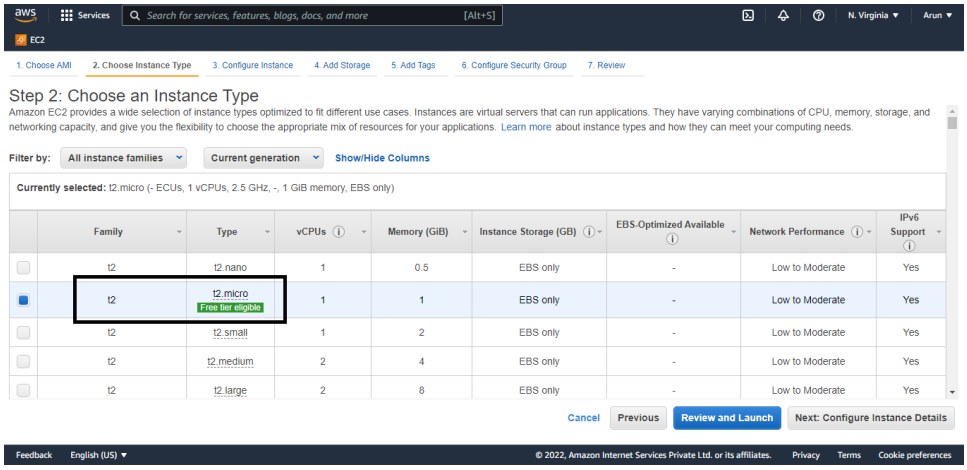
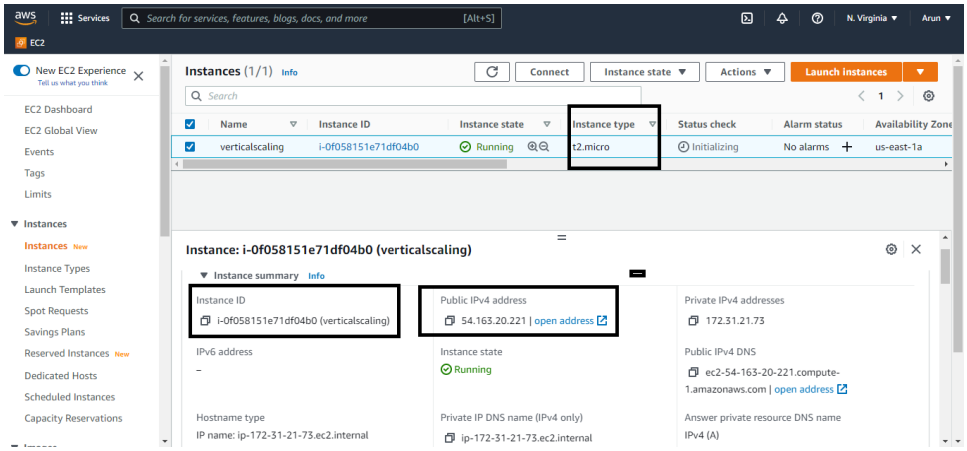
POC : Vertical Scaling

Step 1 : Create Ec2 Instance using the instance type : t2.micro



Step 2 : Now the Instance has launched with t2.micro also notedown the Public ip address and instance id



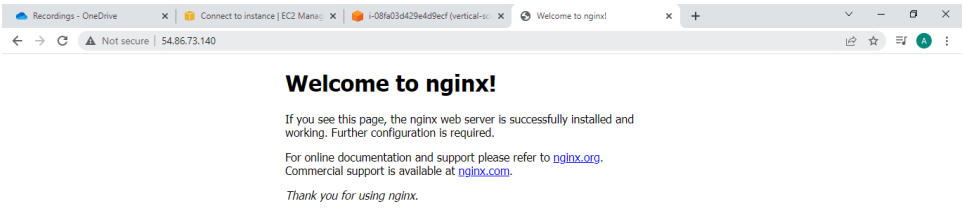
Step 3: Connect the instance and check memory allocation using <u>lsblk</u> command

```
root@ip-172-31-21-73:/home/ubuntu# lsblk
NAME    MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
loop0     7:0    0   25M  1 loop /snap/amazon-ssm-agent/4046
loop1     7:1    0 55.5M  1 loop /snap/core18/2253
loop2     7:2    0 61.9M  1 loop /snap/core20/1242
loop3     7:3    0 67.2M  1 loop /snap/lxd/21835
loop4     7:4    0 42.2M  1 loop /snap/snapd/14066
xvda    202:0    0    8G  0 disk
└─xvda1 202:1    0    8G  0 part /
root@ip-172-31-21-73:/home/ubuntu#
```

Step 4 : Create script file – touch one.sh Enter the following shell scripts in the file one.sh, give execution permission and run the bash file this will installs the nginx

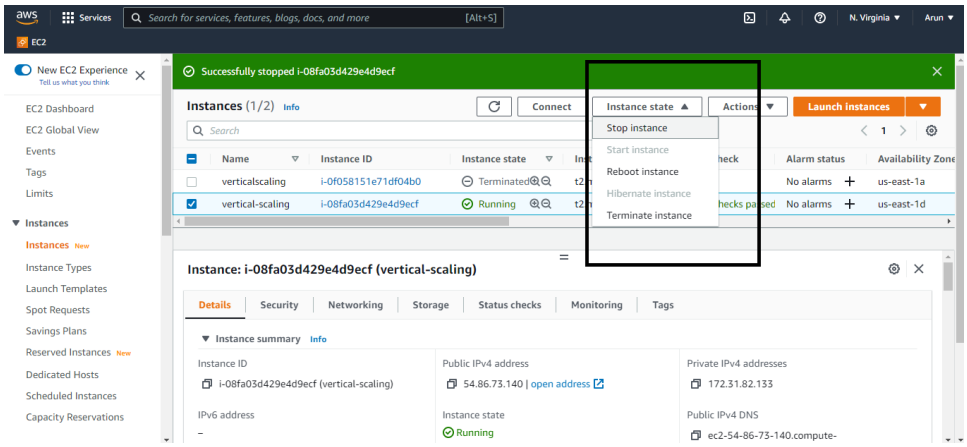
```
root@ip-172-31-82-133:~# cat one.sh
#!/bin/bash
sudo apt-get update -y
sleep 20
sudo apt install nginx -y
sleep 20
root@ip-172-31-82-133:~# sh one.sh
```

Step 5 : Go to browser and enter public ip of the machine. You are going to see nginx on your browser

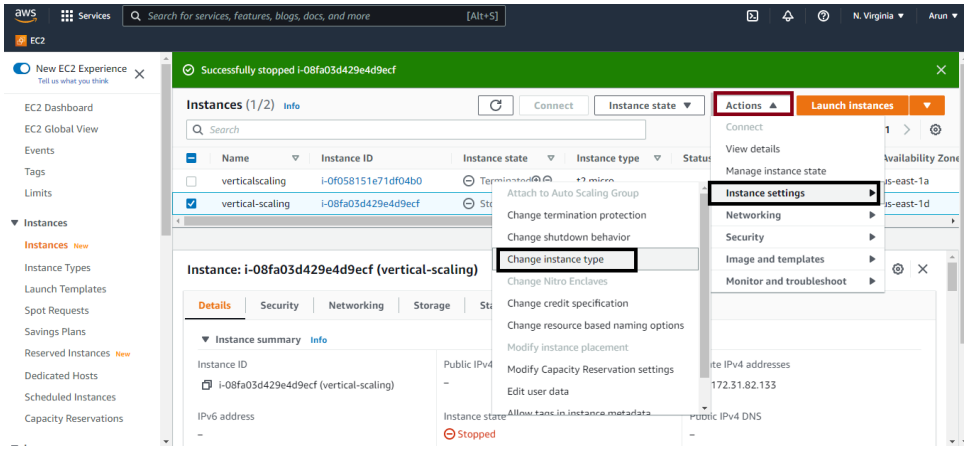


Now it's the time to Scale-Up

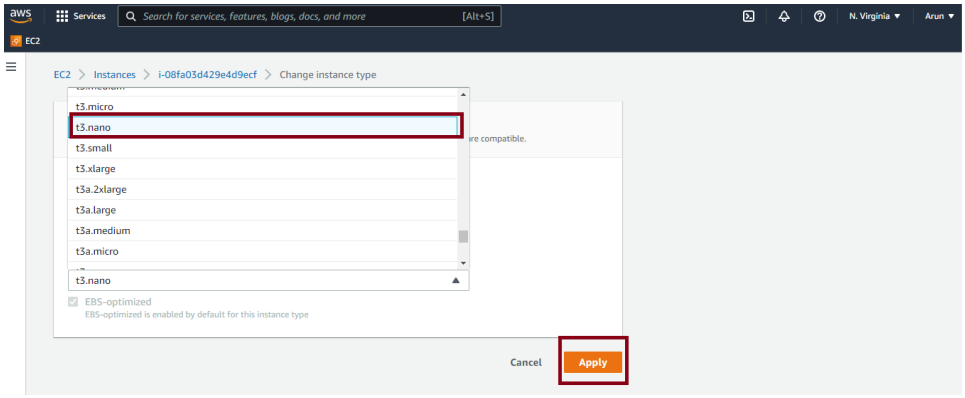
Step 6 : To change the Instance Family (vertical Scaling) Go to aws management console stop instance.



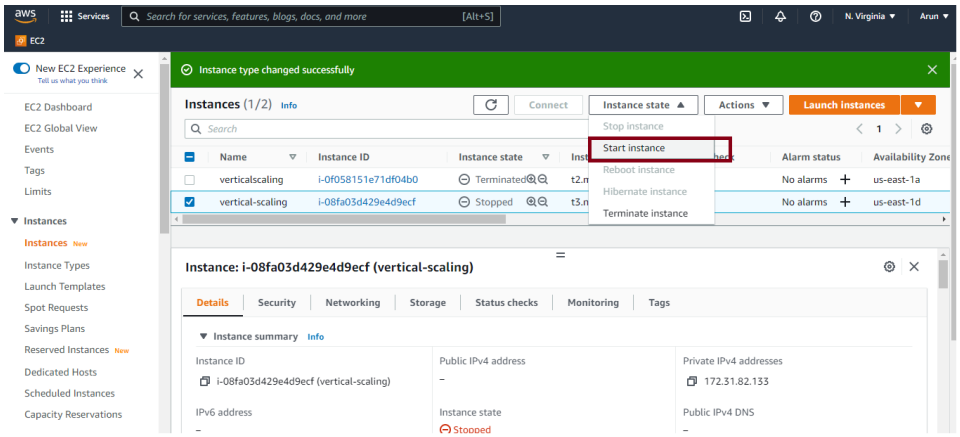
Step 7 : Move to Actions >> Instance Setting >> Change Instance Type



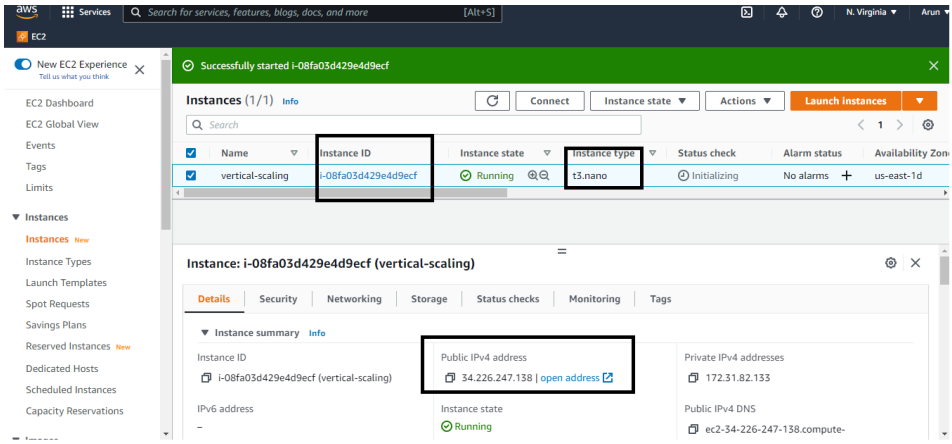
Step 8: Select the changed instance type , Here I selected t2.micro to t2 nano



Step 9 : Now Start the instance from instance Dashboard



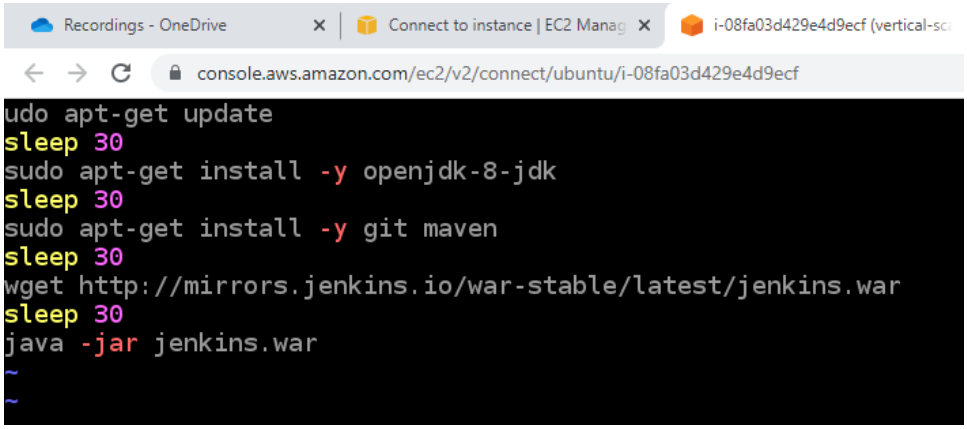
Step 10: Now Note down Instance id (not changed), Public IP (changed), instance type(changed)



Step 11 : connect to instance. And check the files available in the machine by ls command

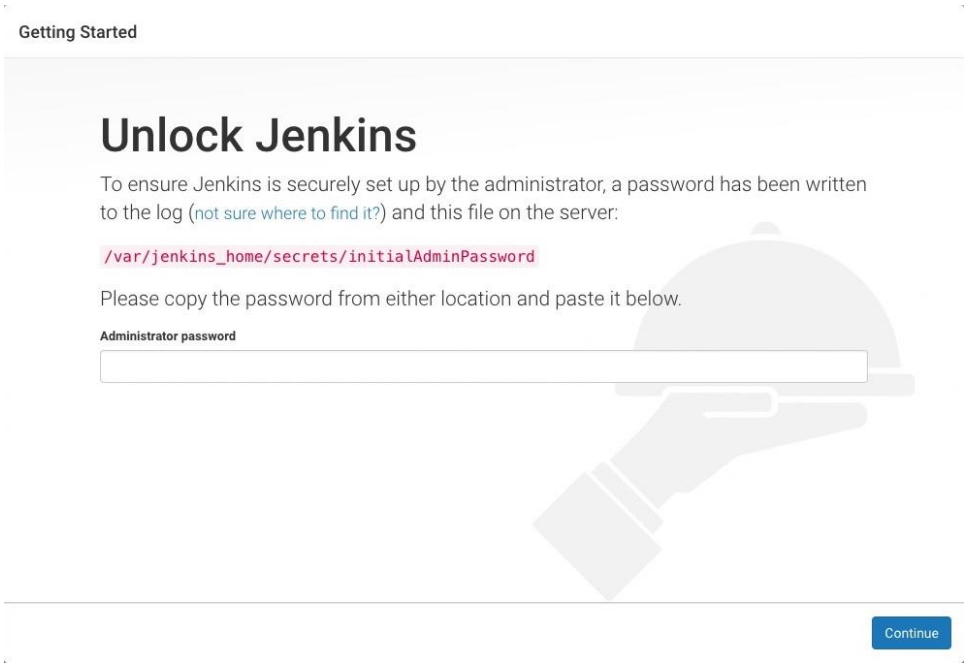
The file which one created previously, t2.micro is also available

Step 12 : create two.sh and write shell scripts to install java, git maven and jenkins.

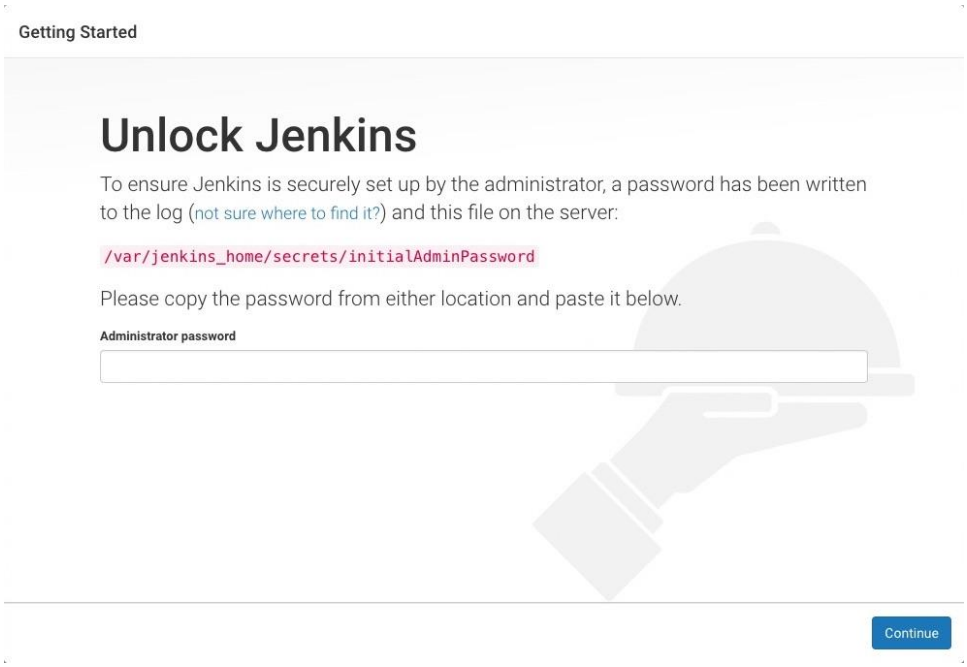


Step 13: Now check with new public ip, you can see nginx which is installed previously

Step 14 : now go to browser and go to newip:8080 and observe jenkins has installed.



Step :15 Again repeat the steps 6, 7, 8, 9, 10 But change instance type to t2.micro again (scale down) and connect to instance



Here we observe that during Vertical scaling only public ip has been changed, but files and applications are unaltered.