Homework 3 EC2 and Firewalls

Name: **Pradeep Medagiri**

You work for a start-up company and you are asked to spin-up 3 virtual machines (EC2s). Each EC2 is for specific purpose.

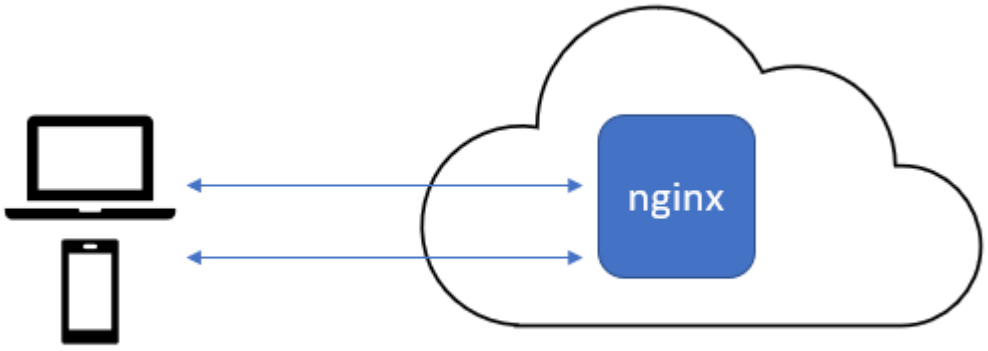
- The first machine is for a web server.
- The second is for general purpose.
- The third one is reserved for internal use only and not accessible from the outside.

At this point the company just need a simple network so you only use the AWS default VPC. Any configurations not mentioned in the problem means it is for you to decide.

All EC2 are to have:

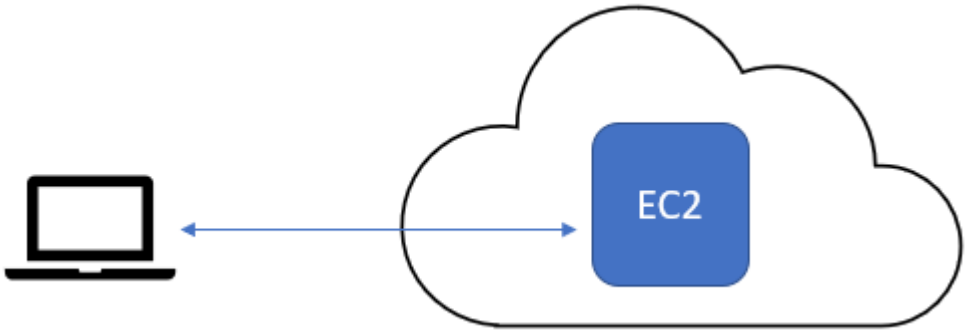
- Instance type: t2.micro.
- AMI: ubuntu.

1. First EC2 (Web Server)



- Name it your_lastname1
- Setup:
    - ssh from everywhere
    - Have a public IP
    - Allow ping from everywhere
    - Allow http call from everywhere
- Install nginx – modify so it will say in the first line: “This is ‘your-first and last name’”

2. Second EC2 (General purpose)

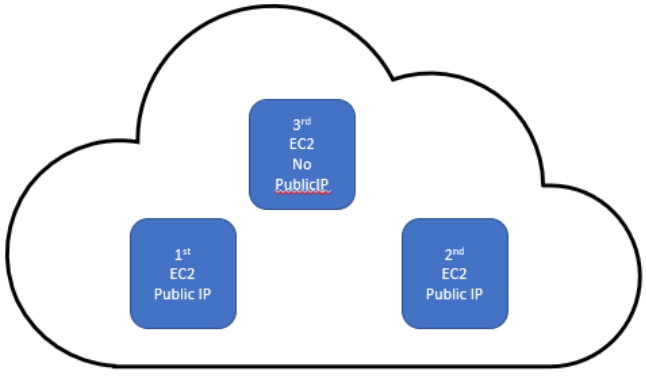


- Name it your_lastname2
- Set-up:
    - ssh from everywhere
    - has a public IP
    - there is a concerned about Ping Of Death (POD) so you want to allow ping from your laptop only

3. Third EC2 (Internal use only)

    - Name it your_lastname3
    - You want to reserve and protect this EC2 for special program that can not be accessed from the outside.
      Setup:
        - ssh from the first EC2 only
        - No public IP
        - Allow ping from your first EC2 only

The VPC will look like this



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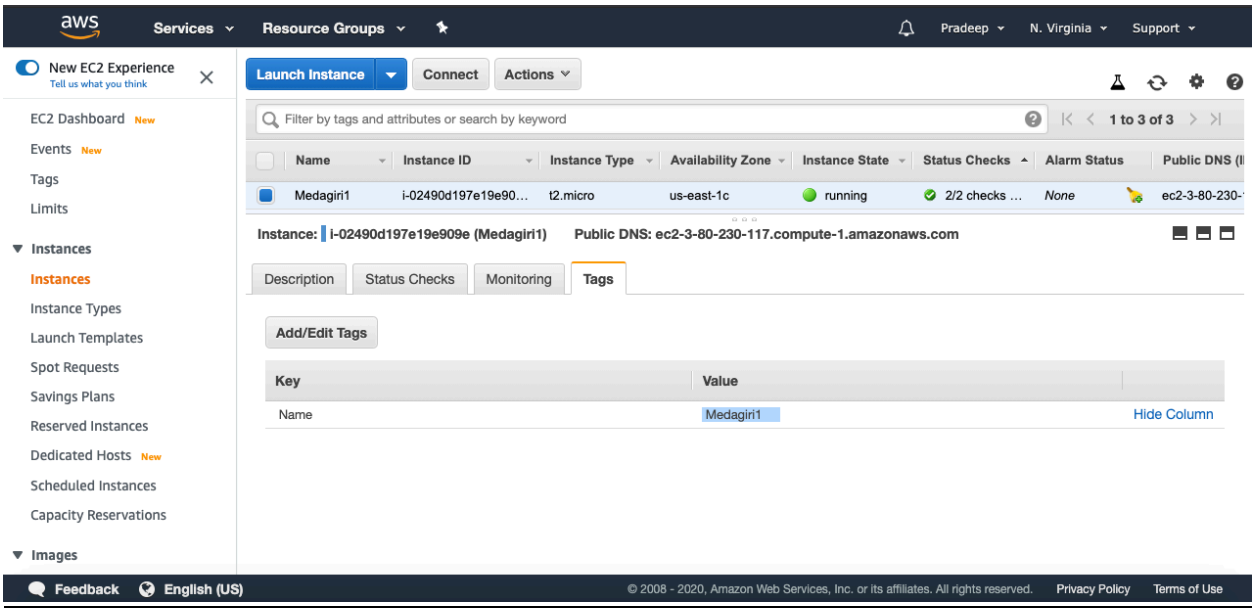
Problem 1 (13):

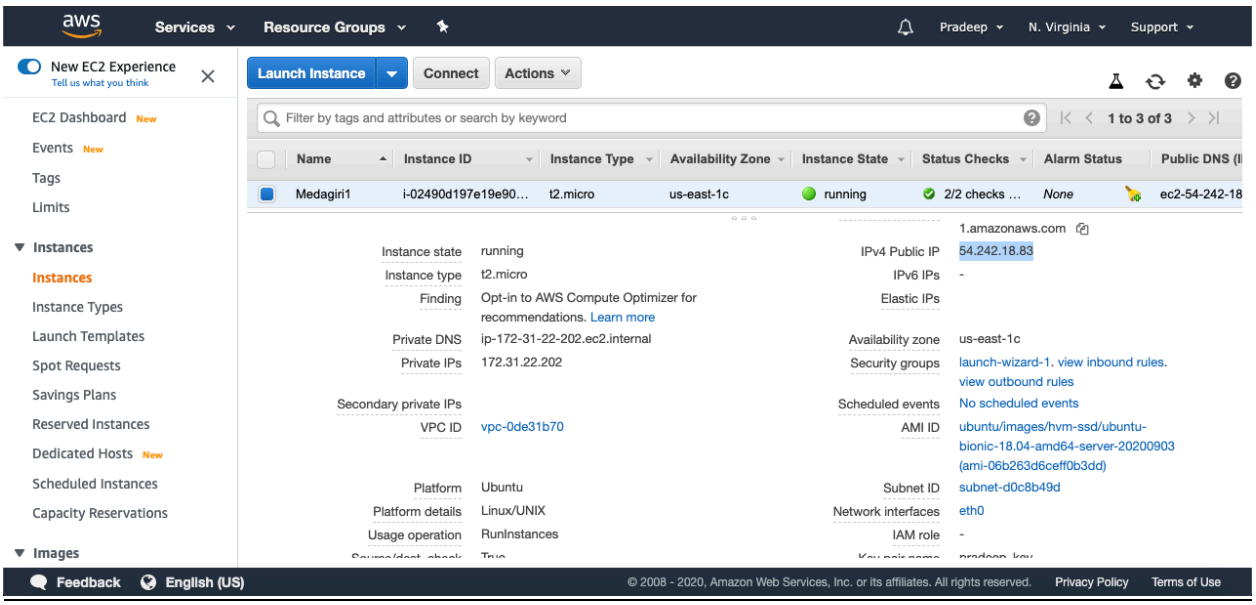
a) The screenshot of the 1st EC2 information, which shows: the name, Public IP address, and the Security group name (3)

For 1St EC2 – Medagiri1

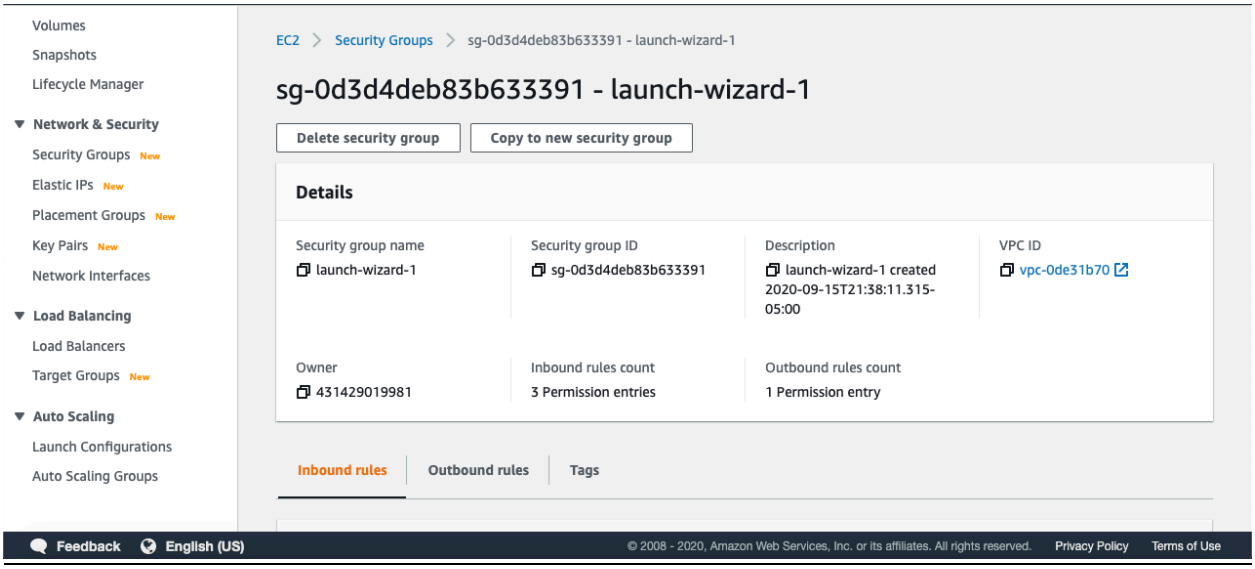
Name:



Public IP Address:

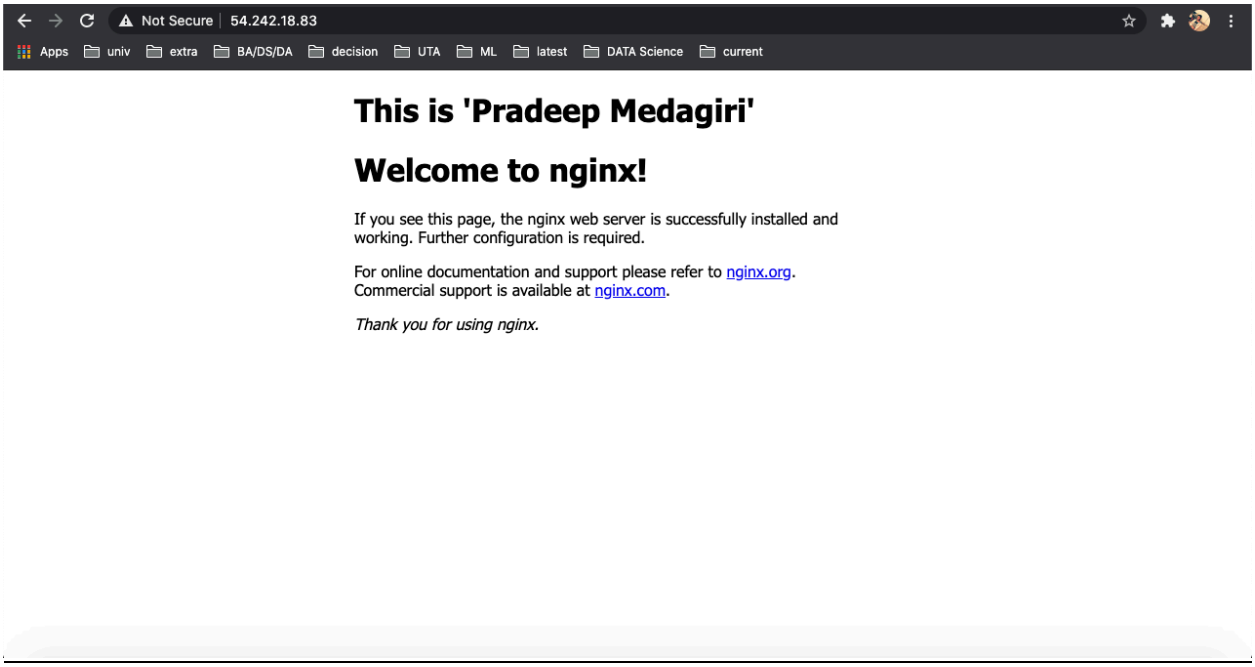


Security group name:



b) The screenshot of the webpage called from your laptop (2)

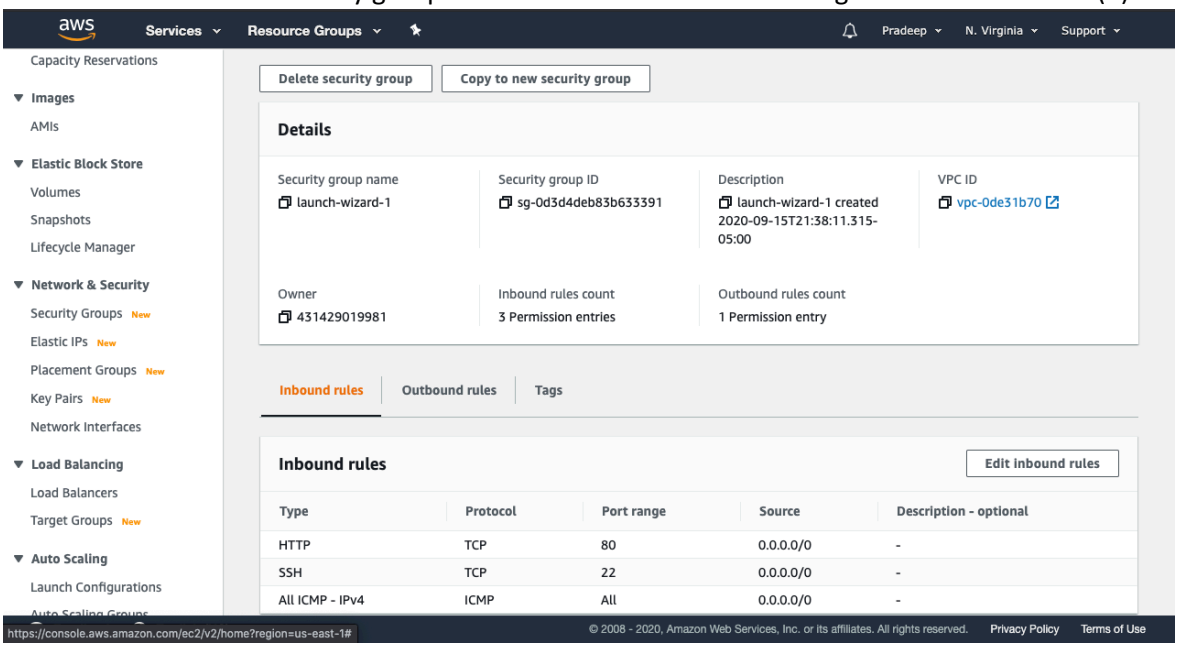
For 1st - EC2:



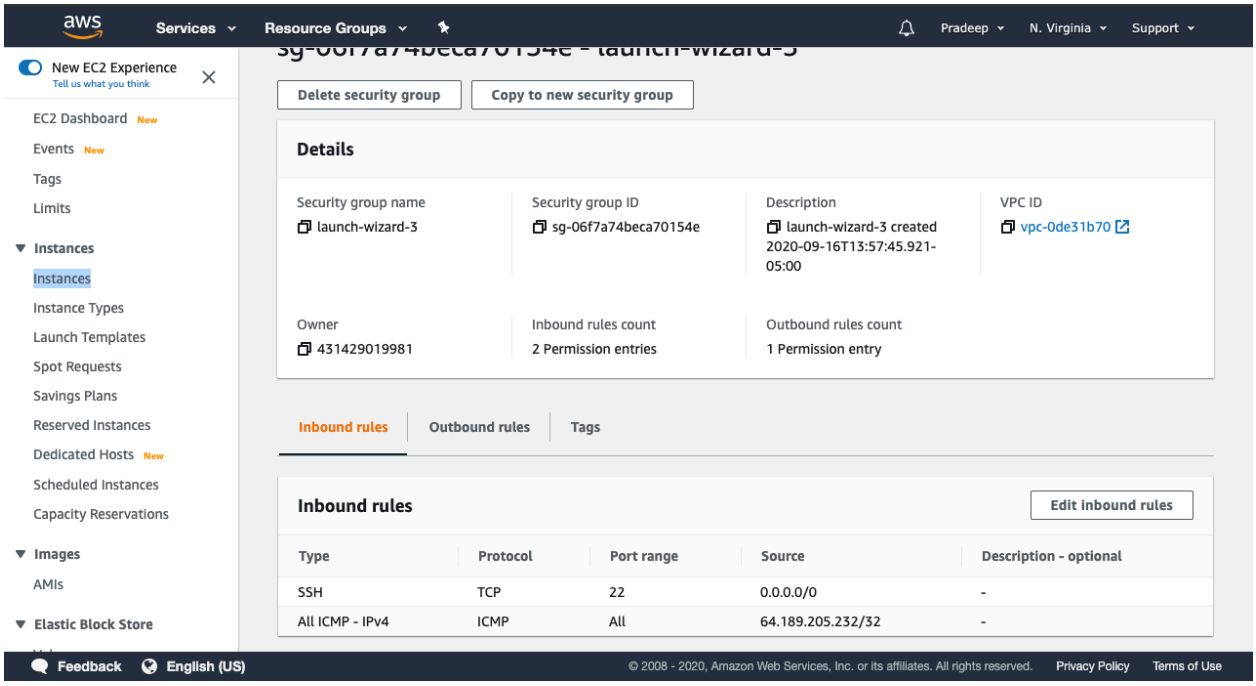
c) The screenshot of the webpage called from your smartphone (2)

For 1st - EC2:

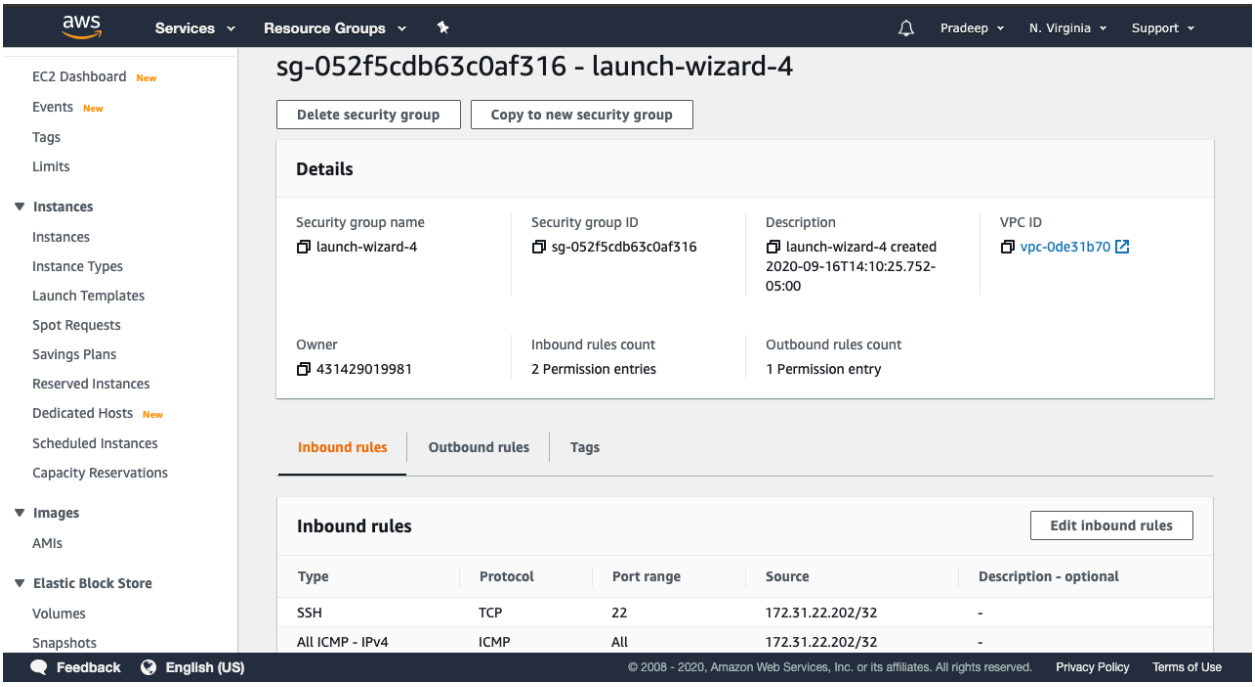
d) The screenshot of the Security group that shows the rules for incoming traffic of the 1st EC2 (2)



e) The screenshot of the Security group that shows the rules for incoming traffic of the 2nd EC2 (2)



f) The screenshot of the Security group that shows the rules for incoming traffic of the 3rd EC2 (2)



Problem 2 (12):

a) Test connectivity using the ping command (6). Think why some can connect and some can not.

Use internal IP address	1st EC2	2nd EC2	3rd EC2
1st EC2	Y	N	Y
2nd EC2	Y	Y	N
3rd EC2	Y	N	Y
Your laptop	N	N	N

b) Test connectivity using the ping command (6). Think why some can connect and some can not.

Use external IP address	1st EC2	2nd EC2	3rd EC2
1st EC2	Y	N	N(no public ip)
2nd EC2	Y	N	N(no public ip)
3rd EC2	N	N	N(no public ip)
Your laptop	Y	Y	N(no public ip)