Task-2

- Create three instances, install nginx and apply ALB.
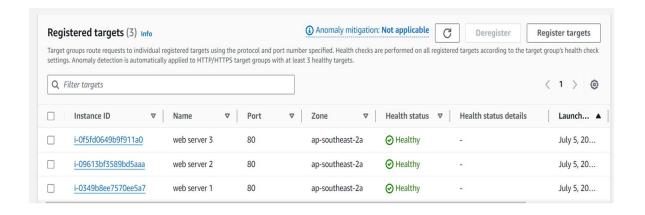
  Step-1:
  Create an own security group.

  | EC2 > Security Groups > sg-0c728e2bbefb9c283 |

  ## sg-0c728e2bbefb9c283 - safety

  Details

Security group name	Security group ID	Description	VPC ID
safety	sg-0c728e2bbefb9c283	allow	vpc-0e1bd6cc4dce36d95
Owner	Inbound rules count	Outbound rules count	
891377200619	2 Permission entries	1 Permission entry	

  Inbound rules Outbound rules Tags

  Step-2:
  Create three instances in different availability zones, and attach our own security group.

  Instances (3) Info

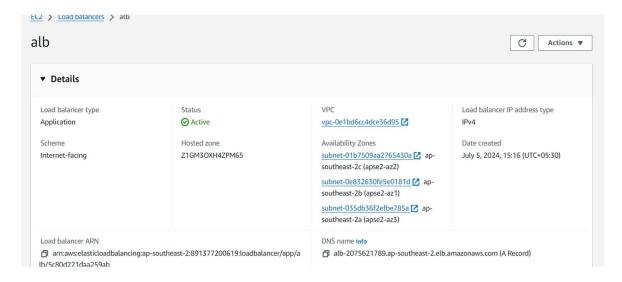 | | Name | Instance ID | Instance state | Instance type | Status check | Alarm status | Availability Zone | Public IPv |
  | --- | --- | --- | --- | --- | --- | --- | --- | --- |
  | ☐ | web server 1 | i-0349b8ee7570ee5a7 | ⊘ Running | t2.micro | ⊘ 2/2 checks passec View alarms + | ap-southeast-2a | ec2-3-26-. |
  | ☐ | web server 2 | i-09613bf3589bd5aaa | ⊘ Running | t2.micro | ⊘ 2/2 checks passec View alarms + | ap-southeast-2a | ec2-52-62 |
  | ☐ | web server 3 | i-0f5fd0649b9f911a0 | ⊘ Running | t2.micro | ⊘ 2/2 checks passec View alarms + | ap-southeast-2a | ec2-54-15 |

Step-3:
Create a target group and assign those three instances to it.

Step-4:

Create an application load balancer and add the created target group to it.

Step-5: Connect the instances and enter the following linux commands.

```
tharun_S@DESKTOP-JKR1GUM MINGW64 ~/Desktop/aws
$ ssh -i "server.pem" ec2-user@ec2-3-26-230-196.ap-southeast-2.compute.amazonaws.com
       #_
  ~\_  ####_          Amazon Linux 2023
 ~~  \_#####\
 ~~     \###|
 ~~      \#/ ___       https://aws.amazon.com/linux/amazon-linux-2023
  ~~     V~' '->
   ~~~         /
    ~~._.   _/
      _/ _/
     _/m/'
Last login: Fri Jul  5 09:50:07 2024 from 205.254.168.158
[ec2-user@ip-172-31-44-215 ~]$ sudo -i
[root@ip-172-31-44-215 ~]# yum update -y && yum install nginx -y
Amazon Linux 2023 repository
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.
Nothing to do.
Complete!
Last metadata expiration check: 0:00:01 ago on Sun Jul  7 13:51:51 2024.
Package nginx-1:1.24.0-1.amzn2023.0.2.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@ip-172-31-44-215 ~]# cd /usr/share/nginx/html
[root@ip-172-31-44-215 html]# ls
404.html  50x.html  icons  index.html  nginx-logo.png  poweredby.png
[root@ip-172-31-44-215 html]# cat index.html
this is webserver 1
[root@ip-172-31-44-215 html]# systemctl restart nginx
```

Finally, the ALB distributes the network traffic among these three instances equally.

← → C ⚠ Not secure alb-2075621789.ap-southeast-2.elb.amazonaws.com

this is web server 3

← → C ⚠ Not secure alb-2075621789.ap-southeast-2.elb.amazonaws.com

this is webserver 1

← → C ⚠ Not secure alb-2075621789.ap-southeast-2.elb.amazonaws.com

this is web server 2