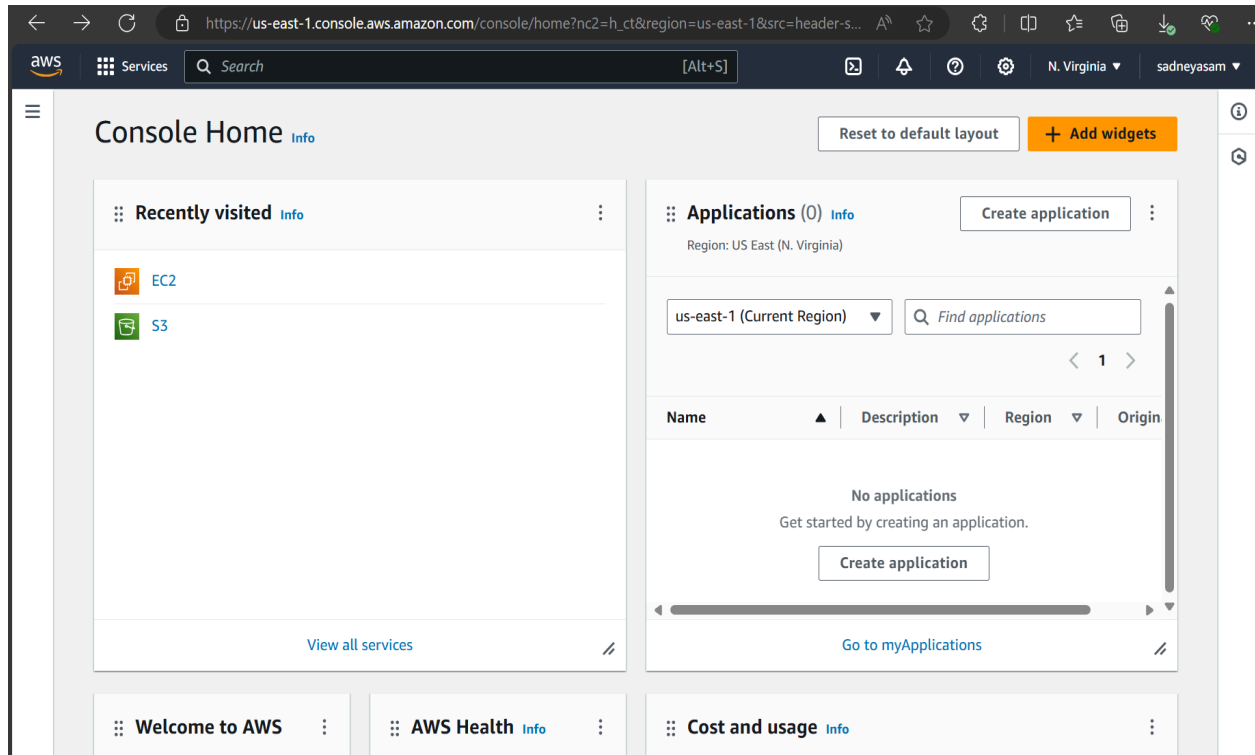
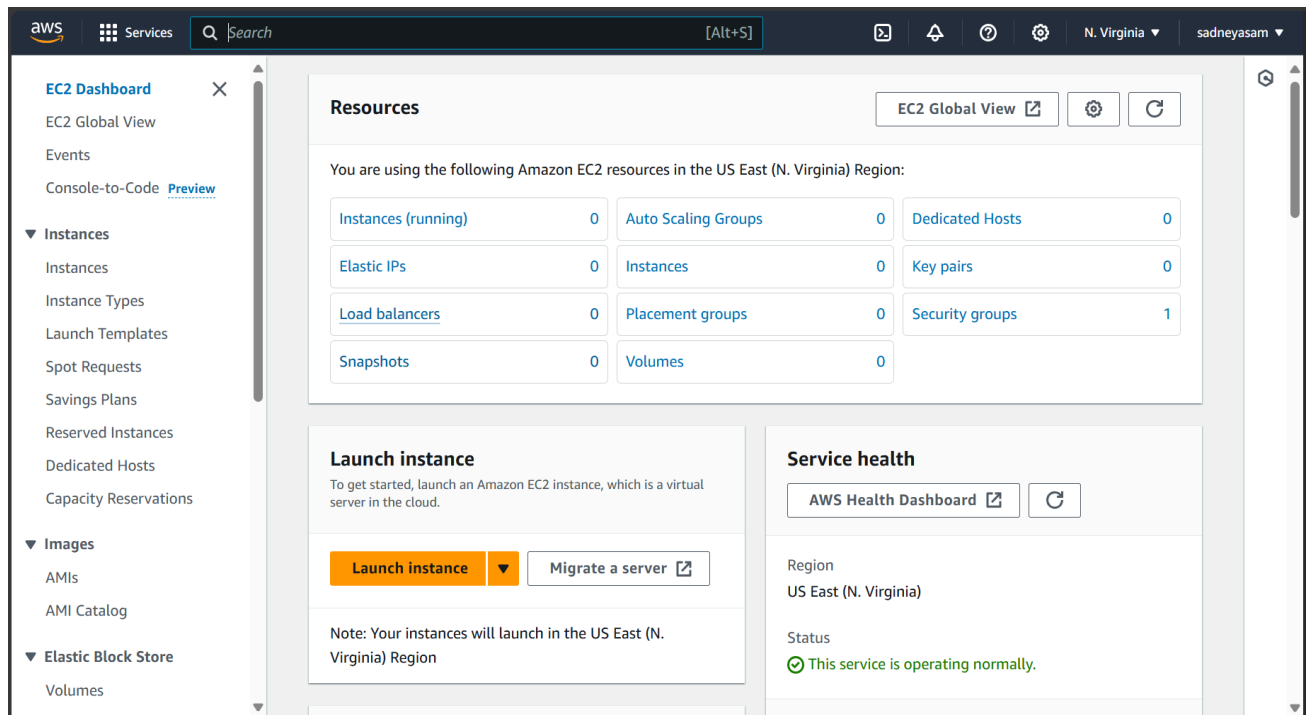


Experiment 1B




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




2. selecting the operating system as ubuntu.

Quick Start


Amazon Linux




macOS




Ubuntu




Windows




Red Hat



SUSE Linux





Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type

Free tier eligible

ami-04a81a99f5ec58529 (64-bit (x86)) / ami-0c14ff330901e49ff (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Description

Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Architecture

AMI ID

64-bit (x86)

ami-04a81a99f5ec58529

Verified provider

3. Keeping all the things default.

▼ Instance type Info | Get advice

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Windows base pricing: 0.0162 USD per Hour

On-Demand SUSE base pricing: 0.0116 USD per Hour

On-Demand RHEL base pricing: 0.026 USD per Hour

On-Demand Linux base pricing: 0.0116 USD per Hour

Additional costs apply for AMIs with pre-installed software

☐ All generations


[Compare instance types](#)

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

vockey

 Create new key pair

▼ 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.

▼ Summary

Number of instances

Info

1

Software Image (AMI)

Canonical, Ubuntu, 24.04 LTS, ...[read more](#)

ami-04a81a99f5ec58529

Virtual server type (instance type)

t2.micro

Firewall (security group)

default

Storage (volumes)

1 volume(s) - 8 GiB

Free tier

In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4

×

5. thus instance get created.

EC2 > Instances > Launch an instance

Success

Successfully initiated launch of instance [\(i-09a38c4c6101aa622\)](#)

Launch log

Next Steps

What would you like to do next with this instance, for example "create alarm" or "create backup"

< 1 2 3 4 5 6 >

Create billing and free tier usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

Create billing alerts

Connect to your instance

Once your instance is running, log into it from your local computer.

Connect to instance

[Learn more](#)

Connect an RDS database

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

Connect an RDS database

Create EBS snapshot policy

Create a policy that automates the creation, retention, and deletion of EBS snapshots

Create EBS snapshot policy

6.wait for instance to launch completely.

The screenshot shows the AWS Management Console for the us-east-1 region. The left sidebar contains navigation links for EC2 Dashboard, EC2 Global View, Events, Console-to-Code, and a list of services including Instances, Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, and Volumes. The main content area is titled 'Instances (1) Info'. It features a search bar with the text 'Find Instance by attribute or tag (case-sensitive)', a filter for 'Instance ID = i-09a38c4c6101aa622', and a 'Clear filters' button. Below the search bar is a table with one instance listed: 'sadneya_46' with Instance ID 'i-09a38c4c6101aa622', Instance state 'Pending', Instance type 't2.micro', Status check '-', and Alarm state 'View alarm'. A 'Launch instances' button is visible in the top right corner. Below the table, there is a 'Select an instance' section.

The screenshot shows the AWS Management Console for the us-east-1 region, displaying the details of the EC2 instance 'i-09a38c4c6101aa622 (sadneya_46)'. The left sidebar is the same as in the previous screenshot. The main content area is titled 'Instances (1/1) Info'. It features a search bar with the text 'Find Instance by attribute or tag (case-sensitive)', a filter for 'Instance ID = i-09a38c4c6101aa622', and a 'Clear filters' button. Below the search bar is a table with one instance listed: 'sadneya_46' with Instance ID 'i-09a38c4c6101aa622', Instance state 'Running', Instance type 't2.micro', Status check 'Initializing', and Alarm state 'View alarm'. A 'Launch instances' button is visible in the top right corner. Below the table, there is a 'Select an instance' section. The instance details are displayed in a card view titled 'i-09a38c4c6101aa622 (sadneya_46)'. The card has tabs for 'Details', 'Status and alarms', 'Monitoring', 'Security', 'Networking', 'Storage', and 'Tags'. The 'Details' tab is selected, showing the 'Instance summary Info'. The summary includes the Instance ID 'i-09a38c4c6101aa622 (sadneya_46)', the Public IPv4 address '54.90.68.42 | open address', the Private IPv4 addresses '172.31.81.89', the Instance state 'Running', the Public IPv4 DNS 'ec2-54-90-68-42.compute-1.amazonaws.com | open address', and the IPv6 address '-'. The instance is shown as 'Running' with a green checkmark icon.

This is the instance summary of my EC2 instance.

Instance summary for i-0b27a6f21d460ffe4 (sadneya_46) [Info](#)

[Refresh](#) [Connect](#) [Instance state](#) [Actions](#)

Updated less than a minute ago

Instance ID i-0b27a6f21d460ffe4 (sadneya_46)	Public IPv4 address 3.82.223.21 open address	Private IPv4 addresses 172.31.80.107
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-3-82-223-21.compute-1.amazonaws.com open address
Hostname type IP name: ip-172-31-80-107.ec2.internal	Private IP DNS name (IPv4 only) ip-172-31-80-107.ec2.internal	Elastic IP addresses -
Answer private resource DNS name IPv4 (A)	Instance type t2.micro	AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more
Auto-assigned IP address 3.82.223.21 [Public IP]	VPC ID vpc-051bba342b3626898	Auto Scaling Group name -
IAM Role -	Subnet ID subnet-058dd8c2c4d107cb2	

7.click on connect on the dashboard.

aws

Services

Search

[Alt+S]

N. Virginia

sadneyasam

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Instances (1/1) [Info](#)

[Refresh](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

[All states](#)

[Clear filters](#)

<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input checked="" type="checkbox"/>	sadneya_46	i-09a38c4c6101aa622	Running	t2.micro	Initializing	View alarm

i-09a38c4c6101aa622 (sadneya_46)

[Details](#) [Status and alarms](#) [Monitoring](#) [Security](#) [Networking](#) [Storage](#) [Tags](#)

Instance summary [Info](#)

Instance ID i-09a38c4c6101aa622 (sadneya_46)	Public IPv4 address 54.90.68.42 open address	Private IPv4 addresses 172.31.81.89
IPv6 address -	Instance state Running	Public IPv4 DNS ec2-54-90-68-42.compute-1.amazonaws.com open address

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

The screenshot shows the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb navigation at the top reads: [EC2](#) > [Instances](#) > [i-00f3bcf72585e5973](#) > [Connect to instance](#). The main heading is "Connect to instance" with an "Info" link. Below the heading, a message states: "Connect to your instance i-00f3bcf72585e5973 (sadneya_46) using any of these options". There are four tabs: "EC2 Instance Connect" (selected), "Session Manager", "SSH client", and "EC2 serial console". A yellow warning box contains a triangle icon and text: "Port 22 (SSH) is open to all IPv4 addresses. Port 22 (SSH) is currently open to all IPv4 addresses, indicated by 0.0.0.0/0 in the inbound rule in [your security group](#). For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 18.206.107.24/29. [Learn more](#)." Below the warning, the "Instance ID" is shown as "i-00f3bcf72585e5973 (sadneya_46)". The "Connection Type" section has two options: "Connect using EC2 Instance Connect" (selected with a blue circle) and "Connect using EC2 Instance Connect Endpoint" (unselected with a grey circle). The "Public IP address" is listed as "44.203.74.158". The "Username" field is empty.

9. Then the following screen opens.

The screenshot shows a terminal window titled "aws" with a search bar and a status bar indicating "N. Virginia" and "sadneyasam". The terminal output is as follows:
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1009-aws x86_64)
* Documentation: <https://help.ubuntu.com>
* Management: <https://landscape.canonical.com>
* Support: <https://ubuntu.com/pro>
System information as of Fri Aug 9 13:08:09 UTC 2024
System load: 0.0 Processes: 106
Usage of /: 23.0% of 6.71GB Users logged in: 0
Memory usage: 30% IPv4 address for enX0: 172.31.32.127
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.
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
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
At the bottom, a box displays the instance ID "i-09675d555ac974581 (sadneya_46)" and IP addresses: "PublicIPs: 54.196.4.55 PrivateIPs: 172.31.32.127".

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)

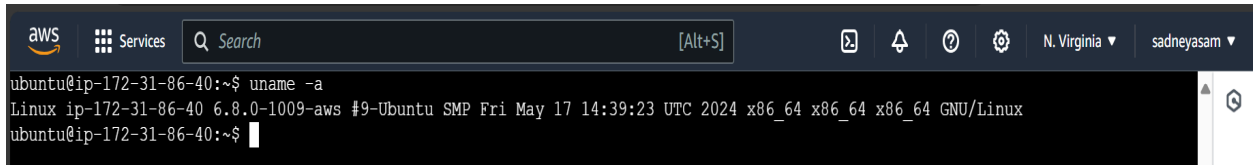
```
ubuntu@ip-172-31-86-40:~$ whatis df
df (1)                  - report file system space usage
```

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, --block-size=LK       like --block-size=LK
-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)



```
aws Services Q Search [Alt+S] N. Virginia sadneyasam
ubuntu@ip-172-31-86-40:~$ uname -a
Linux ip-172-31-86-40 6.8.0-1009-aws #9-Ubuntu SMP Fri May 17 14:39:23 UTC 2024 x86_64 x86_64 x86_64 GNU/Linux
ubuntu@ip-172-31-86-40:~$
```

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
```