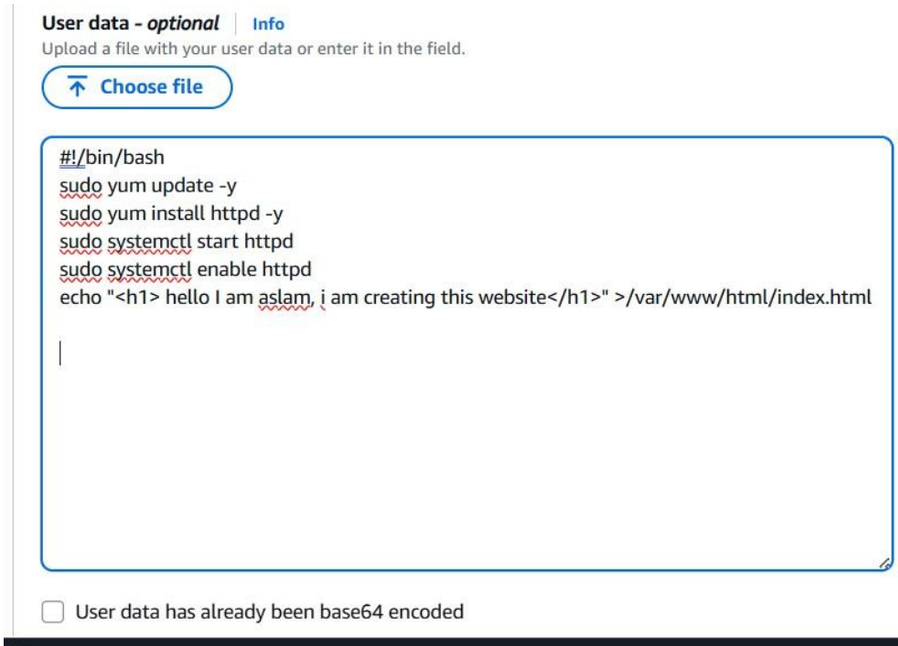
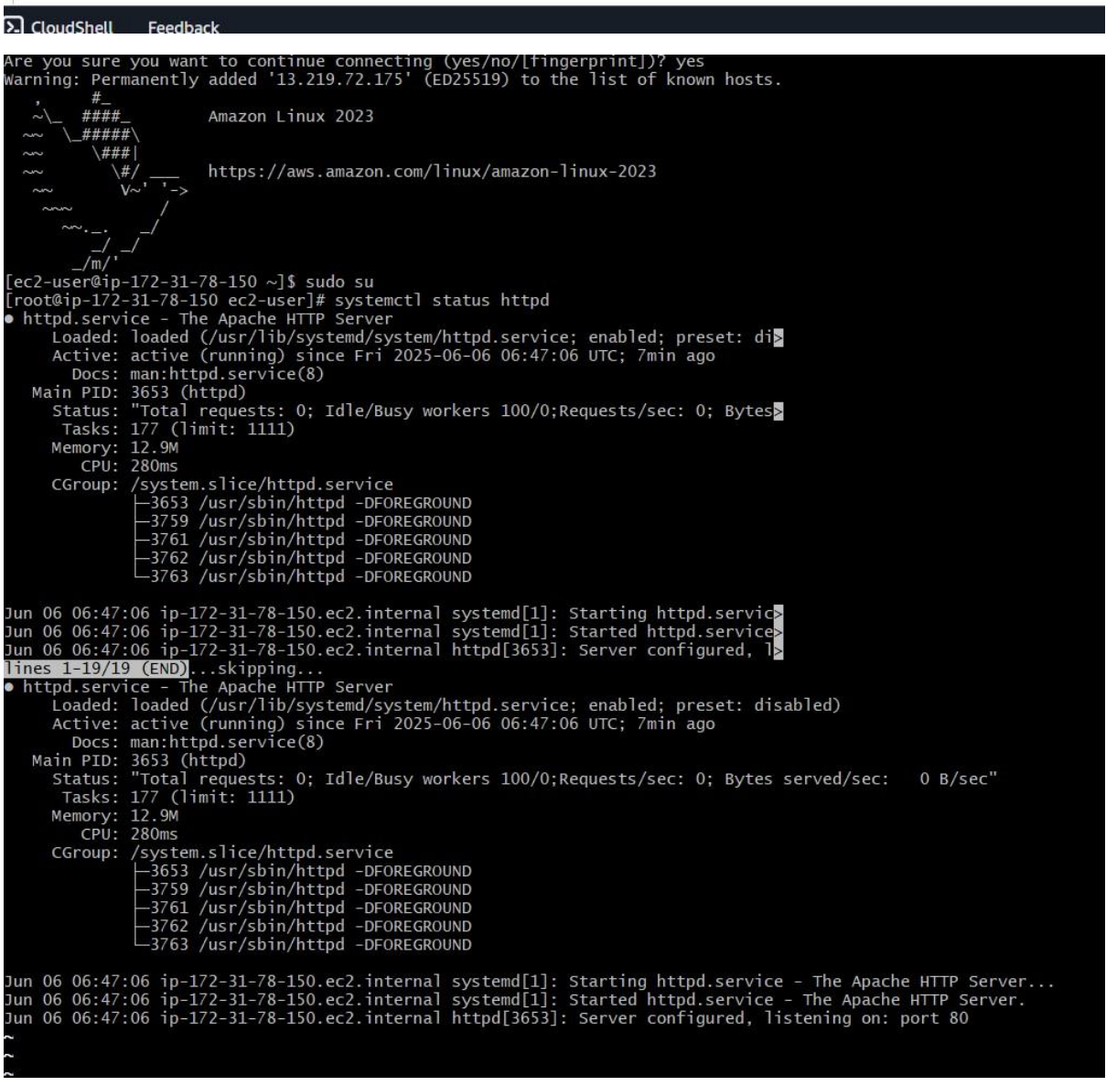
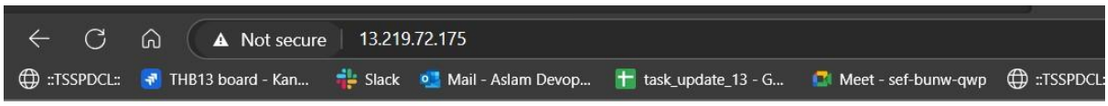
1) **Launch one ec2 using Amazon Linux 2 image and add script in user data to install Apache.**

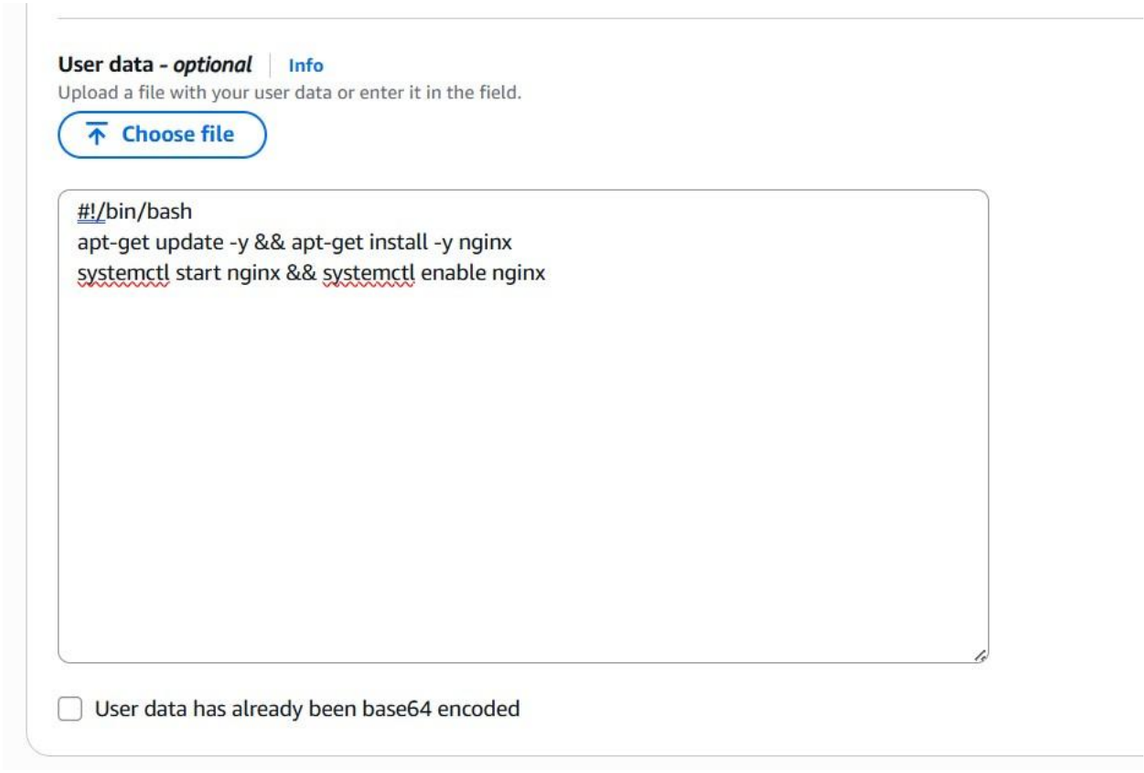


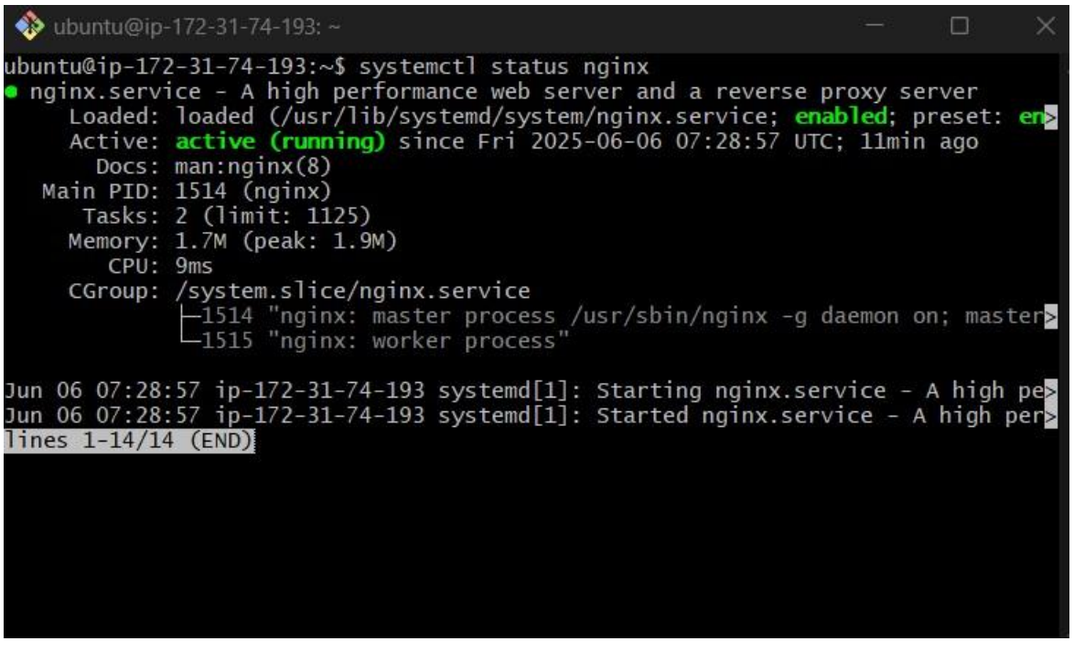


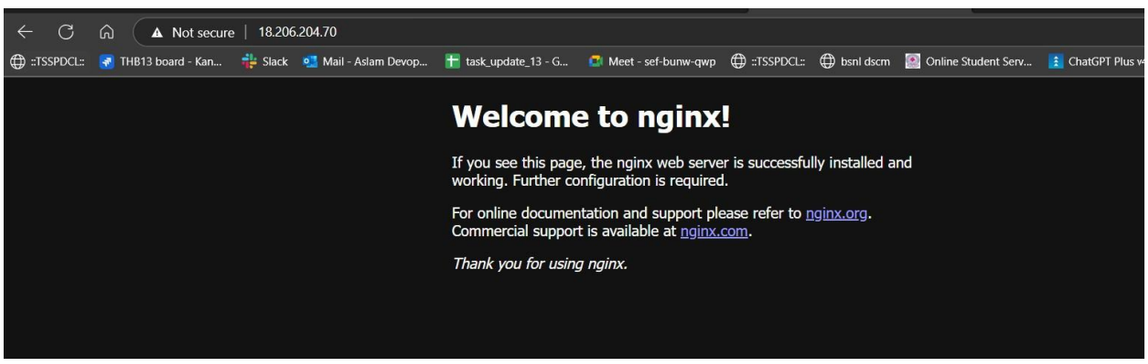


hello I am aslam, i am creating this website

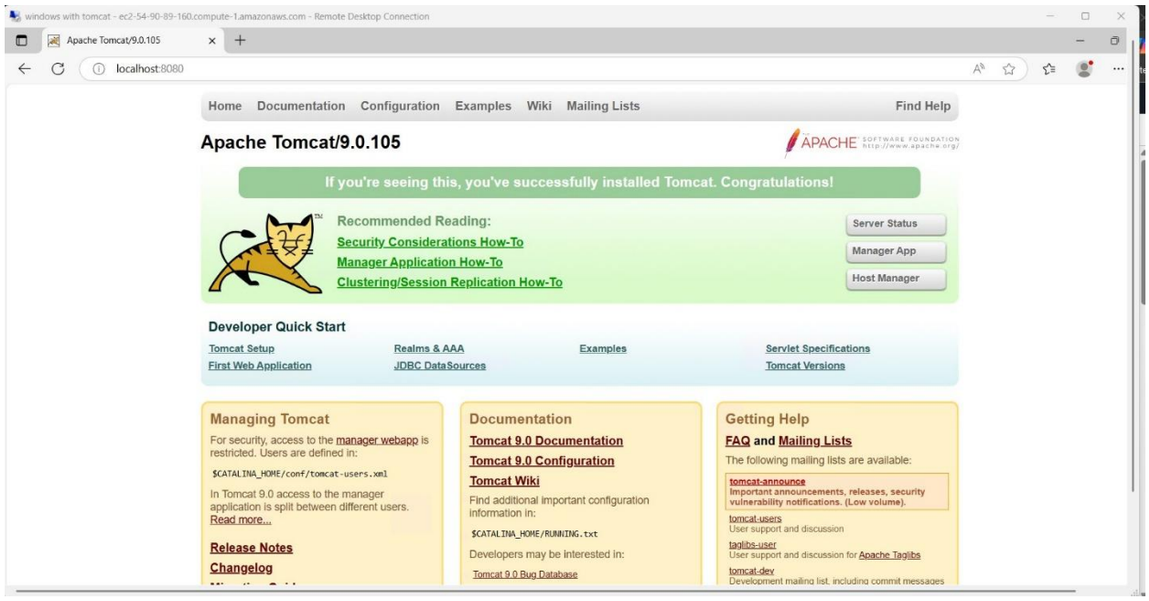
2) Launch one ec2 using Ubuntu image and add script in user data to install Nginx.

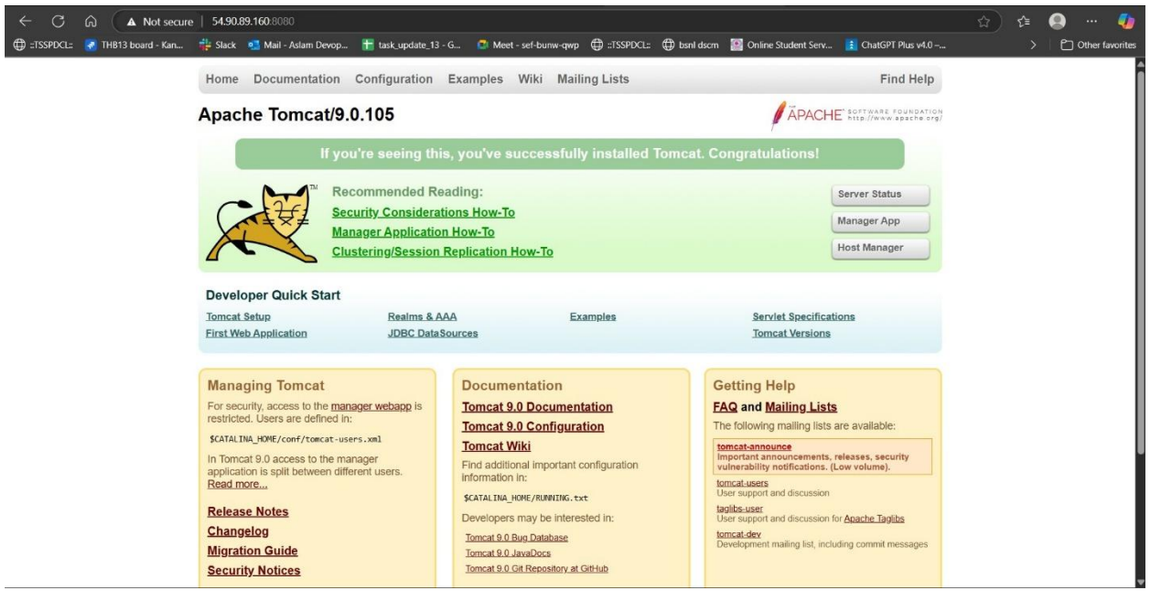




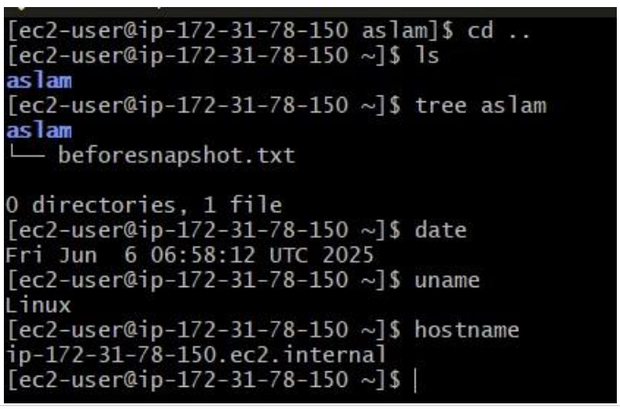


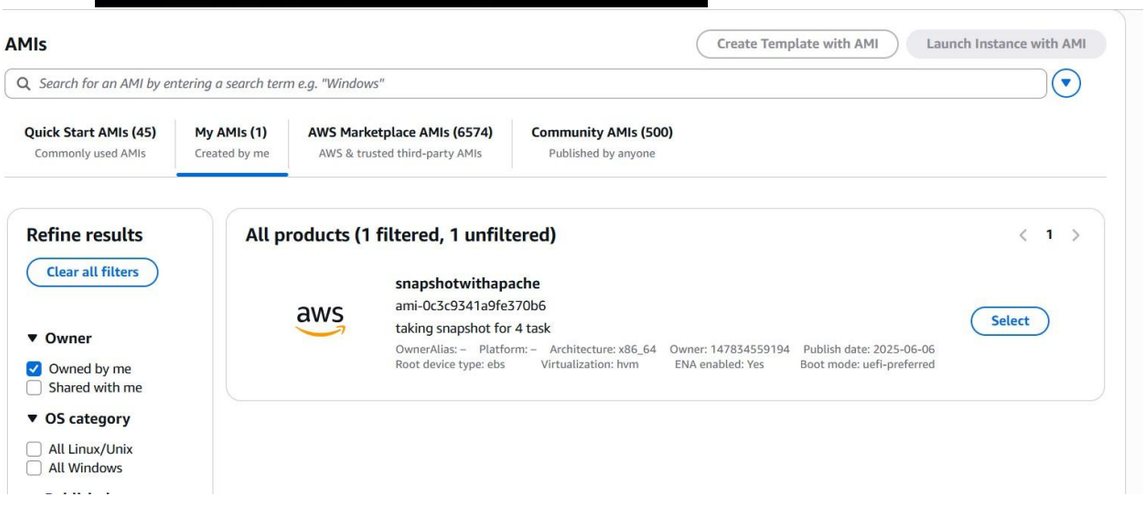
3) **Launch one windows server and install tomcat in windows.**





4) **Take snapshot of the instane created in Task 1.**
Before taking snapshot created directory and file and captured hostname with date and time





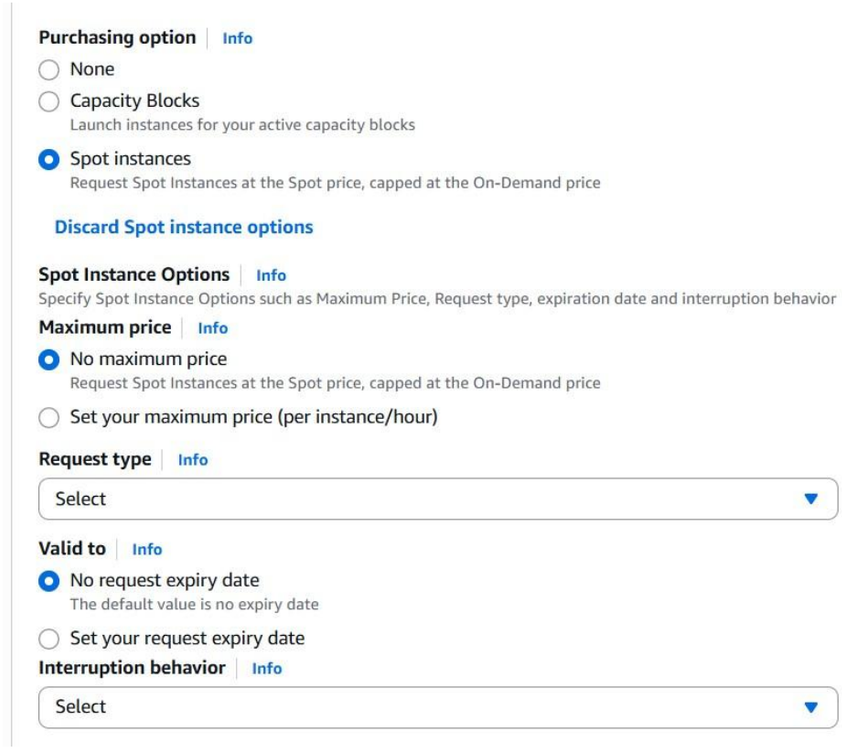
5) **Assign password less authentication for ec2 created on Task 2.**
Added the public key which I had generated for git hub in ubuntu to password less authentication

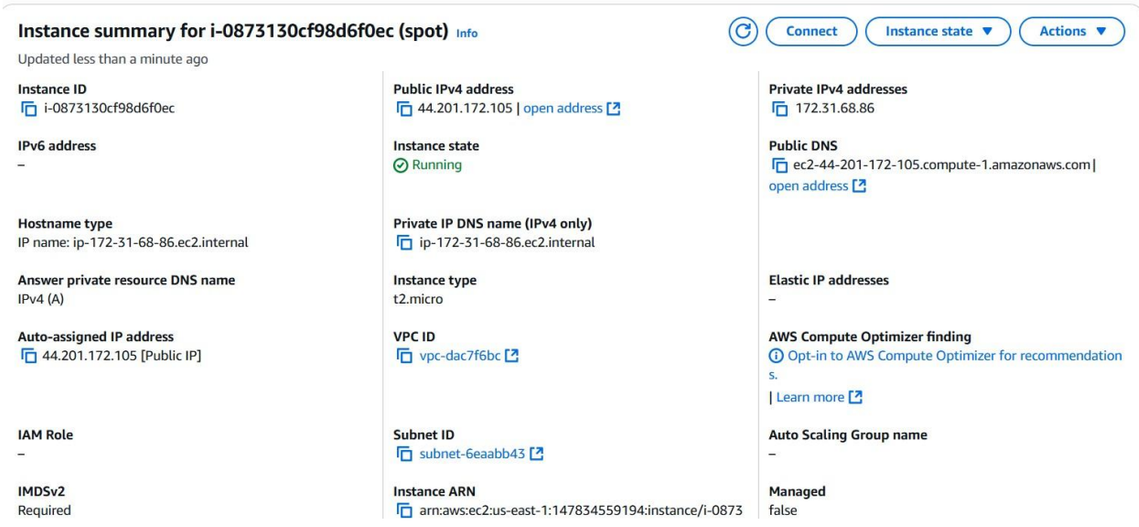
```
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIHgkeZmubmaroG7nDeO6ZGm18VEZdSwSzaM+9GjYUhfT
 masla@Hplaptop

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCuaYb6QAfwvM8BVQAg2J3JKu2ssxXeproT6EI7q279
z2qZNVlcODK5j9fsx4ingn9jsBuVGiIYS3+AiygTYoKY/cTa6GMpBXviYocPM7JhoXuL1rOEAWH/MJTT
Avsl1PkUw2dB6v1mbOMsAym6r/NEw1NrI2HxLn2lTsi4fObXLoqJsDGDfG5F1QZHhPOjJGUmcJSpO7tn
GAIU5CruXo3malQ4FoSkmgFjQkP2hwDGDWL7nNPJpcfbFgckOX6OU3tkOWOkBFxcvDbrE2O47jurNvF1
uTlrlprHb6c3L30mxWpndBaROllCU/eCNTjkDD61g//3WGufqUDG+4ROF5VV scripting
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
-- INSERT --                                                    1,96          All
```

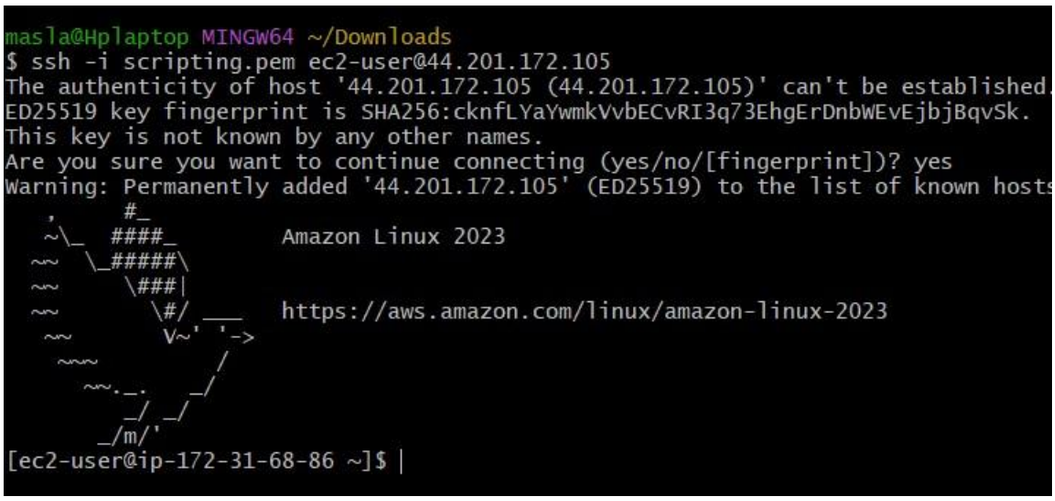
```
masla@Hplaptop MINGW64 ~/Downloads
$ cat /c/Users/masla/.ssh/id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIHgkeZmubmaroG7nDeO6ZGm18VEZdSwSzaM+9GjYUhfT
 masla@Hplaptop

masla@Hplaptop MINGW64 ~/Downloads
$ ssh -i scripting.pem ubuntu@18.206.204.70
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

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

 System information as of Fri Jun  6 09:18:03 UTC 2025

  System load:  0.02              Processes:             108
  Usage of /:   29.0% of 6.71GB   Users logged in:       0
  Memory usage: 26%               IPv4 address for enX0: 172.31.74.193
  Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.
root@ip-172-31-74-193:/home/ubuntu/.ssh# cd
root@ip-172-31-74-193:~# ls
snap
root@ip-172-31-74-193:~# exit
exit
ubuntu@ip-172-31-74-193:~$ exit
logout
Connection to 18.206.204.70 closed.

masla@Hplaptop MINGW64 ~/Downloads
$ ssh ubuntu@18.206.204.70
Welcome to Ubuntu 24.04.2 LTS (GNU/Linux 6.8.0-1029-aws x86_64)

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

 System information as of Fri Jun  6 09:20:52 UTC 2025

  System load:  0.0               Processes:             108
  Usage of /:   29.0% of 6.71GB   Users logged in:       0
  Memory usage: 25%               IPv4 address for enX0: 172.31.74.193
  Swap usage:   0%

 * Ubuntu Pro delivers the most comprehensive open source security and
   compliance features.

   https://ubuntu.com/aws/pro

Expanded Security Maintenance for Applications is not enabled.

2 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Enable ESM Apps to receive additional future security updates.
```

6) Launch any ec2 using spot purchasing option.

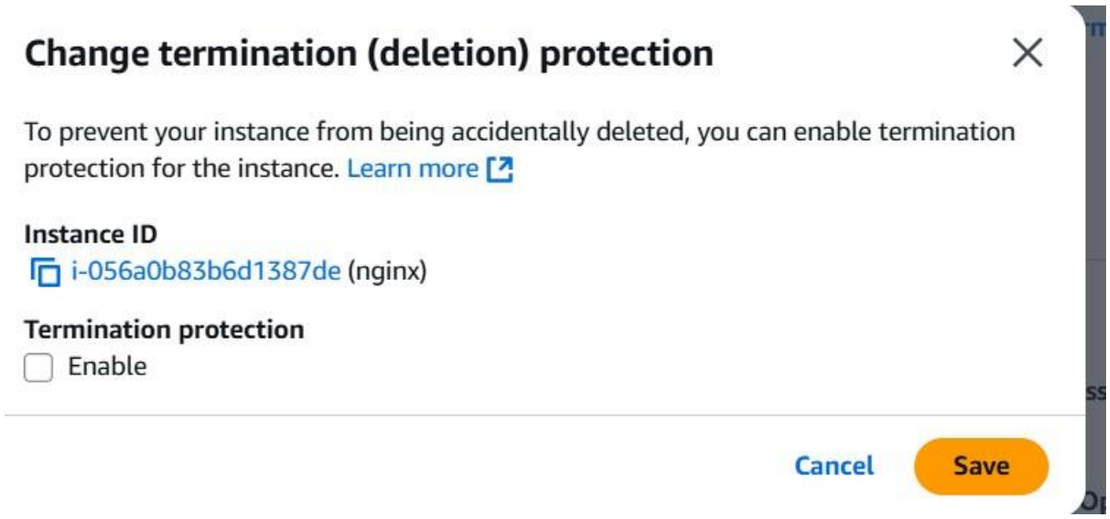
We are able to connect spot instance even before initialization

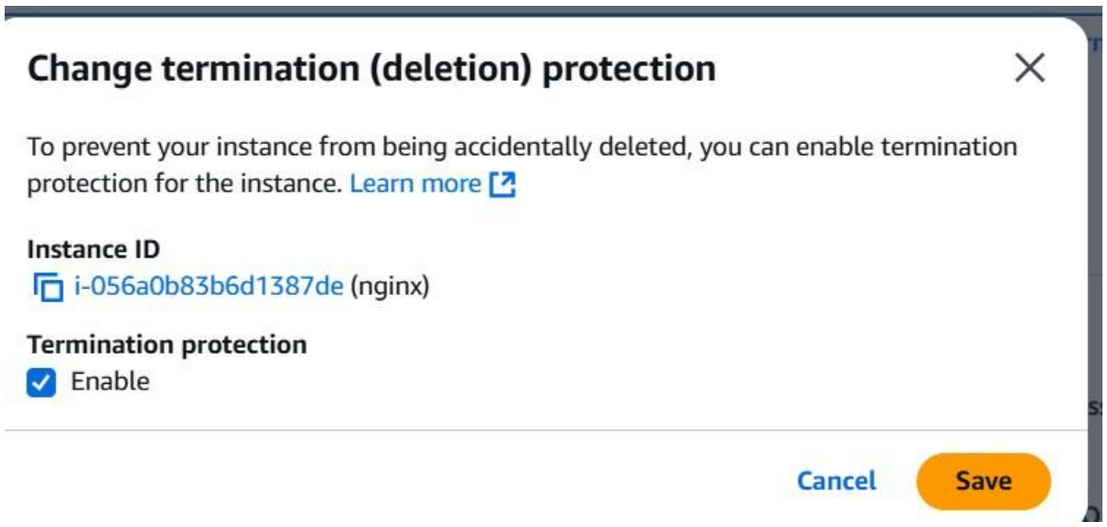


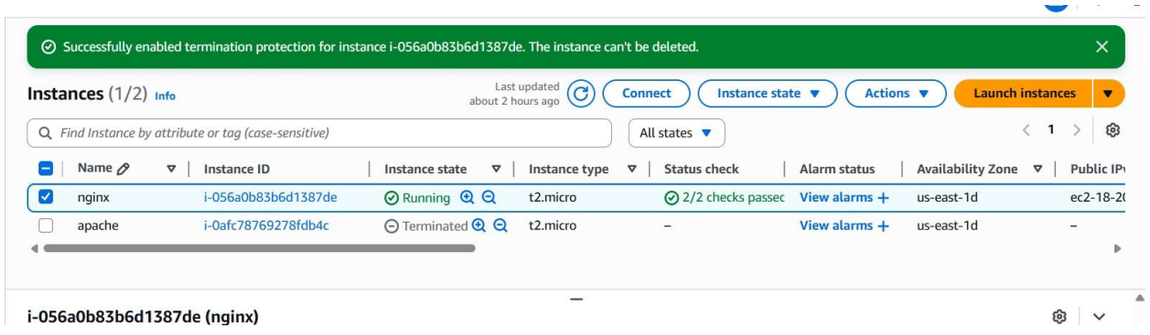


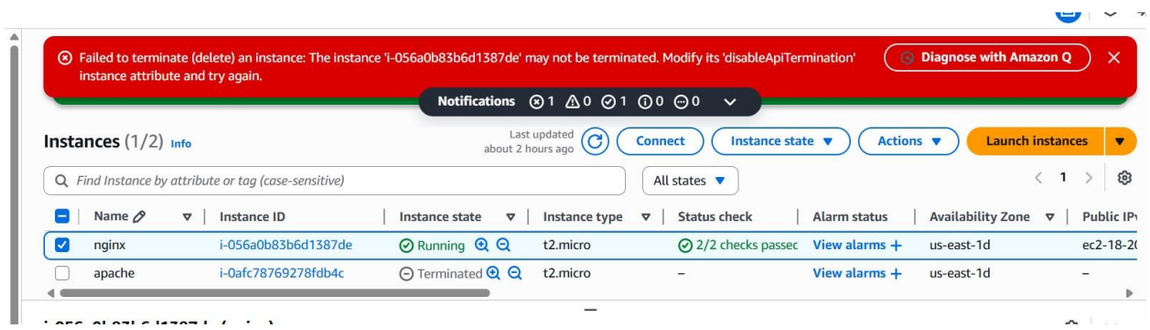


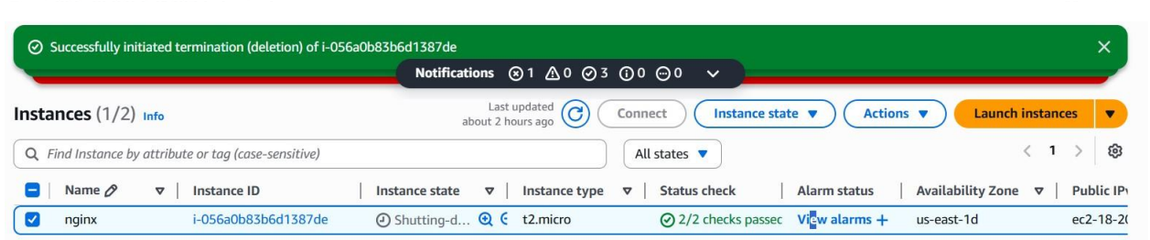
7) **Enable Termination policy on ec2 created in Task 2.**

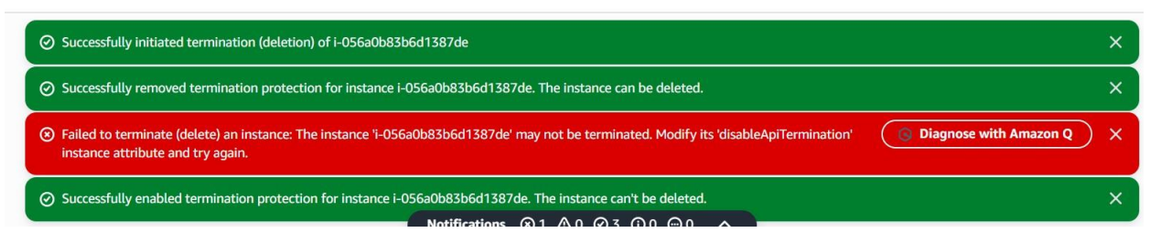












8) Launch one ec2 using Aws CLI.

```
masla@Hplaptop MINGW64 ~/Downloads
$ aws configure
AWS Access Key ID [****************V2I7]: AKIASE25ALLNFHKHNDOU
AWS Secret Access Key [****************94M2]: 1KFde8qjPrILXdvrcIn+iJiLH0jAPSIygV
cSviA+
Default region name [us-east-1]: us-east-1
Default output format [text]: text

masla@Hplaptop MINGW64 ~/Downloads
$ aws ec2 create-key-pair --key-name MyKeyPair --query 'KeyMaterial' --output te
xt > MyKeyPair.pem

masla@Hplaptop MINGW64 ~/Downloads
```

```
masla@Hplaptop MINGW64 ~/Downloads
$ aws ec2 create-security-group --group-name my-sg --description "My security gr
oup"
sg-00459cf3e947de82b    arn:aws:ec2:us-east-1:147834559194:security-group/sg-004
59cf3e947de82b

147834559194    r-0b16e1f778c8a4004
INSTANCES       0       x86_64  a9cad62b-5ae8-47f7-91c6-cdd98d48f7e4    legacy-bios     False   True    xen     ami-0e9bbd70d26d7cf4f   i-0688e1b7129f76904     t2.micro        MyKeyPair       2025-06-06T13:29:5
7+00:00     ip-172-31-67-212.ec2.internal   172.31.67.212           /dev/xda        ebs     True            subnet-6eaabb43 hvm     vpc-dac7f6bc
CAPACITYRESERVATIONSPECIFICATION        open
CPUOPTIONS      1       1
ENCLAVEOPTIONS  False
MAINTENANCEOPTIONS      default
METADATAOPTIONS enabled disabled        1       optional        disabled        pending
MONITORING      disabled
NETWORKINTERFACES       interface       12:0d:b8:78:2e:65       eni-05db00c7d9072d7e3   147834559194    ip-172-31-67-212.ec2.internal   172.31.67.212   True    in-use  subnet-6eaabb43 vpc-dac7f6bc
ATTACHMENT      2025-06-06T13:29:57+00:00       eni-attach-091bd2dcb5c992dfd    True    0       0       attaching
GROUPS  sg-00459cf3e947de82b    my-sg
OPERATOR        False
PRIVATEIPADDRESSES      True    ip-172-31-67-212.ec2.internal   172.31.67.212
OPERATOR        False
PLACEMENT       us-east-1d              default
-- More --
```

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Publi
	i-0688e1b7129f76904	Running	t2.micro	Initializing	View alarms +	us-east-1d	ec2-1

```
masla@Hplaptop MINGW64 ~/Downloads
$ aws ec2 describe-instances
RESERVATIONS    147834559194    r-0b16e1f778c8a4004
INSTANCES       0       x86_64  a9cad62b-5ae8-47f7-91c6-cdd98d48f7e4    legacy-bios     False   True    xen     ami-0e9bbd70d26d7cf4f   i-0688e1b7129f76904     t2.micro        MyKeyPair       2025-06-06T13:29:5
7+00:00     Linux/UNIX      ip-172-31-67-212.ec2.internal   172.31.67.212   ec2-100-27-19-87.compute-1.amazonaws.com        100.27.19.87    /dev/xda        ebs     True            subnet-6eaabb43 RunInstances
    2025-06-06T13:29:57+00:00       hvm     vpc-dac7f6bc
BLOCKDEVICEMAPPINGS     /dev/xda
EBS     2025-06-06T13:29:58+00:00       True    attached        vol-0a6e3e0d04deb3fa0
CAPACITYRESERVATIONSPECIFICATION        open
CPUOPTIONS      1       1
ENCLAVEOPTIONS  False
HIBERNATIONOPTIONS      False
MAINTENANCEOPTIONS      default default
METADATAOPTIONS enabled disabled        1       optional        disabled        applied
MONITORING      disabled
NETWORKINTERFACES       interface       12:0d:b8:78:2e:65       eni-05db00c7d9072d7e3   147834559194    ip-172-31-67-212.ec2.internal   172.31.67.212   True    in-use  subnet-6eaabb43 vpc-dac7f6bc
ASSOCIATION     amazon  ec2-100-27-19-87.compute-1.amazonaws.com        100.27.19.87
ATTACHMENT      2025-06-06T13:29:57+00:00       eni-attach-091bd2dcb5c992dfd    True    0       0       attached
GROUPS  sg-00459cf3e947de82b    my-sg
OPERATOR        False
PRIVATEIPADDRESSES      True    ip-172-31-67-212.ec2.internal   172.31.67.212
ASSOCIATION     amazon  ec2-100-27-19-87.compute-1.amazonaws.com        100.27.19.87
NETWORKPERFORMANCEOPTIONS       default
OPERATOR        False
PLACEMENT       us-east-1d              default
PRIVATEDNSNAMEOPTIONS   False   False   ip-name
SECURITYGROUPS  sg-00459cf3e947de82b    my-sg
STATE   16      running

masla@Hplaptop MINGW64 ~/Downloads
$
```

```
masla@Hplaptop MINGW64 ~/Downloads
$ ssh -i MyKeyPair.pem ec2-user@100.27.19.87
The authenticity of host '100.27.19.87 (100.27.19.87)' can't be established.
ED25519 key fingerprint is SHA256:58x6ymyB5tLSnMJi+1fl87FNOz4K1GwEiZOFJBsS8R4.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '100.27.19.87' (ED25519) to the list of known hosts.
       #_
   ~\_  ####_        Amazon Linux 2
  ~~  \_#####\
  ~~     \###|       AL2 End of Life is 2026-06-30.
  ~~       \#/ ___
   ~~       V~' '->
    ~~~         /    A newer version of Amazon Linux is available!
      ~~._.   _/
         _/ _/       Amazon Linux 2023, GA and supported until 2028-03-15.
       _/m/'           https://aws.amazon.com/linux/amazon-linux-2023/

[ec2-user@ip-172-31-67-212 ~]$
```