

## AWS CloudSpace Academy Class promotion:

AWS Cloud & DevOps Engineer 2025

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Course: ELB HOMEWORK

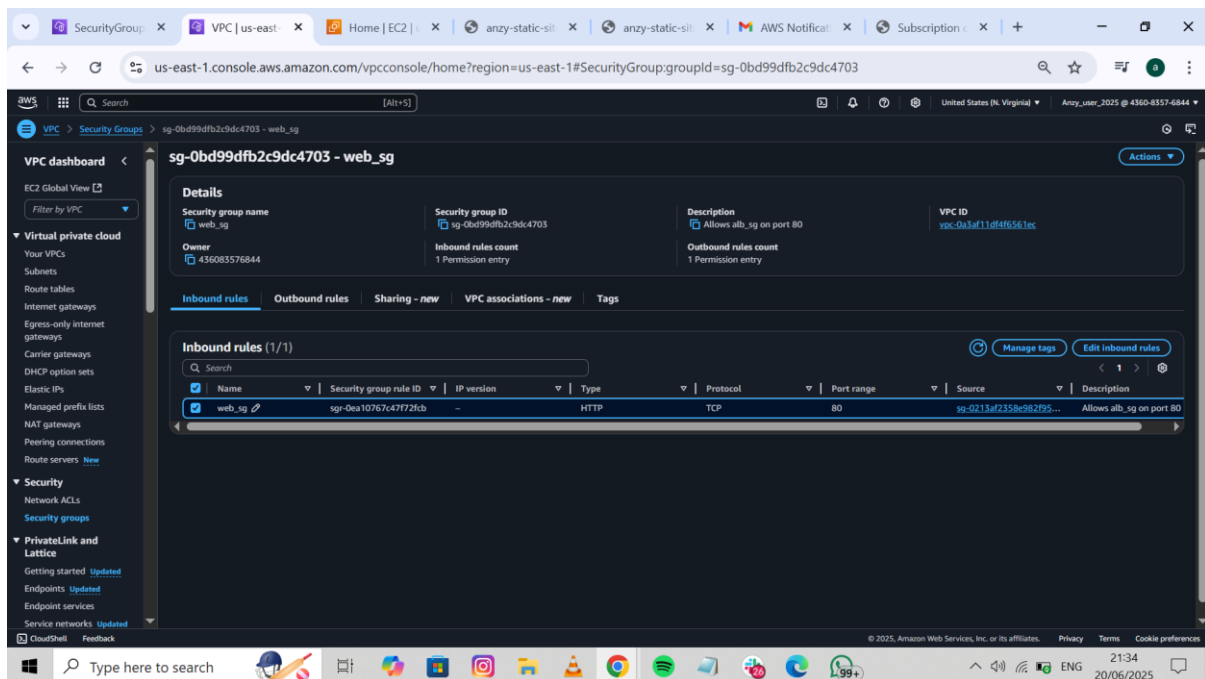
Teacher: Narcisse Tcheumo

### Homework 1: Internet-facing Load Balancer with Public Subnet

**Step 1:** Create ALB and Webserver Security Group —> “alb\_sg” and “web\_sg” alb\_sg should allow 0.0.0.0/0 on port 80

web\_sg should allow alb\_sg on port 80

take screenshot showing inbound rule of web\_sg



NB: please make sure you TAG your resources and note the alb\_sg id

**Step 2:** Create your Public webserver Image —> tag: image\_server\_1 and tag: image\_server\_2

test using public ip address

take screenshot showing timeout of both in the browser



## This site can't be reached

54.237.222.80 took too long to respond.

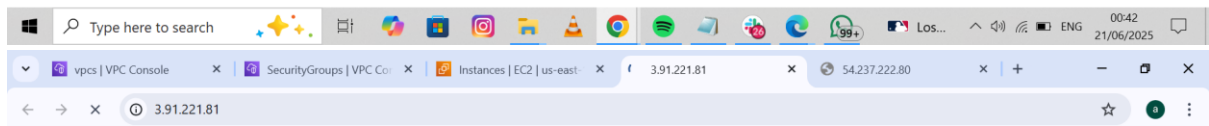
Try:

- Checking the connection
- [Checking the proxy and the firewall](#)
- [Running Windows Network Diagnostics](#)

ERR\_CONNECTION\_TIMED\_OUT

Reload

Details



## This site can't be reached

3.91.221.81 took too long to respond.

Try:

- Checking the connection
- [Checking the proxy and the firewall](#)
- [Running Windows Network Diagnostics](#)

ERR\_CONNECTION\_TIMED\_OUT

Reload

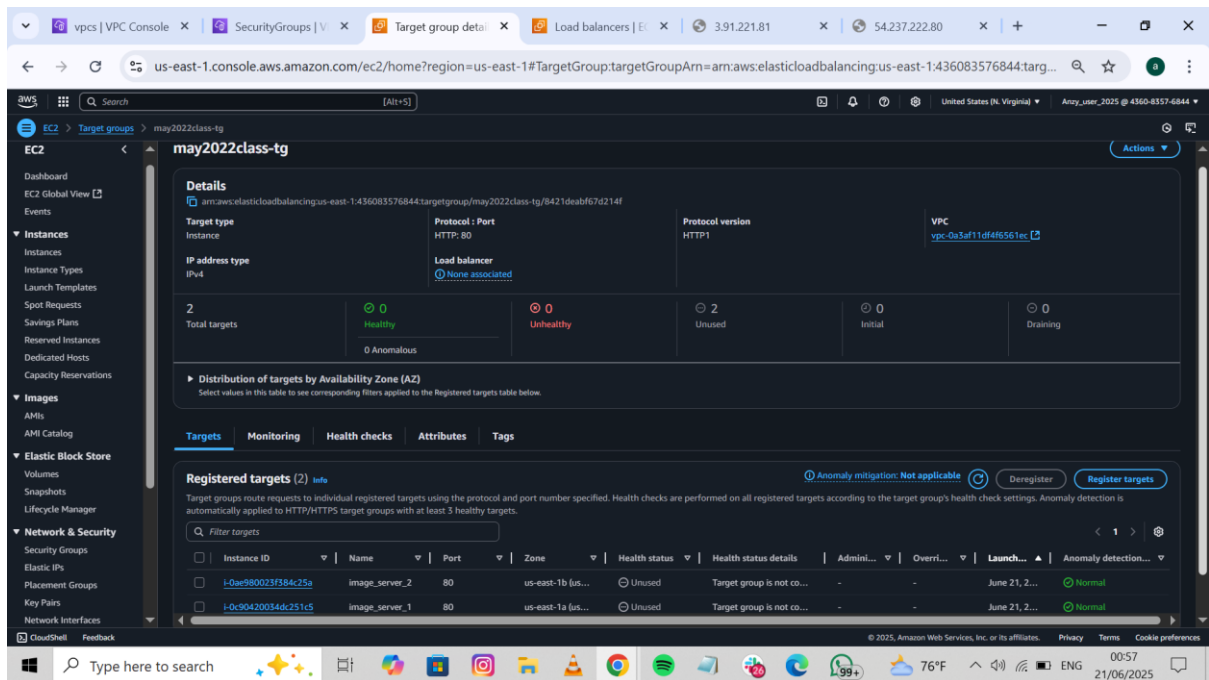
Details



**Step 3:** Create Target Group with targets (Webservers) —> name: "may2022class-tg"

please observe the status

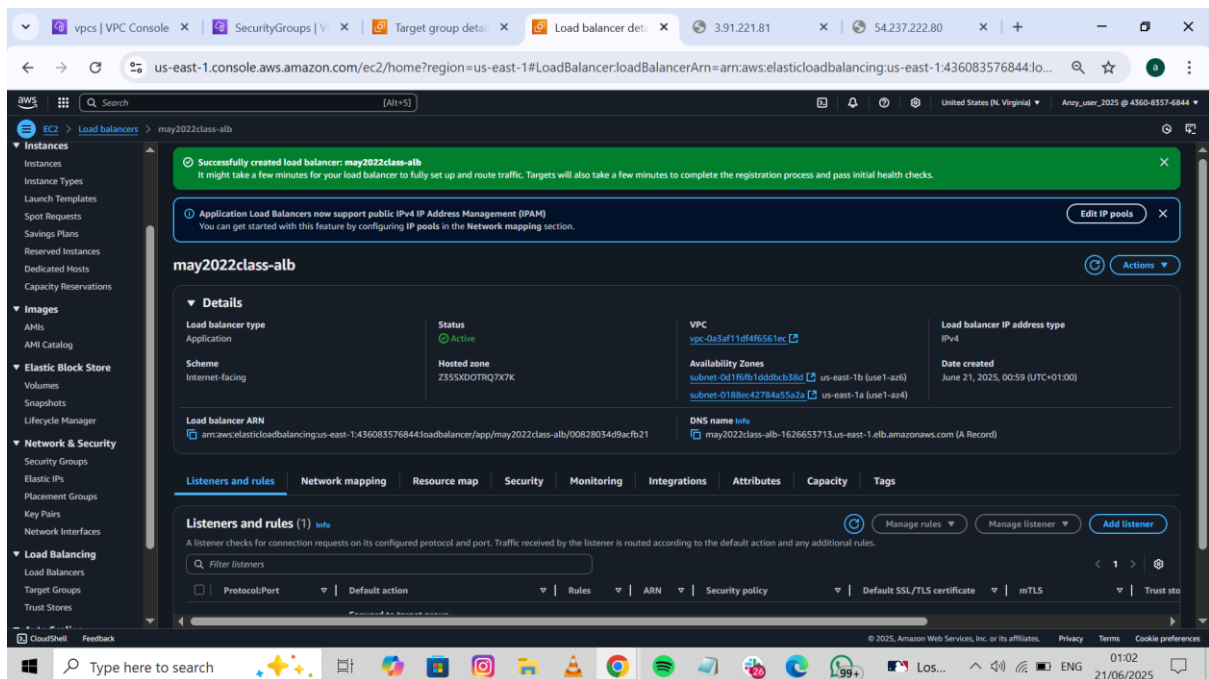
take screenshot showing "Health status details"



**Step 4:** Create an Application Load Balancer (ALB) —> name: “may2022class-alb”

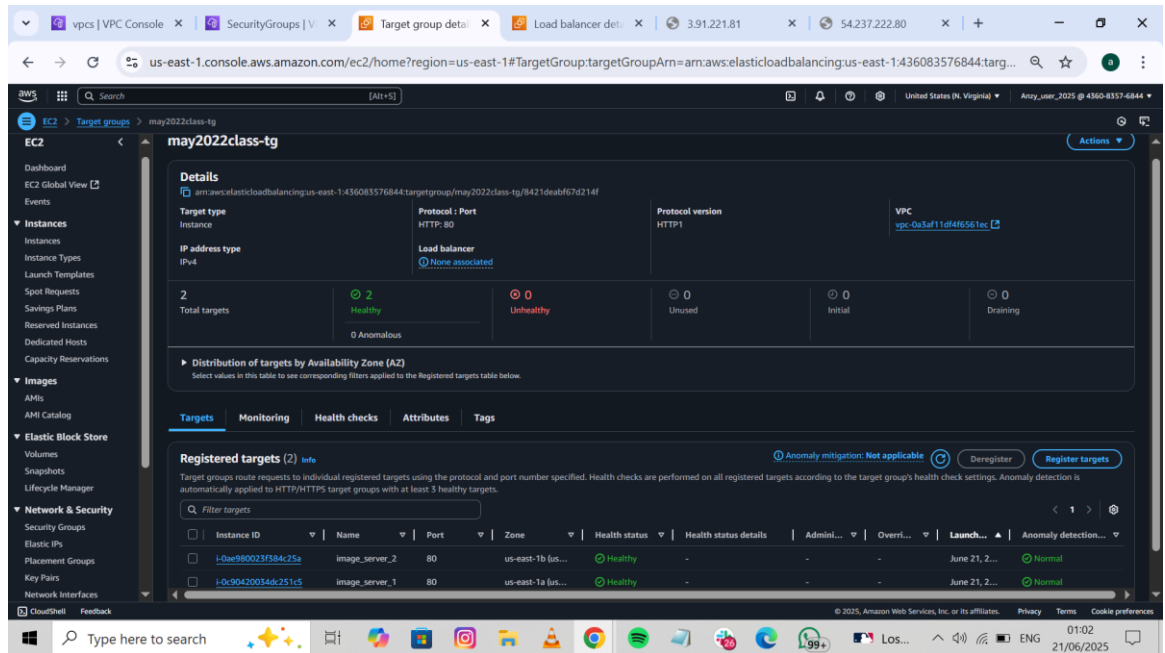
listener on http (80) only

select may2022class-alb > click on Listener and take a screenshot



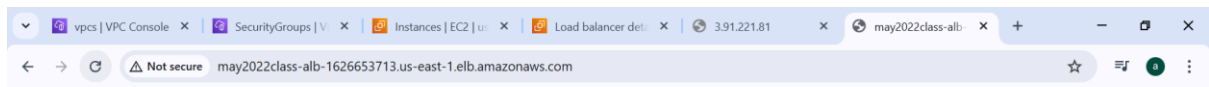
**Step 5:** Observe the target group status again in the console

- take a screenshot when it shows healthy

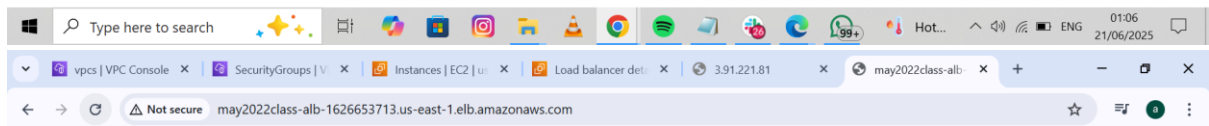


**Step 6:** test your website in a browser using the ALB dns name and refresh multiple time

- take screenshots of both Blue and Red



Welcome to the Image Server 1 (Blue)

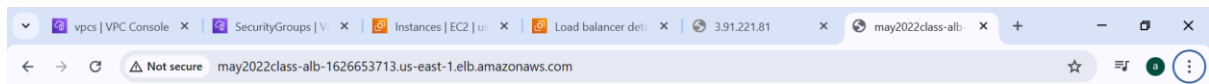


Welcome to the Image Server 2 (Red)

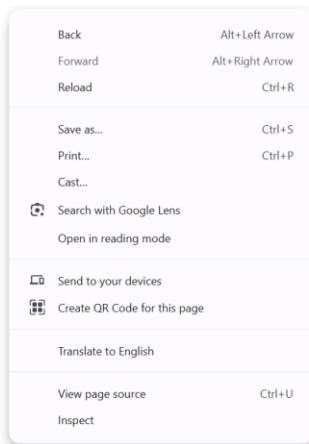


**Step 7:** stop webserver 1 and test again to see which server is now responding

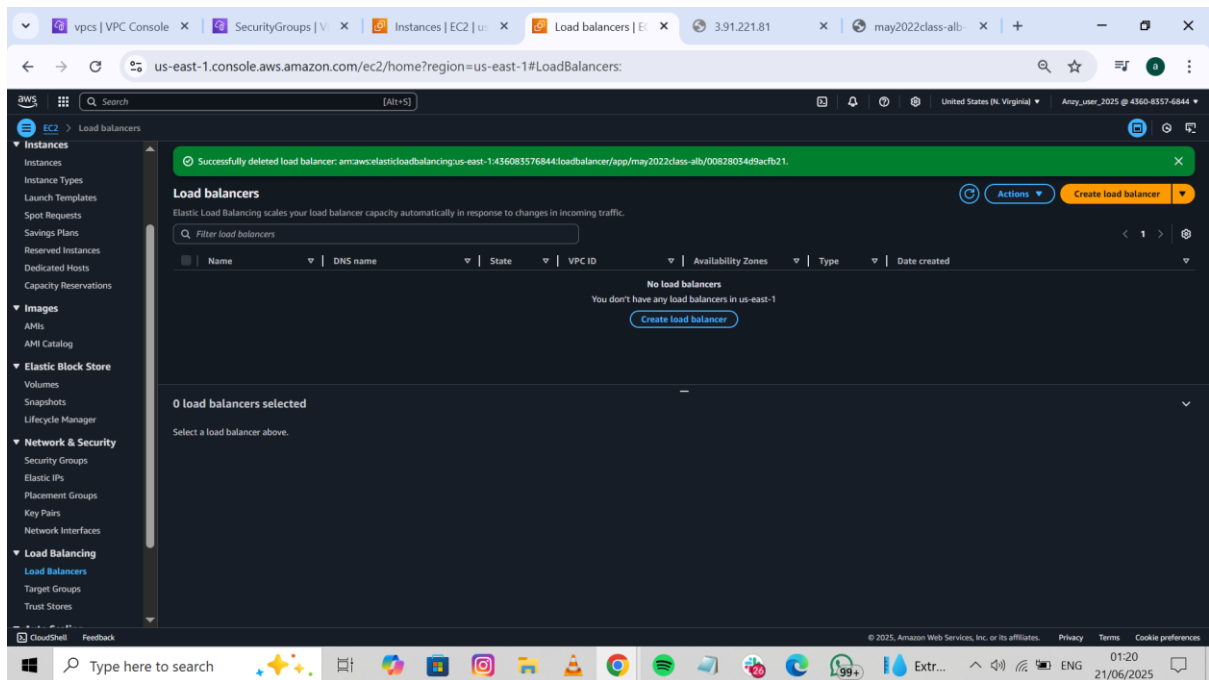
take a screenshot

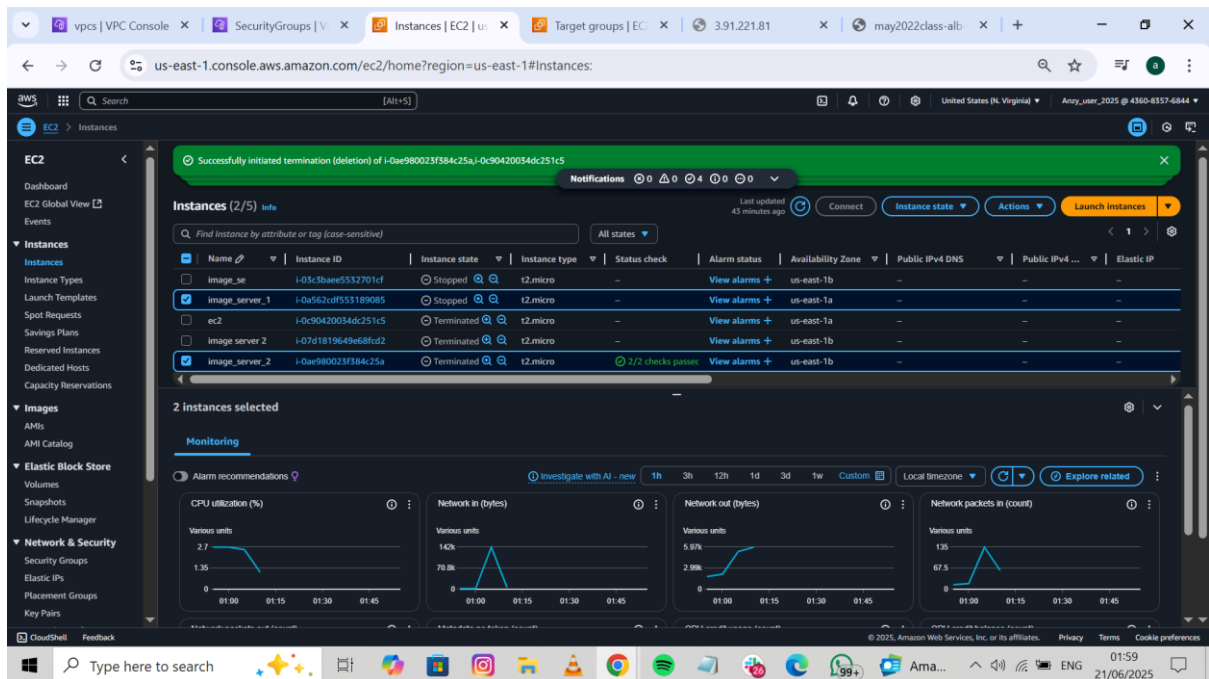
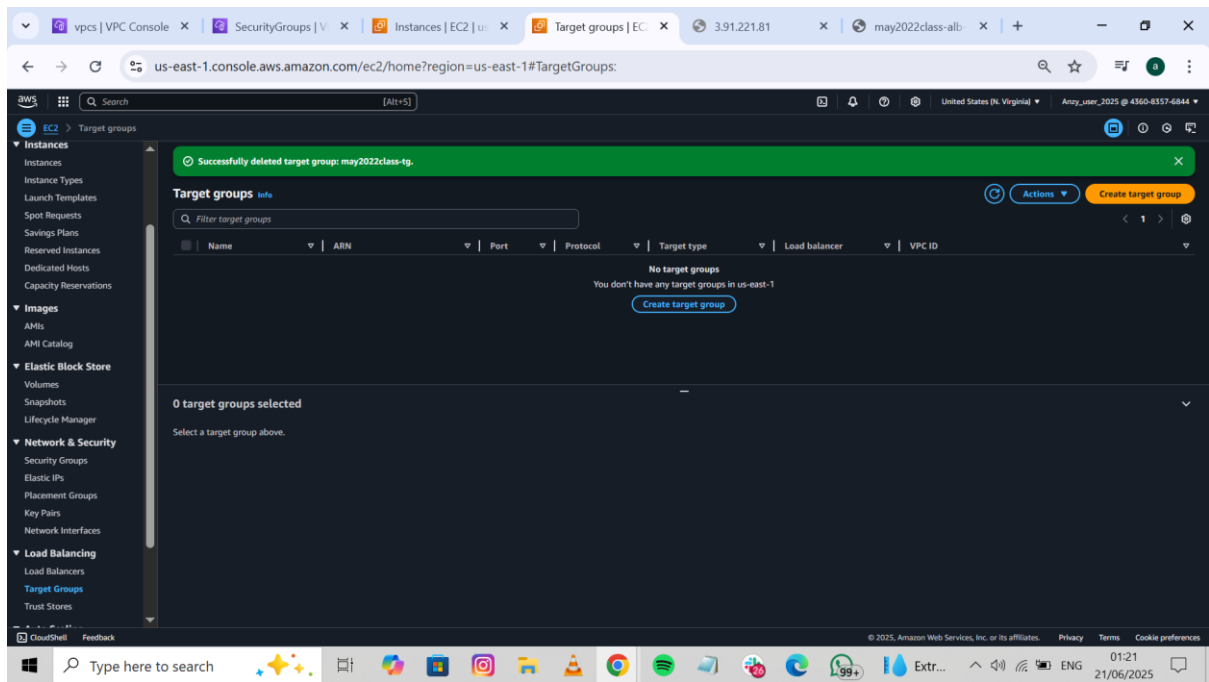


## Welcome to the Image Server 2 (Red)



**Step 8:** clean up your environment by deleting in the reverse order that you created all resources





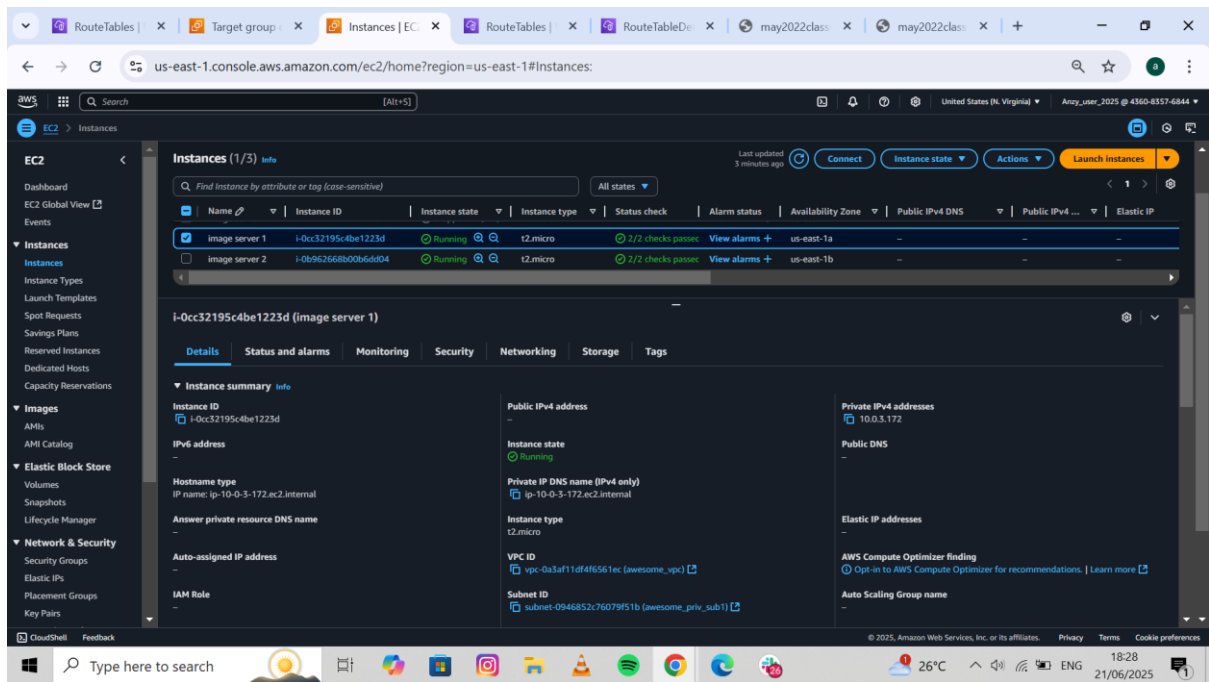
## Homework 2: Internet-facing Load Balancer with Private Subnet

Repeat All step in **Homework 1** except step 2, create your EC2 Instance in the Private Subnet

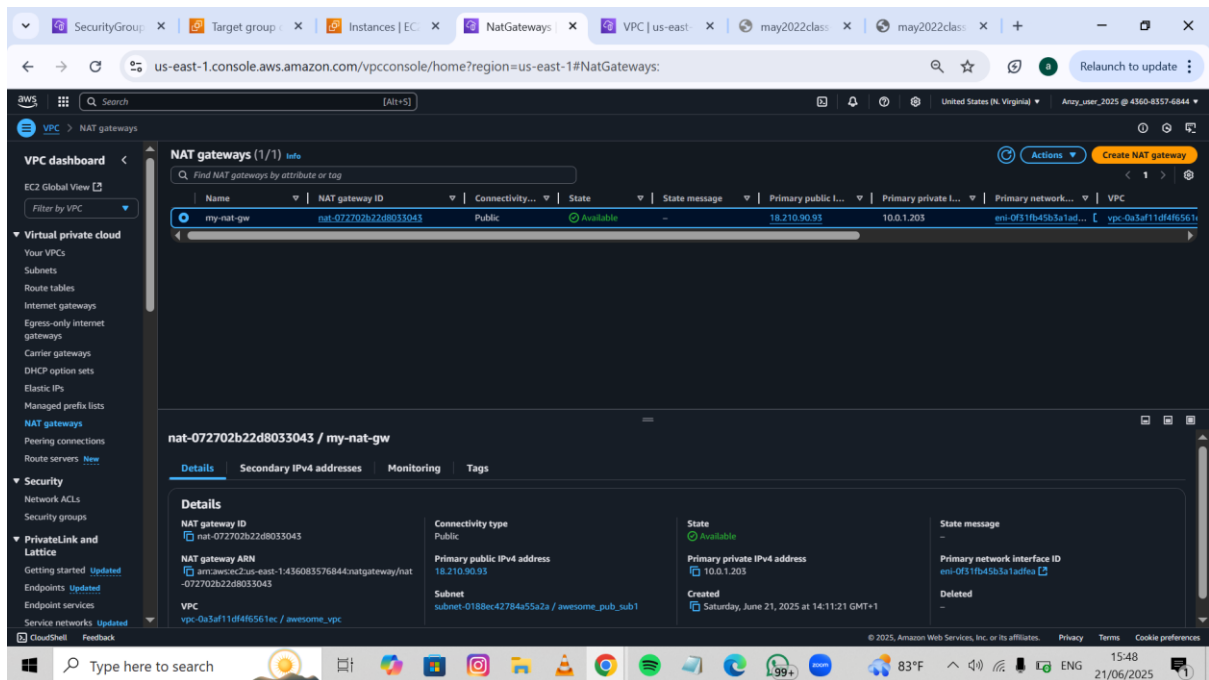
NB: read step 2 in Homework 1 carefully

use any resource to make this to work

Launch 2 EC2 instances on private subnets

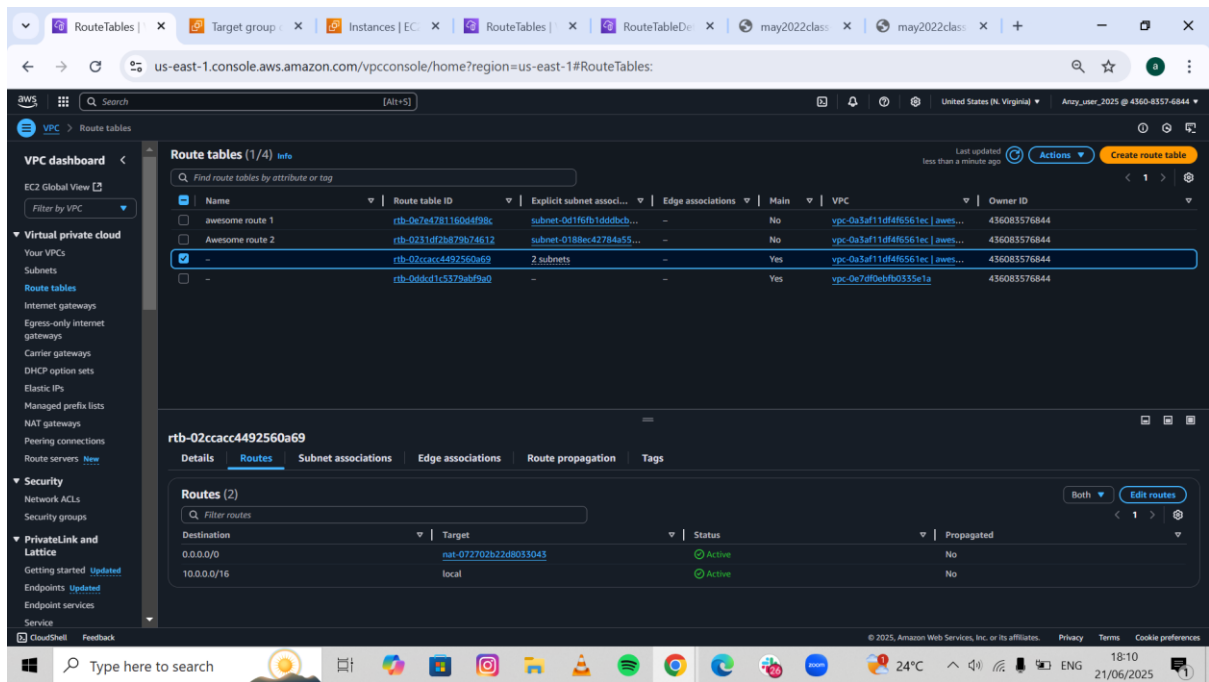


Configure a NAT GW to a public subnet and associate an elastic ip

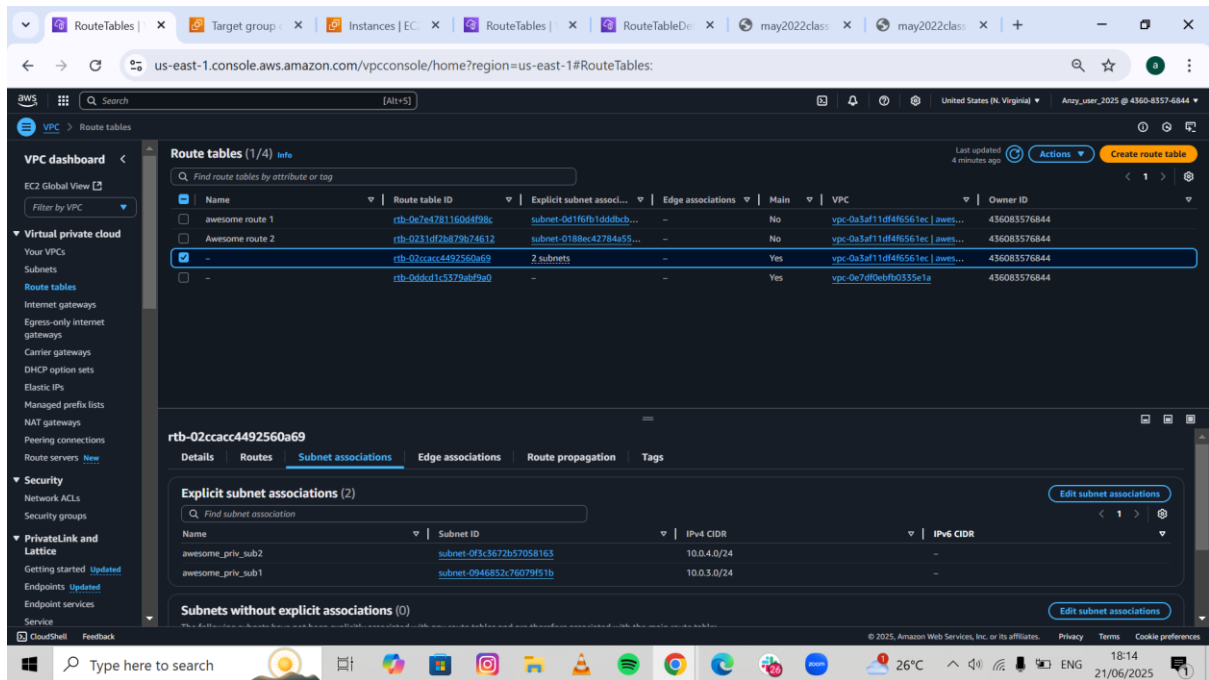


The NAT GW associated to a route





Associate the route table to the private subnets

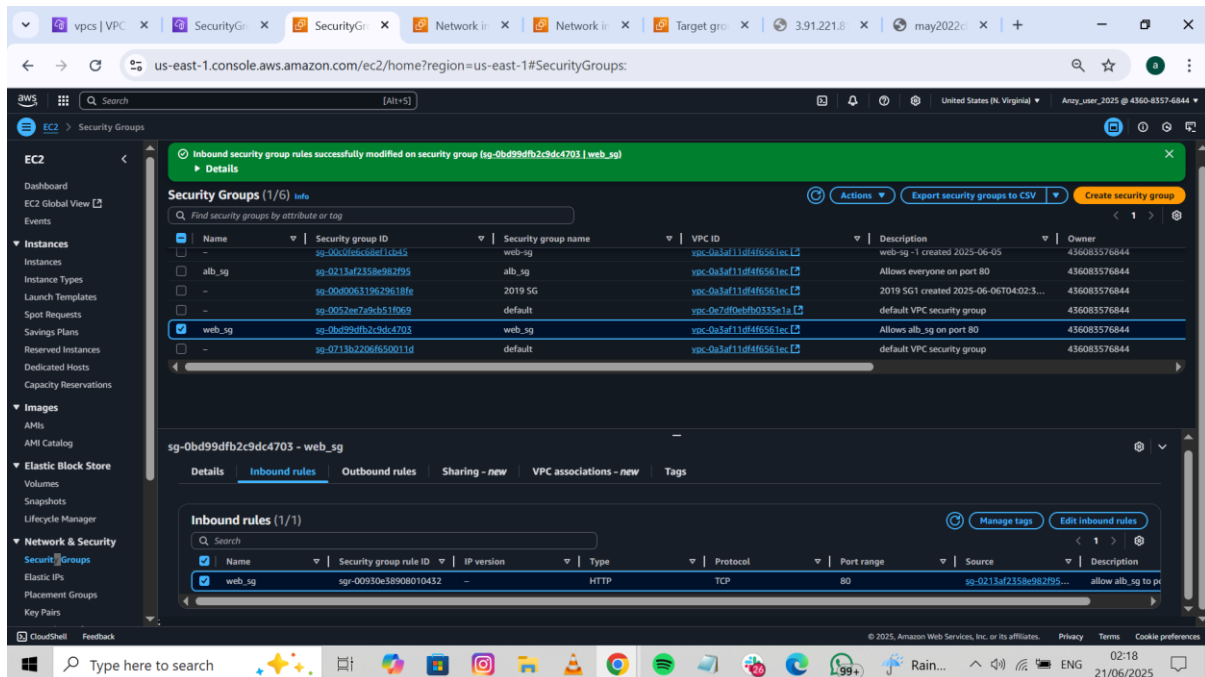


FOLLOW THE STEP 2 –7 FROM HOMEWORK 1

**Step 1:** Create ALB and Webserver Security Group —> “alb\_sg” and “web\_sg” alb\_sg should allow 0.0.0.0/0 on port 80

web\_sg should allow alb\_sg on port 80

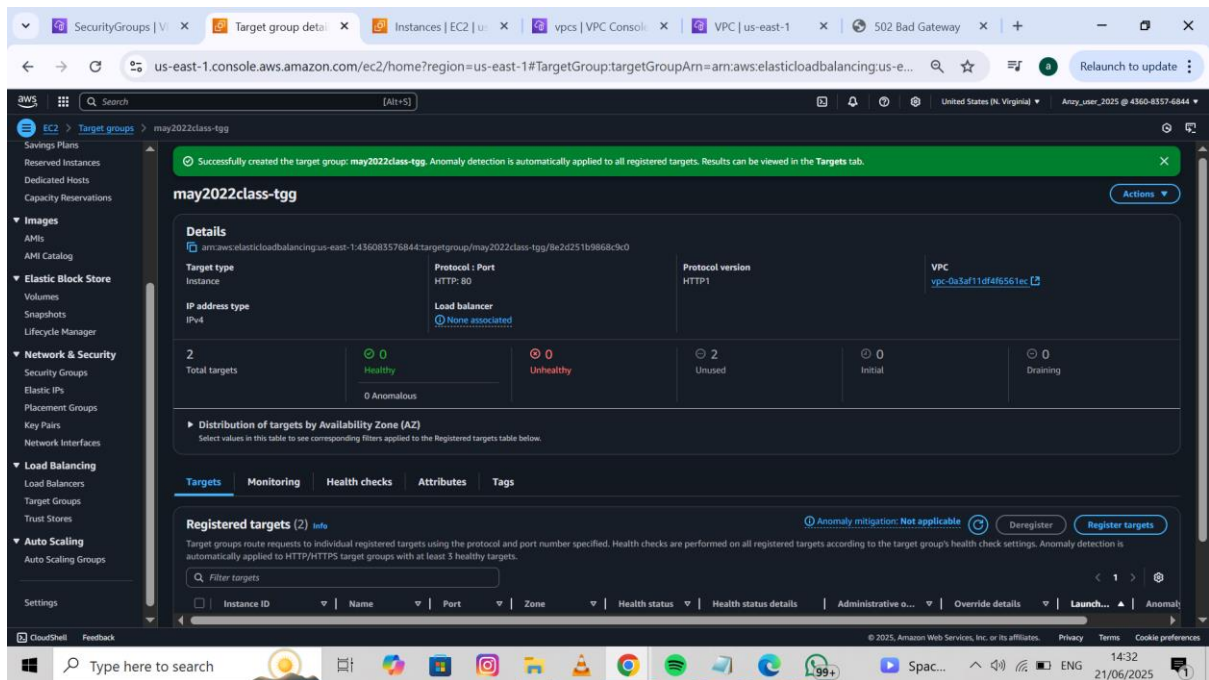
take screenshot showing inbound rule of web\_sg



**Step 3:** Create Target Group with targets (Webservers) —> name: “may2022class-tg”

please observe the status

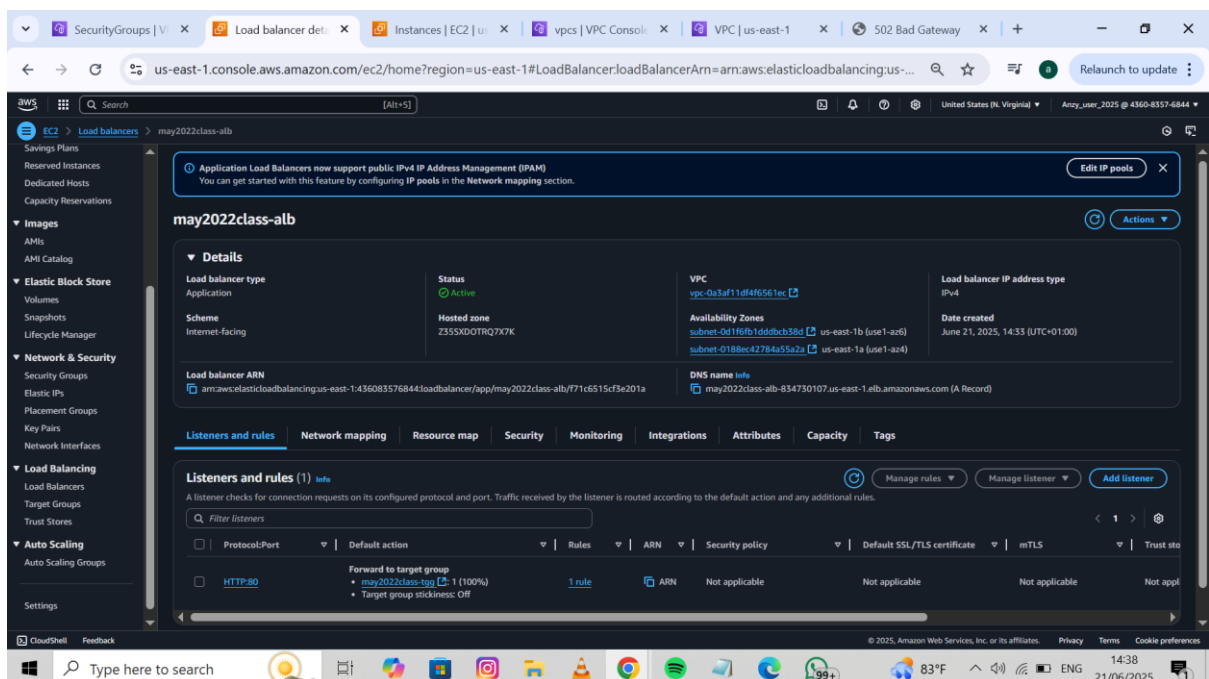
take screenshot showing “Health status details”



**Step 4:** Create an Application Load Balancer (ALB) —> name: “may2022class-alb”

listener on http (80) only

select may2022class-alb > click on Listener and take a screenshot



**Step 5:** Observe the target group status again in the console

take a screenshot when it shows healthy

The screenshot displays the AWS Management Console interface for an Elastic Load Balancing Target Group. The browser tabs at the top include 'SecurityGroups', 'Target group details', 'Instances | EC2', 'vpcs | VPC Console', 'VPC | us-east-1', and '502 Bad Gateway'. The URL bar shows the console path for the target group.

**Target Group Details:**

- Target type:** Instance
- Protocol:** HTTP
- Port:** 80
- Protocol version:** HTTP1
- VPC:** vpc-QaSaT11d4f46561ec
- IP address type:** IPv4
- Load balancer:** None associated

**Health Status Summary:**

- Total targets:** 2
- Healthy:** 2
- Unhealthy:** 0
- Anomalous:** 0
- Unused:** 0
- Initial:** 0
- Draining:** 0

**Distribution of targets by Availability Zone (AZ):**

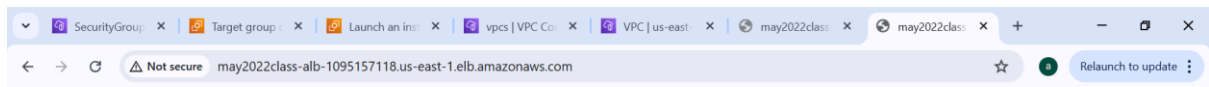
Select values in this table to see corresponding filters applied to the Registered targets table below.

**Registered targets (2):**

Target groups route requests to individual registered targets using the protocol and port number specified. Health checks are performed on all registered targets according to the target group's health check settings. Anomaly detection is automatically applied to HTTP/HTTPS target groups with at least 3 healthy targets.

Instance ID	Name	Port	Zone	Health status	Health status details	Admin...	Overri...	Launch...	Anomaly detection...
i-0b362668b00b6dd04	image server 2	80	us-east-1b (us...)	Healthy	-	No override	No over...	June 21, 2...	Normal
i-0cc32195c4be1223d	image server 1	80	us-east-1a (us...)	Healthy	-	No override	No over...	June 21, 2...	Normal

**Step 6:** test your website in a browser using the ALB dns name and refresh multiple time



Welcome to the Image Server 1 (Green)

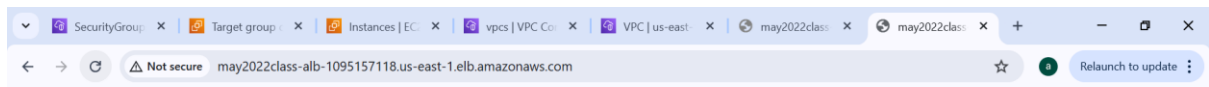


Welcome to the Image Server 2 (Purple)



**Step 7:** stop webserver 1 and test again to see which server is now responding

take a screenshot



## Welcome to the Image Server 2 (Purple)



**Step 8:** clean up your environment by deleting in the reverse order that you created all resources

- take screenshots of both Blue and Red