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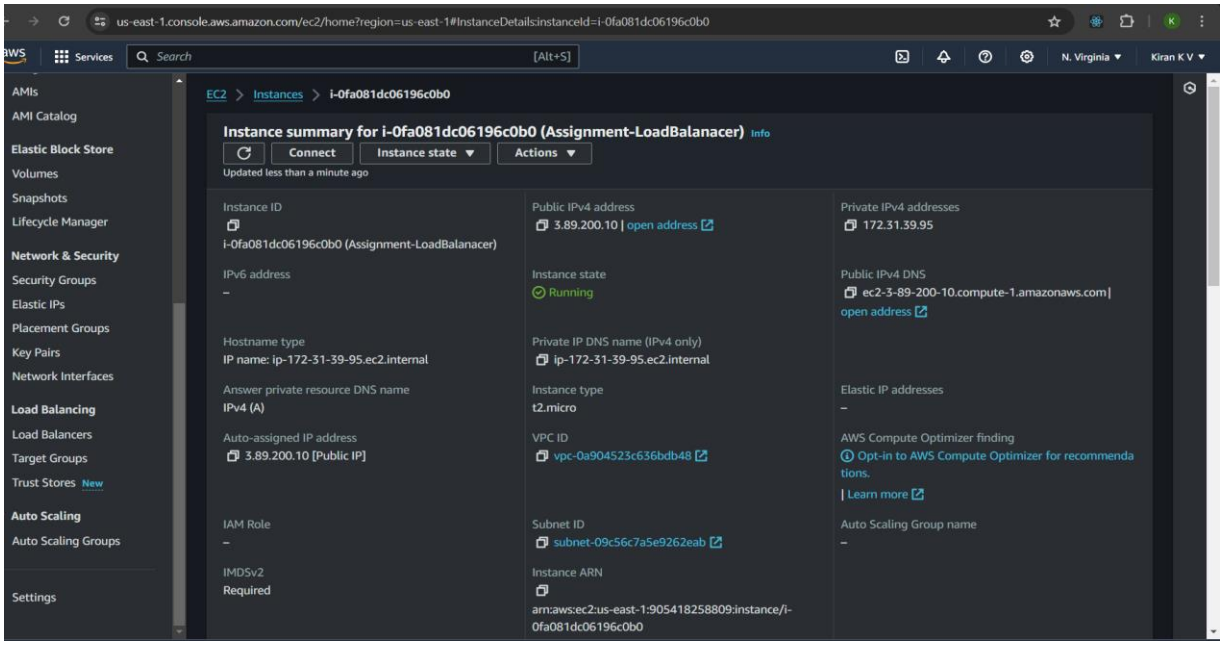
Batch: 2024-11761

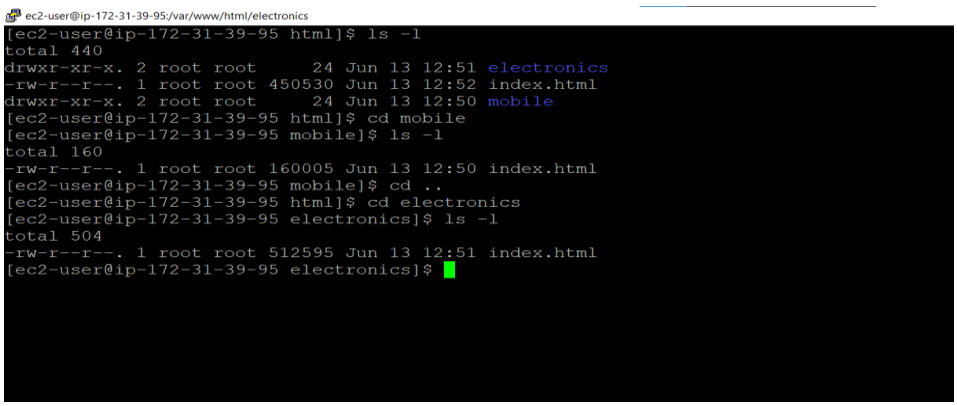
Elastic Load Balancer Task: - (Application Load Balancer)

Create highly available architecture such that homepage should available homepage of e-commerce and iPhone website should be available on routing path **/mobile/,** PlayStation should be available on routing **/electronics/.**

Step 1: Created Red Hat Linux EC2-instance server for hosting e-commerce and mobile, electronics applications with the name **Assignment-LoadBalancer**.



Step 2: Hosted e-commerce application that is **(amazon application) in** main directory (/var/www/html/index.html) and created mobile and electronics directories, for mobile application index file **(iPhone application)** added in mobile directory (/var/www/html/mobile/index.html) and for electronics application index file **(PlayStation application**) added in electronics directories(/var/www/html/electronics/index.html).

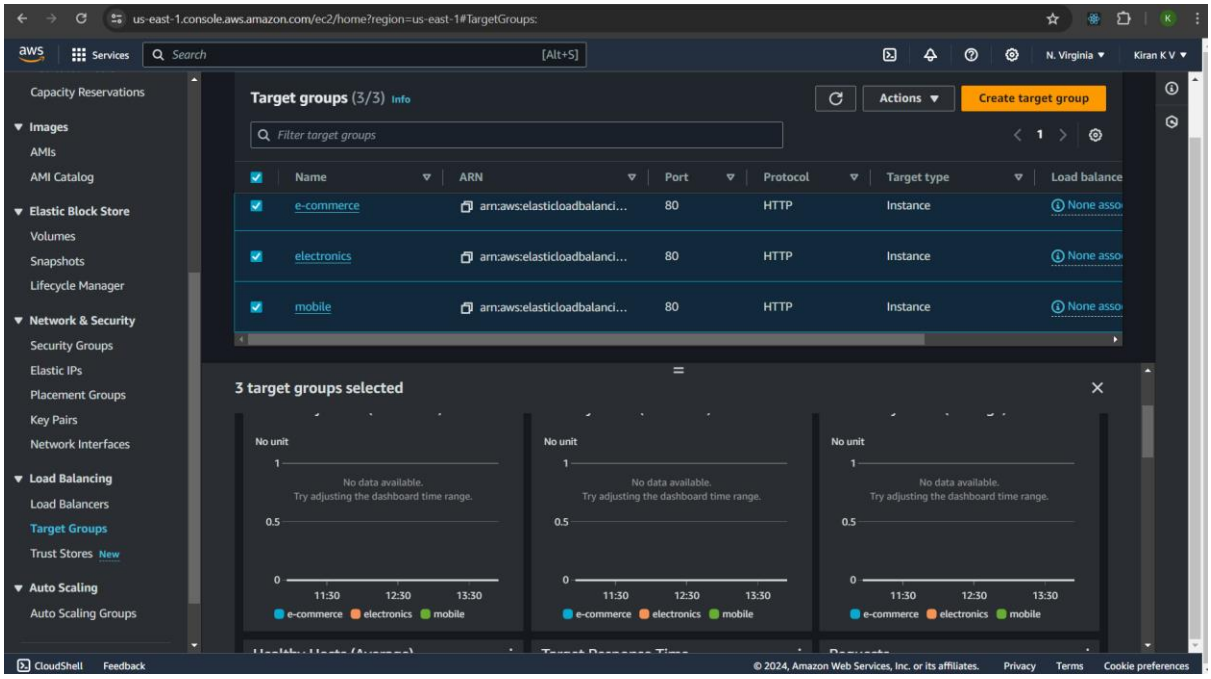


Step 3: Started httpd server and enabled.

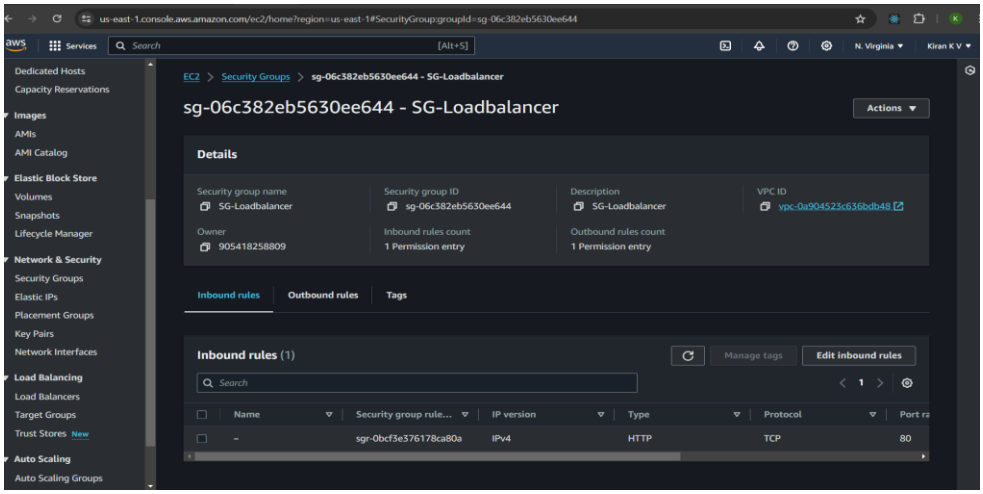
```
[ec2-user@ip-172-31-39-95 html]$ sudo systemctl start httpd
[ec2-user@ip-172-31-39-95 html]$ sudo systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.service → /usr/lib/systemd/system/httpd.service.
[ec2-user@ip-172-31-39-95 html]$ sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
     Active: active (running) since Thu 2024-06-13 12:52:23 UTC; 17s ago
       Docs: man:httpd.service(8)
   Main PID: 14465 (httpd)
     Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec:   0 B/sec"
      Tasks: 177 (limit: 4400)
     Memory: 35.9M
        CPU: 76ms
     CGroup: /system.slice/httpd.service
             ├─14465 /usr/sbin/httpd -DFOREGROUND
             ├─14466 /usr/sbin/httpd -DFOREGROUND
             ├─14467 /usr/sbin/httpd -DFOREGROUND
             ├─14468 /usr/sbin/httpd -DFOREGROUND
             └─14469 /usr/sbin/httpd -DFOREGROUND

Jun 13 12:52:23 ip-172-31-39-95.ec2.internal systemd[1]: Starting The Apache HTTP Server...
Jun 13 12:52:23 ip-172-31-39-95.ec2.internal systemd[1]: Started The Apache HTTP Server.
Jun 13 12:52:23 ip-172-31-39-95.ec2.internal httpd[14465]: Server configured, listening on: port 80
[ec2-user@ip-172-31-39-95 html]$ ls
```

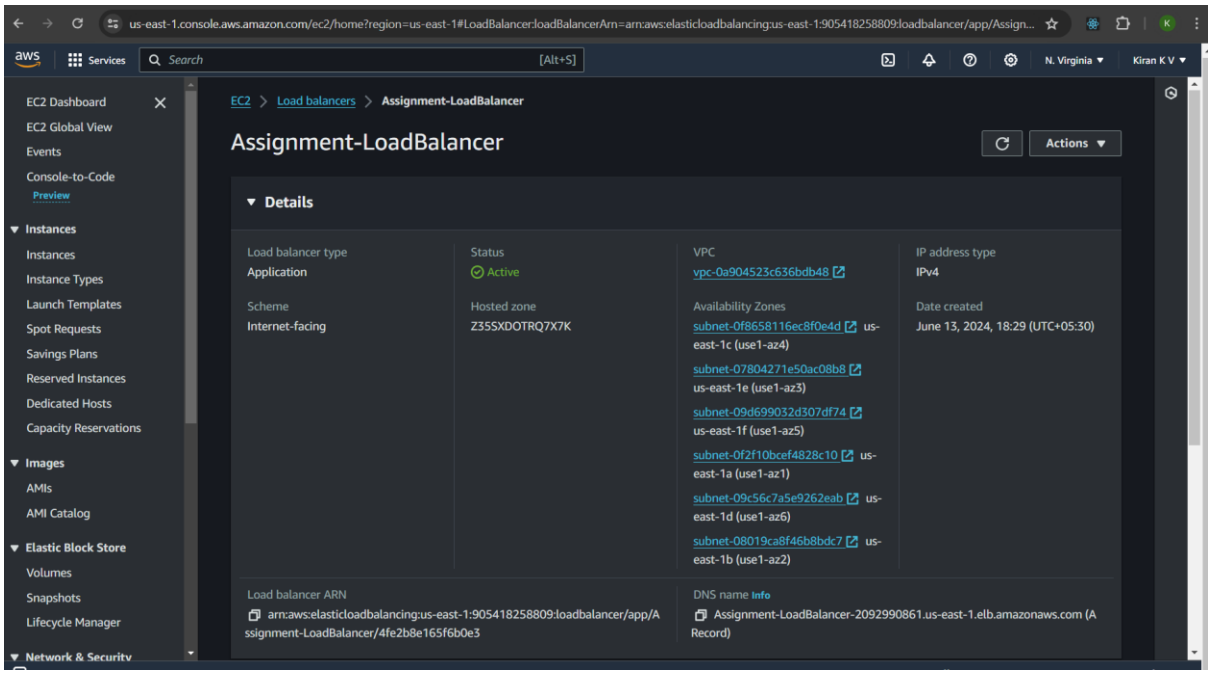
Step 4: Created Target groups for e-commerce application and mobile, electronics application aligning with specific health-check paths and ec2-instance servers.



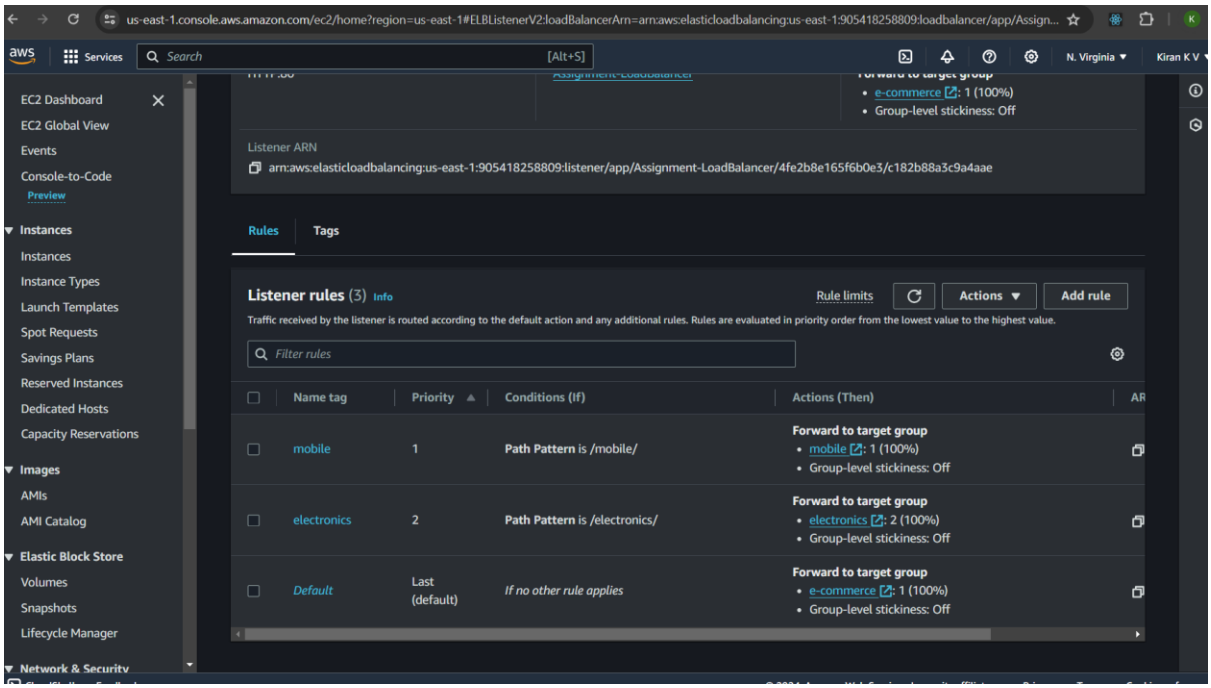
Step 5 : Created security group for load balancer with allowing http port 80.



Step 6: Created Application Load Balancer with security group http and listener port 80, attached ec2-instance server



Step 7: Added listener port rules with specific conditions and priority wise.

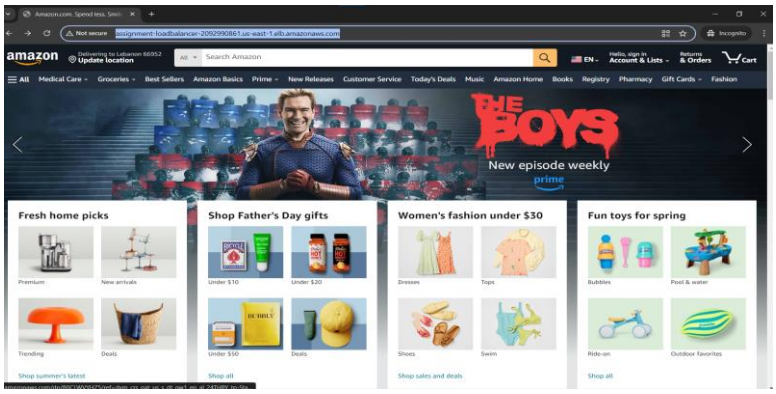


Step 8: Created Application Load Balancer and tested in internet.

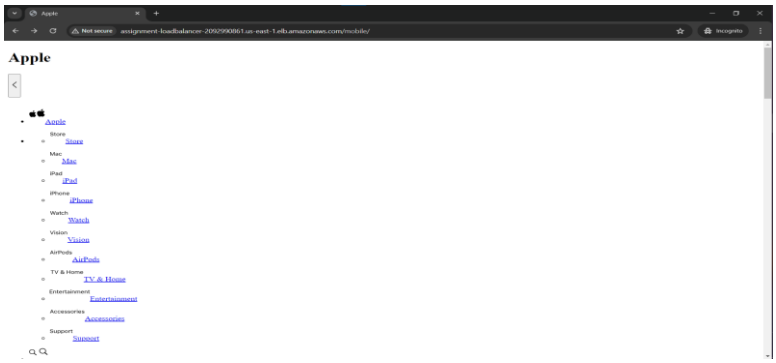
Testing:

DNS url : Assignment-LoadBalancer-2092990861.us-east-1.elb.amazonaws.com

HomePage: http://assignment-loadbalancer-2092990861.us-east-1.elb.amazonaws.com/



Mobilepage: http://assignment-loadbalancer-2092990861.us-east-1.elb.amazonaws.com/mobile/



ElectronicsPage: http://assignment-loadbalancer-2092990861.us-east-1.elb.amazonaws.com/electronics/