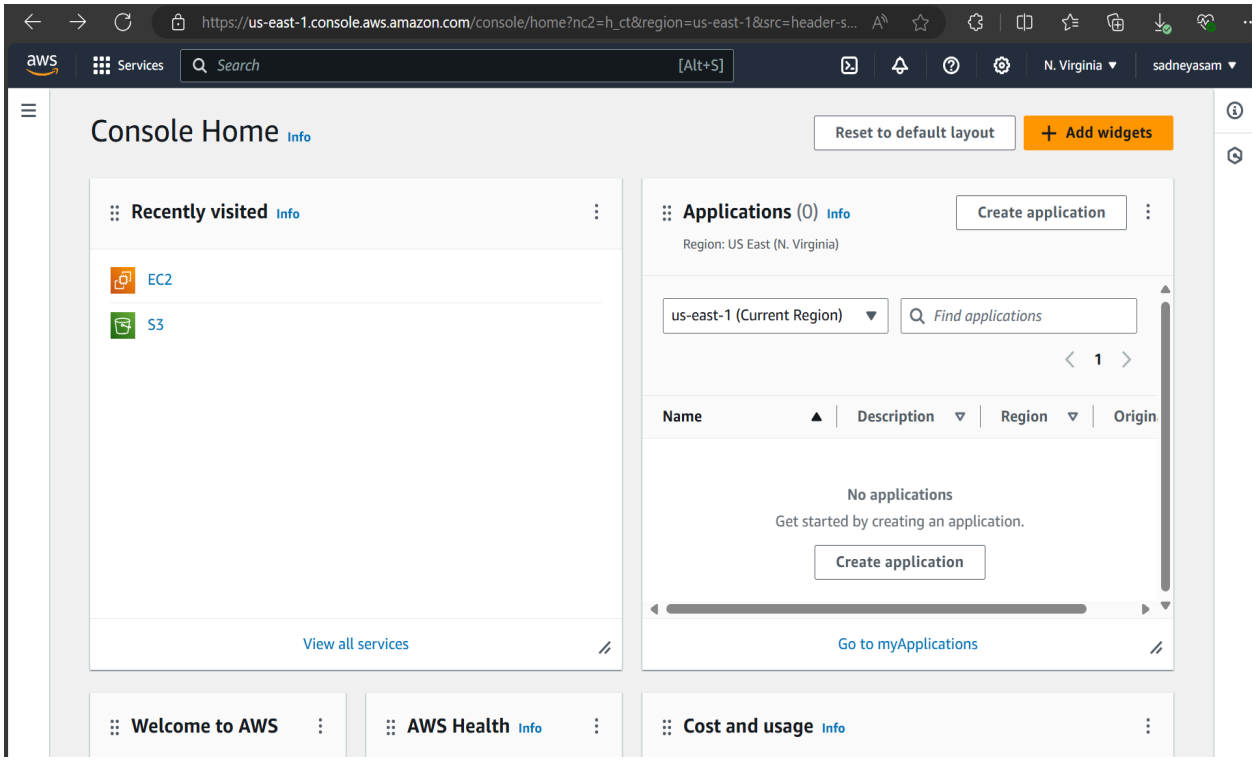
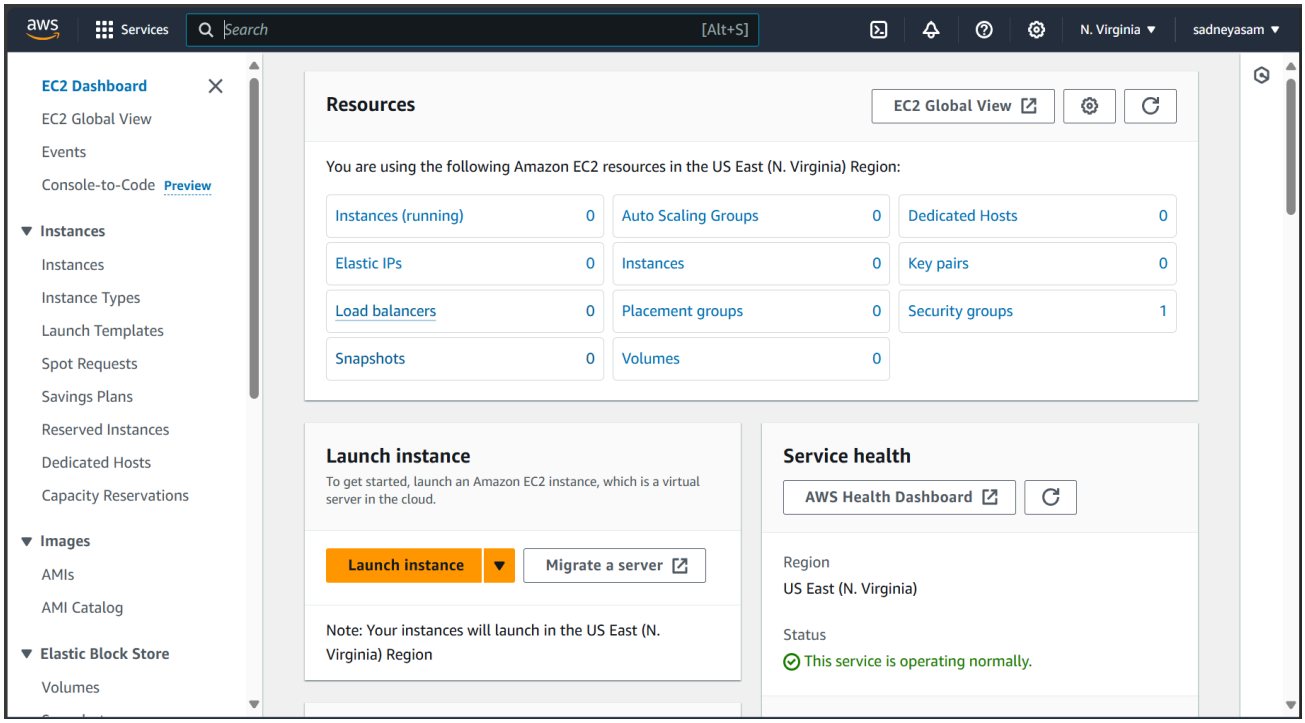
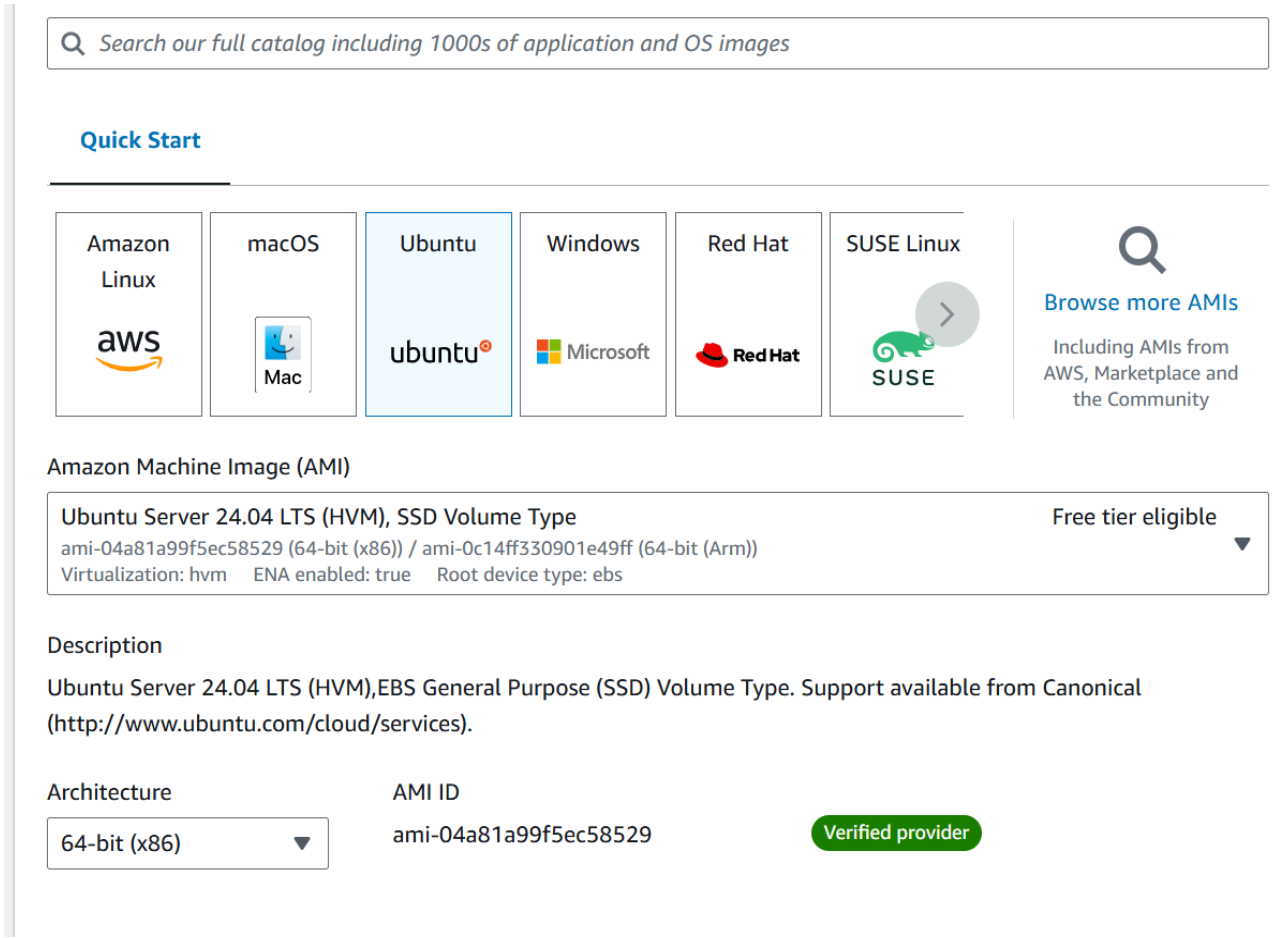
# Experiment 1B



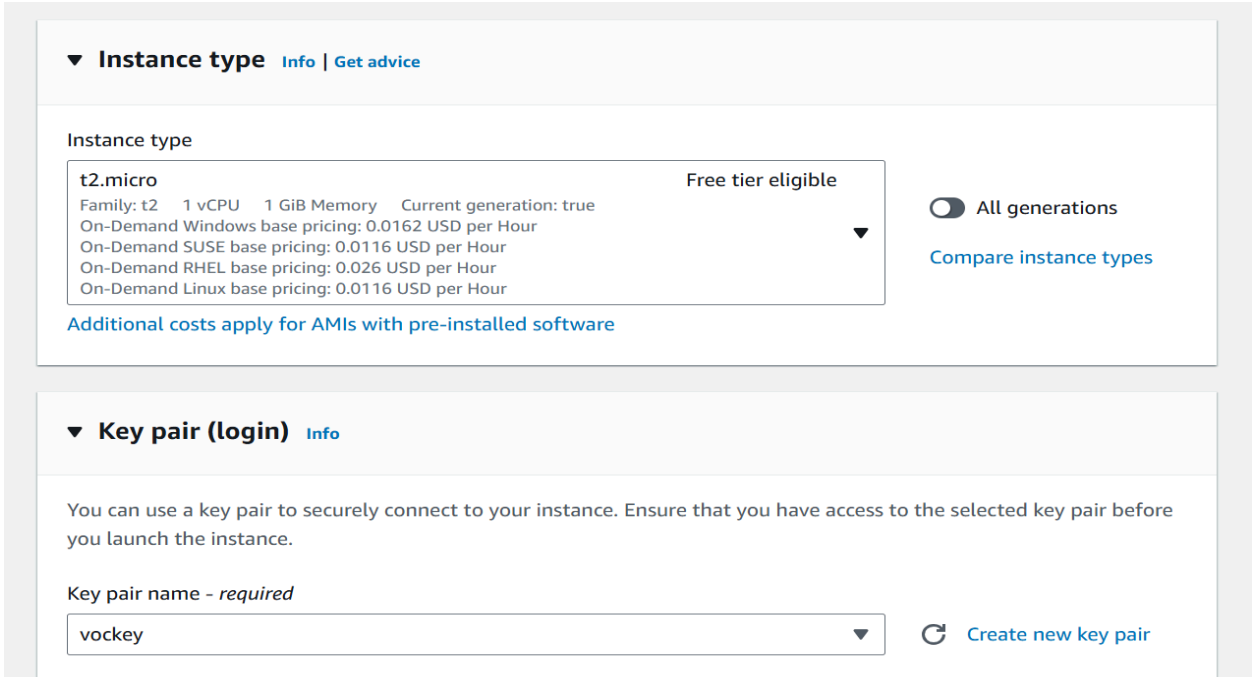

1. Search EC2 instance. Then click on launch instance.

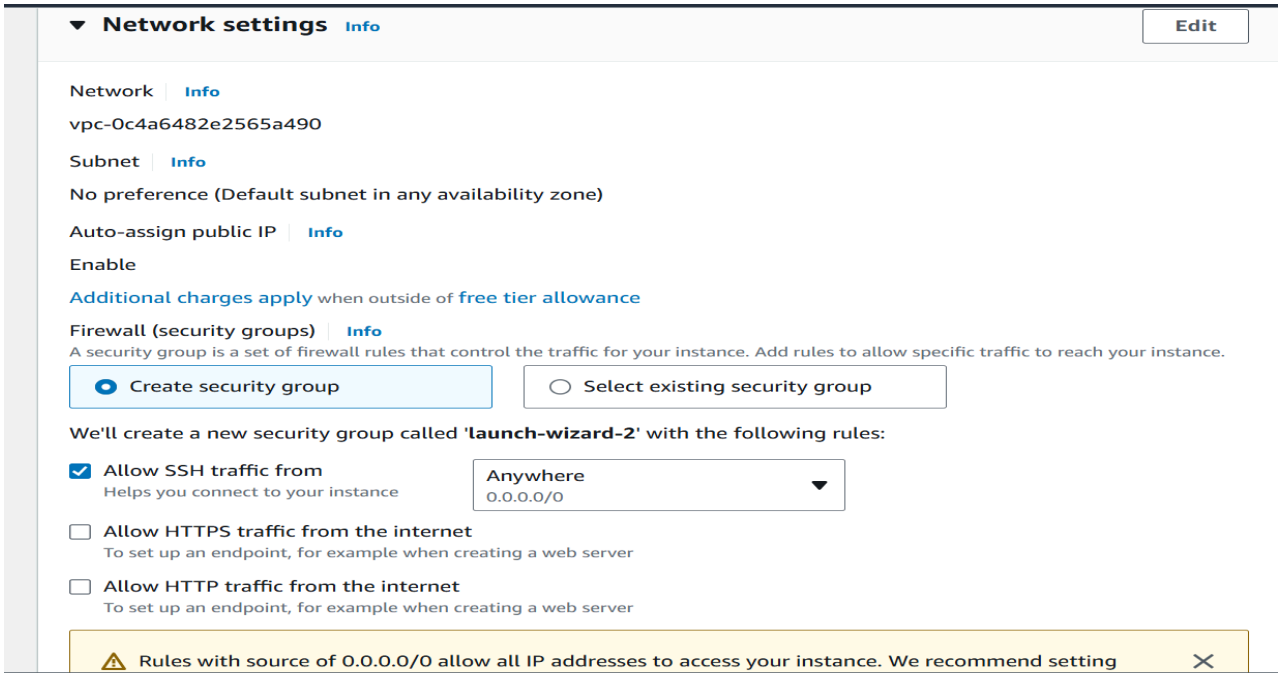


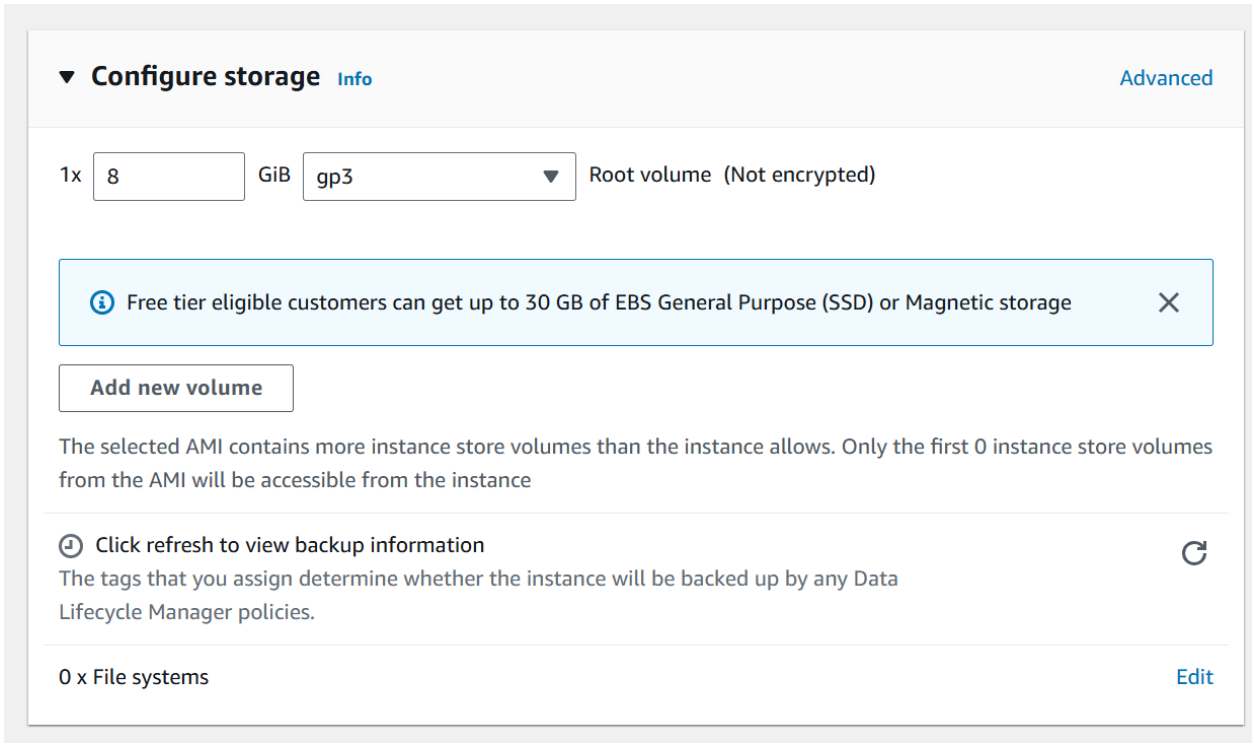
2.selecting the operating system as ubuntu.



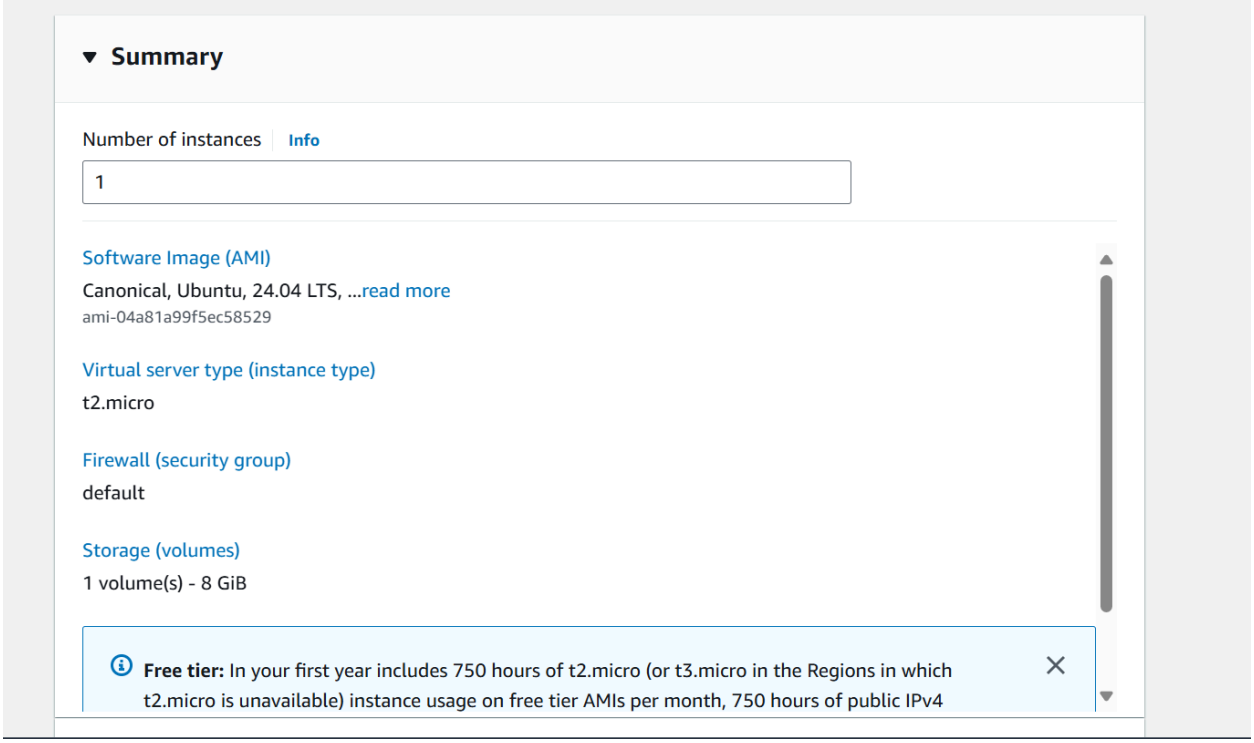

3. Keeping all the things default.



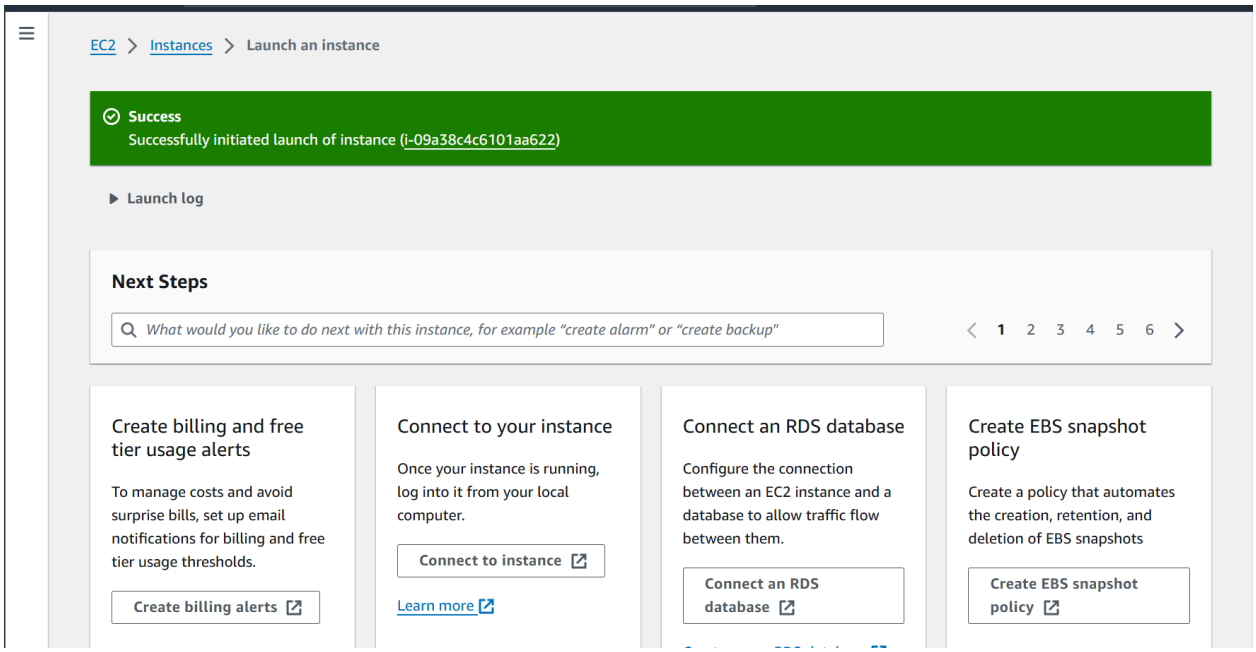

Network settings Info
Edit
Network Info
vpc-0c4a6482e2565a490
Subnet Info
No preference (Default subnet in any availability zone)
Auto-assign public IP Info
Enable
Additional charges apply when outside of free tier allowance
Firewall (security groups) Info
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.
Create security group
Select existing security group
We'll create a new security group called 'launch-wizard-2' with the following rules:
Allow SSH traffic from
Helps you connect to your instance
Anywhere
0.0.0.0/0
Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server
Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting


Configure storage Info
Advanced
1x
8
GiB
gp3
Root volume (Not encrypted)
Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage
Add new volume
The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance
Click refresh to view backup information
The tags that you assign determine whether the instance will be backed up by any Data Lifecycle Manager policies.
0 x File systems
Edit

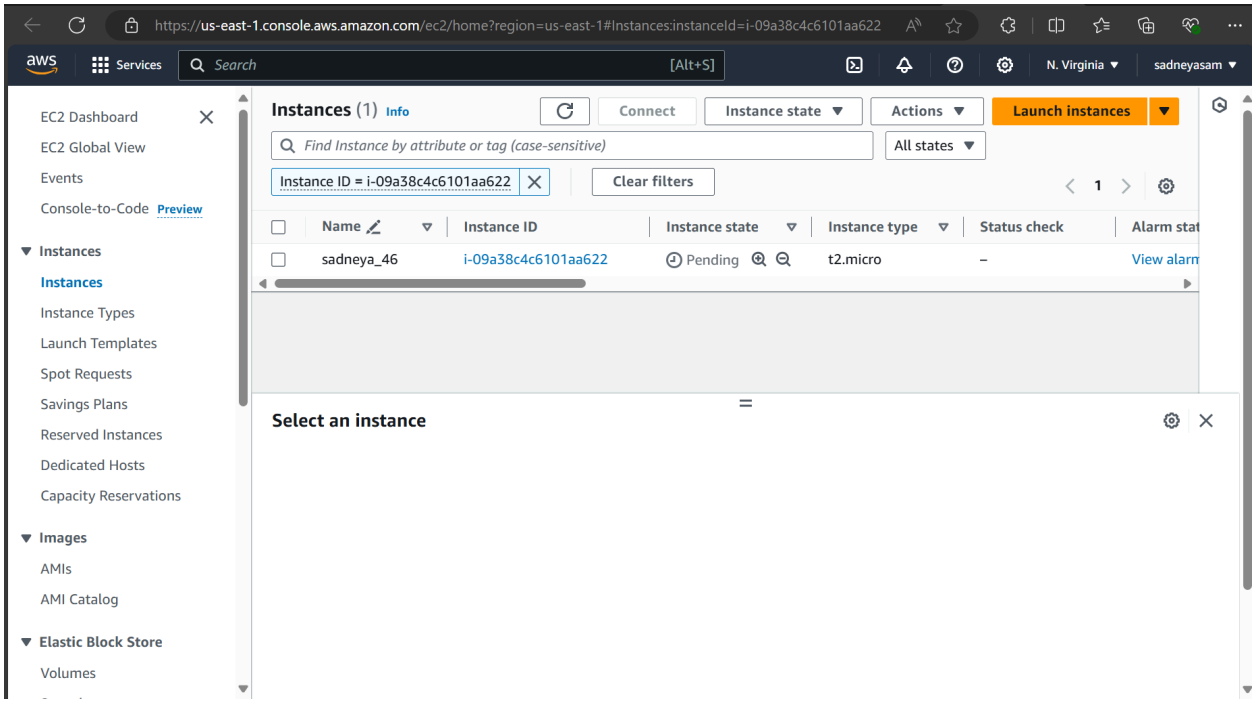
4. After completing all steps. You will get the summary. Then click on confirm.

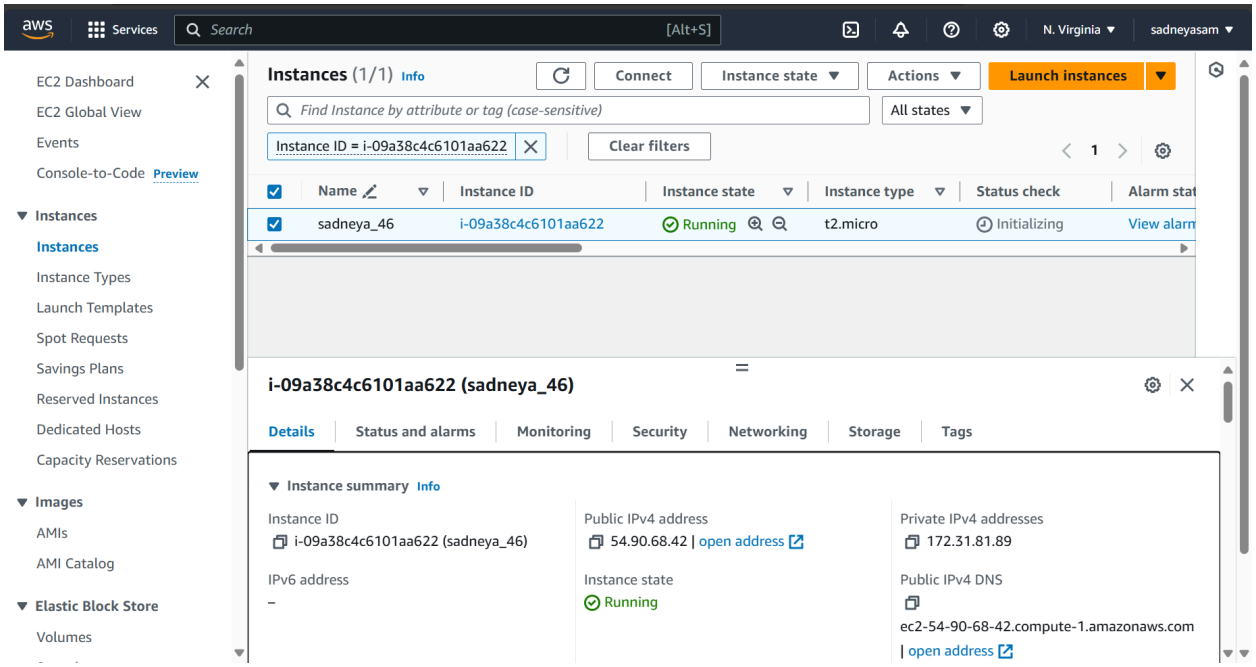



5.thus instance get created.

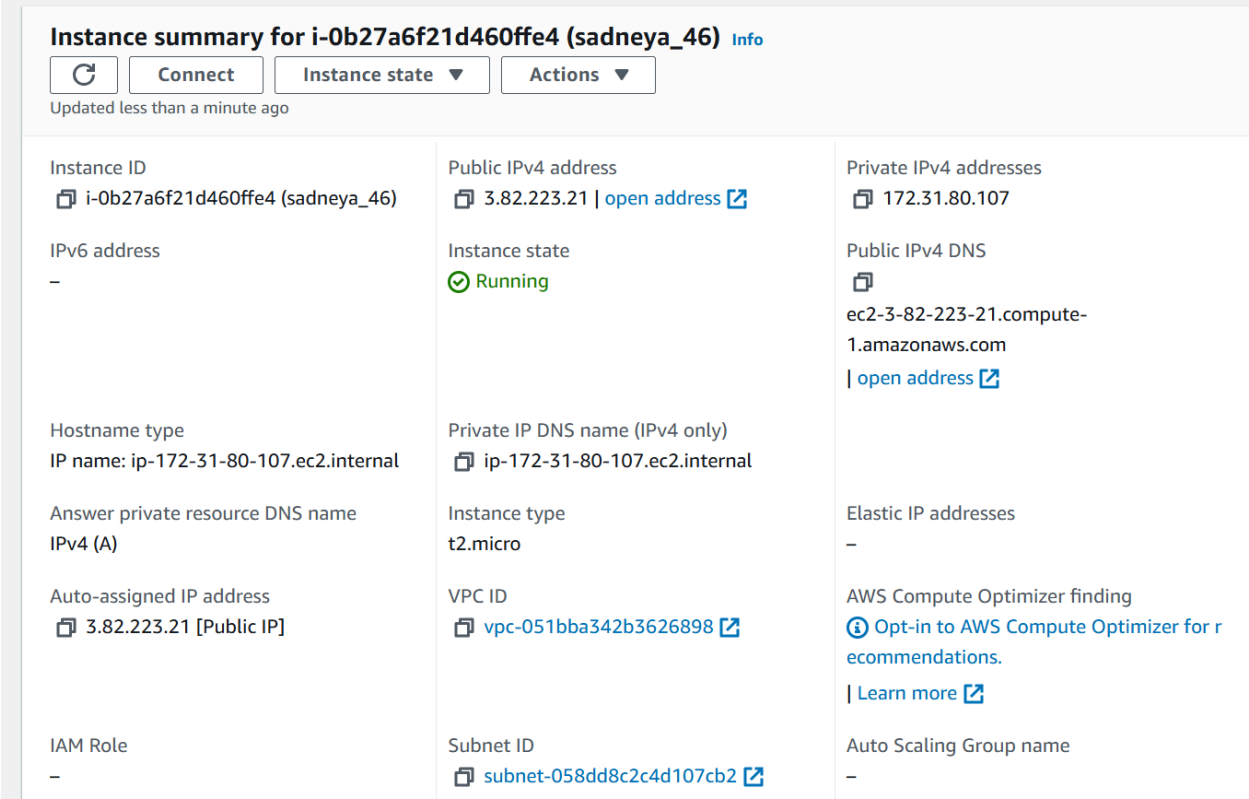


6.wait for instance to launch completely.

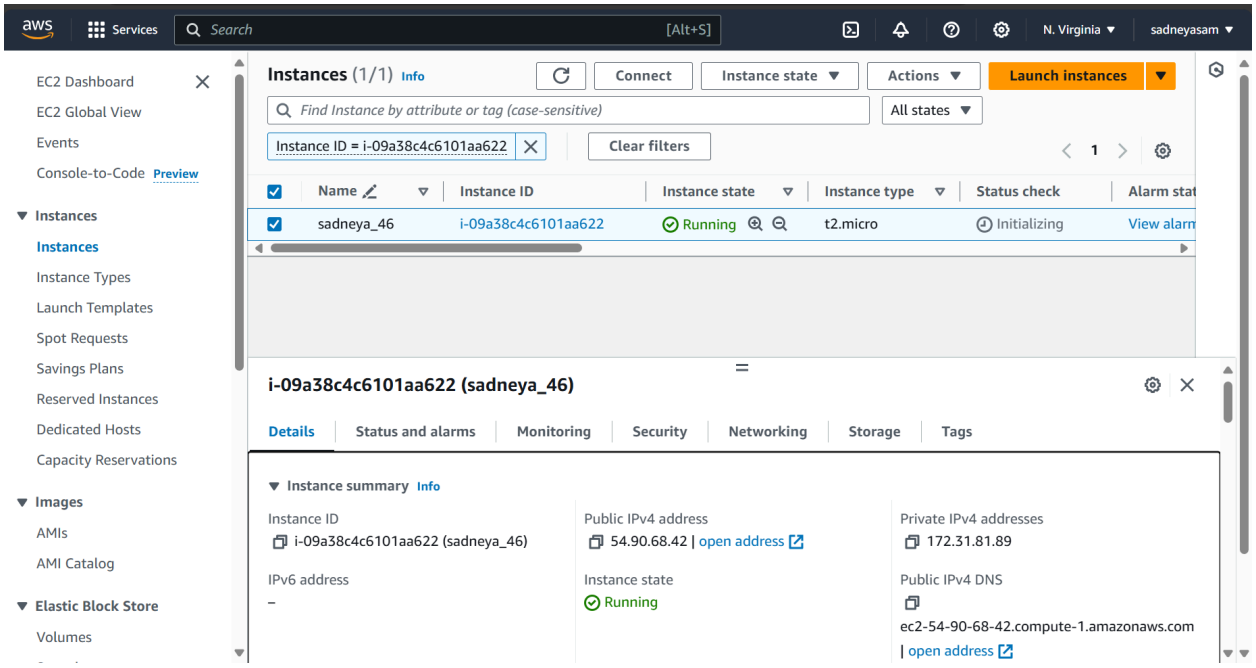


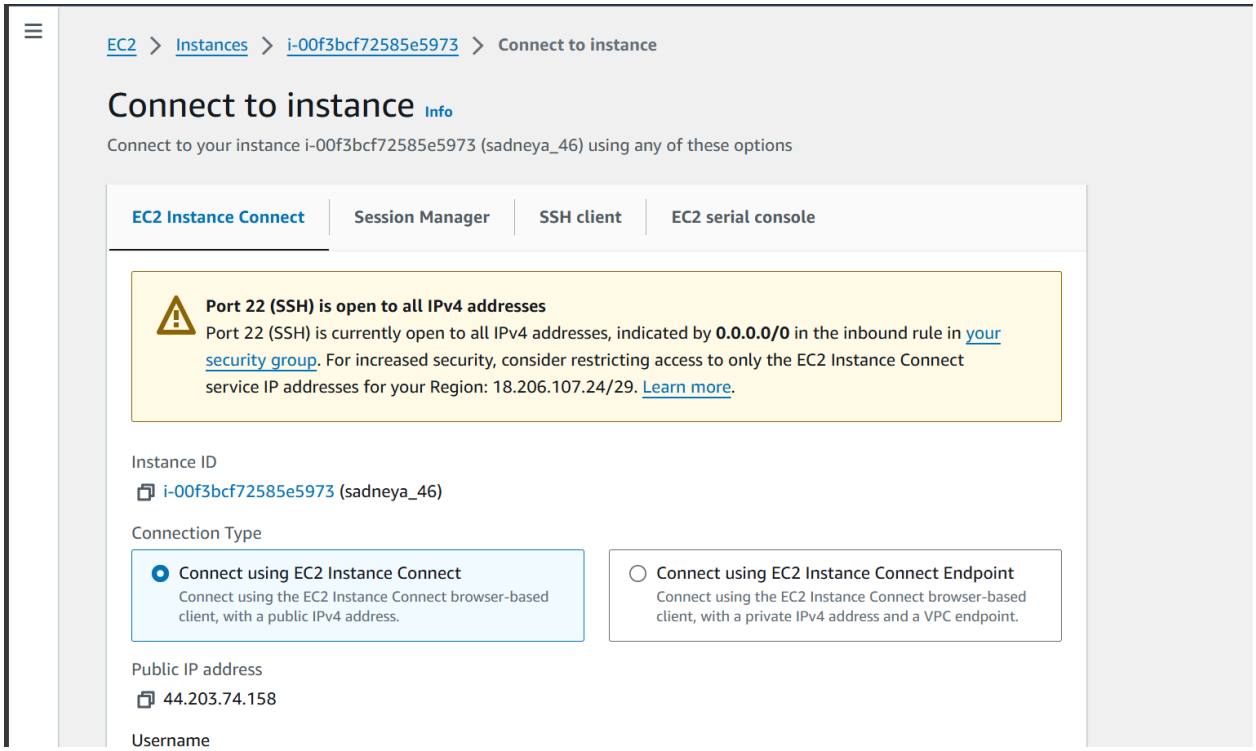
This is the instance summary of my EC2 instance.



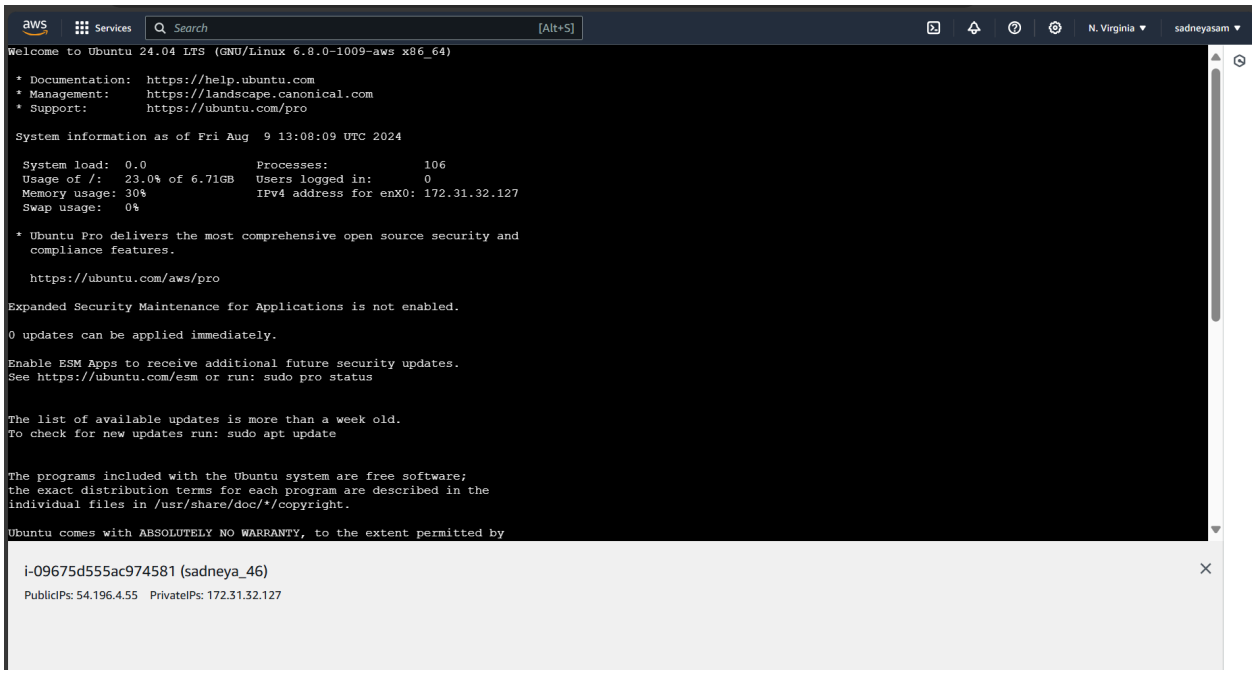

7.click on connect on the dashboard.



8. Then connect to instance dashboard will get open where click on connect.




9. Then the following screen opens.



10. Then you can run all commands on this command prompt.
    1. sudo –l (to check the login user.)

```
ubuntu@ip-172-31-32-127:~$ sudo -l
Matching Defaults entries for ubuntu on ip-172-31-32-127:
    env_reset, mail_badpass, secure_path=/usr/local/sbin\:/usr/local/bin\:/usr/sbin\:/usr/bin\:/sbin\:/bin\:/snap/bin, use_pty

User ubuntu may run the following commands on ip-172-31-32-127:
    (ALL : ALL) ALL
    (ALL) NOPASSWD: ALL
```

    2. apt update (to update the system)

```
ubuntu@ip-172-31-86-40:~$ sudo apt  update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [265 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [63.1 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [3632 B]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [246 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [106 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [8632 B]
Get:13 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [9164 B]
Get:14 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [208 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [40.7 kB]
Get:16 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [420 B]
Get:17 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [10.6 kB]
Get:18 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [2808 B]
Get:19 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
Get:20 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [344 B]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
```

    3. top (It gives a table of processes, which are the running processes in our system and also checks its usage management.)

```
ubuntu@ip-172-31-86-40:~$ top
```

```
top - 04:37:13 up 10 min,  1 user,  load average: 0.17, 0.09, 0.07
Tasks: 105 total,   1 running, 104 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.0 us,  0.0 sy,  0.0 ni,100.0 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :    957.4 total,    227.6 free,    354.7 used,    530.5 buff/cache
MiB Swap:      0.0 total,      0.0 free,      0.0 used.    602.8 avail Mem

    PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM     TIME+ COMMAND
      1 root      20   0   22520  13536   9568 S   0.0   1.4   0:03.80 systemd
      2 root      20   0       0      0      0 S   0.0   0.0   0:00.00 kthreadd
      3 root      20   0       0      0      0 S   0.0   0.0   0:00.00 pool_workqueue_release
      4 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-rcu_g
      5 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-rcu_p
      6 root       0 -20       0      0      0 I   0.0   0.0   0:00.00 kworker/R-slub_
```

    4. history(To get history of commands executed.)

```
ubuntu@ip-172-31-86-40:~$ history
    1  sudo -l
    2  apt update
    3  sudo apt  update
    4  top
    5  history
```

5. Vmstat (virtual memory static ,how much memory in the buffer,in the cache,what is in the input,output,systems and the cpu)

```
ubuntu@ip-172-31-86-40:~$ vmstat
procs -----------memory---------- ---swap-- -----io---- -system-- -------cpu-------
 r  b   swpd   free   buff  cache   si   so    bi    bo   in   cs us sy id wa st gu
 2  0      0 233040  18712 524596    0    0   379   806  189    1  3  1 94  1  1  0
```

6. df (disk file system)

```
ubuntu@ip-172-31-86-40:~$ df
Filesystem     1K-blocks    Used Available Use% Mounted on
/dev/root        7034376 1814472   5203520  26% /
tmpfs             490208       0    490208   0% /dev/shm
tmpfs             196084     872    195212   1% /run
tmpfs               5120       0      5120   0% /run/lock
/dev/xvda16       901520   76972    761420  10% /boot
/dev/xvda15       106832    6246    100586   6% /boot/efi
tmpfs              98040      12     98028   1% /run/user/1000
```

7. df –kh (k-kilobyte h-human readable)

```
ubuntu@ip-172-31-86-40:~$ df -kh
Filesystem      Size  Used Avail Use% Mounted on
/dev/root       6.8G  1.8G  5.0G  26% /
tmpfs           479M     0  479M   0% /dev/shm
tmpfs           192M  872K  191M   1% /run
tmpfs           5.0M     0  5.0M   0% /run/lock
/dev/xvda16     881M   76M  744M  10% /boot
/dev/xvda15     105M  6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
```

8. whatis df (it gives information about what is df)

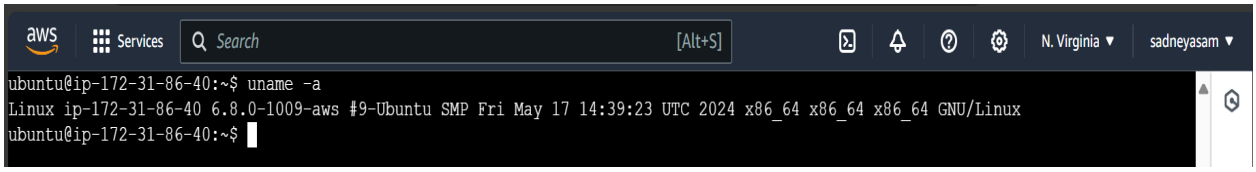
```
ubuntu@ip-172-31-86-40:~$ whatis df
df (1)               - report file system space usage
```

9. df - - help (It is a help command)

```
ubuntu@ip-172-31-86-40:~$ df --help
Usage: df [OPTION]... [FILE]...
Show information about the file system on which each FILE resides,
or all file systems by default.

Mandatory arguments to long options are mandatory for short options too.
  -a, --all             include pseudo, duplicate, inaccessible file systems
  -B, --block-size=SIZE  scale sizes by SIZE before printing them; e.g.,
                           '-BM' prints sizes in units of 1,048,576 bytes;
                           see SIZE format below
  -h, --human-readable  print sizes in powers of 1024 (e.g., 1023M)
  -H, --si              print sizes in powers of 1000 (e.g., 1.1G)
  -i, --inodes          list inode information instead of block usage
  -k                    like --block-size=1K
  -l, --local           limit listing to local file systems
      --no-sync         do not invoke sync before getting usage info (default)
      --output[=FIELD_LIST]  use the output format defined by FIELD_LIST,
                               or print all fields if FIELD_LIST is omitted.
  -P, --portability     use the POSIX output format
      --sync            invoke sync before getting usage info
      --total           elide all entries insignificant to available space,
                          and produce a grand total
  -t, --type=TYPE       limit listing to file systems of type TYPE
  -T, --print-type      print file system type
  -x, --exclude-type=TYPE   limit listing to file systems not of type TYPE
  -v                    (ignored)
```

10. uname -a (information related to ip, kernel version)




All are Validation steps for checking your EC2 instance working properly or not(check system performance).

Then following is the output of general utility commands.

```
ubuntu@ip-172-31-80-107:~$ mkdir test
ubuntu@ip-172-31-80-107:~$ ls
test
ubuntu@ip-172-31-80-107:~$ cd test
ubuntu@ip-172-31-80-107:~/test$ touch file1
ubuntu@ip-172-31-80-107:~/test$ ls
file1
ubuntu@ip-172-31-80-107:~/test$ touch file2 file3
ubuntu@ip-172-31-80-107:~/test$ ls
file1  file2  file3
ubuntu@ip-172-31-80-107:~/test$ rm file*
ubuntu@ip-172-31-80-107:~/test$ ls
ubuntu@ip-172-31-80-107:~/test$ cd ..
ubuntu@ip-172-31-80-107:~$ rmdir test
ubuntu@ip-172-31-80-107:~$ cd ..
ubuntu@ip-172-31-80-107:/home$ ls
ubuntu
ubuntu@ip-172-31-80-107:/home$ cd ubuntu
ubuntu@ip-172-31-80-107:~$ mkdir test1 test2 test3
ubuntu@ip-172-31-80-107:~$ ls
test1  test2  test3
```