D Y PATIL INTERNATIONAL UNIVERSITY
AKURDI PUNE

School of Computer Science, Engineering and Applications(SCSEA)
B.C.A. TY (CCSA)
Subject : Infrastructure Orchesteation (P)

Name of the Student: **Shrushti Krishna Shrivastav** **PRN: 20220801024**

Title of Practicle : **Setting up Application Load Balancer with Multiple EC2 instances**

NOTE:

1. SECURITY GROUP: SG-CCSA-TY-1024
2. TARGET GROUP: TG-CCSAS-TY-1024
3. LOAD BALANCER: ALB-CCSA-TY-1024

Step 1: Launch your EC2 Instance (4 instances)

Log in and Navigate to the EC2 dashboard. Click on the "Launch Instance" button.

Now name your instance:

Increase the number of instances to 4

(instead of manually launching 4 instances increase the number, 4 instances of same configuration will be created.)

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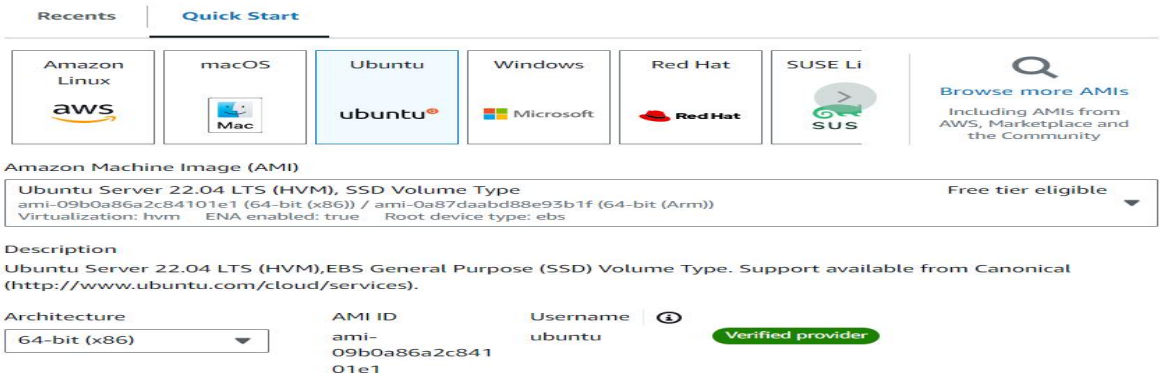
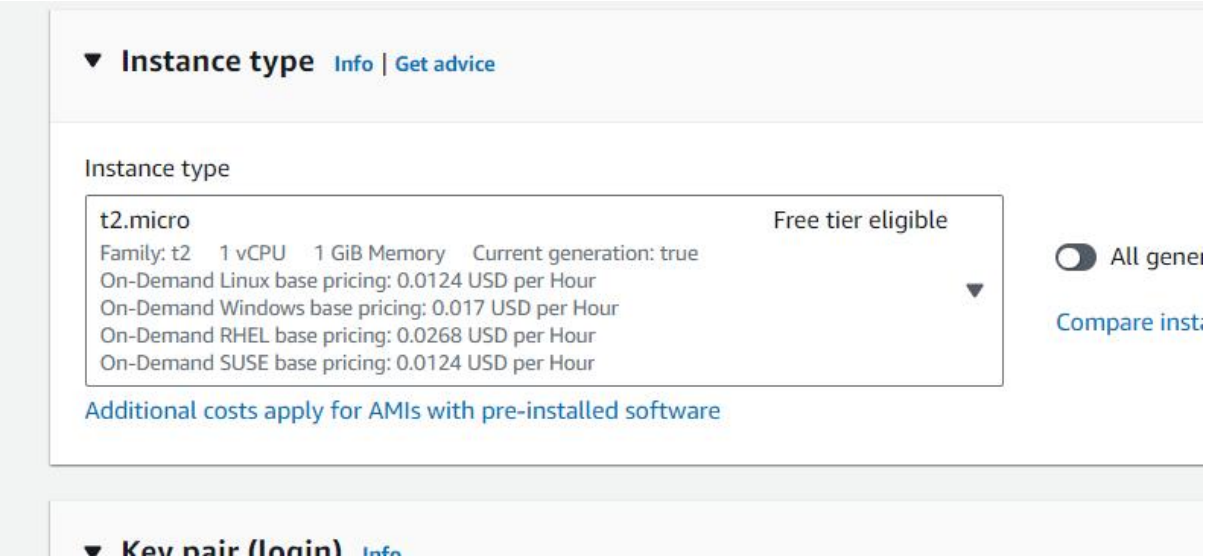
Select AMI: Ubuntu server 22.04



Instance type : t2 micro



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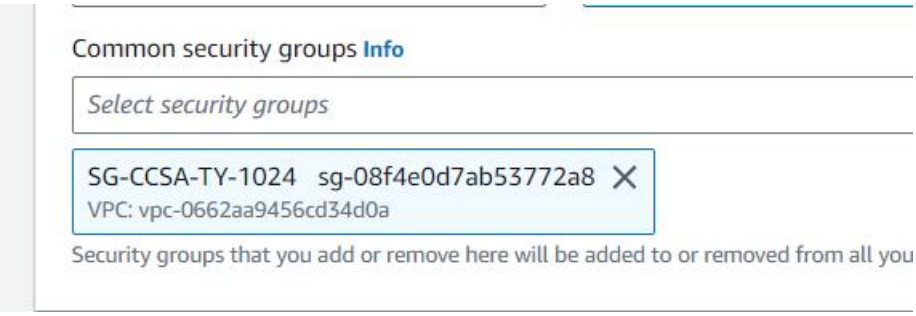
Key pair : attach your key-pair (must know location where it is downloaded) or create a new one

Security group: Attach security group that allow http traffic (SG-CCSA-TY-1024)



Do the changes in advance detail:

(#!/bin/bash

sudo apt-get update -y

sudo apt-get install apache2 -y

sudo sh -c 'echo "hello from $(hostname -f)" > /var/www/html/index.html')

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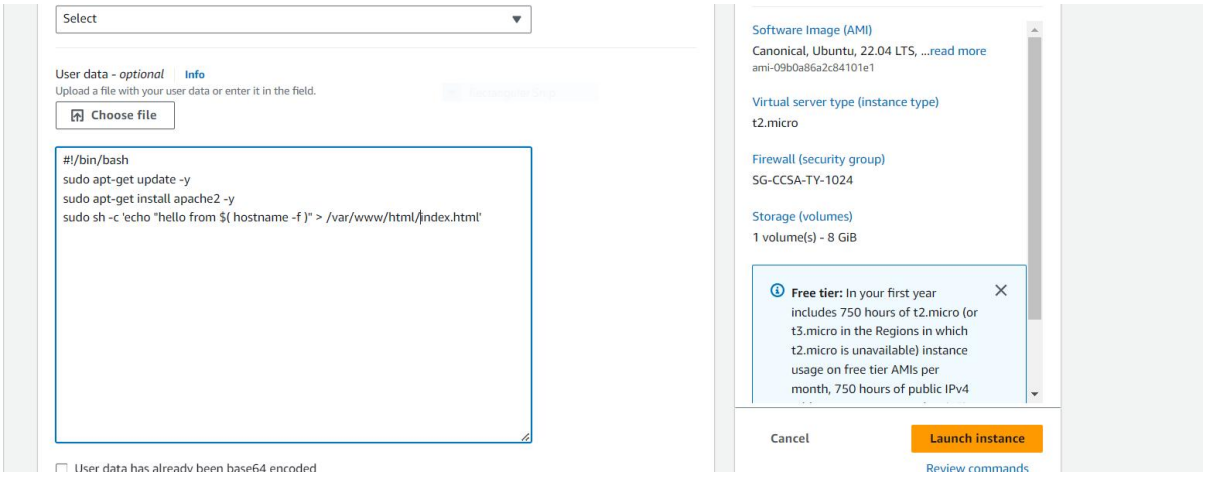
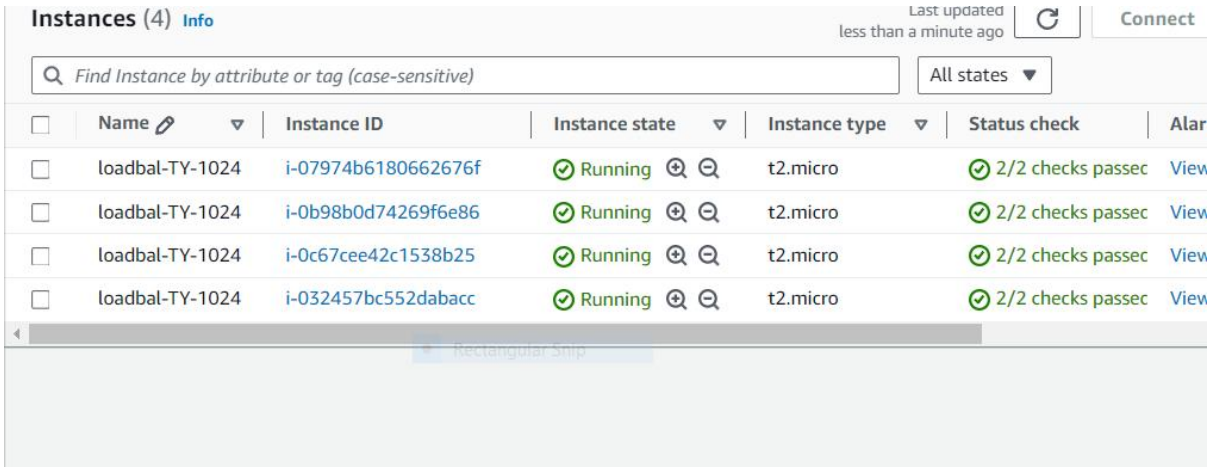
Add this script at the end.



Now 'LAUNCH' your Instance

Wait for your instance status to show as 'running' and '2/2 checks passed'.



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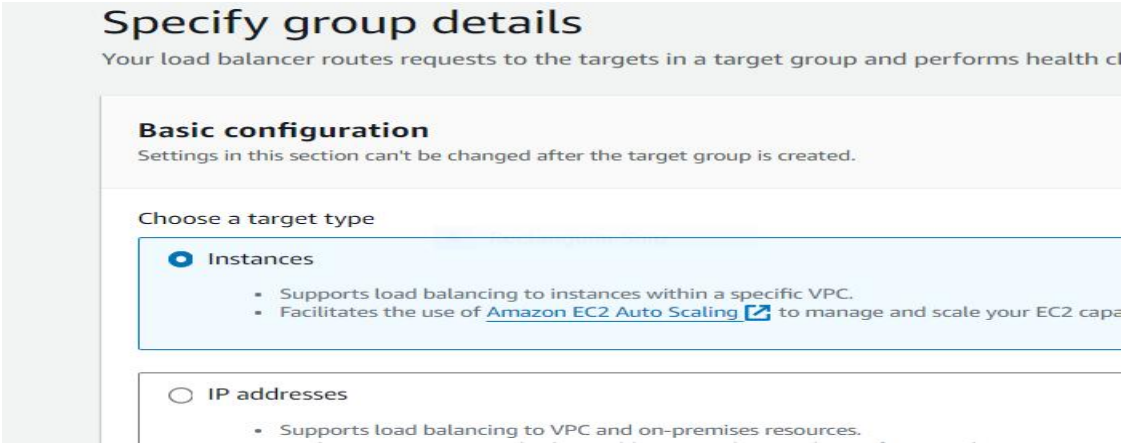
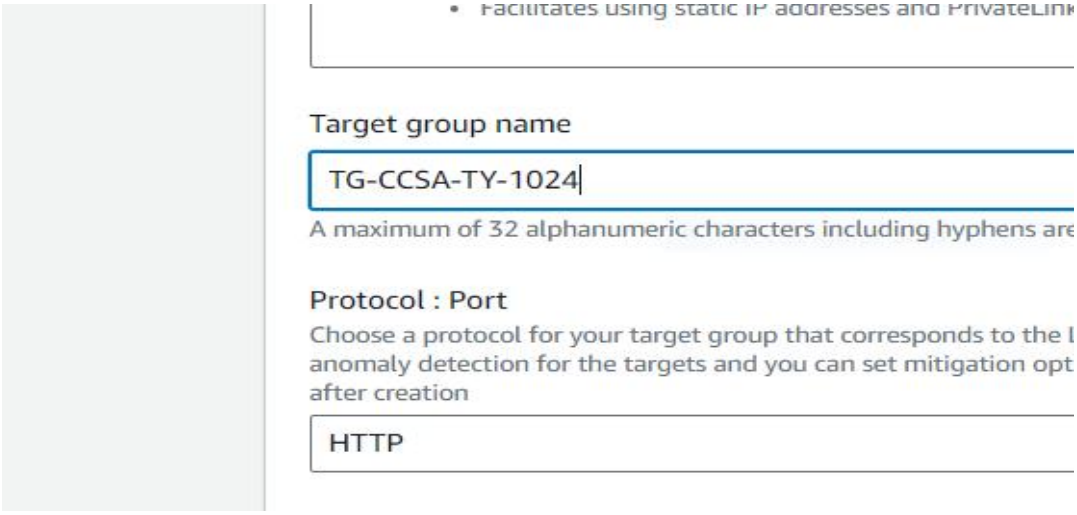
Step2: TARGET GROUP

At the bottom of side-bar in load balancing section there is Target Groups. 'create target group'

Target type: instances



Name your target group:



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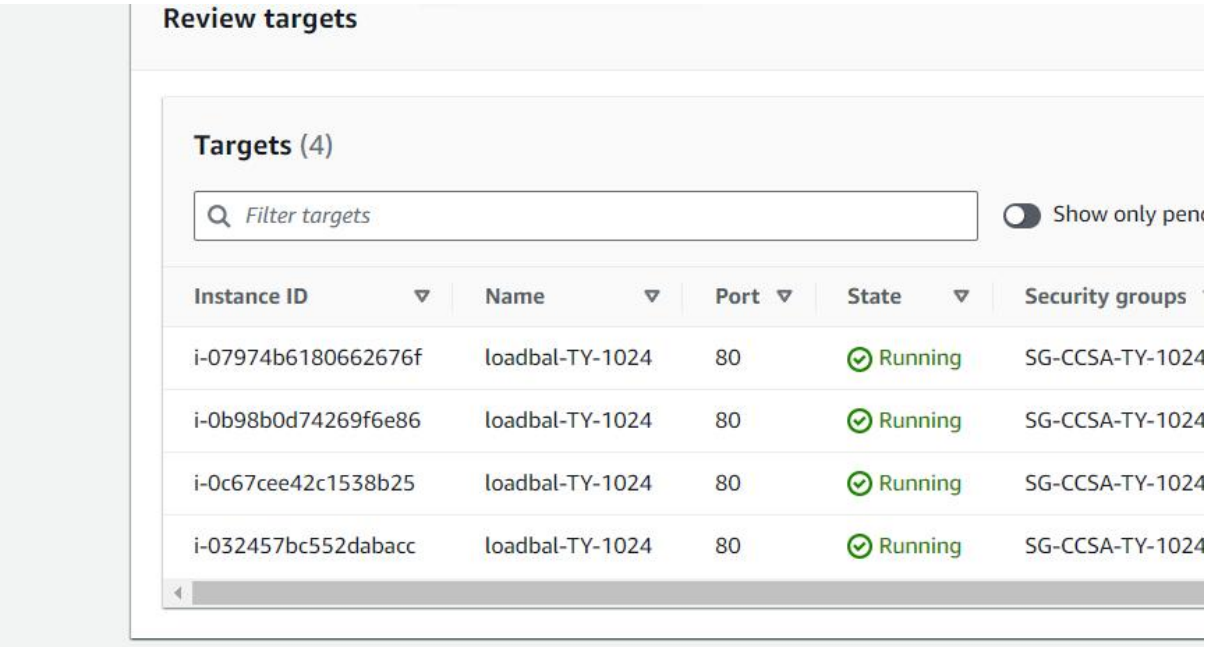
Keep rest of the setting as default and proceed for next step in creation.

In last step add all the instances by selecting all instances and 'include as pending below'



And create target group.

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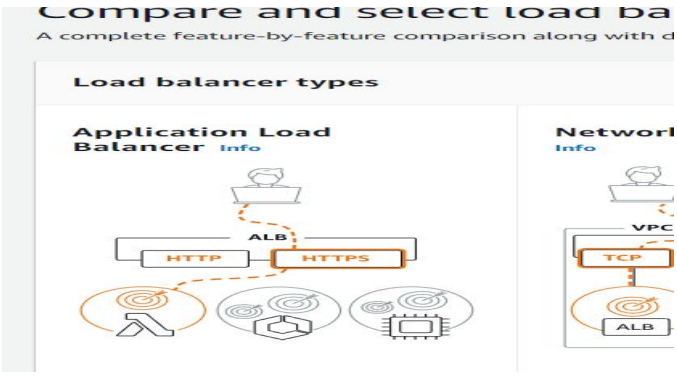
Step3: LOAD BALANCER

Now create an 'Application Load Balancer'



Name the load balancer and ensure it has (scheme) 'internet-facing ' enabled

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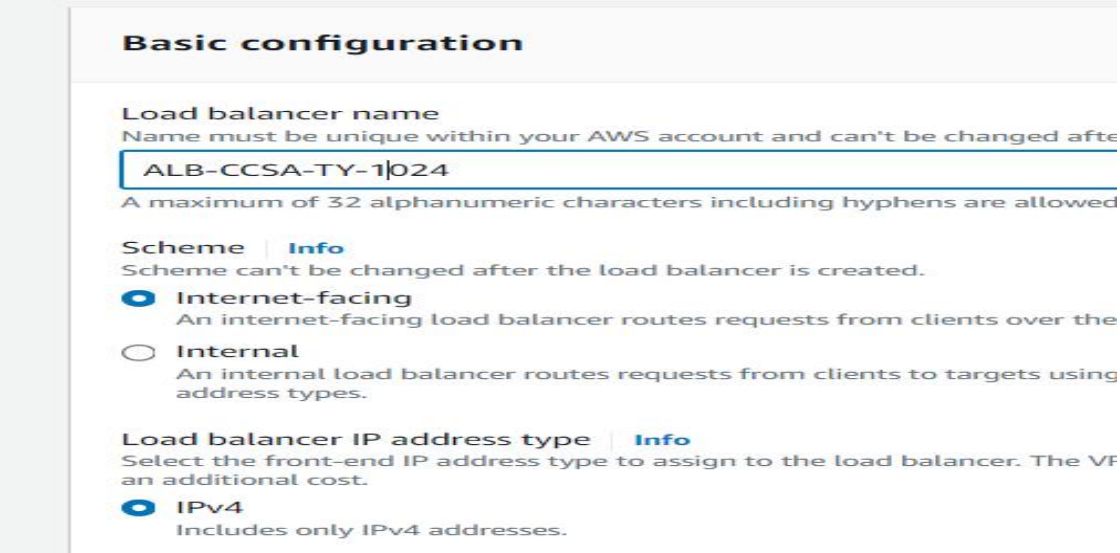
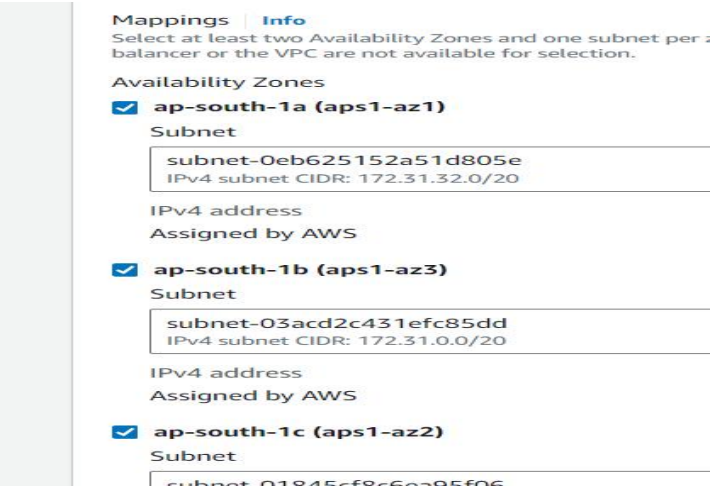


In network mapping select all the Availability Zones



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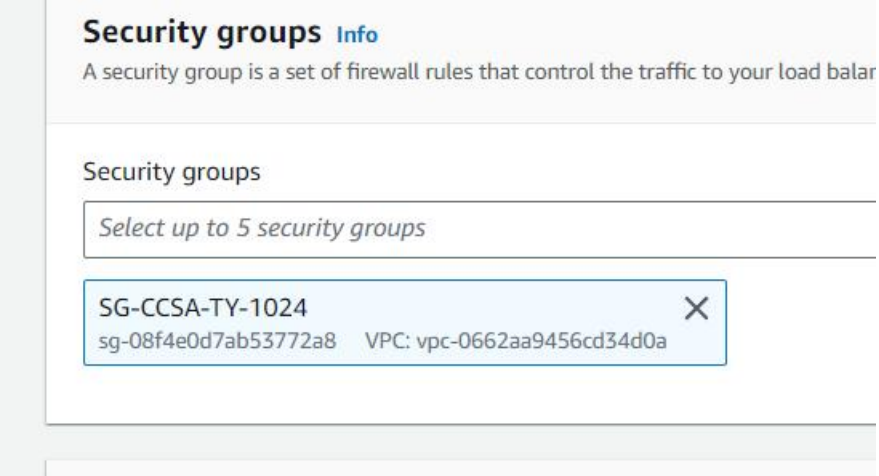
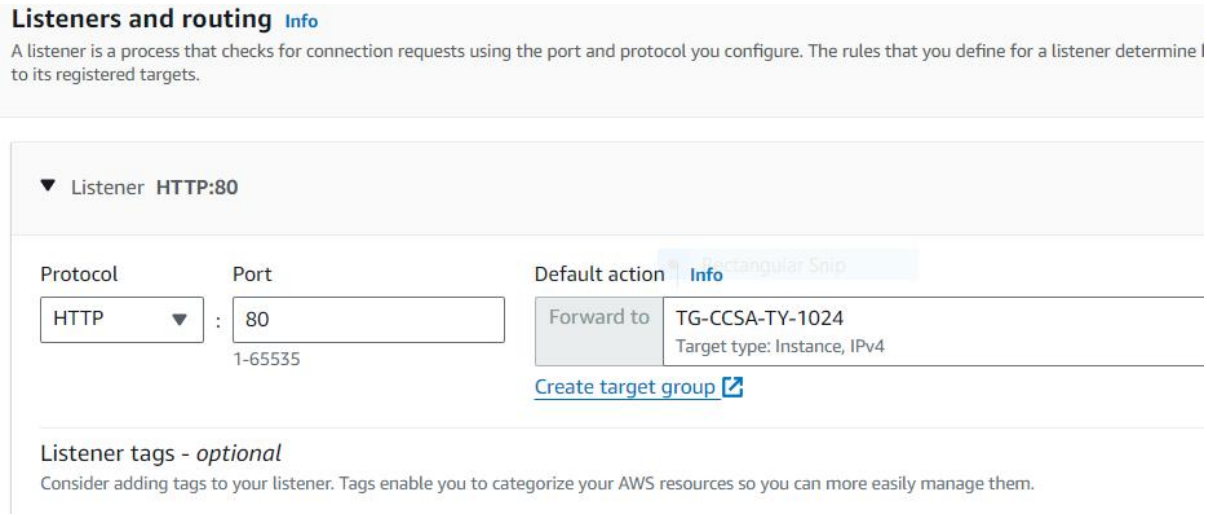
Add your security group



Attach target group



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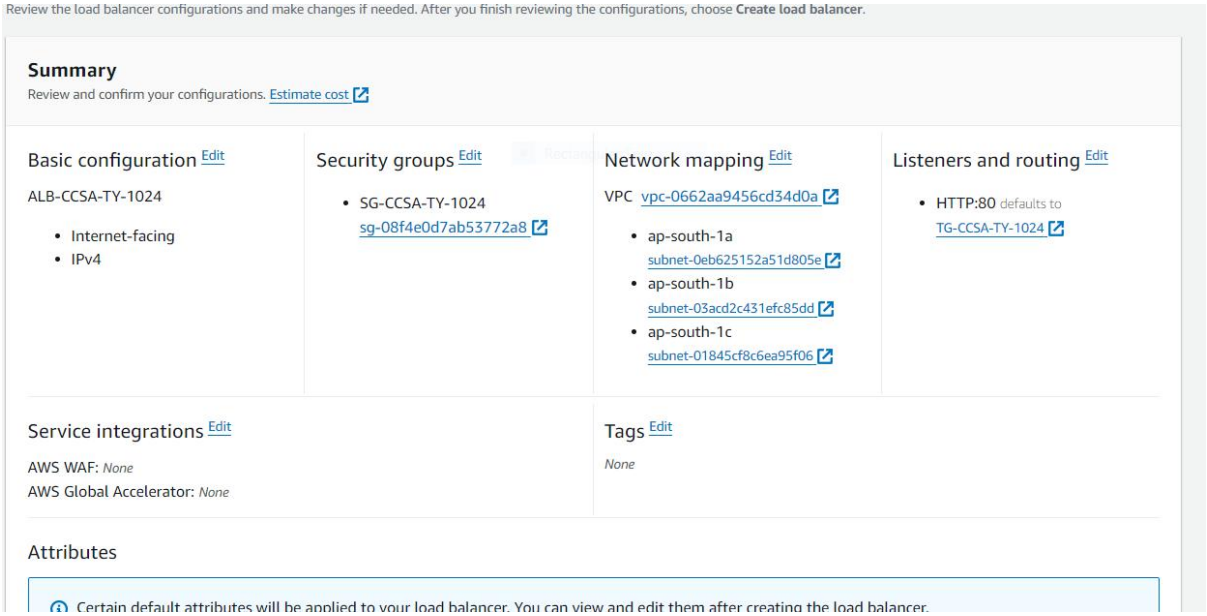
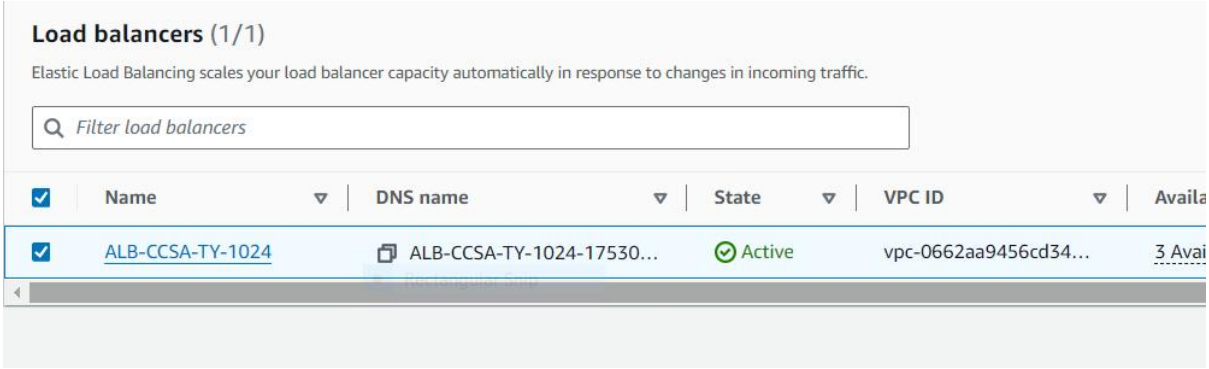
Review the summary and create the load balancer



Wait until the status is 'ACTIVE' and then paste the DNS to browser



To ensure load balancer is working refresh the page

Instance 1

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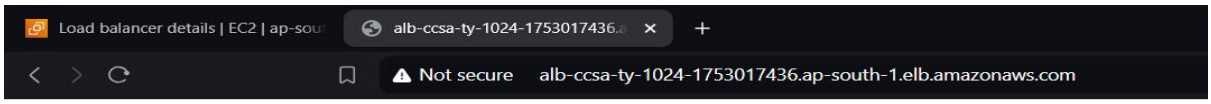
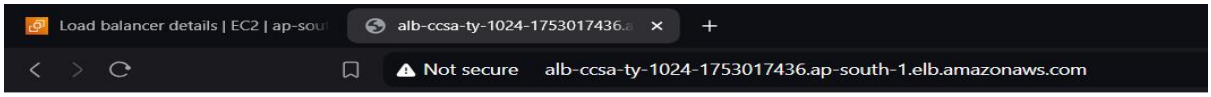


hello from ip-172-31-43-95.ap-south-1.compute.internal

Instance 2



hello from ip-172-31-39-230.ap-south-1.compute.internal

Instance 3

hello from ip-172-31-40-95.ap-south-1.compute.internal

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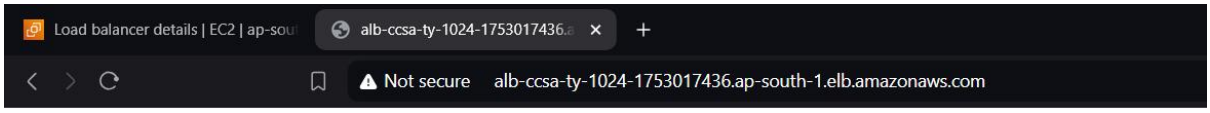
Instance 4



hello from ip-172-31-43-244.ap-south-1.compute.internal

Done.

First delete load balancer then target group and finally terminate instances.