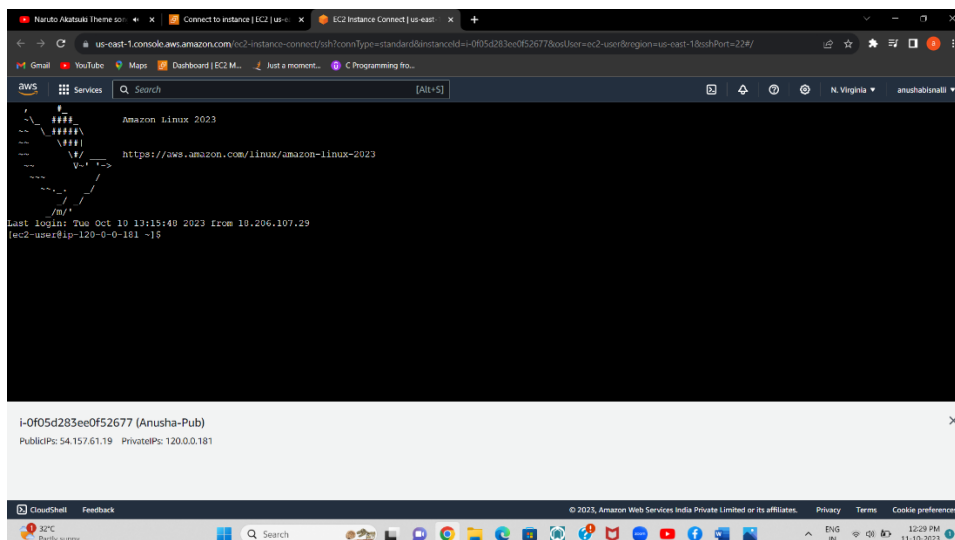
Step 5: Creating & editing route table & adding IGW to it.



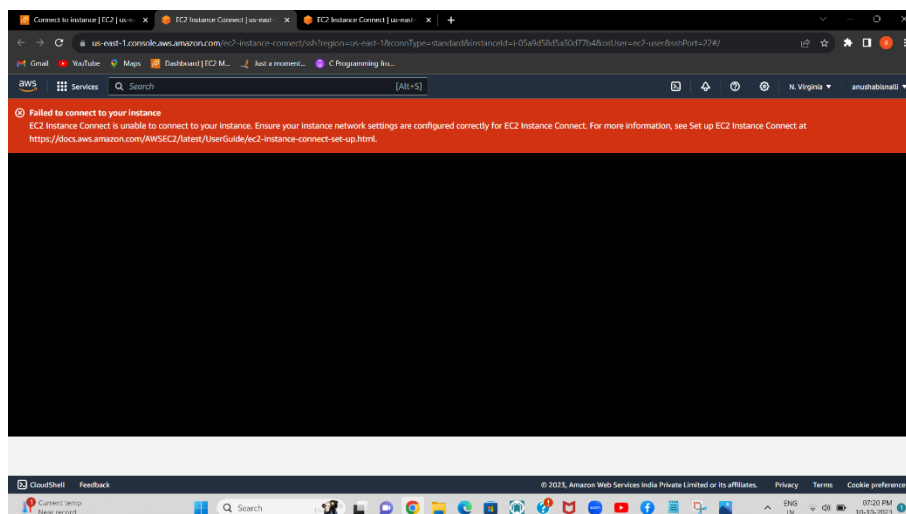
Step 6: Create one public instance



Step 6: Create one private instance



Step 7: Connecting with public instance(open)



Step 8: Connecting with private instance(not open)

```
ec2-user@ip-120-0-0-178 ~$ logout
Connection to 120.0.0.178 closed.
ec2-user@ip-120-0-0-181 ~$ ping google.com
PING google.com (172.253.63.139) 56(84) bytes of data.
64 bytes from bi-in-fl39-1e100.net (172.253.63.139): icmp_seq=1 ttl=55 time=1.80 ms
64 bytes from bi-in-fl39-1e100.net (172.253.63.139): icmp_seq=2 ttl=55 time=1.86 ms
64 bytes from bi-in-fl39-1e100.net (172.253.63.139): icmp_seq=3 ttl=55 time=1.79 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 1.787/1.814/1.859/0.031 ms
ec2-user@ip-120-0-0-181 ~$ sudo yum update -y
Last metadata expiration check: 0:50:07 ago on Tue Oct 10 12:56:51 2023.
Dependencies resolved.
Nothing to do.
Complete!
ec2-user@ip-120-0-0-181 ~$ ping google.com
PING google.com (172.253.122.101) 56(84) bytes of data.
64 bytes from bh-in-fl01-1e100.net (172.253.122.101): icmp_seq=1 ttl=101 time=1.77 ms
64 bytes from bh-in-fl01-1e100.net (172.253.122.101): icmp_seq=2 ttl=101 time=1.85 ms
64 bytes from bh-in-fl01-1e100.net (172.253.122.101): icmp_seq=3 ttl=101 time=1.84 ms
^C
--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2004ms
rtt min/avg/max/mdev = 1.765/1.819/1.848/0.038 ms
ec2-user@ip-120-0-0-181 ~$
```

i-0f05d283ee0f52677 (Anusha-Pub)
PublicIPs: 54.157.61.19 PrivateIPs: 120.0.0.181

```
permissions 0644 for 'key2.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key "key2.pem": bad permissions
ec2-user@120.0.0.178: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).
ec2-user@ip-120-0-0-181 ~$ ll
total 8
-rw-r--r-- 1 ec2-user ec2-user 1679 Oct 10 13:10 key.pem
-rw-r--r-- 1 ec2-user ec2-user 1679 Oct 10 13:20 key2.pem
ec2-user@ip-120-0-0-181 ~$ ll
total 8
-rw-r--r-- 1 ec2-user ec2-user 1679 Oct 10 13:10 key.pem
-rw-r--r-- 1 ec2-user ec2-user 1679 Oct 10 13:20 key2.pem
ec2-user@ip-120-0-0-181 ~$ ssh -i "key2.pem" ec2-user@120.0.0.178
Warning: Permanently added '120.0.0.178' (RSA) to the list of known hosts.
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
ec2-user@ip-120-0-0-178 ~$
```

i-0f05d283ee0f52677 (Anusha-Pub)
PublicIPs: 54.157.61.19 PrivateIPs: 120.0.0.181

Step 9: Connecting to private instances via public instance

Instance details | EC2 | us-east-1 | VPC Console

us-east-1 console.aws.amazon.com/vpcconsole/home?region=us-east-1#NatGateway/details:natGatewayId=nat-0d6d8b3116dc96426

nat-0d6d8b3116dc96426 / Anusha-NAT

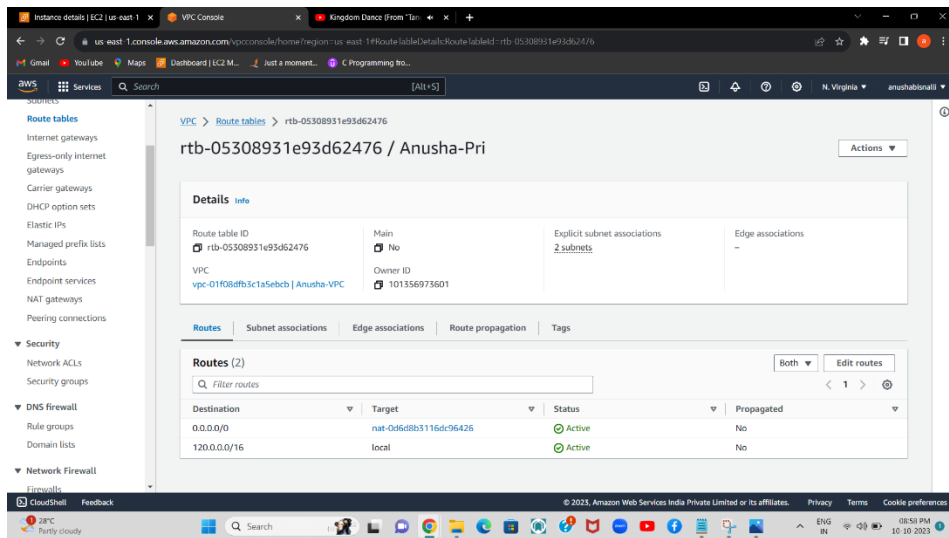
Details info

NAT gateway ID nat-0d6d8b3116dc96426	Connectivity type Public	State Available	State message -
NAT gateway ARN arn:aws:ec2:us-east-1:101356973601:natgateway/nat-0d6d8b3116dc96426	Primary public IPv4 address 52.21.37.142	Primary private IPv4 address 120.0.0.221	Primary network interface ID eni-0ee14478b5578d5ec
VPC vpc-01f08dfb3c1a5ebcb / Anusha-VPC	Subnet subnet-08c81efd4157fdb83 / Anusha-PubSub	Created Tuesday, October 10, 2023 at 19:12:57 GMT+5:30	Deleted -

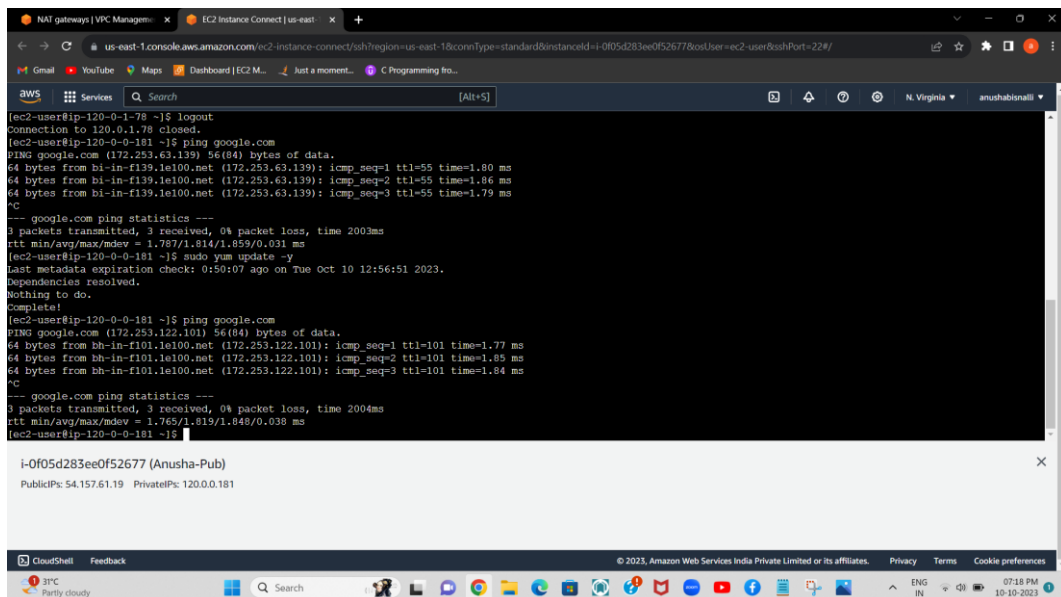
Secondary IPv4 addresses

Filter by secondary IPv4 address

Step 10: Creating NAT



Step 11: Creating Route table adding private subnets 1 & 2 & edit route table add NAT Gateway.



Step 12: Go to public instance update it ping google we can get access to internet

