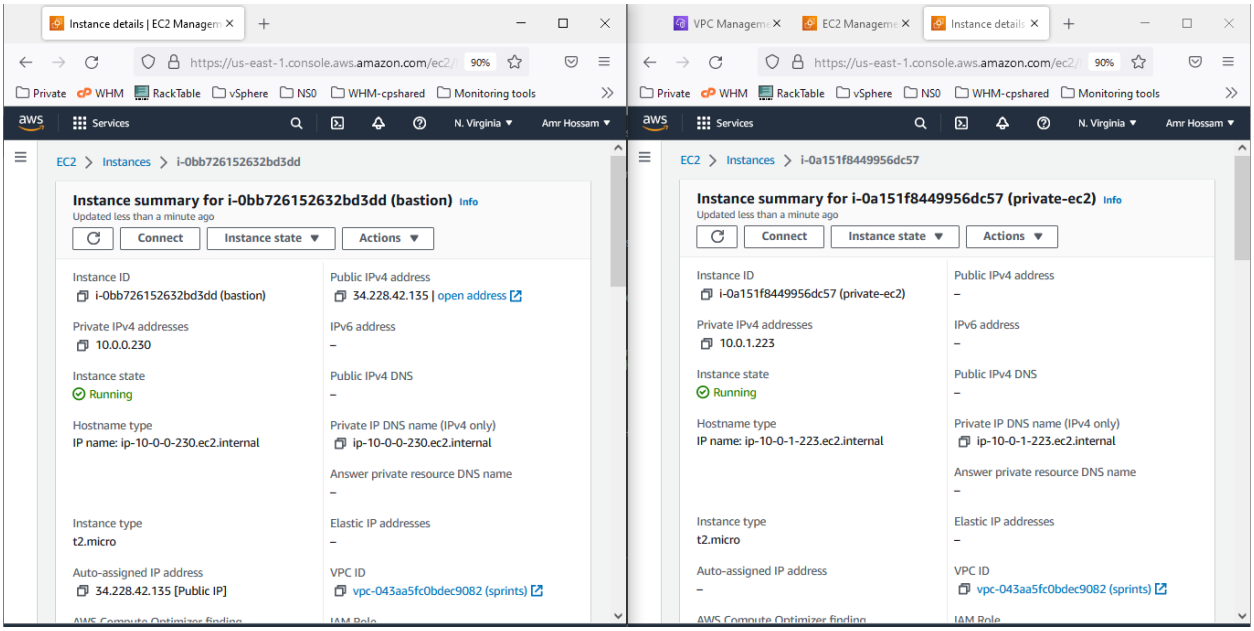
Lab (4)

1- Launch a jump host Take a screen while you are ssh to the jumphost Also When you ssh from bastion to the private machine Screenshot from the console showing the instances Ips

Solution:

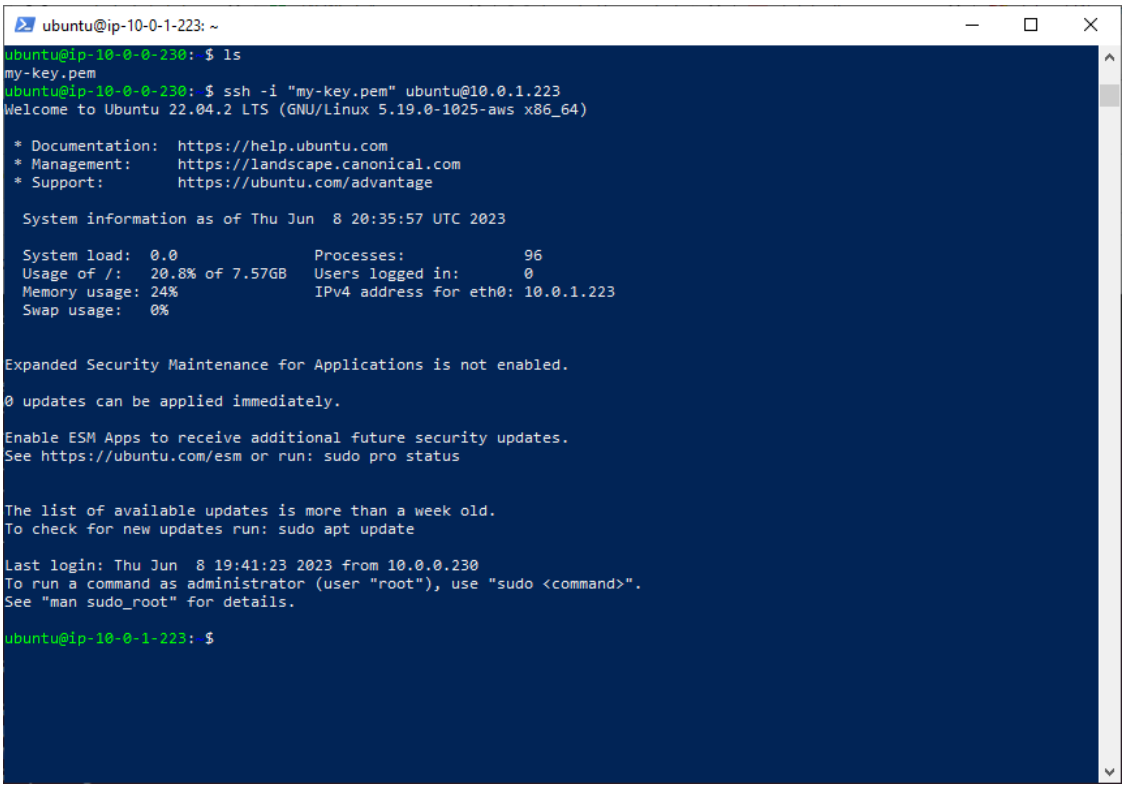
a) Create a public instance (bastion) and Private ec2



b) Secure copy for the key to the public ec2

```
PS C:\Users\amr.m.hussien\Downloads> scp -i .\my-key.pem ubuntu@34.228.42.135:/home/ubuntu/my-key.pem .\my-key.pem
my-key.pem                                                                    100% 1675    11.8KB/s   00:00
PS C:\Users\amr.m.hussien\Downloads> ssh -i .\my-key.pem ubuntu@34.228.42.135
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-1025-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Thu Jun  8 20:33:06 UTC 2023

  System load:  0.0               Processes:             97
  Usage of /:   20.8% of 7.57GB   Users logged in:       0
  Memory usage: 25%               IPv4 address for eth0: 10.0.0.230
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Thu Jun  8 20:21:29 2023 from 156.205.241.177
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-10-0-0-230:~$ ls
my-key.pem
```

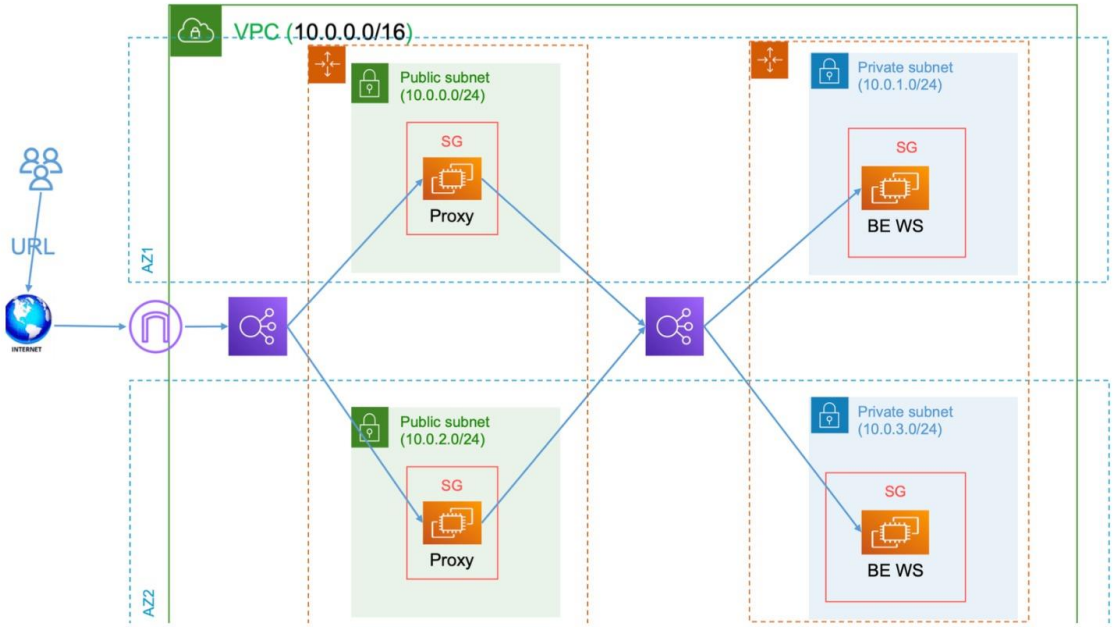
c) Now you Can access the private ec2 with jumphost



2- Question 2:

Question1:

Implement a vpc with cidr 10.0.0.0/16 with 2 public subnets with cidrs 10.0.0.0/24 and 10.0.0.2.0/24 with a load balancer to Distribute the traffic between 2 machines with nginx installed in them as a proxy and 2 private subnets with the below cidrs 10.0.1.0/24 and 10.0.0.3.0/24 then a 2 instances attached in autoscaling in the private subnets with apache installed without SSH and load balancer to install between them



Needed :

A screenshot from the autoscaling group after indicating the minimum ,maximum and desired instances

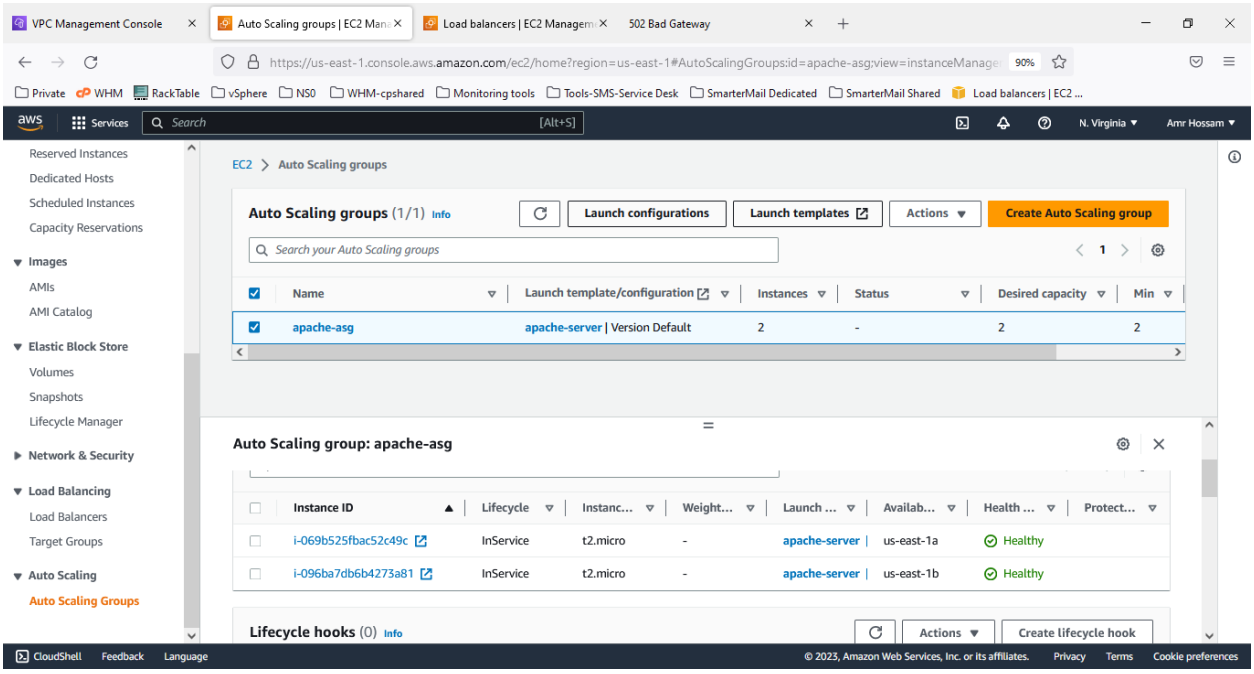
Screenshot from the 2 target groups indicating the machines are healthy

Screenshot indicate the the machines BE WS are private

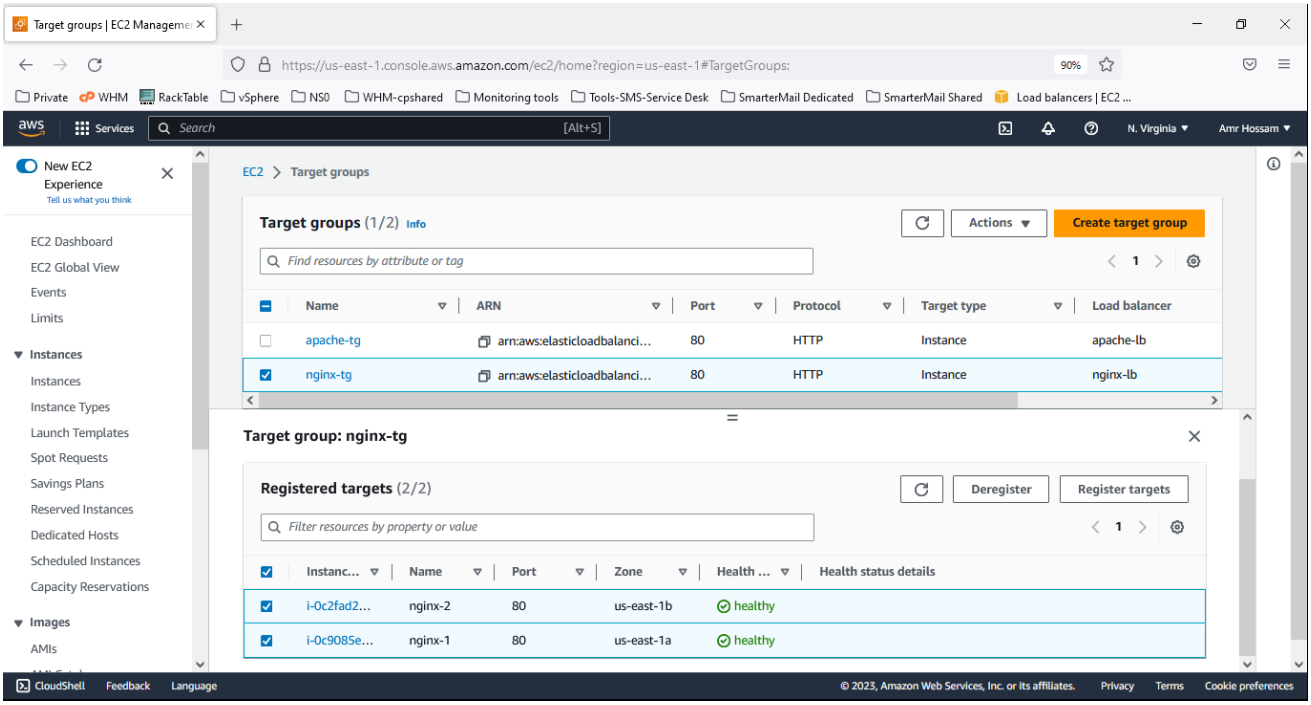
Screenshot from the public load balancer when you hit a request from it from a browser with a response returned from the instances

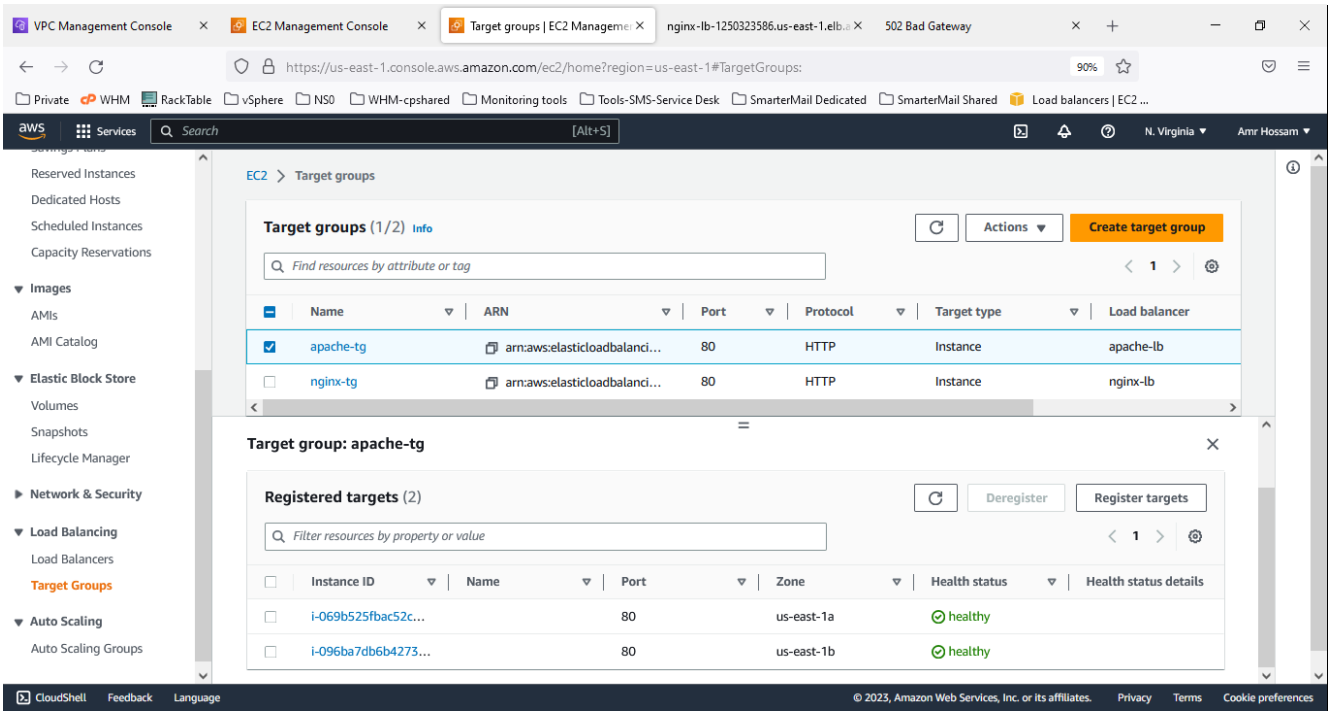
Solution:

Auto Scaling Group:

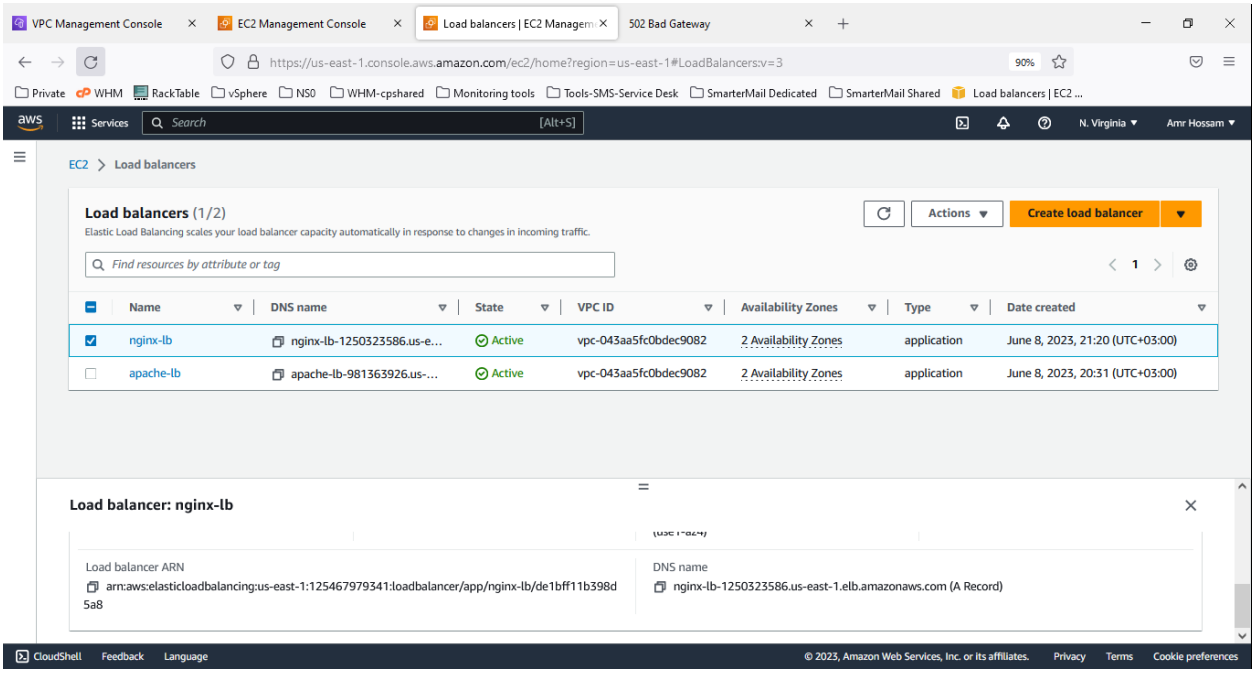


Target Groups with Healthy check:





Load Balancer:



Indicates Machines Be AWS are Private
Public load balancer when you hit a request from a browser with returned response

The output contains the private ips in the body of web