

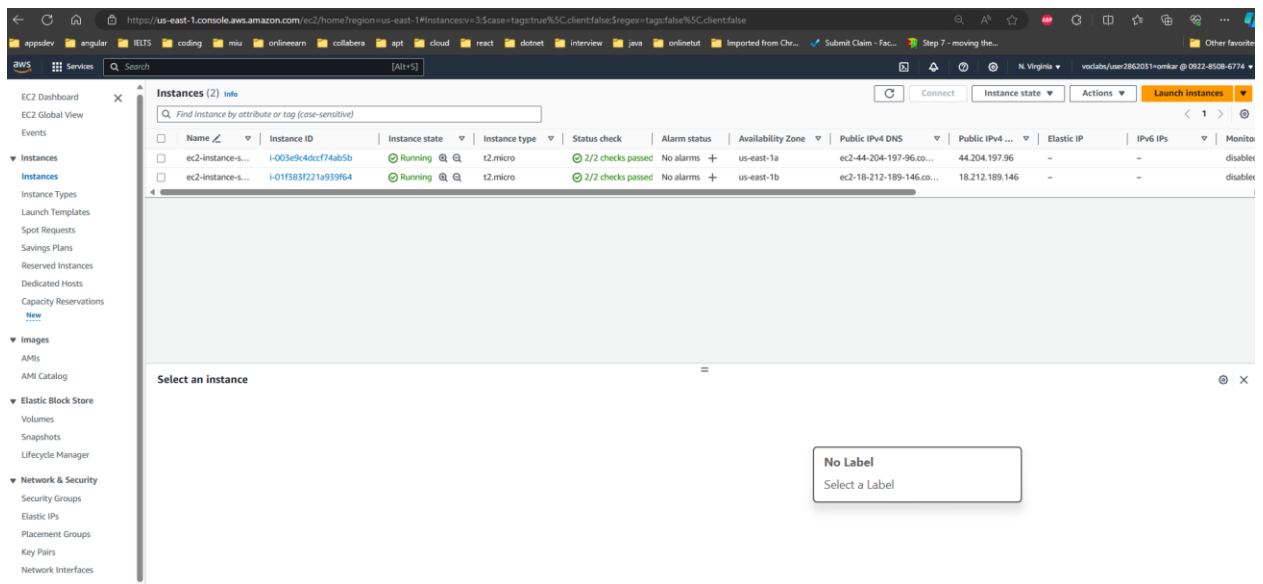
# Lab4

## Task 1: Run 2 web servers behind ALB

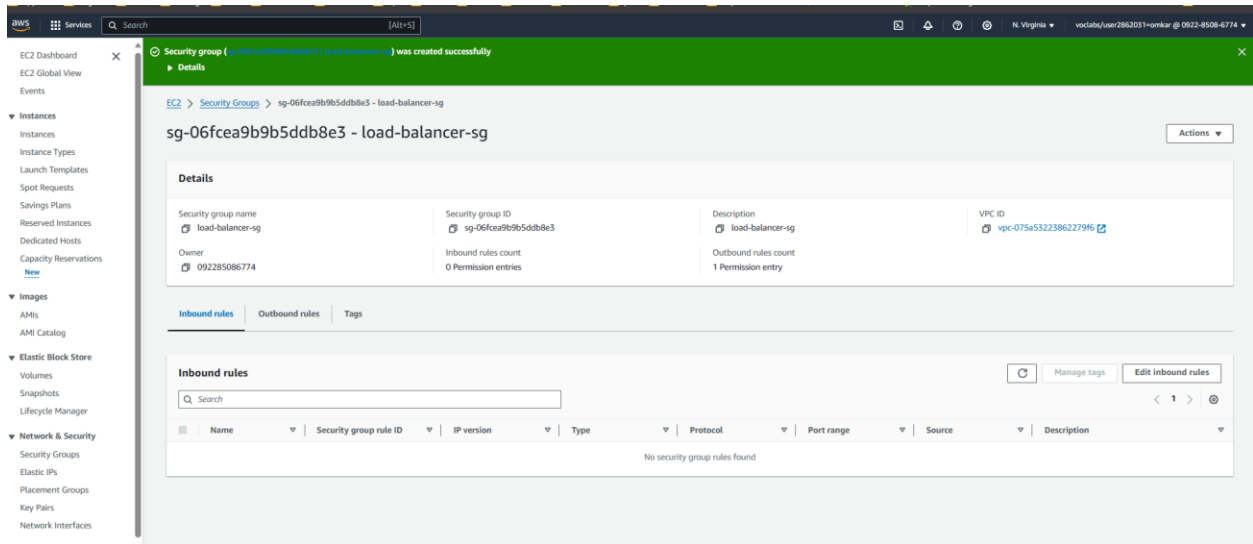
Step1: Created two EC2 instance Server

- a> In Networking Settings, select two different AZ for each EC2 Server
- b> Create a security group(firewall) and allow HTTP type with TCP protocol and 80 port.
- c> Add user data so that EC2 server start automatically

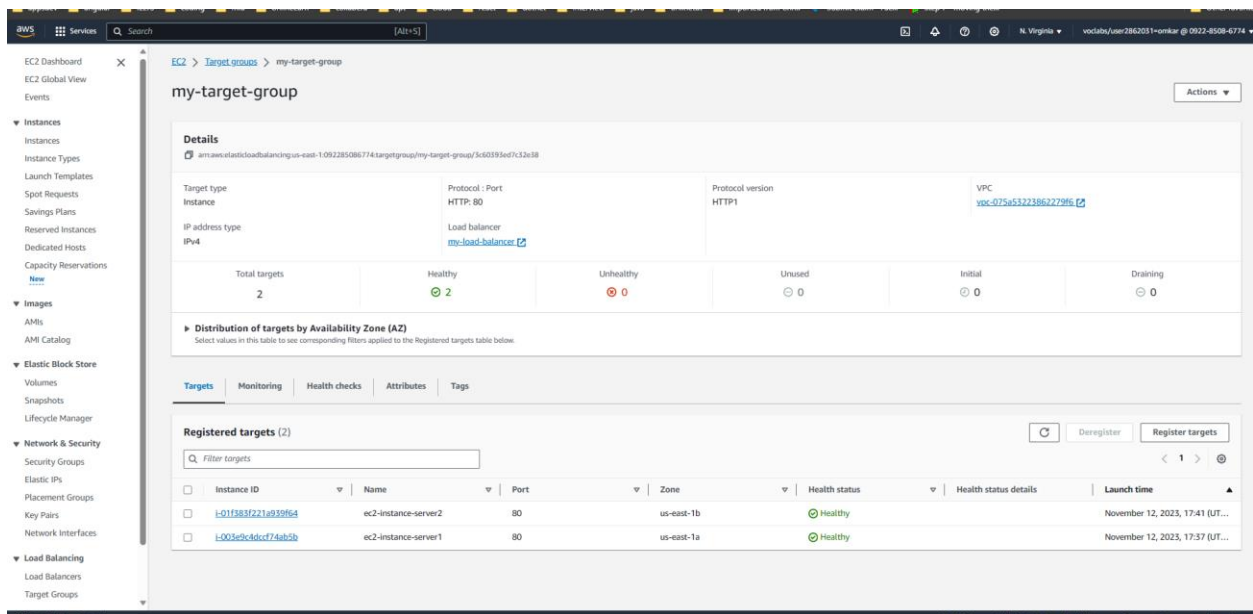
```
#!/bin/bash
yum install -y httpd
systemctl start httpd
systemctl enable httpd
echo "<h1> Hello from omkar $(hostname -f)</h1>" >/var/www/html/index.html
```



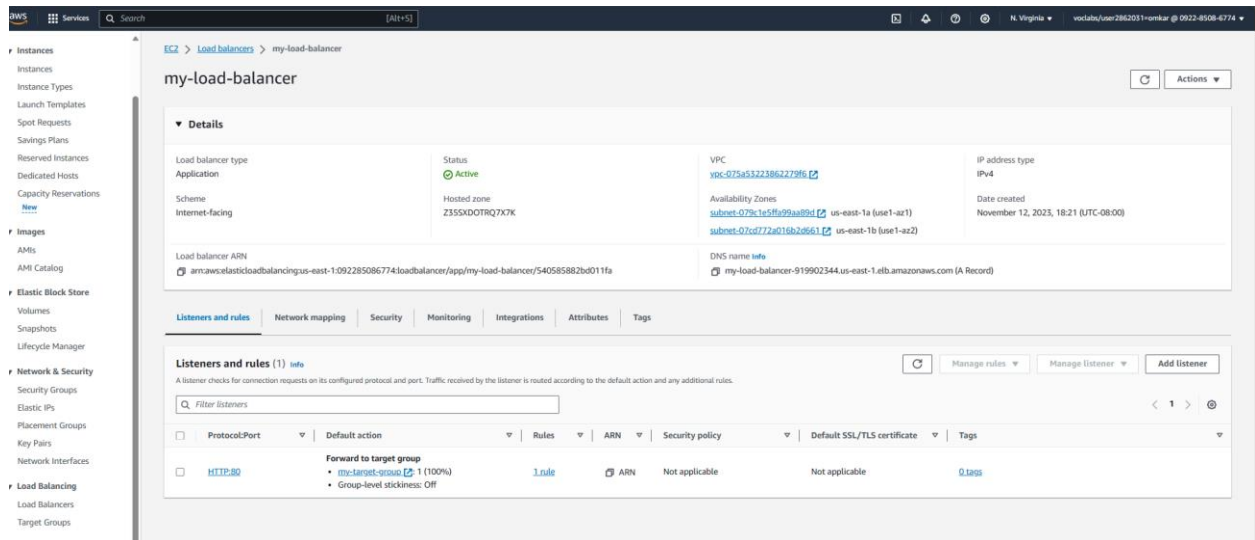
1. Create Security group for ALB



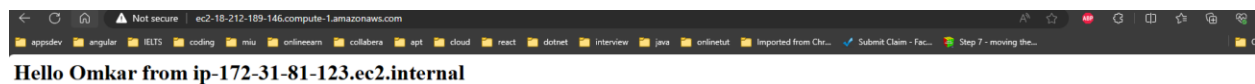
### Step3: Create Target group:



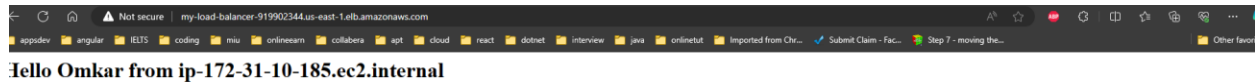
### Step 4: create ALB:



## Step5: Loadbalancer DNS:



When one EC2 server is Unhealthy: The load balance redirect to another healthy server.



## Task: 2 Run Web server behind NLB

Step1: Follow the same step as above except NLB and Target Group, In target group, select TCP protocol instead of HTTP.

Target-groupf-NLB

**Details**

arn:aws:elasticloadbalancing:us-east-1:092285086774:targetgroup/Target-groupf-NLB/7ae64c6b73a4b9

Target type Instance	Protocol : Port TCP: 80	VPC <a href="#">vpc-075a53223862279f6</a>	IP address type IPv4
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[Load balancer](#)  
[load-balancer-NLB](#)

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
2	2	0	0	0	0

► **Distribution of targets by Availability Zone (AZ)**  
Select values in this table to see corresponding filters applied to the Registered targets table below.

**Targets** | Monitoring | Health checks | Attributes | Tags

**Registered targets (2)**

Filter targets

<input type="checkbox"/>	Instance ID	Name	Port	Zone	Health status	Health status details	Launch time
<input type="checkbox"/>	<a href="#">i-01f383f221a339f64</a>	ec2-instance-server2	80	us-east-1b	Healthy		November 12, 2023, 18:46 (UTC-08:00)
<input type="checkbox"/>	<a href="#">i-003a9c4dc774ab5b</a>	ec2-instance-server1	80	us-east-1a	Healthy		November 12, 2023, 17:37 (UTC-08:00)

## Step2: NLB

load-balancer-NLB

**Details**

Load balancer type Network	Status Provisioning	VPC <a href="#">vpc-075a53223862279f6</a>	IP address type IPv4
Scheme Internet-facing	Hosted zone Z26RNL4JYFOTI	Availability Zones <a href="#">subnet-079c1e5f9d99a82d4</a> us-east-1a (use1-az1) <a href="#">subnet-07cd772a016b28661</a> us-east-1b (use1-az2)	Date created November 12, 2023, 18:49 (UTC-08:00)

Load balancer ARN  
arn:aws:elasticloadbalancing:us-east-1:092285086774:loadbalancer/net/load-balancer-NLB/c168ae26fa4443f

DNS name  
[load-balancer-NLB-c168ae26fa4443f.elb.us-east-1.amazonaws.com \(A Record\)](#)

**Listeners** | Network mapping | Security | Monitoring | Integrations | Attributes | Tags

**Listeners (1)**

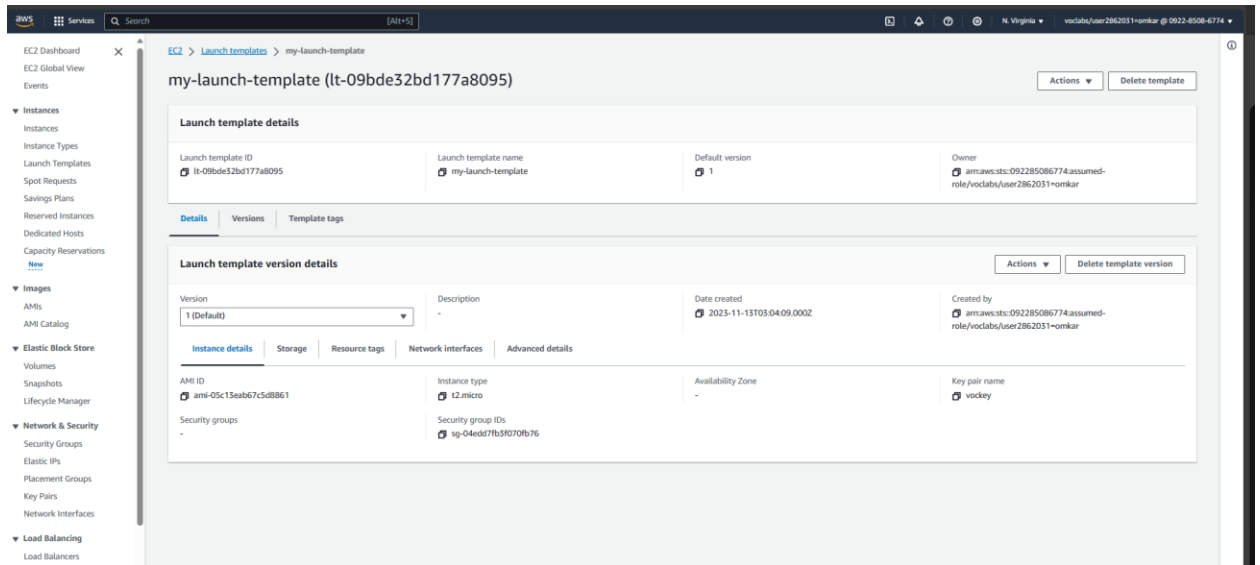
A listener checks for connection requests using the protocol and port that you configure. Traffic received by a Network Load Balancer listener is forwarded to the selected target group.

Filter listeners

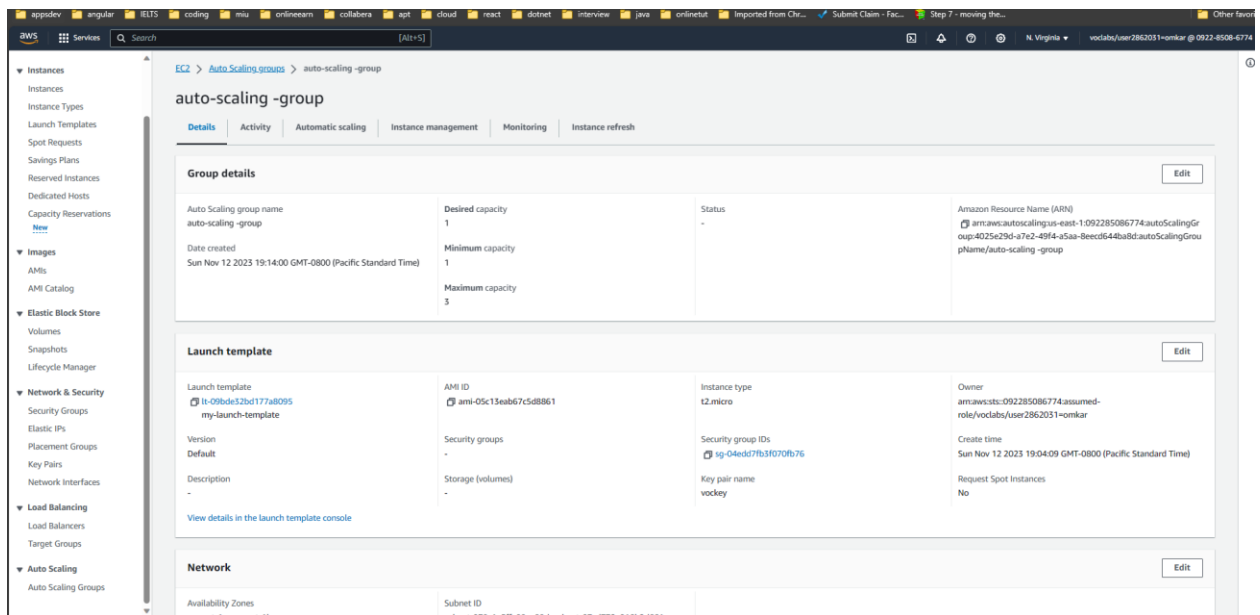
<input type="checkbox"/>	Protocol/Port	Default action	ARN	Security policy	Default SSL/TLS certificate	ALPN policy	Tags
<input type="checkbox"/>	<a href="#">TCP:80</a>	Forward to target group • <a href="#">Target-groupf-NLB</a>	<a href="#">ARN</a>	Not applicable	Not applicable	None	<a href="#">0 tags</a>

## Task 3:Auto Scaling Group:

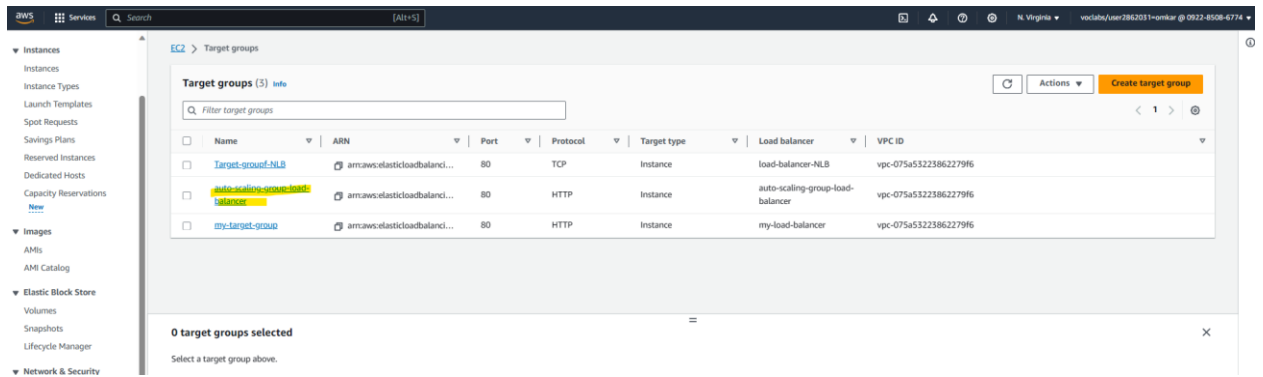
### Step 1: create Launch template



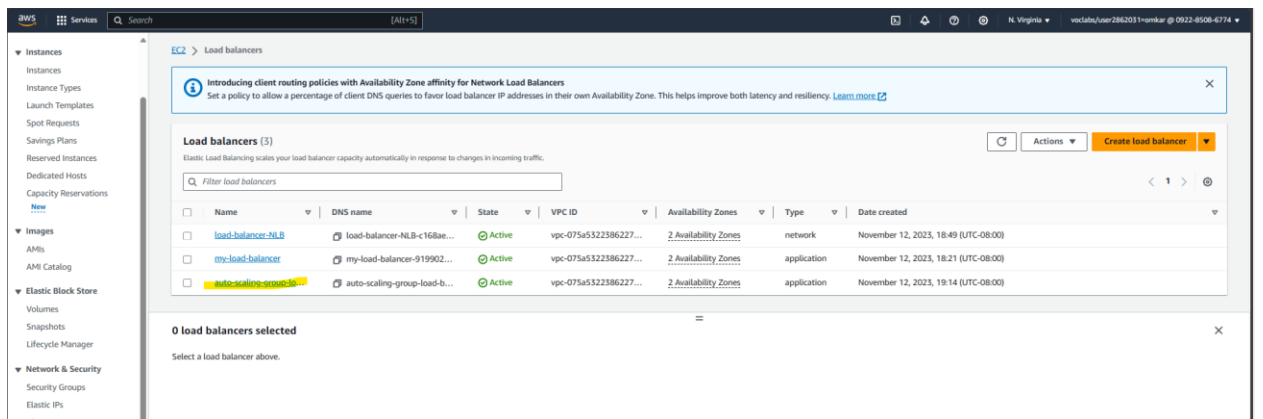
Step 2: Create auto scaling group:



Target group created:



Load Balancer created:



Response from Load Balancer:

