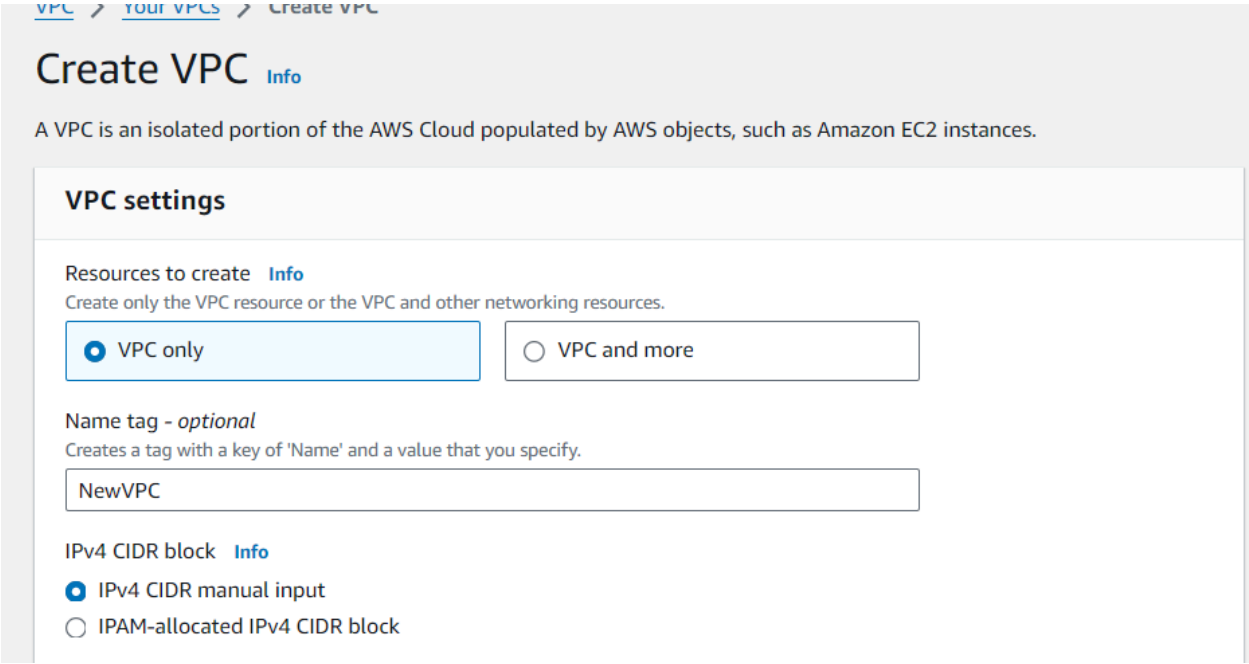
Some important points

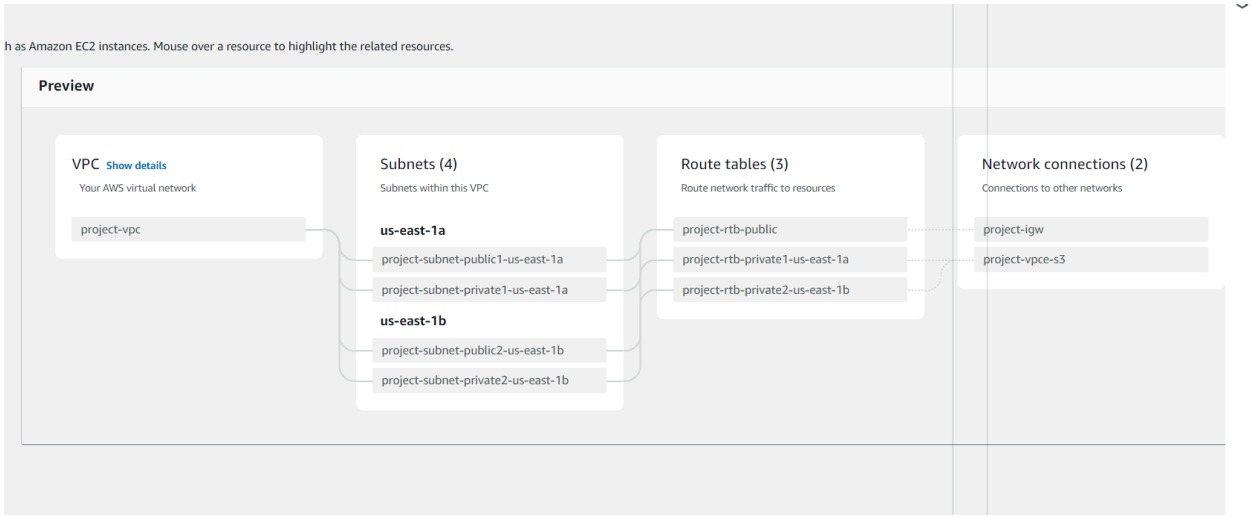
Distribute Across Zones: Use multiple availability zones for disaster recovery.
Separate **Routing Tables**: Set up distinct routing tables for public and private networks.
Implement IGW: Use an Internet Gateway for seamless connectivity with the internet.
Consider **NAT Gateway:** Evaluate the need for a NAT gateway for outbound traffic.
Convert to Class B: If using a Class A address (e.g., 10.x.x.x), consider converting to Class B.
Choose Tenancy Wisely: Default tenancy is often sufficient; dedicated tenancy is costlier.
Shared Services: Default tenancy means utilizing shared infrastructure for efficiency.
Check NAT Gateway Setting: By default, no NAT gateway is assigned; assess if it's necessary for your setup.

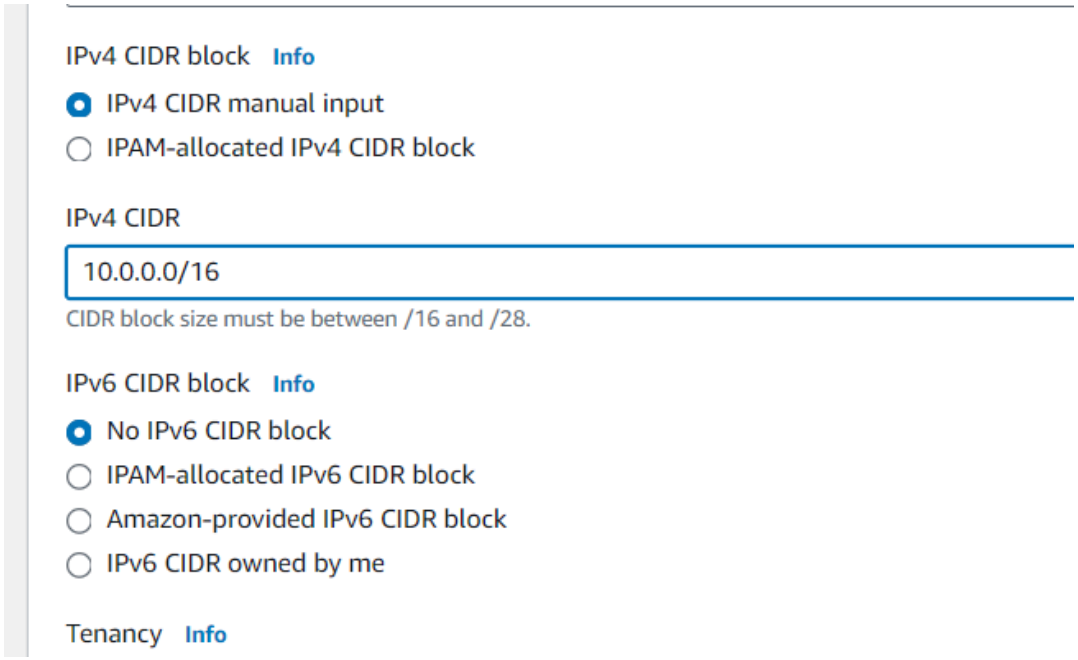
Lets start from here..

1) **Go to VPC Dashboard and create VPC.**
   A name is provided and required configurations can be done.

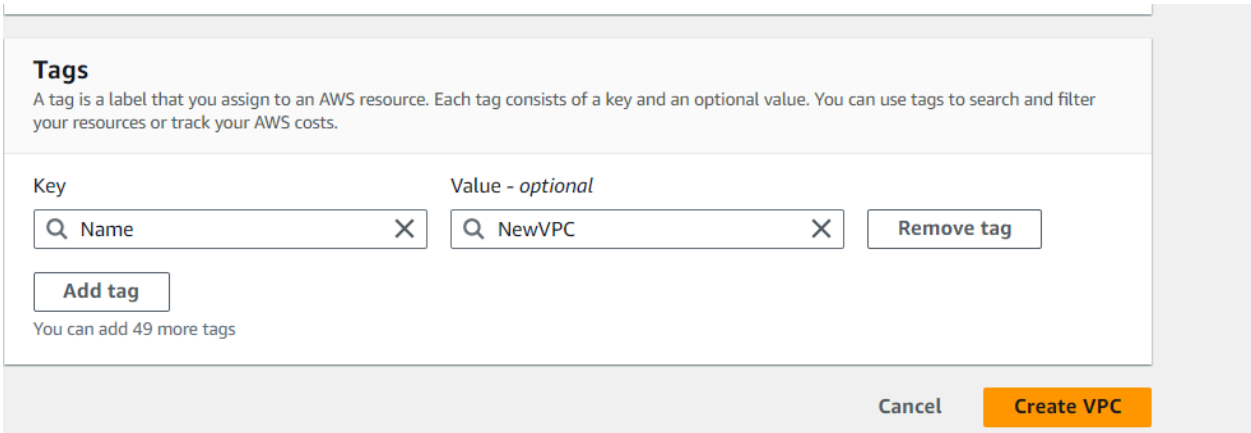


The preview of VPC are shown as:

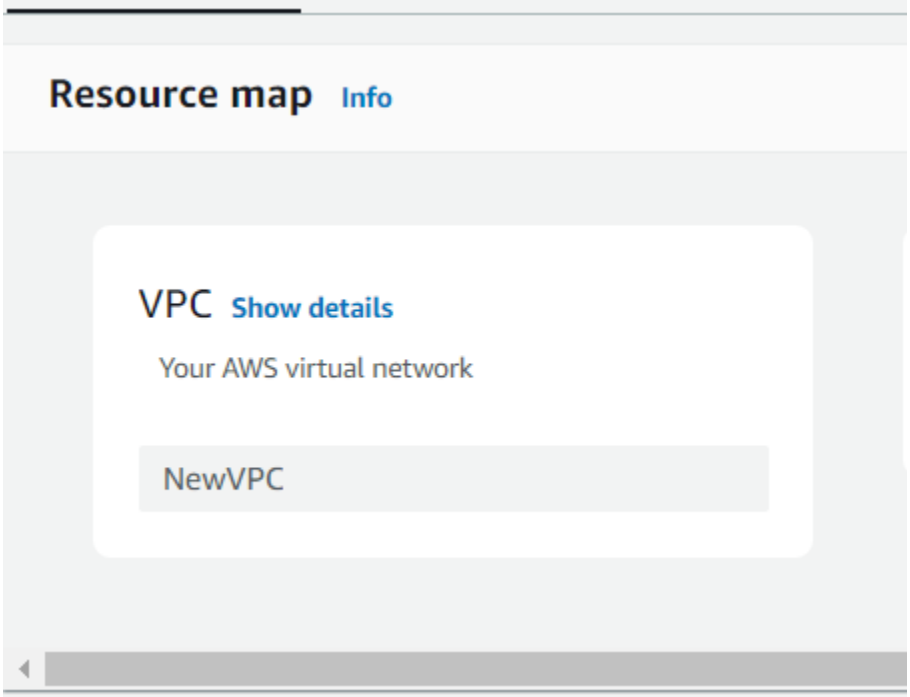




2) **Click on Create VPC.**

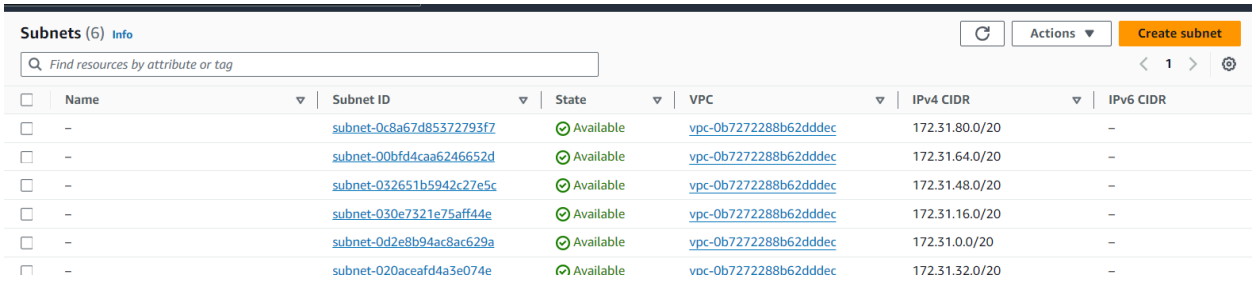


3) **Successful VPC Configuration**

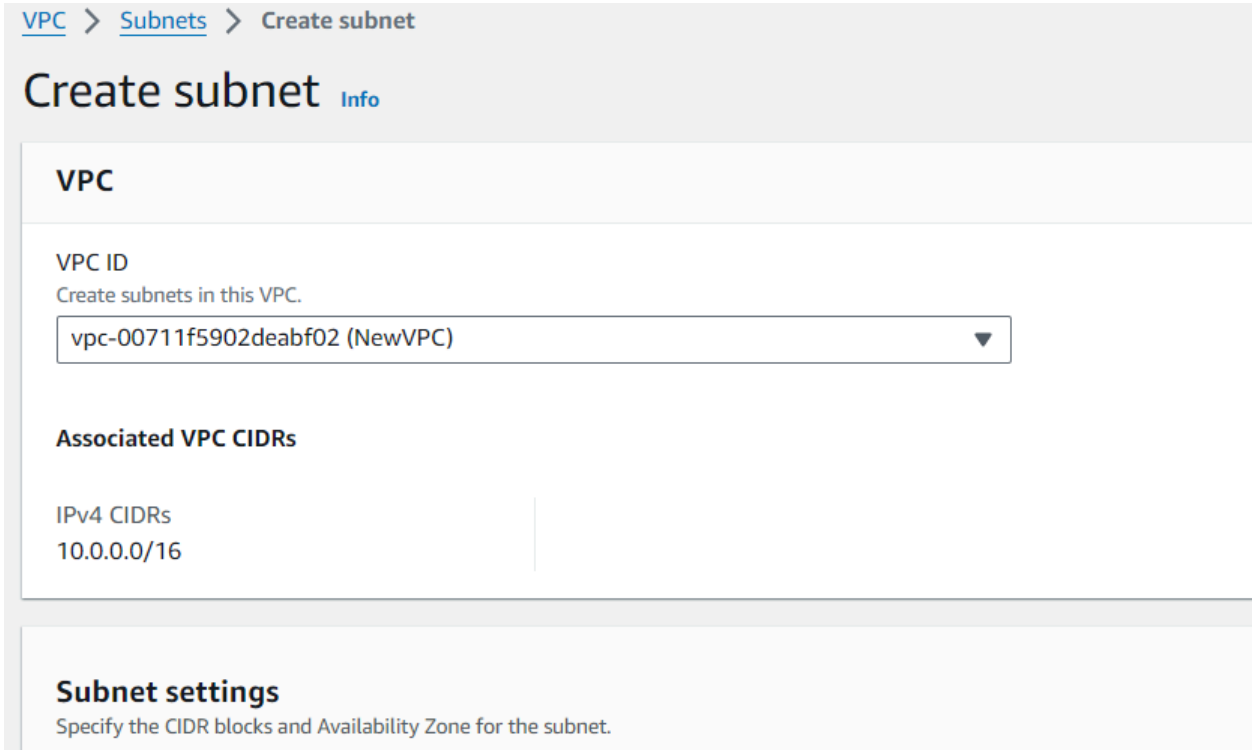


CREATING SUBNETS

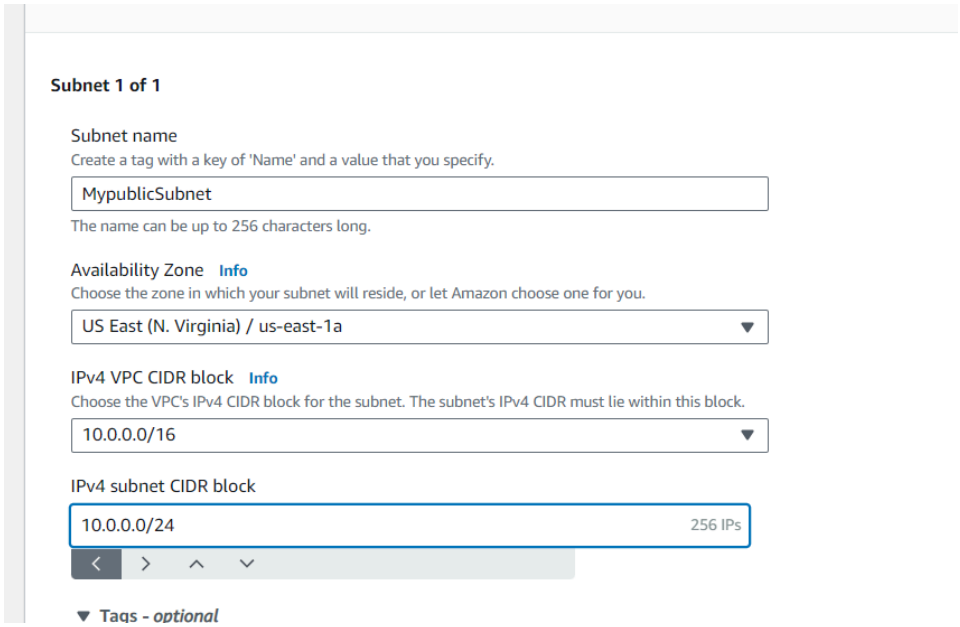
4) **Go to Subnets and Create Subnet.**

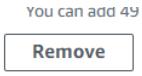


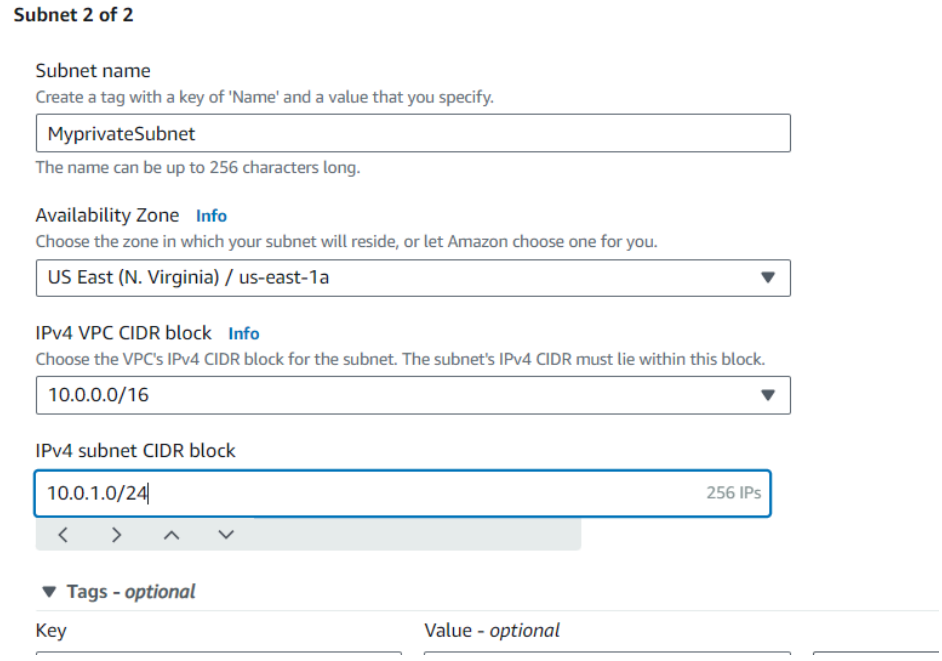
5) **Configure Subnets with the previous made VPC.**



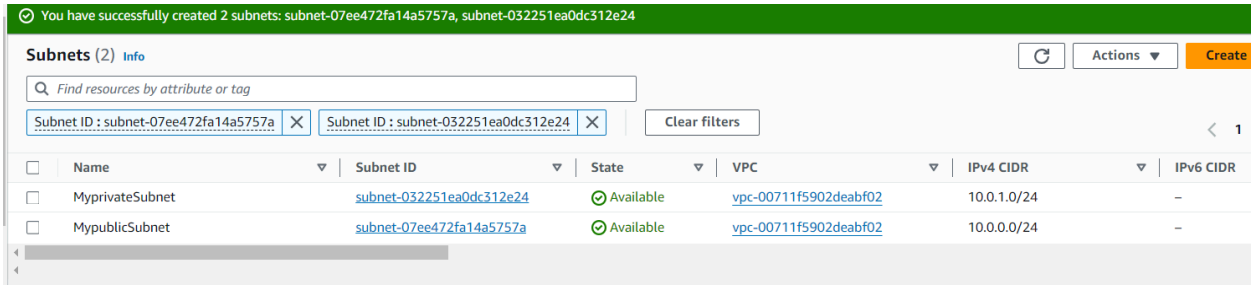
6) **Two subnets are created and configured as per requirements. One each for public and private usage.**



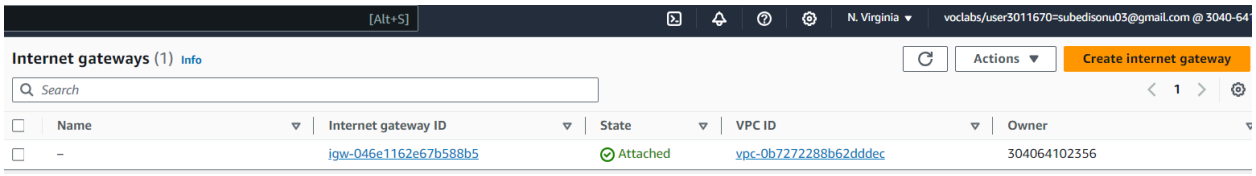




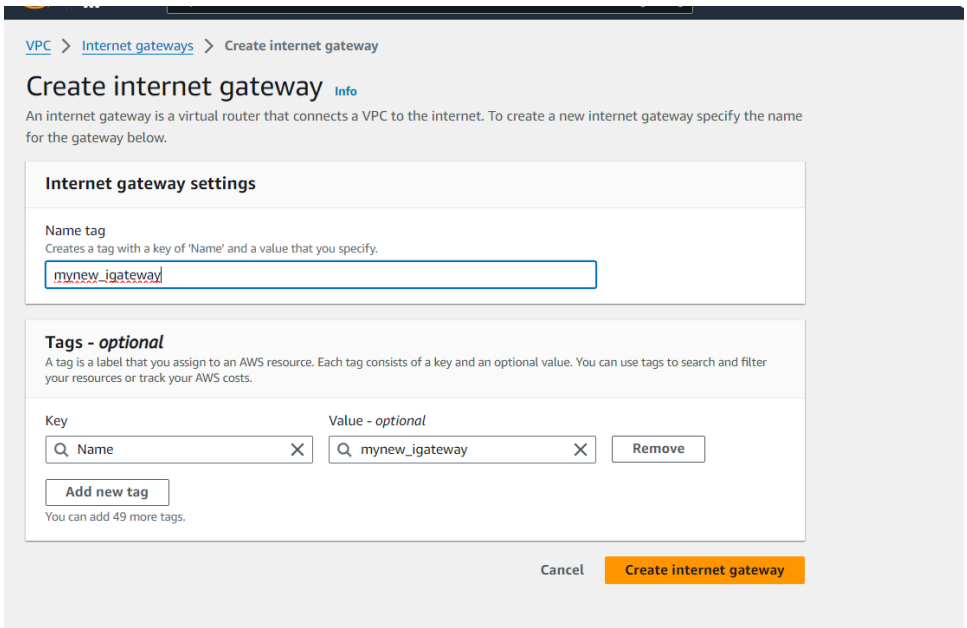
7) Subnets created successfully.



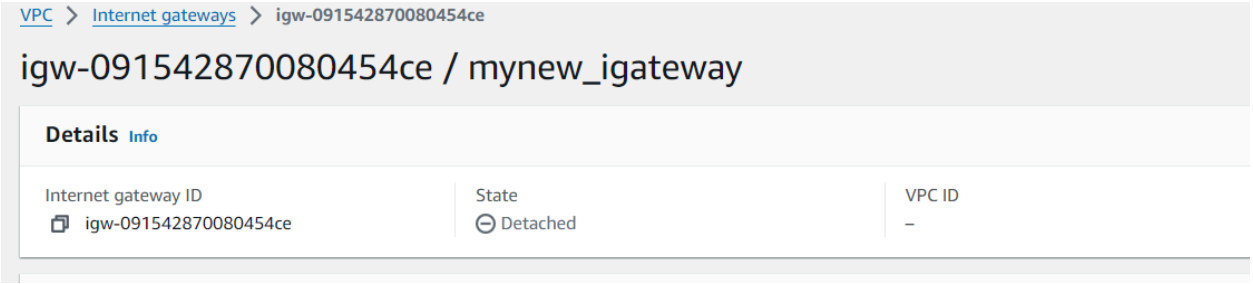
8) Creating Internet gateway



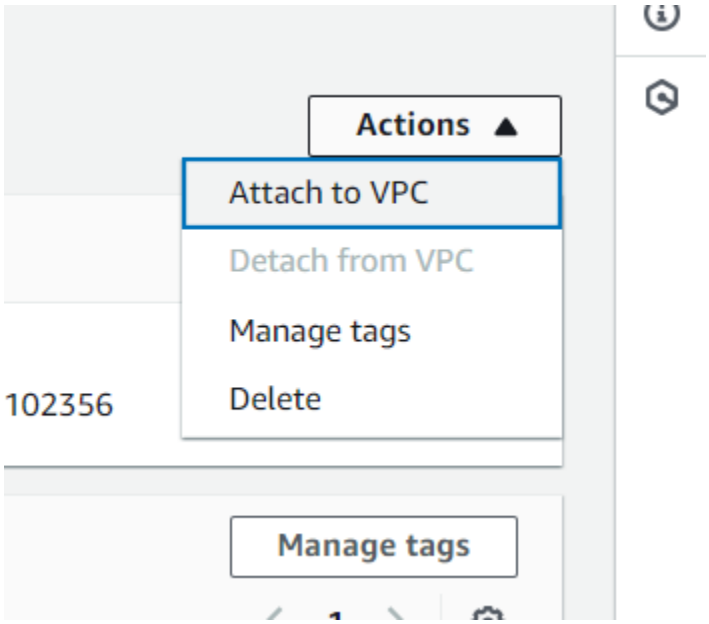
Click on create internet gateway and name it.



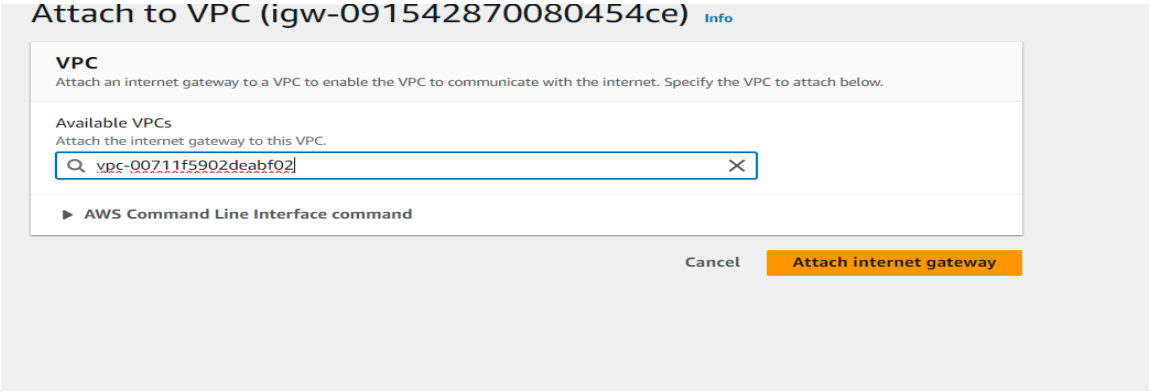
The state is detached previously.

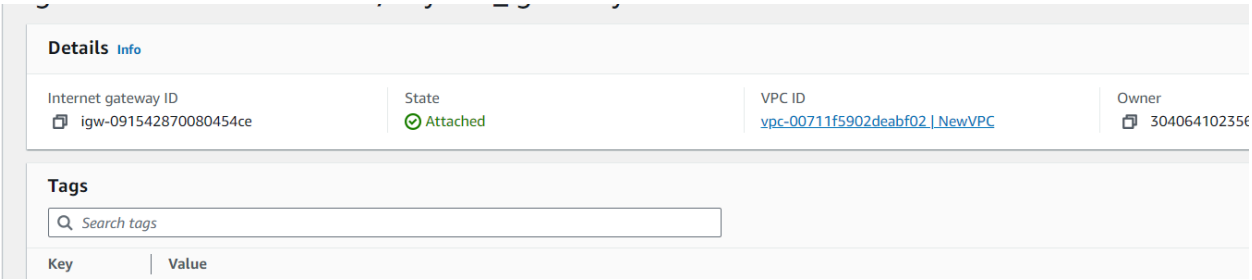


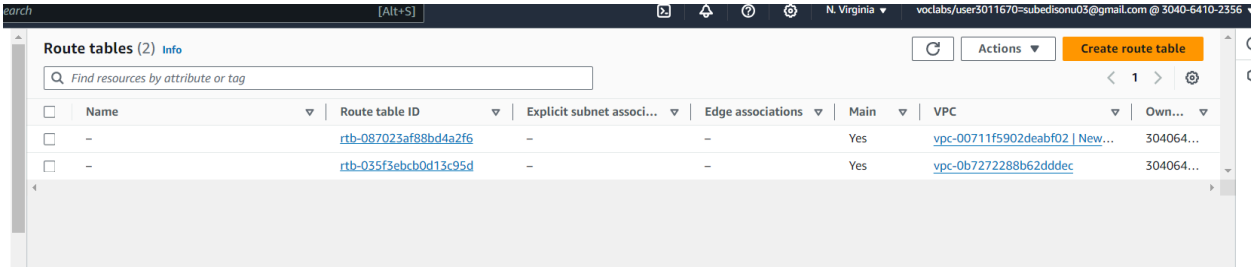
Go to Actions and attach to VPC.



9) **The gateway is attached to the previously created VPC.**

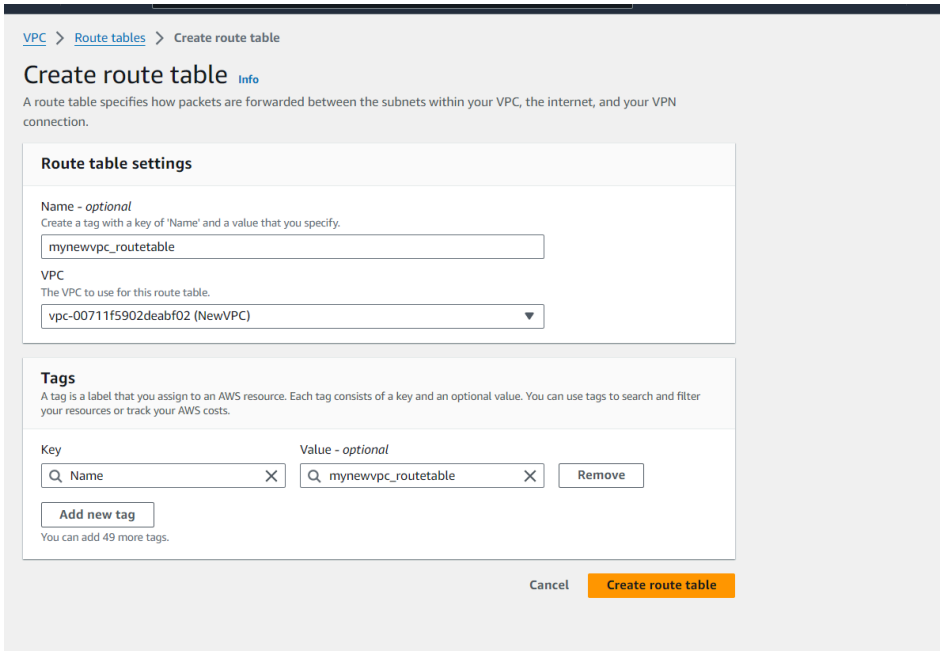






10) Creating Route Table

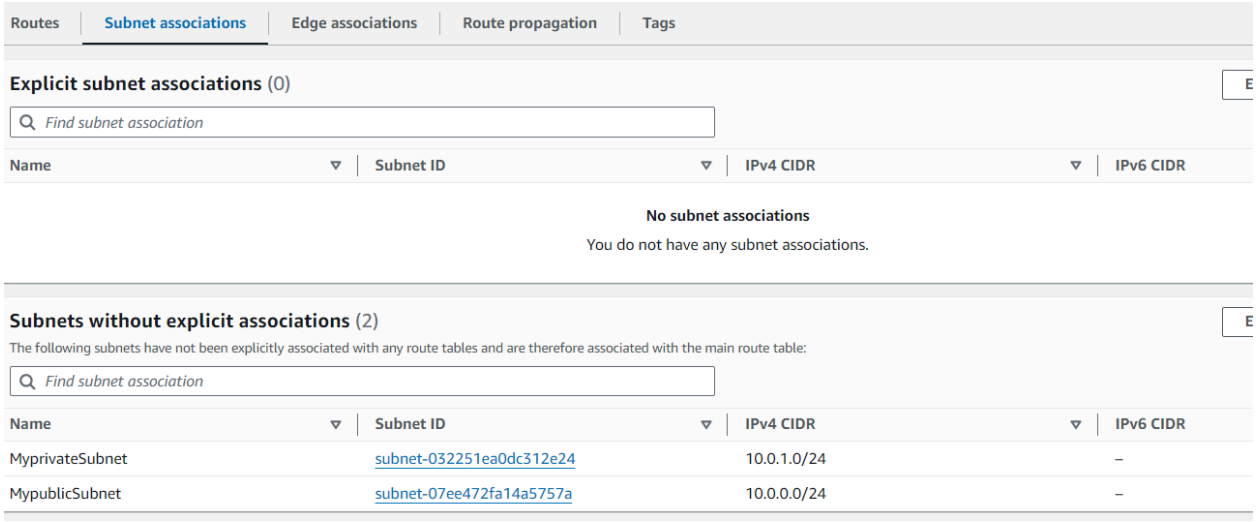
Now, route table is created and the VPC made above is selected.

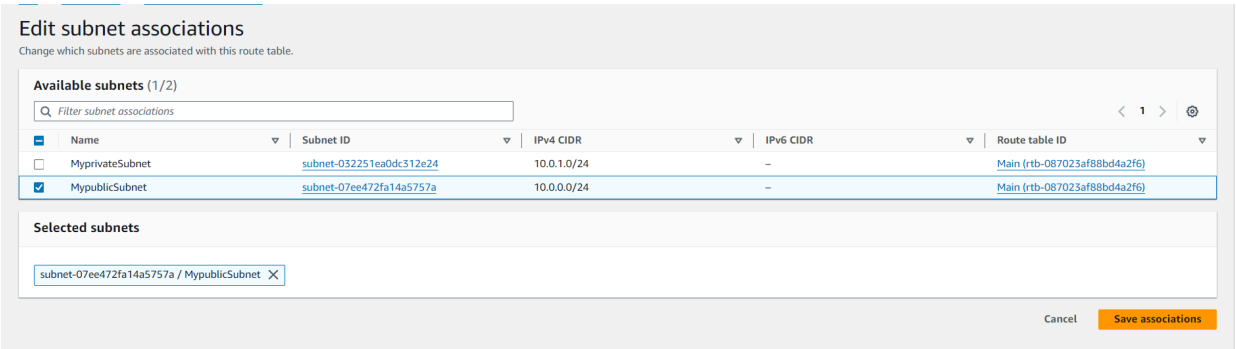


Target - local
Internally there is communication between default by subnet

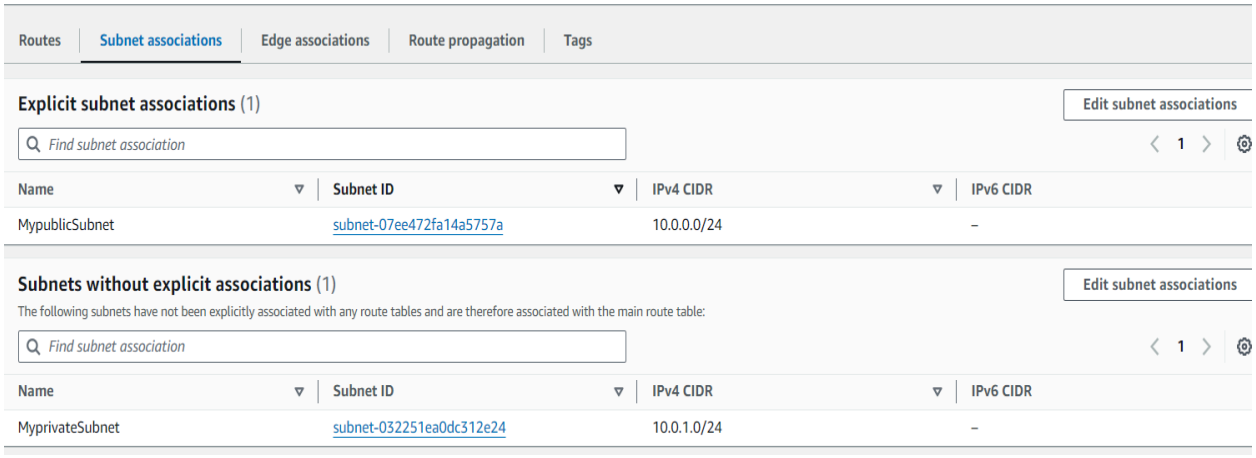
Configuration to be done from local to the internet

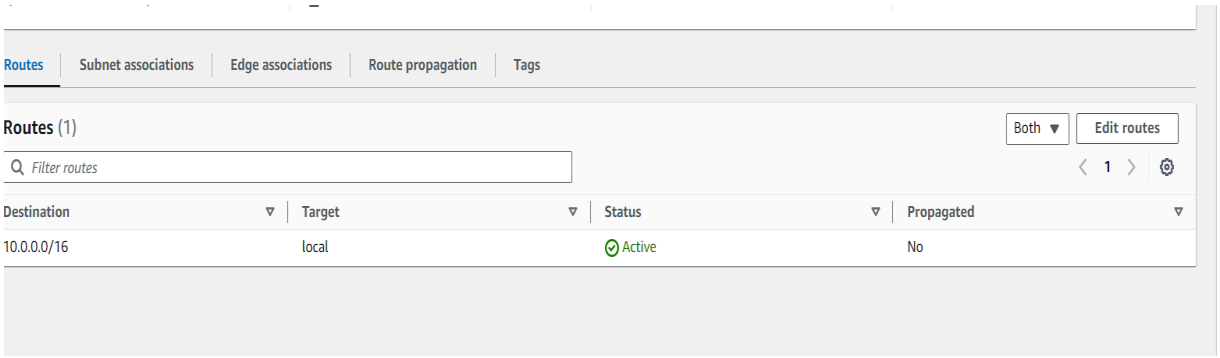
11) Choose a public subnet.





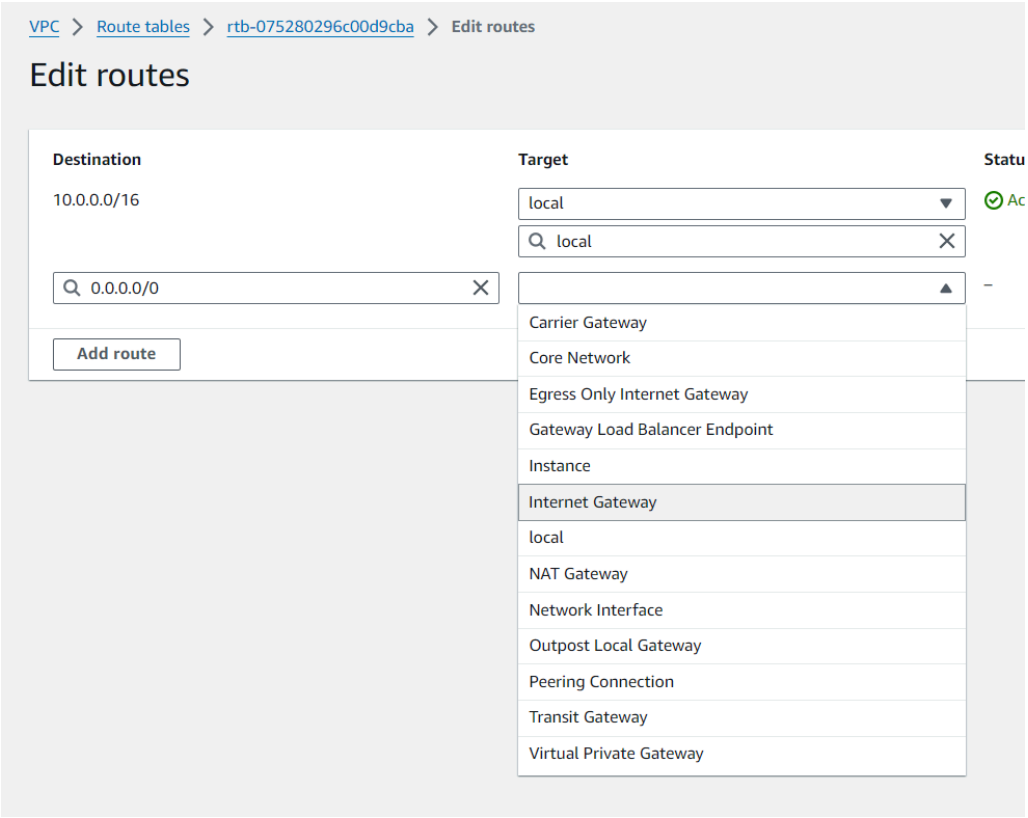
12)Explicit Subnet Association is done so that it is accessible by the internet.

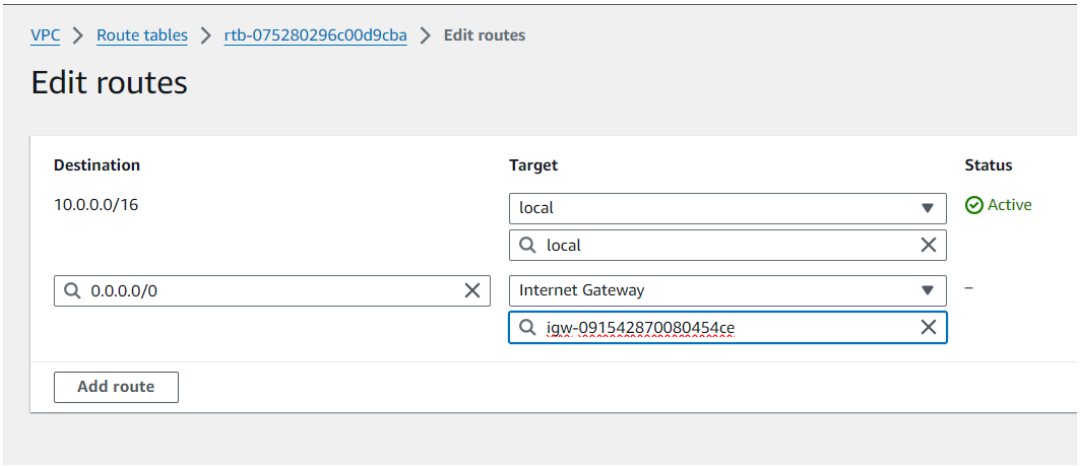




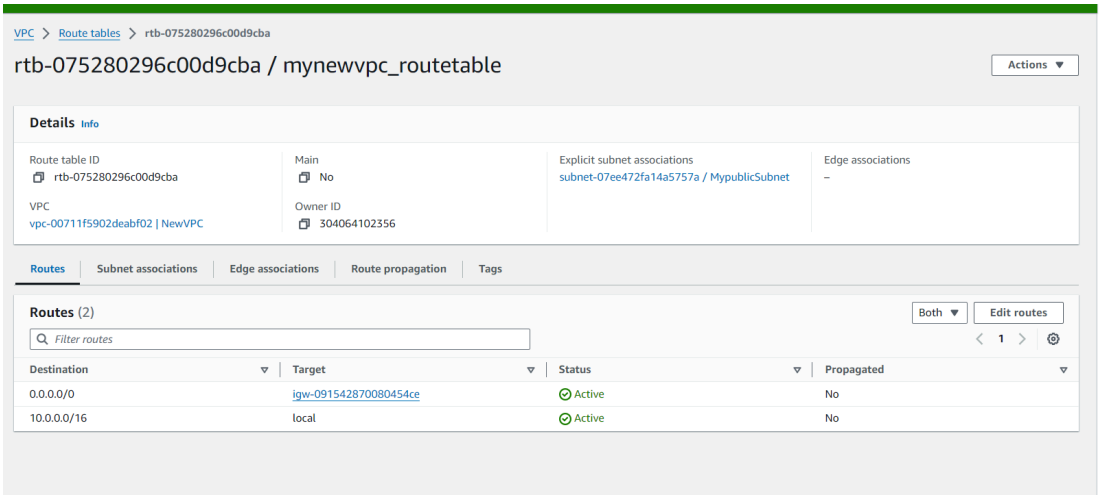
13) Editing Route in Route Table

Route is edited to associate Internet Gateway.

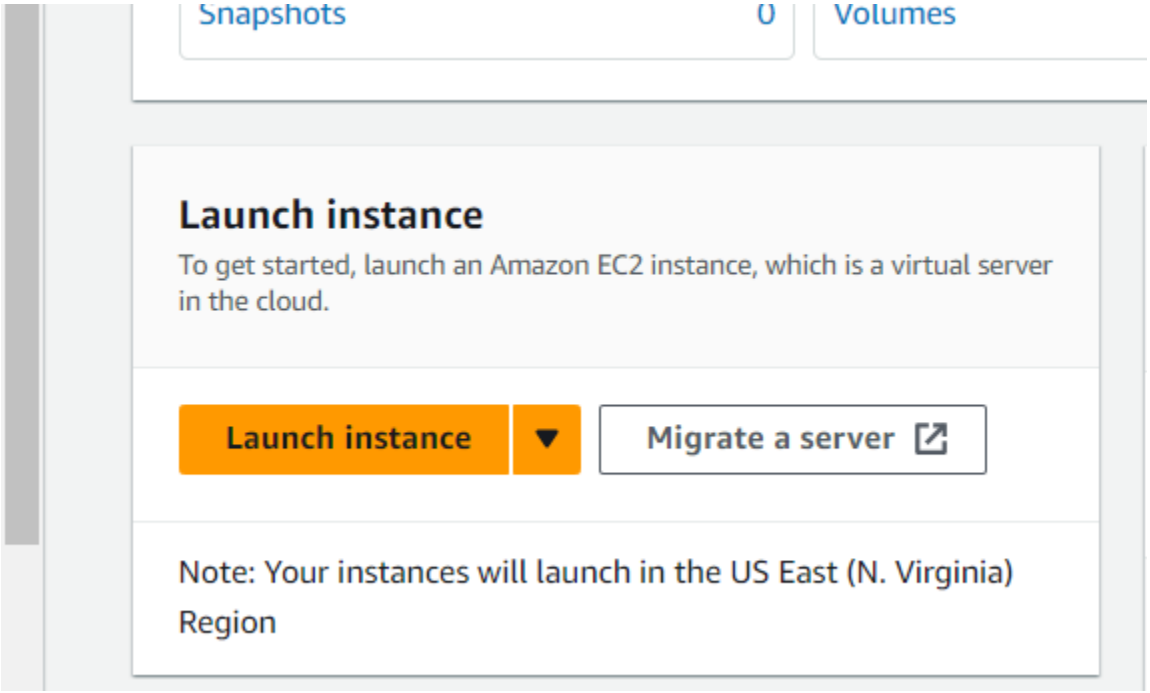




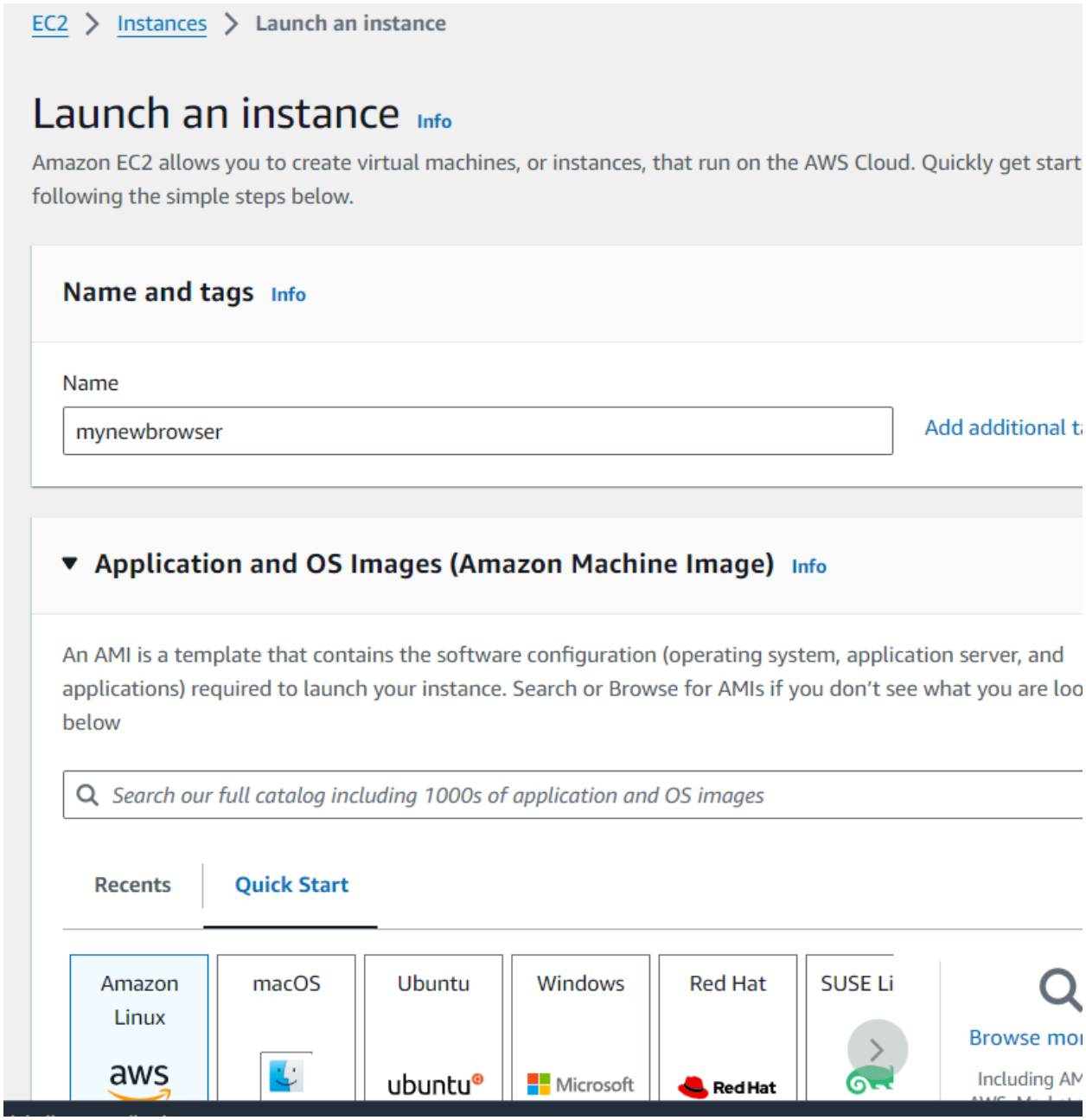
Save changes



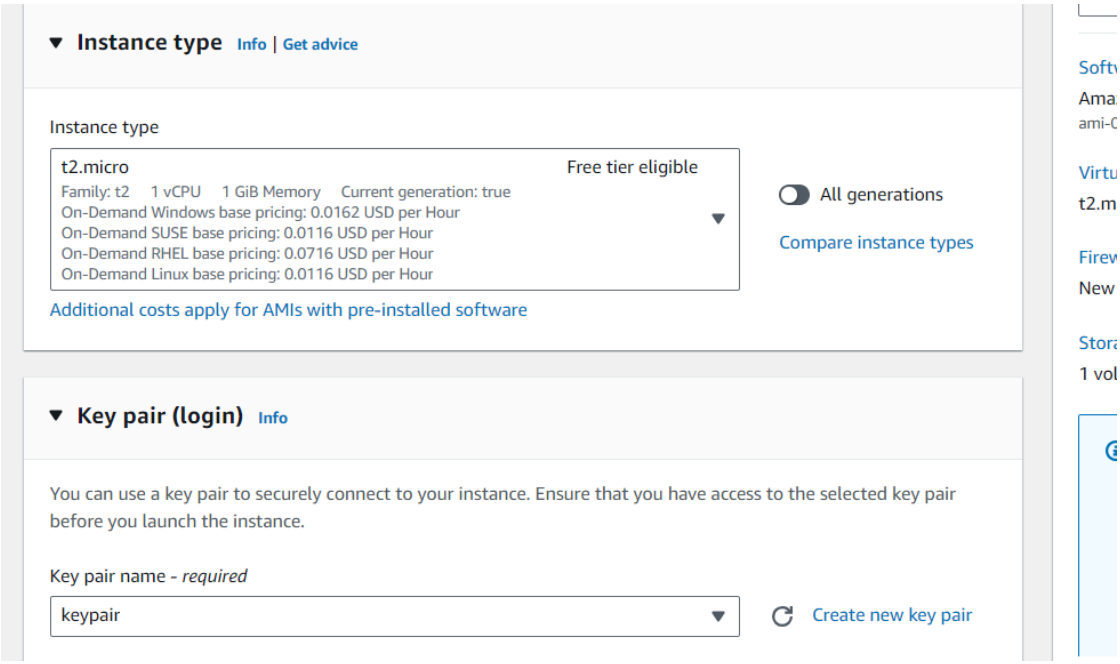
14) An instance is launched to host a static website and configure so that it iS accessible by local machine.



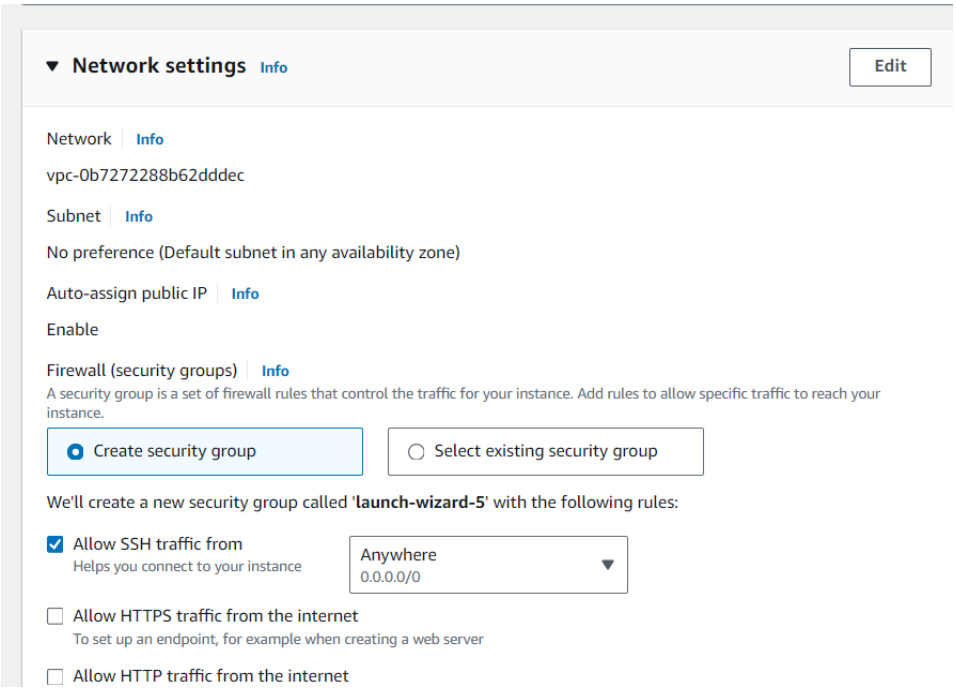
15) Name and AMI is selected.

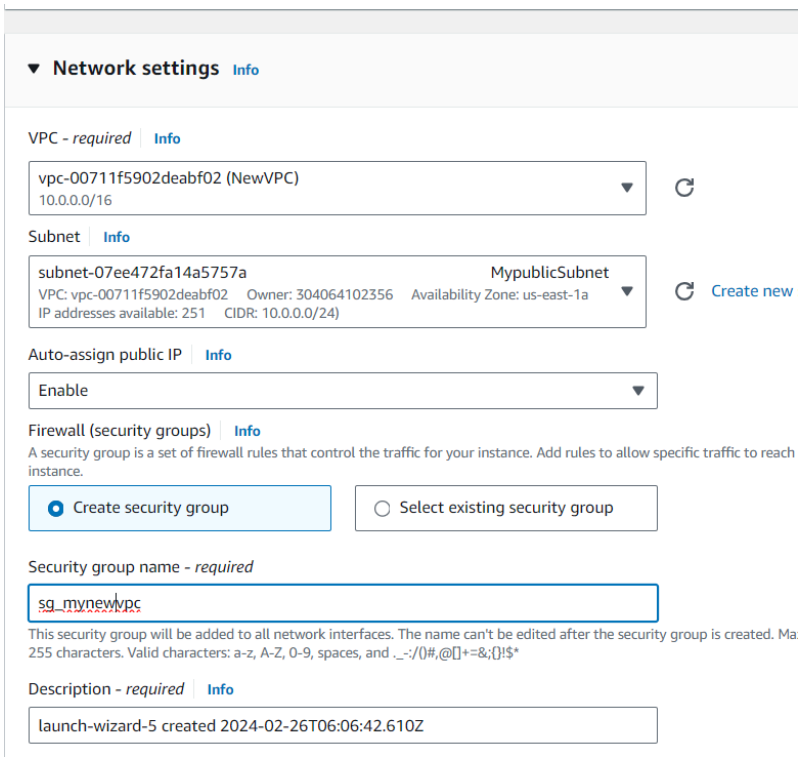


16) Instance type (t2.micro) is selected and previously created Key Pair (keypairi.pem) is selected.

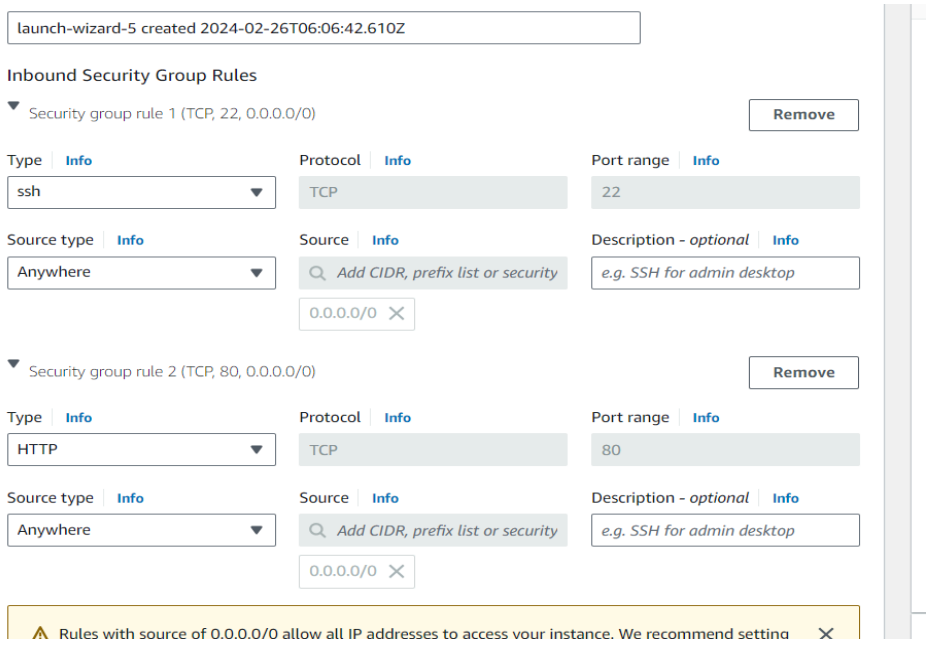


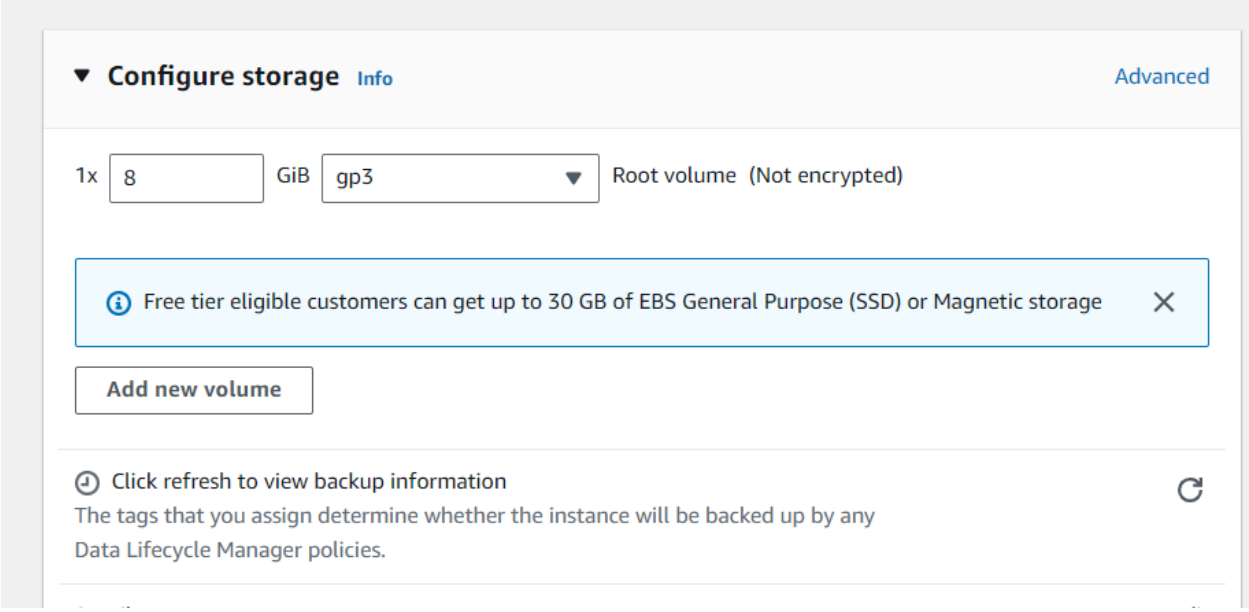
17) Instance Network Settings



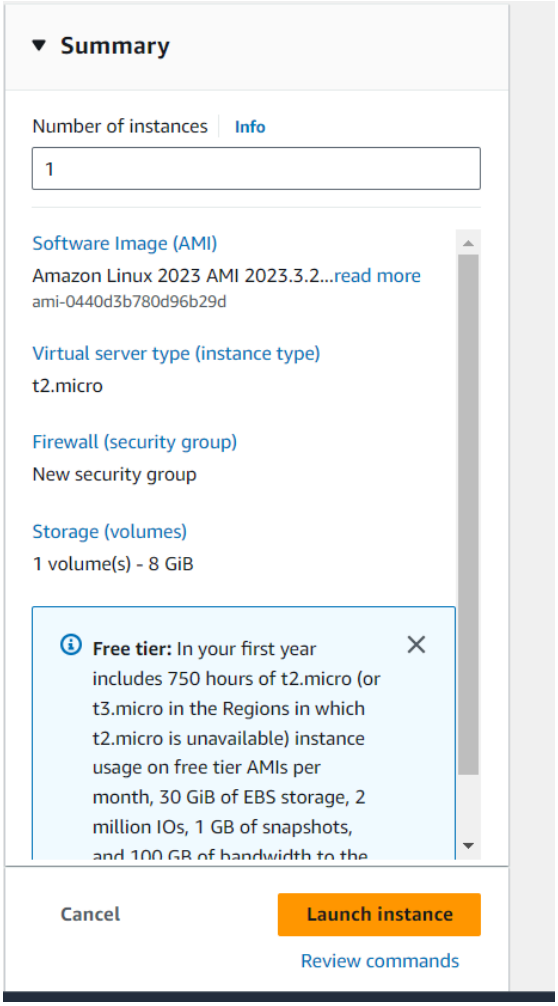


Also, HTTP connection is allowed in the security group from anywhere.

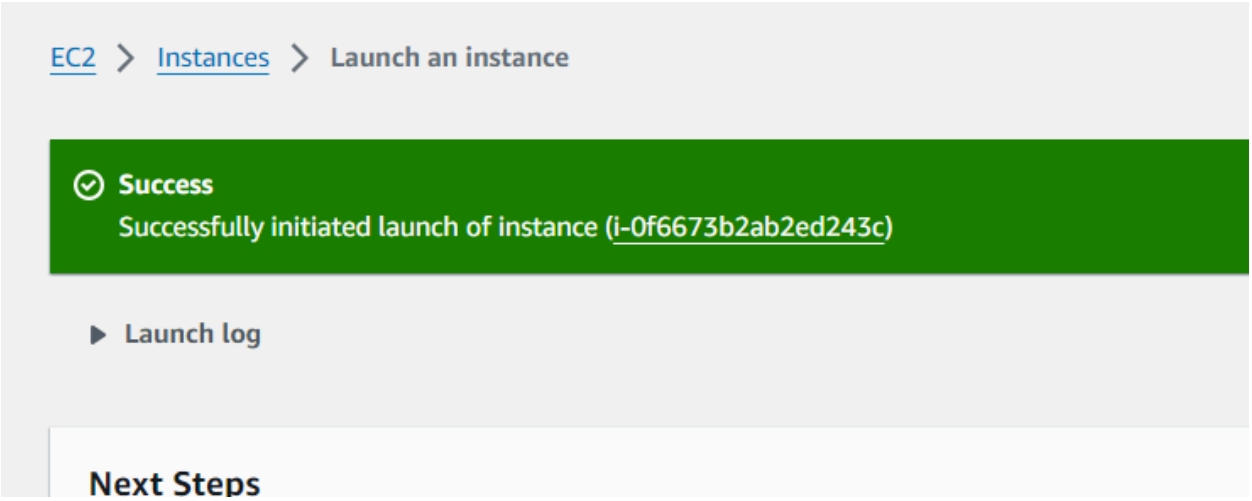




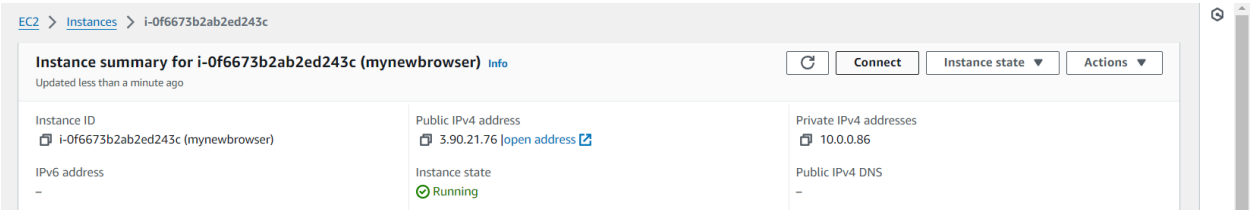
18)Instance Creation Summary.Choose any no of instance



Successful creation of instances.



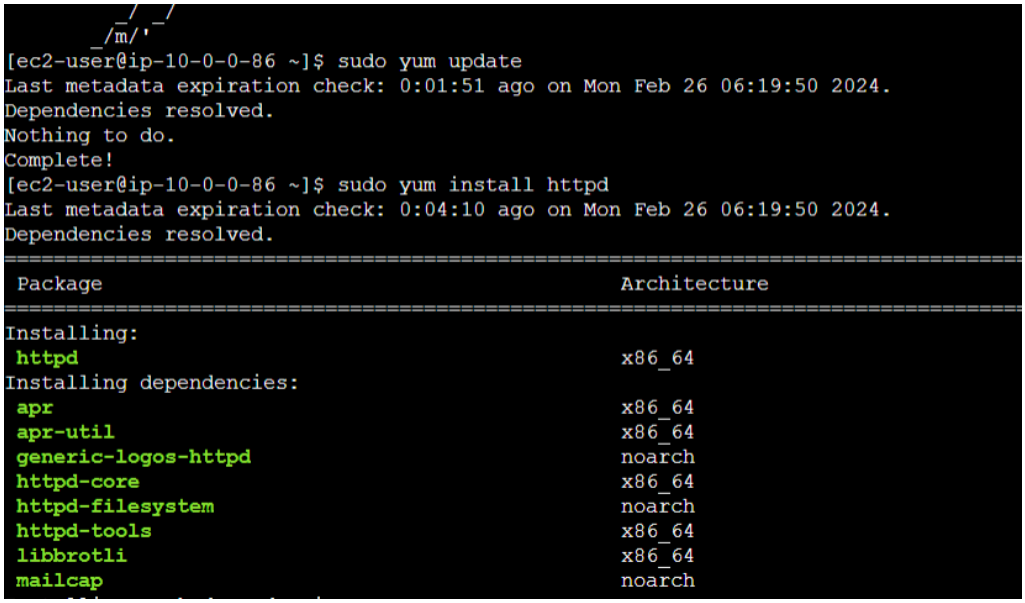
19)Click on connect.



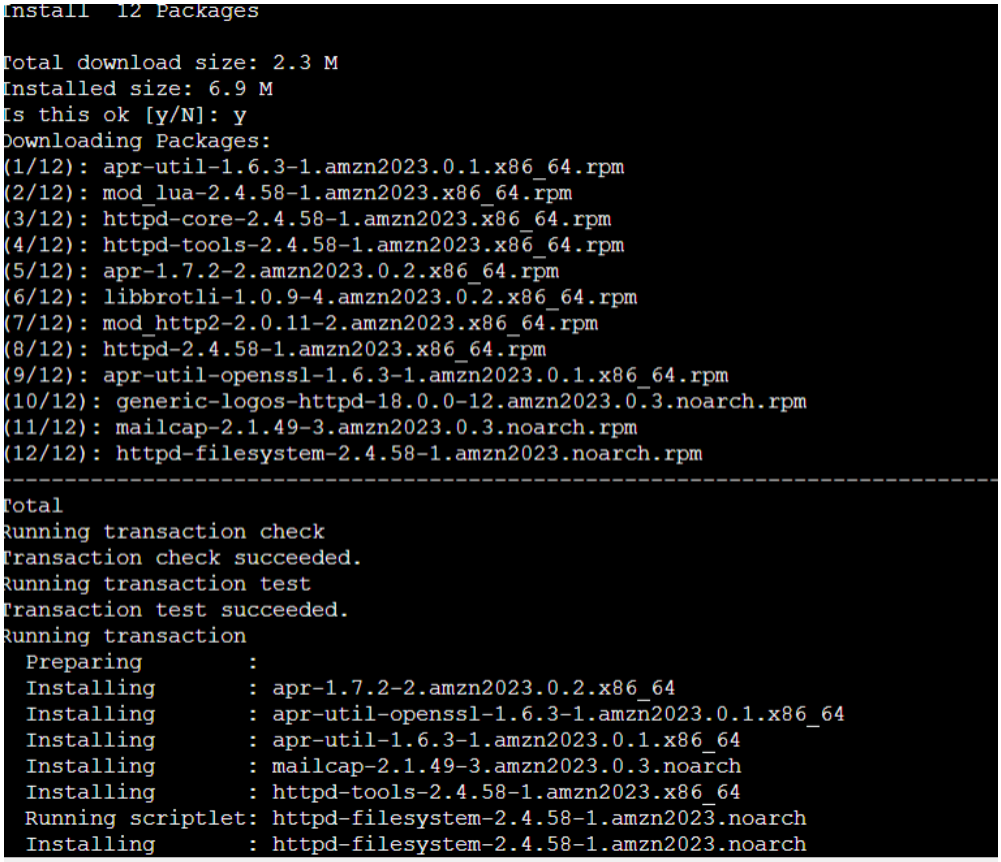
Successfully connected to an Instance.

20) Installing Apache Server

Apache Server is installed to Linux instance to host the static website.

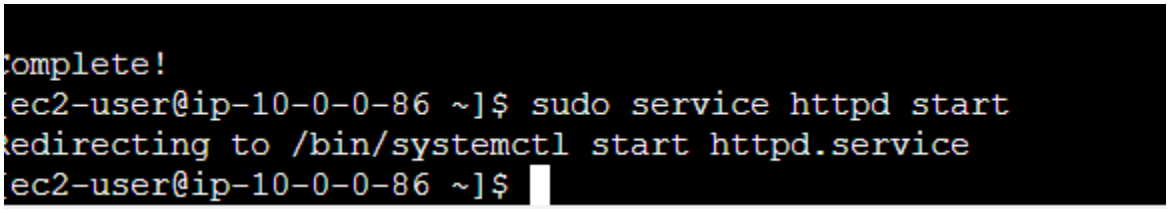


```
       _/ _/
     _/m/'
[ec2-user@ip-10-0-0-86 ~]$ sudo yum update
Last metadata expiration check: 0:01:51 ago on Mon Feb 26 06:19:50 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-10-0-0-86 ~]$ sudo yum install httpd
Last metadata expiration check: 0:04:10 ago on Mon Feb 26 06:19:50 2024.
Dependencies resolved.
================================================================================
 Package                                         Architecture
================================================================================
Installing:
 httpd                                           x86_64
Installing dependencies:
 apr                                             x86_64
 apr-util                                        x86_64
 generic-logos-httpd                             noarch
 httpd-core                                      x86_64
 httpd-filesystem                                noarch
 httpd-tools                                     x86_64
 libbrotli                                       x86_64
 mailcap                                         noarch
```



```
Install  12 Packages

Total download size: 2.3 M
Installed size: 6.9 M
Is this ok [y/N]: y
Downloading Packages:
(1/12): apr-util-1.6.3-1.amzn2023.0.1.x86_64.rpm
(2/12): mod_lua-2.4.58-1.amzn2023.x86_64.rpm
(3/12): httpd-core-2.4.58-1.amzn2023.x86_64.rpm
(4/12): httpd-tools-2.4.58-1.amzn2023.x86_64.rpm
(5/12): apr-1.7.2-2.amzn2023.0.2.x86_64.rpm
(6/12): libbrotli-1.0.9-4.amzn2023.0.2.x86_64.rpm
(7/12): mod_http2-2.0.11-2.amzn2023.x86_64.rpm
(8/12): httpd-2.4.58-1.amzn2023.x86_64.rpm
(9/12): apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64.rpm
(10/12): generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch.rpm
(11/12): mailcap-2.1.49-3.amzn2023.0.3.noarch.rpm
(12/12): httpd-filesystem-2.4.58-1.amzn2023.noarch.rpm
--------------------------------------------------------------------------------
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :
  Installing       : apr-1.7.2-2.amzn2023.0.2.x86_64
  Installing       : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64
  Installing       : apr-util-1.6.3-1.amzn2023.0.1.x86_64
  Installing       : mailcap-2.1.49-3.amzn2023.0.3.noarch
  Installing       : httpd-tools-2.4.58-1.amzn2023.x86_64
  Running scriptlet: httpd-filesystem-2.4.58-1.amzn2023.noarch
  Installing       : httpd-filesystem-2.4.58-1.amzn2023.noarch
```

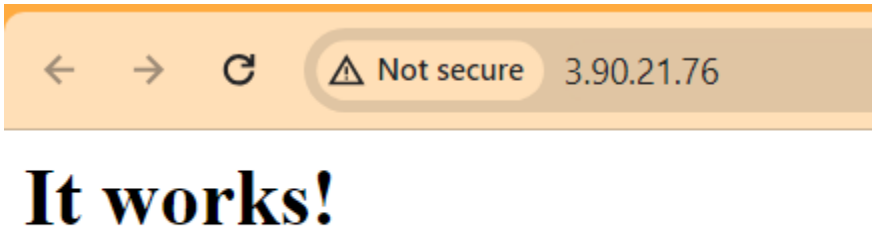
21) Starting the Server



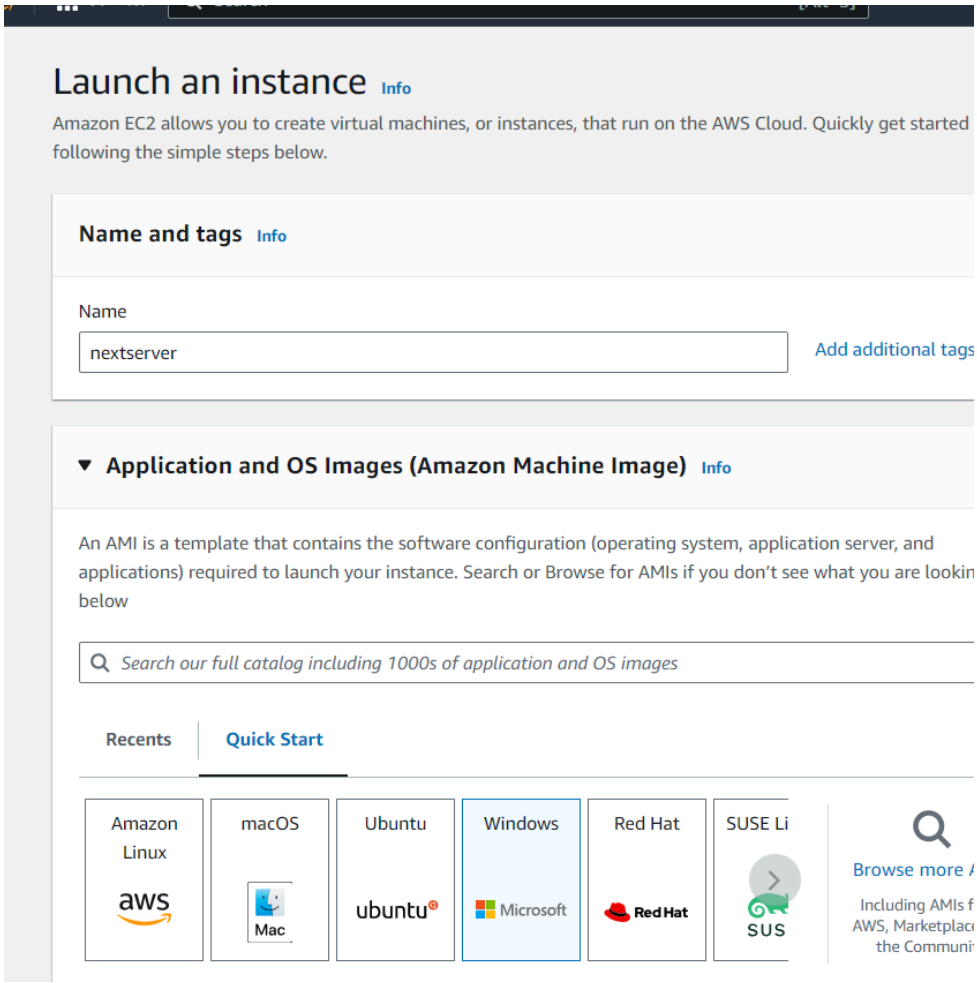

```
The service command supports only basic LSB actions (start, stop, restart, try-restart, reload, reload-or-restart,
ctions, please try to use systemctl.
[ec2-user@ip-10-0-0-86 ~]$ sudo service httpd status
Redirecting to /bin/systemctl status httpd.service
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; preset: disabled)
     Active: active (running) since Mon 2024-02-26 06:25:40 UTC; 7min ago
       Docs: man:httpd.service(8)
   Main PID: 25978 (httpd)
     Status: "Total requests: 1; Idle/Busy workers 100/0;Requests/sec: 0.00223; Bytes served/sec:   1 B/sec"
      Tasks: 177 (limit: 1114)
     Memory: 13.5M
        CPU: 329ms
     CGroup: /system.slice/httpd.service
             ├─25978 /usr/sbin/httpd -DFOREGROUND
             ├─25979 /usr/sbin/httpd -DFOREGROUND
             ├─25980 /usr/sbin/httpd -DFOREGROUND
             ├─25981 /usr/sbin/httpd -DFOREGROUND
             └─25982 /usr/sbin/httpd -DFOREGROUND

Feb 26 06:25:40 ip-10-0-0-86.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Feb 26 06:25:40 ip-10-0-0-86.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.
Feb 26 06:25:40 ip-10-0-0-86.ec2.internal httpd[25978]: Server configured, listening on: port 80
[ec2-user@ip-10-0-0-86 ~]$
```

22) Check instance IP Address

23) The Apache server is running successfully.

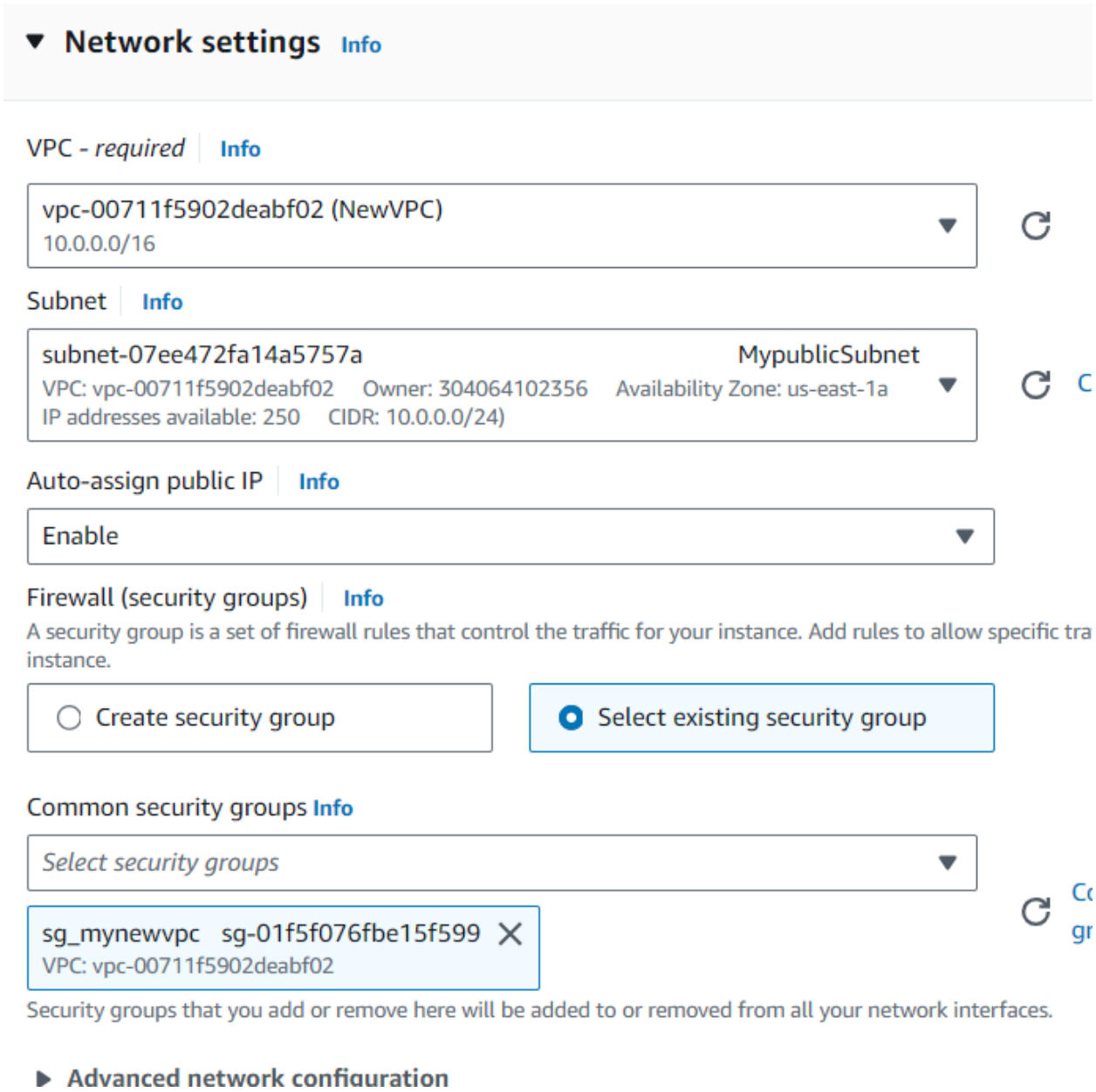


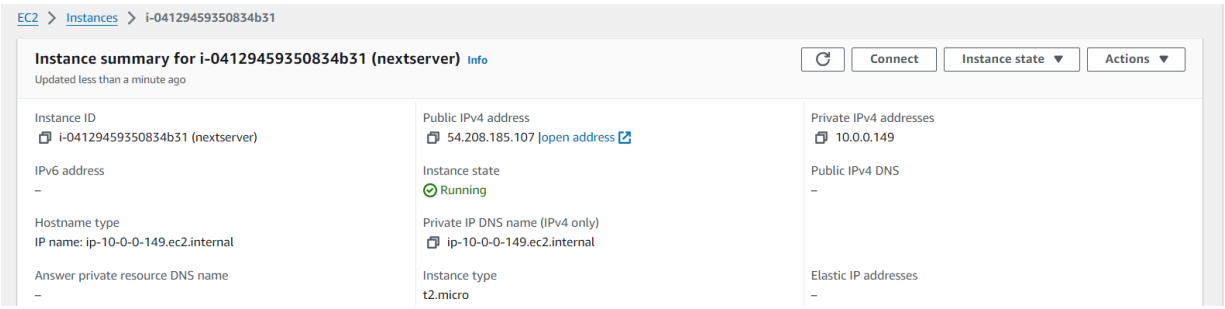
24) Choose Windows Instance



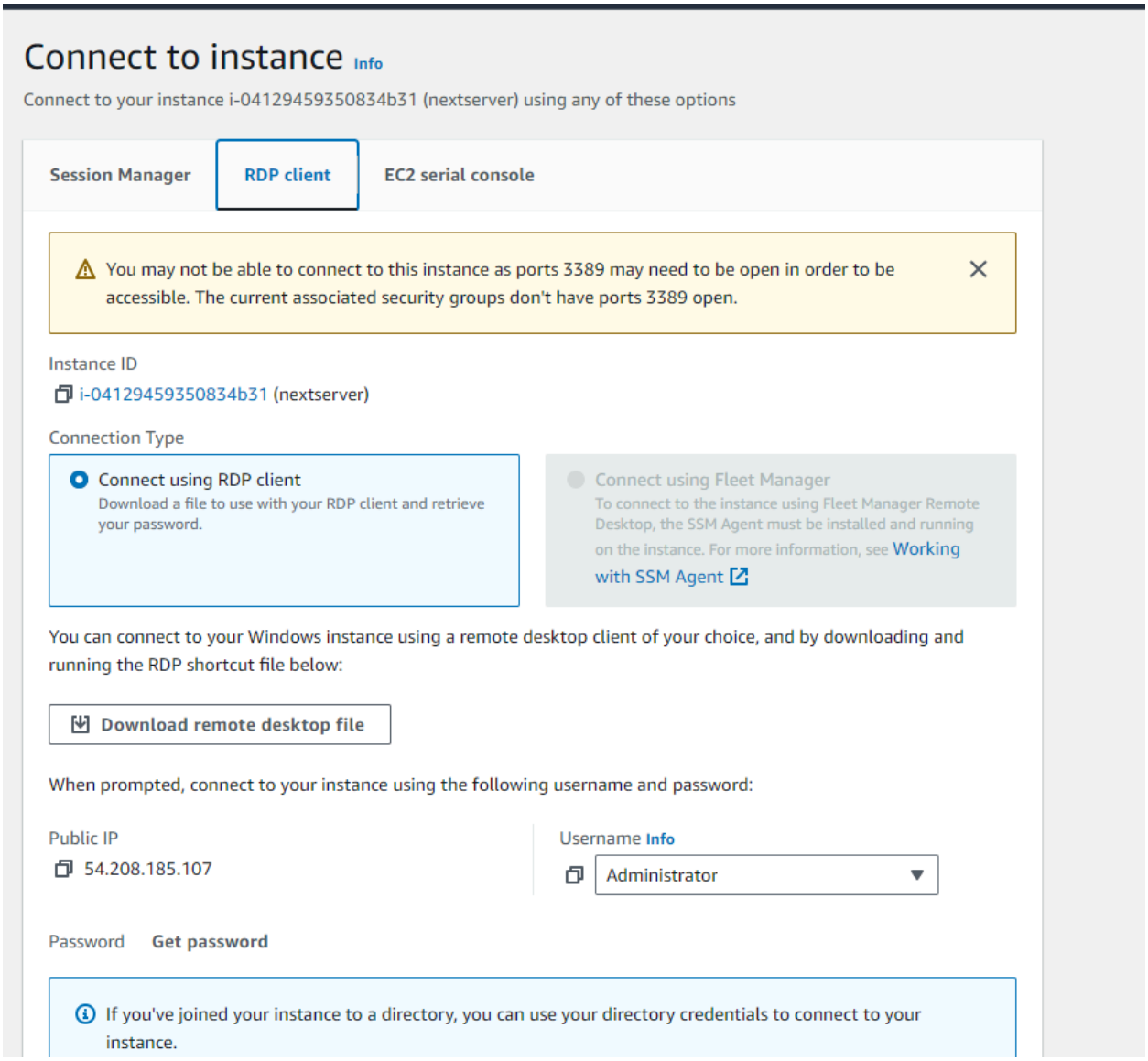
25) Configure Network Setting.

Public subnet is selected, and Public IP is auto assigned. Also, security group created for the Linux Instance is reused.

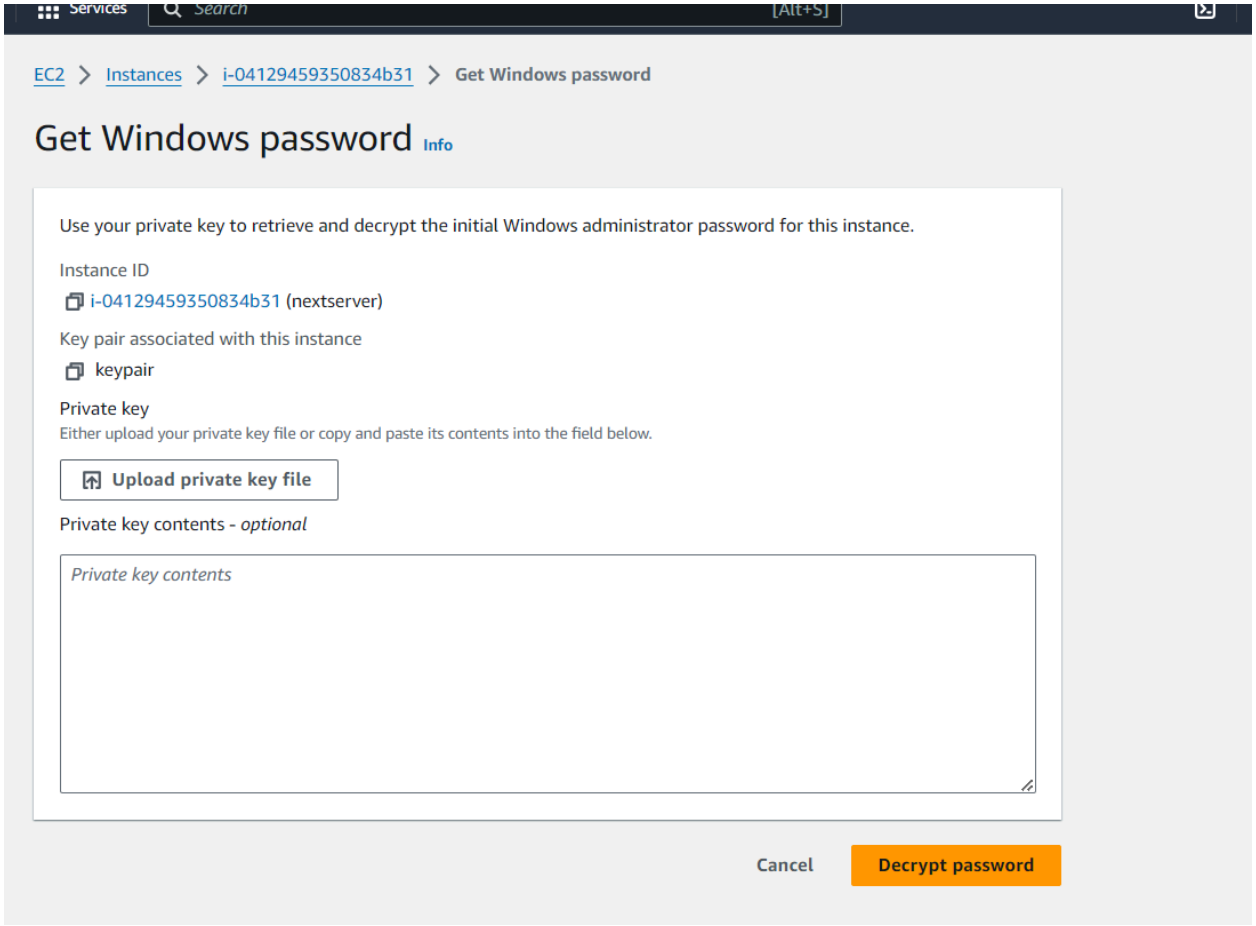


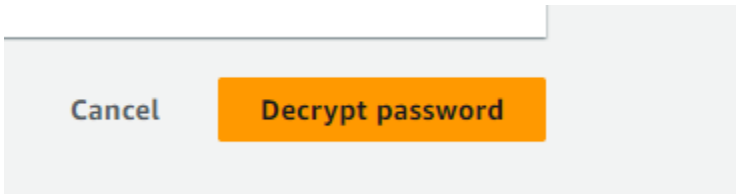


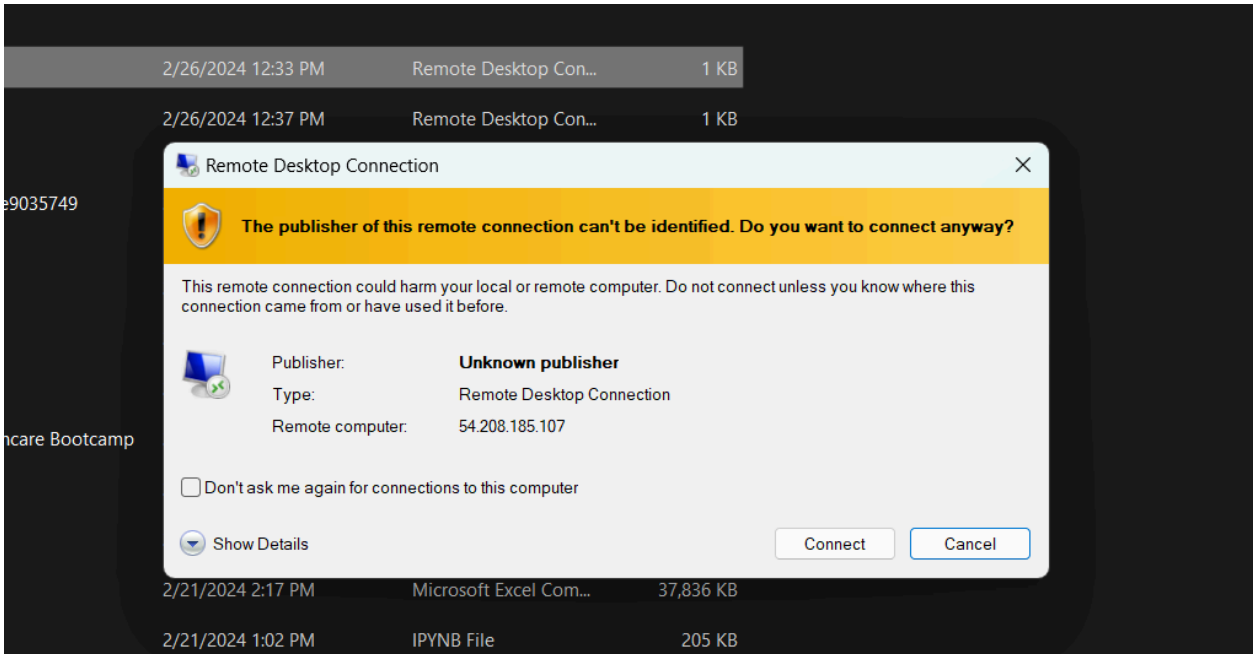
26) Connecting to an instance



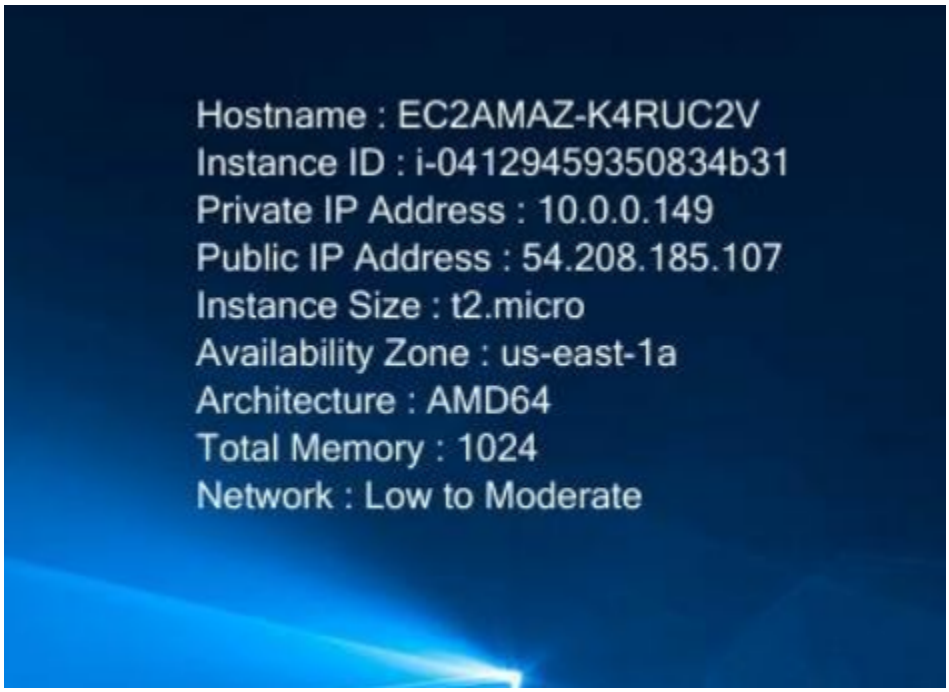
27) **The remote desktop file is downloaded and the keypair file is decrypted to connect to the instance.**



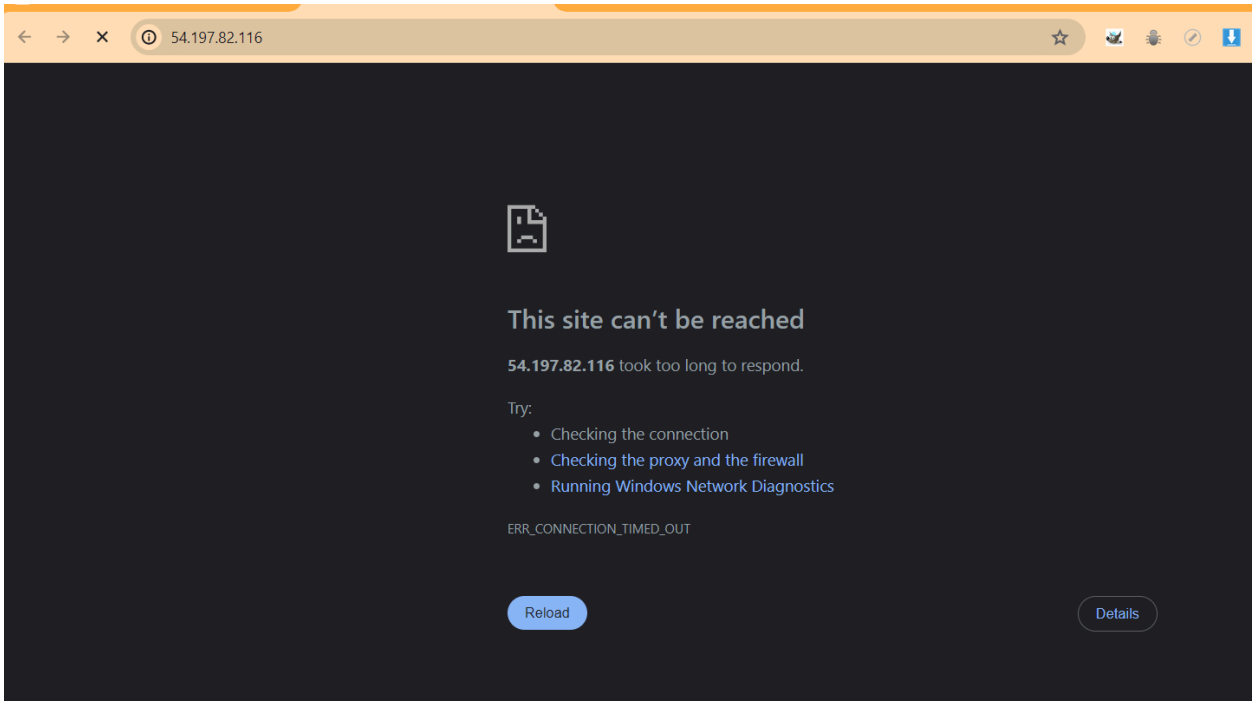




28) Successful Connection to Windows Instance

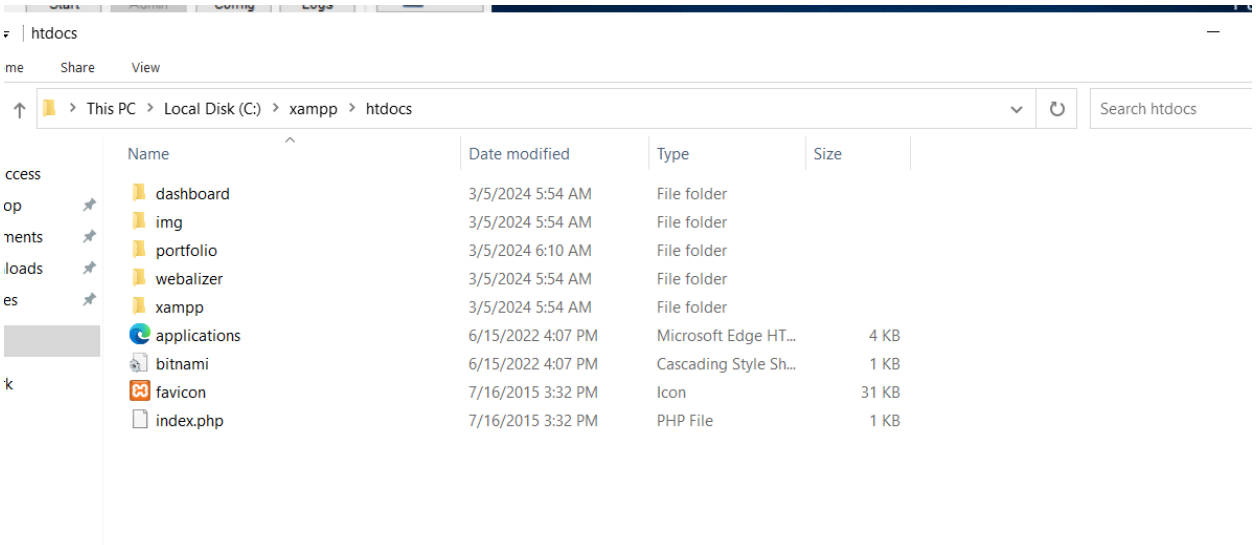


29) XAMPP is installed to host the static website and start the Apache Server.



29) Uploading Website Files

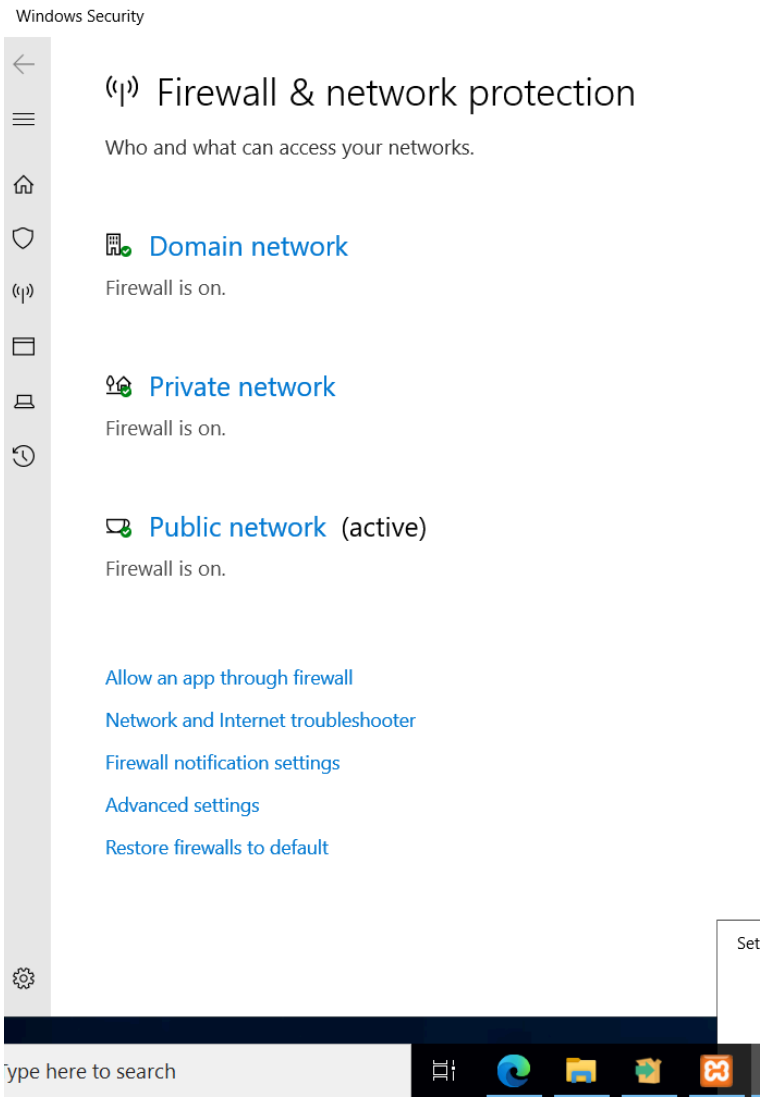
The HTML and image file is added inside htdocs of XAMPP under portfolio folder..



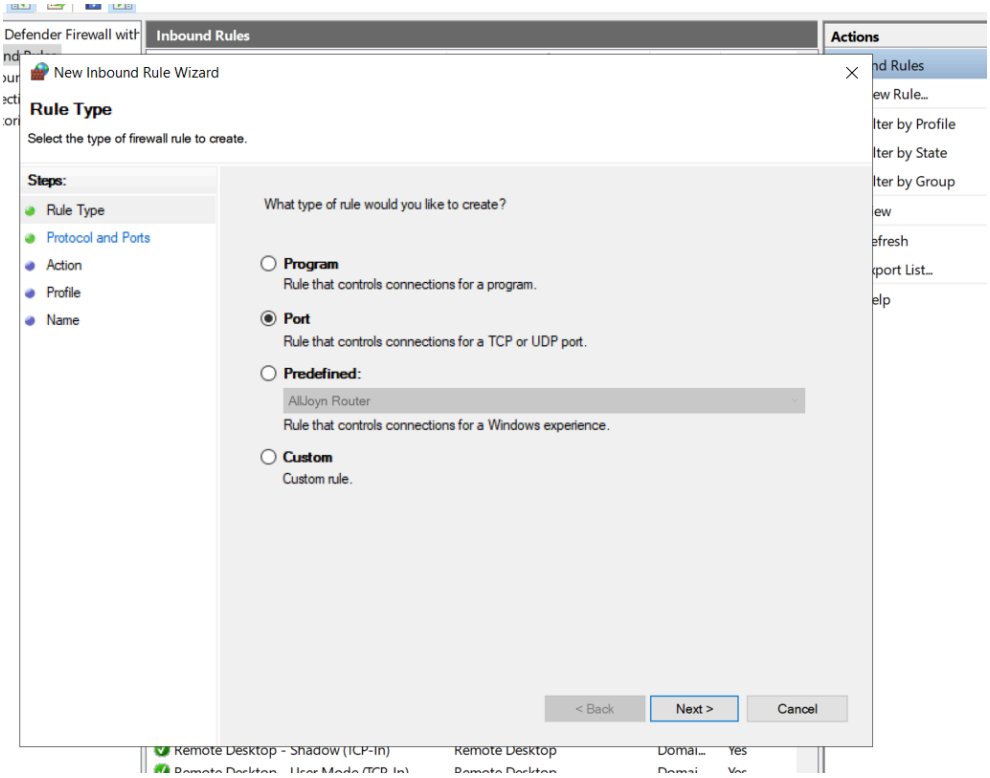
30) Changing Firewall Settings

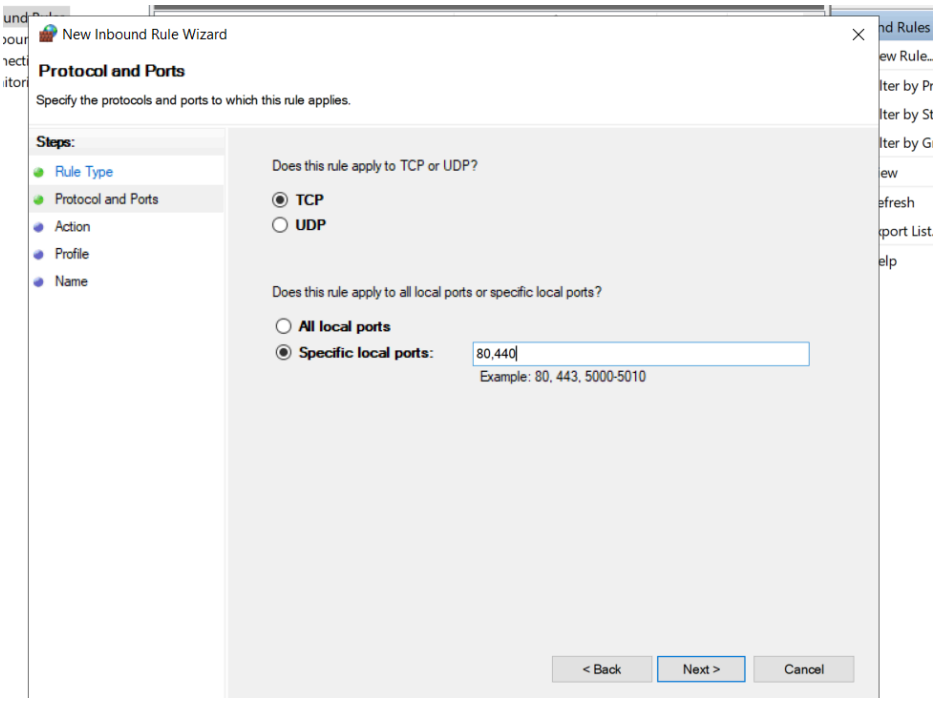
Firewall Settings need to be changed if the website is to be accessed by the local machine.

Go to Advanced Setting.

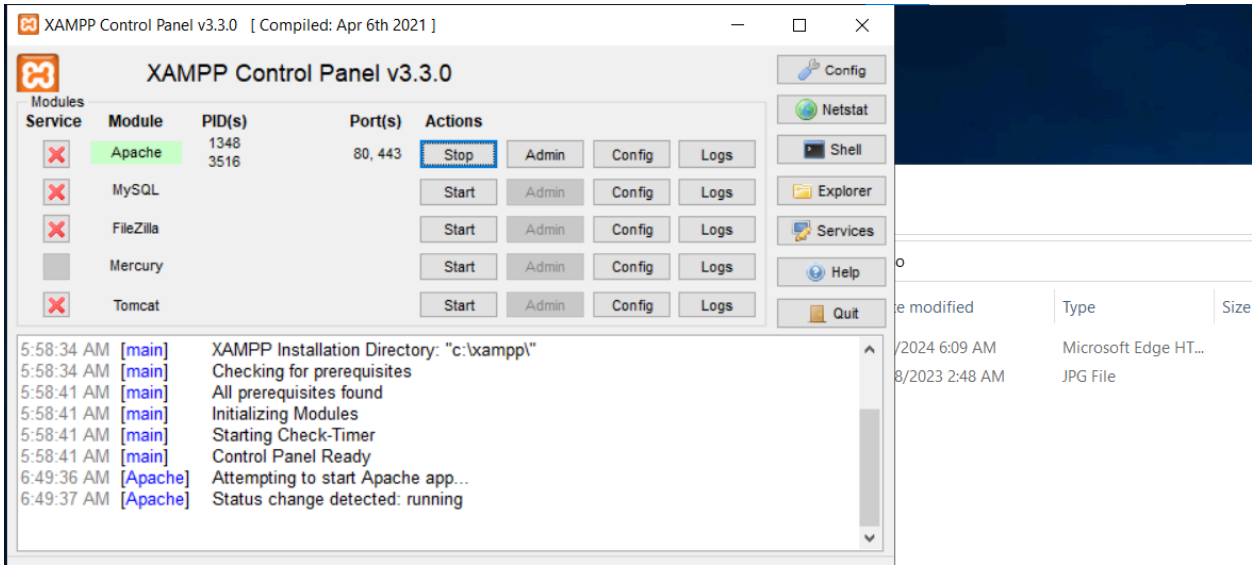


31) Add new rule for allowing HTTP (Port 80) and HTTPS (Port 443).





32) Starting Apache server



33) The static website is successfully accessible by the Local Machine.