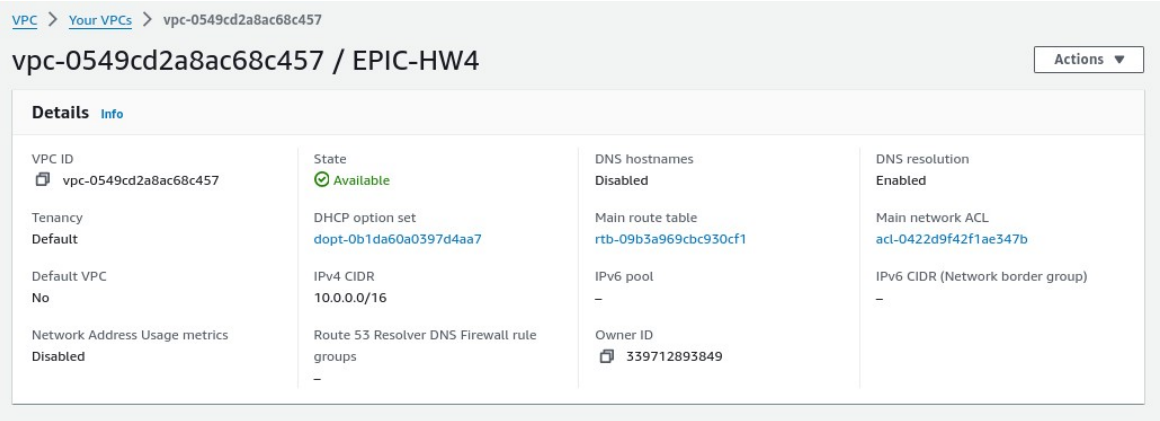
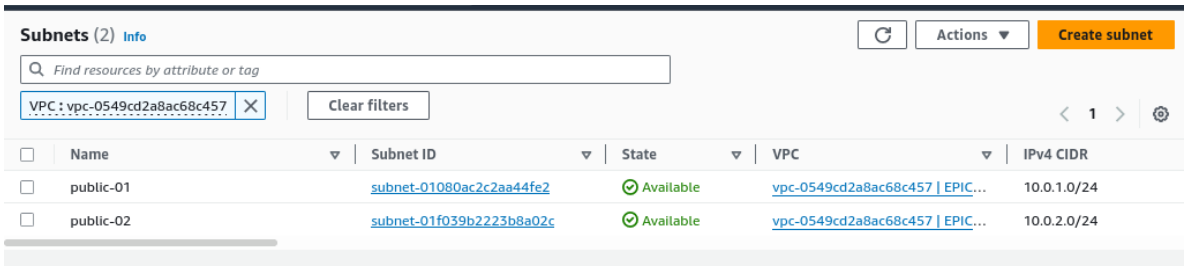
Expectation for Exercise 2:

- Create new VPC:

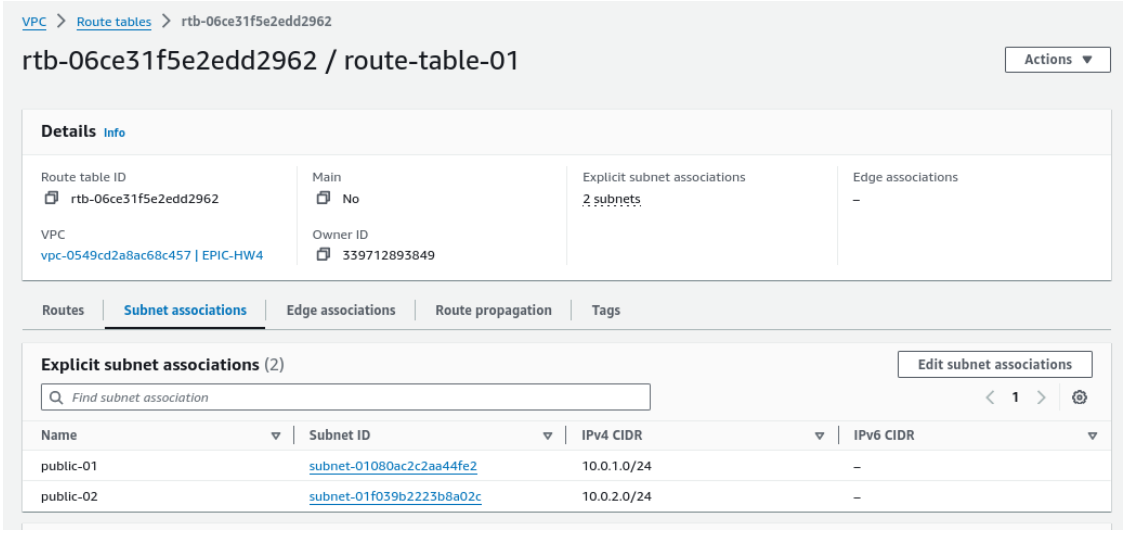


Expectation for Exercise 3:

- Create 2 subnets:

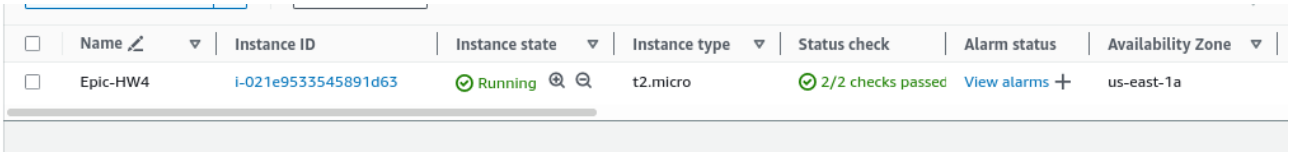


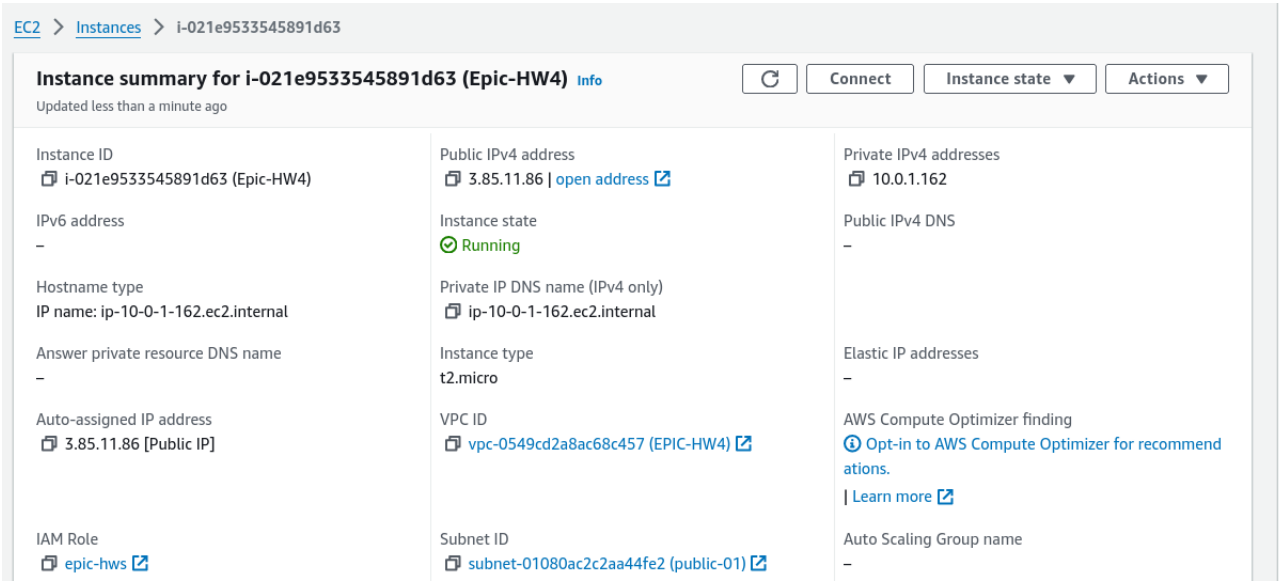
- create route table and attach your subnets to it:



Expectation for Exercise 4:

- Create EC2 instance :





Expectation for Exercise 5:

- Install nginx & Change the conf to be available on 80 and 443:

```
server {
        listen 80;
        server_name 3.85.11.86
        root /var/www/html;
        index index.html index.htm index.nginx-debian.html;

        location / {
                try_files $uri $uri/ =404;
        }
}

server{
        listen 443 ssl;
        server_name 3.85.11.86
        root /var/www/html;
        index index.nginx-debian.html;

        ssl_certificate /etc/ssl/certs/epic-hws.crt;
        ssl_certificate_key /etc/ssl/private/epic-hws.key;
        ssl_protocols TLSv1 TLSv1.1 TLSv1.2 TLSv1.3;

        location / {
           try_files $uri $uri/ =404;
        }
}
```

```
ubuntu@ip-10-0-1-162:~$ curl http://3.85.11.86:80
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
ubuntu@ip-10-0-1-162:~$ curl --insecure https://3.85.11.86:443
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
```

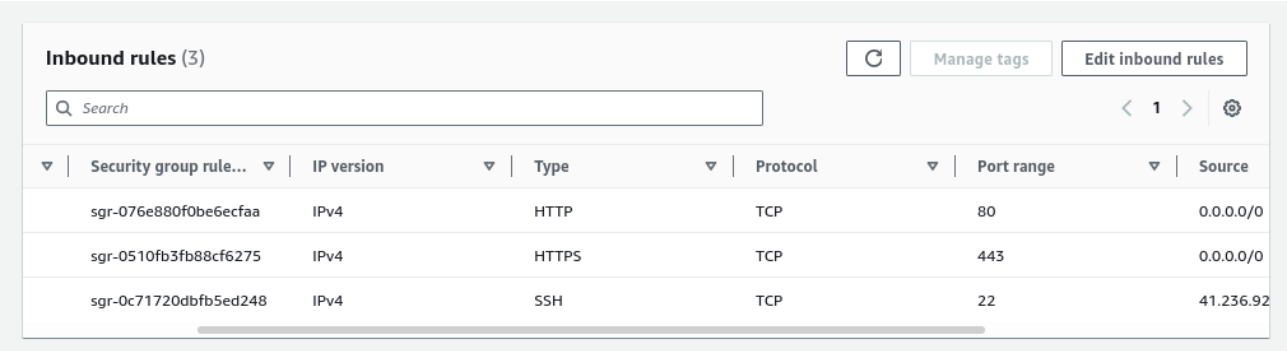
```
ubuntu@ip-10-0-1-162:~$ curl -I http://3.85.11.86:80
HTTP/1.1 200 OK
Server: nginx/1.24.0 (Ubuntu)
Date: Wed, 15 May 2024 13:29:04 GMT
Content-Type: text/html
Content-Length: 615
Last-Modified: Tue, 11 Apr 2023 01:45:34 GMT
Connection: keep-alive
ETag: "6434bbbe-267"
Accept-Ranges: bytes

ubuntu@ip-10-0-1-162:~$ curl -I --insecure https://3.85.11.86:443
HTTP/1.1 200 OK
Server: nginx/1.24.0 (Ubuntu)
Date: Wed, 15 May 2024 13:29:27 GMT
Content-Type: text/html
Content-Length: 615
Last-Modified: Tue, 11 Apr 2023 01:45:34 GMT
Connection: keep-alive
ETag: "6434bbbe-267"
Accept-Ranges: bytes

ubuntu@ip-10-0-1-162:~$
```

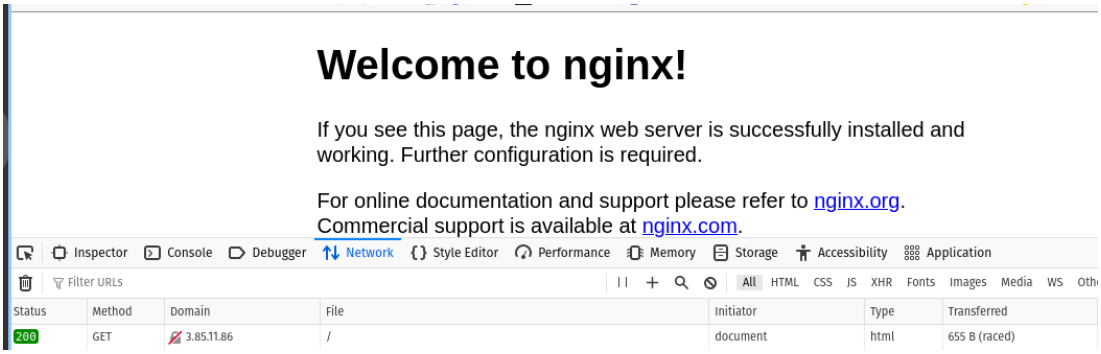
Expectation for Exercise 6:

- Update your security group and open access on ports 80 and 443:



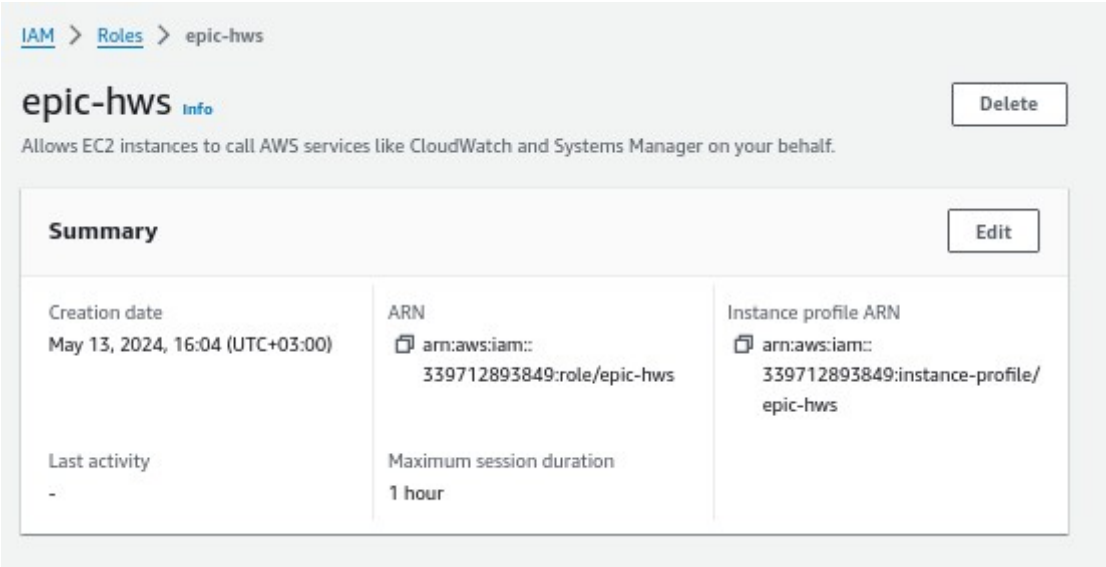
Expectation for Exercise 7:

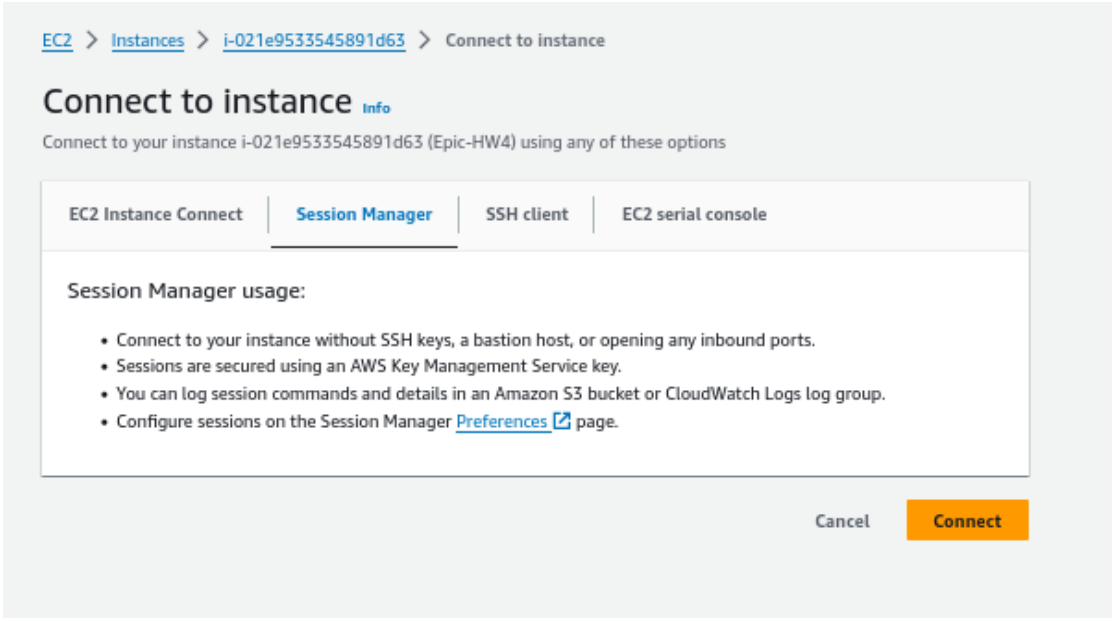
- Try to access EC2 instance public IP:

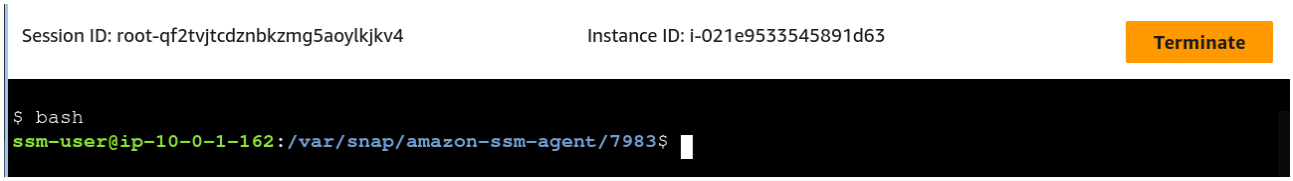


Expectation for Exercise 8:

- Create new Role for EC2 :







Expectation for Exercise 9:

- Run one of the scripts you've created in hometask 2: The script's link

```
ssm-user@ip-10-0-1-162:/var/snap/amazon-ssm-agent/7983$ sudo ./myscript.sh
Select an operation:
1) Launch htop on instance
2) Launch tcpdump utility on instance
3) Show EC2 instance metadata
Enter choice:
```

➔ option 1:

```
CPU[|                                                    0.4%] Tasks: 32, 52 thr, 77 kthr; 1 running
Mem[||||||||||||||||||||||||||||                       162M/957M] Load average: 0.00 0.02 0.00
Swp[                                                     0K/0K] Uptime: 04:50:02

  Main   I/O
    PID USER       PRI  NI  VIRT   RES   SHR S  CPU%▽MEM%   TIME+  Command
      1 root        20   0 22176 13236  9524 S   0.0  1.4  0:04.34 /sbin/init
    138 root        20   0 50416 16424 15272 S   0.0  1.7  0:00.47 /usr/lib/systemd/systemd-journald
    181 root        RT   0  282M 27136  8704 S   0.0  2.8  0:00.19 /sbin/multipathd -d -s
    185 root        20   0 26468  8132  5060 S   0.0  0.8  0:00.21 /usr/lib/systemd/systemd-udevd
    189 root        20   0  282M 27136  8704 S   0.0  2.8  0:00.00 /sbin/multipathd -d -s
```

➔ option 2:

```
ssm-user@ip-10-0-1-162:/var/snap/amazon-ssm-agent/7983$ sudo ./myscript.sh
Select an operation:
1) Launch htop on instance
2) Launch tcpdump utility on instance
3) Show EC2 instance metadata
Enter choice: 2
Launching tcpdump...
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on enX0, link-type EN10MB (Ethernet), snapshot length 262144 bytes
18:00:16.930662 IP ip-10-0-1-162.42552 > 67.220.240.135.https: Flags [P.], seq 695958514:695958817, ack 926278664, win 3193, length 303
18:00:16.932271 IP 67.220.240.135.https > ip-10-0-1-162.42552: Flags [.], ack 303, win 20508, length 0
18:00:17.033415 IP ip-10-0-1-162.47308 > 10.0.0.2.domain: 8117+ [1au] PTR? 135.240.220.67.in-addr.arpa. (56)
18:00:17.035515 IP 10.0.0.2.domain > ip-10-0-1-162.47308: 8117 NXDomain 0/1/1 (127)
18:00:17.035977 IP ip-10-0-1-162.38650 > 10.0.0.2.domain: 42788+ [1au] PTR? 162.1.0.10.in-addr.arpa. (52)
```

➔ option 3:

```
ssm-user@ip-10-0-1-162:/var/snap/amazon-ssm-agent/7983$ sudo ./myscript.sh
Select an operation:
1) Launch htop on instance
2) Launch tcpdump utility on instance
3) Show EC2 instance metadata
Enter choice: 3
Retrieving instance metadata..
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100    56  100    56    0     0  23064      0 --:--:-- --:--:-- --:--:-- 28000
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left  Speed
100   325  100   325    0     0  31865      0 --:--:-- --:--:-- --:--:-- 32500
ami-id
```

Student Name: Lama Salah