Aws assignment 2

Creating instance and connect

Creating an EC2 instance on AWS.and Connect with the instance. Set hostnmae as nw-yourname-cli (sudo hostnamectl set-hostname nw-yourname-cli)

Install AWS CLI and configure the default settings.

```
ubuntu@nw-animesh-cli:~$ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
ubuntu@nw-animesh-cli:~$ aws --version
aws-cli/2.13.27 Python/3.11.6 Linux/6.2.0-1012-aws exe/x86_64.ubuntu.22 prompt/off
ubuntu@nw-animesh-cli:~$
```

```
ubuntu@nw-animesh-cli:~$ ls
aws   awscliv2.zip
ubuntu@nw-animesh-cli:~$ cd aws
ubuntu@nw-animesh-cli:~/aws$ aws s3 ls

Unable to locate credentials. You can configure credentials by running "aws configure".
ubuntu@nw-animesh-cli:~/aws$ aws configure
AWS Access Key ID [None]: AKIAVDQLONUTCPZLXTFS
AWS Secret Access Key [None]: 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
Default region name [None]: us-west-2
Default output format [None]:
ubuntu@nw-animesh-cli:~/aws$ aws s3 ls
2023-09-10 03:40:04 10sep
```

```
aws: error: argument --query: expected one argument

ubuntu@nw-animesh-cli:~/aws$ aws s3 mb s3://nw-animesh-cli2
make_bucket failed: s3://nw-animesh-cli2 An error occurred (TooManyBuckets) when calling the CreateBucket operation: You have attempted to create mo
re buckets than allowed
ubuntu@nw-animesh-cli:~/aws$
```

Download a sample csv file in your instance.

```
Last login: Thu Oct 19 06:51:01 2023 from 18.237.140.165
ubuntu@nw-animesh-cli:~$ ls
aws   awscliv2.zip
ubuntu@nw-animesh-cli:~$ cd aws/
ubuntu@nw-animesh-cli:~/aws$ cd
ubuntu@nw-animesh-cli:~$ wget https://www.stats.govt.nz/assets/Uploads/Business-employme
ta/business-employment-data-june-2023-quarter.zip
--2023-10-19 07:25:37--  https://www.stats.govt.nz/assets/Uploads/Business-employment-da
siness-employment-data-june-2023-quarter.zip
Resolving www.stats.govt.nz (www.stats.govt.nz)... 45.60.11.104
Connecting to www.stats.govt.nz (www.stats.govt.nz)|45.60.11.104|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 176895 (173K) [application/zip]
Saving to: 'business-employment-data-june-2023-quarter.zip'

business-employment-data-june-2023-qu 100%[===============================================

2023-10-19 07:25:37 (4.20 MB/s) - 'business-employment-data-june-2023-quarter.zip' saved

ubuntu@nw-animesh-cli:~$ ls
aws   awscliv2.zip   business-employment-data-june-2023-quarter.zip
ubuntu@nw-animesh-cli:~$ unzip business-employment-data-june-2023-quarter.zip
Archive:  business-employment-data-june-2023-quarter.zip
  inflating: machine-readable-business-employment-data-jun-2023-quarter.csv
ubuntu@nw-animesh-cli:~$
```

Copy file to instance to S3 using AWS CLI command. [Visit S3 bucket and verify the file is uploaded]


```
ubuntu@nw-animesh-cli:~$ aws s3 cp machine-readable-business-employment-data-jun-2023-quarter.csv s3://nw-animesh-cli1/
upload: ./machine-readable-business-employment-data-jun-2023-quarter.csv to s3://nw-animesh-cli1/machine-readable-business-employment-data-jun-2023-qu
arter.csv
ubuntu@nw-animesh-cli:~$ aws s3 ls s3://nw-animesh-cli/
ubuntu@nw-animesh-cli:~$ aws s3 ls s3://nw-animesh-cli1/
2023-10-18 10:55:36       3208 Automobile_data.csv
2023-10-18 10:55:35          0 HR_Hiring_details_transaction.csv
2023-10-19 07:32:08    3400510 machine-readable-business-employment-data-jun-2023-quarter.csv
ubuntu@nw-animesh-cli:~$ 
```

Create an EBS volume Specifications of EBS (GP2, 11-19GB


```
ubuntu@nw-animesh-cli:~$ aws ec2 create-volume --volume-type gp2 --size 15 --availability-zone us-west-2a
{
    "AvailabilityZone": "us-west-2a",
    "CreateTime": "2023-10-19T07:42:15+00:00",
    "Encrypted": false,
    "Size": 15,
    "SnapshotId": "",
    "State": "creating",
    "VolumeId": "vol-0dc219cfe7dbe1769",
    "Iops": 100,
    "Tags": [],
    "VolumeType": "gp2",
    "MultiAttachEnabled": false
```

Attach this EBS volume to your EC2 using AWS CLI command


```
    "MultiAttachEnabled": false
}
ubuntu@nw-animesh-cli:~$ aws ec2 attach-volume --volume-id vol-0123456789abcdef0 --instance-id i-0abcdef1234567890 --device /dev/sdf^C

ubuntu@nw-animesh-cli:~$ aws ec2 attach-volume --volume-id vol-0dc219cfe7dbe1769 --instance-id i-0032e11cfb2b65af6 --device /dev/sdk
{
    "AttachTime": "2023-10-19T07:47:05.900000+00:00",
    "Device": "/dev/sdk",
    "InstanceId": "i-0032e11cfb2b65af6",
    "State": "attaching",
    "VolumeId": "vol-0dc219cfe7dbe1769"
}
ubuntu@nw-animesh-cli:~$ 
```

Fire lsblk to check whether it appears in devices list.

```
ubuntu@nw-animesh-cli:~$ lsblk
NAME          MAJ:MIN RM    SIZE RO TYPE MOUNTPOINTS
loop0           7:0    0   24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1           7:1    0   55.7M  1 loop /snap/core18/2790
loop2           7:2    0   63.5M  1 loop /snap/core20/2015
loop3           7:3    0  111.9M  1 loop /snap/lxd/24322
loop4           7:4    0   40.8M  1 loop /snap/snapd/20092
xvda          202:0    0      8G  0 disk
 ─xvda1       202:1    0    7.9G  0 part /
 ─xvda14      202:14   0      4M  0 part
 ─xvda15      202:15   0    106M  0 part /boot/efi
xvdk          202:160  0     15G  0 disk
ubuntu@nw-animesh-cli:~$
```

Creating file system

```
 ─xvda1    202:1   0    7.9G  0 part /
 ─xvda14   202:14  0      4M  0 part
 ─xvda15   202:15  0    106M  0 part /boot/efi
xvdk       202:160 0     15G  0 disk
ubuntu@nw-animesh-cli:~$ sudo file -s /dev/xvda
/dev/xvda: DOS/MBR boot sector, extended partition table (last)
ubuntu@nw-animesh-cli:~$ sudo file -s /dev/xvda1
/dev/xvda1: Linux rev 1.0 ext4 filesystem data, UUID=4f575094-453e-450d-aeed-215d8cbcbf58, volume name "cloudimg-rootfs" (needs journal recovery) (ext
ents) (64bit) (large files) (huge files)
ubuntu@nw-animesh-cli:~$ sudo file -s /dev/xvda14
/dev/xvda14: data
ubuntu@nw-animesh-cli:~$ sudo file -s /dev/xvdk
/dev/xvdk: data
ubuntu@nw-animesh-cli:~$ sudo mkfs -t xfs /dev/xvdk
meta-data=/dev/xvdk            isize=512    agcount=4, agsize=983040 blks
         =                     sectsz=512   attr=2, projid32bit=1
         =                     crc=1        finobt=1, sparse=1, rmapbt=0
         =                     reflink=1    bigtime=0 inobtcount=0
data     =                     bsize=4096   blocks=3932160, imaxpct=25
         =                     sunit=0      swidth=0 blks
naming   =version 2            bsize=4096   ascii-ci=0, ftype=1
log      =internal log         bsize=4096   blocks=2560, version=2
         =                     sectsz=512   sunit=0 blks, lazy-count=1
realtime =none                 extsz=4096   blocks=0, rtextents=0
ubuntu@nw-animesh-cli:~$
```

i-0032e11cfb2b65af6 (nw-animesh-cliaccess)   ✕

PublicIPs: 54.218.231.42   PrivateIPs: 10.0.1.63

Mount this external storage volume

```
meta-data=/dev/xvdk              isize=512    agcount=4, agsize=983040 blks
         =                       sectsz=512   attr=2, projid32bit=1
         =                       crc=1        finobt=1, sparse=1, rmapbt=0
         =                       reflink=1    bigtime=0 inobtcount=0
data     =                       bsize=4096   blocks=3932160, imaxpct=25
         =                       sunit=0      swidth=0 blks
naming   =version 2              bsize=4096   ascii-ci=0, ftype=1
log      =internal log           bsize=4096   blocks=2560, version=2
         =                       sectsz=512   sunit=0 blks, lazy-count=1
realtime =none                   extsz=4096   blocks=0, rtextents=0
ubuntu@nw-animesh-cli:~$ sudo mkdir /export
ubuntu@nw-animesh-cli:~$ sudo mount /dev/xvdk /export
ubuntu@nw-animesh-cli:~$ lsblk
NAME      MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0       7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1       7:1    0  55.7M  1 loop /snap/core18/2790
loop2       7:2    0  63.5M  1 loop /snap/core20/2015
loop3       7:3    0 111.9M  1 loop /snap/lxd/24322
loop4       7:4    0  40.8M  1 loop /snap/snapd/20092
xvda      202:0    0     8G  0 disk
├─xvda1   202:1    0   7.9G  0 part /
├─xvda14  202:14   0     4M  0 part
└─xvda15  202:15   0   106M  0 part /boot/efi
xvdk      202:160  0    15G  0 disk /export
ubuntu@nw-animesh-cli:~$
```

```
ubuntu@nw-animesh-cli:~$ sudo mkdir /export
ubuntu@nw-animesh-cli:~$ sudo mount /dev/xvdk /export
ubuntu@nw-animesh-cli:~$ lsblk
NAME      MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0       7:0    0  24.6M  1 loop /snap/amazon-ssm-agent/7528
loop1       7:1    0  55.7M  1 loop /snap/core18/2790
loop2       7:2    0  63.5M  1 loop /snap/core20/2015
loop3       7:3    0 111.9M  1 loop /snap/lxd/24322
loop4       7:4    0  40.8M  1 loop /snap/snapd/20092
xvda      202:0    0     8G  0 disk
├─xvda1   202:1    0   7.9G  0 part /
├─xvda14  202:14   0     4M  0 part
└─xvda15  202:15   0   106M  0 part /boot/efi
xvdk      202:160  0    15G  0 disk /export
ubuntu@nw-animesh-cli:~$ cd /e
etc/     export/
ubuntu@nw-animesh-cli:~$ cd /e
etc/     export/
ubuntu@nw-animesh-cli:~$ cd /export/
```

Copy some data to this volume

```
ubuntu@nw-animesh-cli:~$ sudo cp * /export/
cp: -r not specified; omitting directory 'aws'
ubuntu@nw-animesh-cli:~$ ls
aws  awscliv2.zip  business-employment-data-june-2023-quarter.zip  car.txt  machine-readable-business-employment-data-jun-2023-quarter.csv
ubuntu@nw-animesh-cli:~$ sudo cp machine-readable-business-employment-data-jun-2023-quarter.csv /export/
ubuntu@nw-animesh-cli:~$
```

Configure fstab for automatic mounting everytime

```
cp: -r not specified; omitting directory 'aws'
ubuntu@nw-animesh-cli:~$ ls
aws   awscliv2.zip  business-employment-data-june-2023-quarter.zip   car.txt   machine-readable-business-employment-data-jun-2023-quarter.csv
ubuntu@nw-animesh-cli:~$ sudo cp machine-readable-business-employment-data-jun-2023-quarter.csv /export/
ubuntu@nw-animesh-cli:~$ lsblk -f
NAME        FSTYPE FSVER LABEL           UUID                                   FSAVAIL FSUSE% MOUNTPOINTS
loop0                                                                                 0   100% /snap/amazon-ssm-agent/7528
loop1                                                                                 0   100% /snap/core18/2790
loop2                                                                                 0   100% /snap/core20/2015
loop3                                                                                 0   100% /snap/lxd/24322
loop4                                                                                 0   100% /snap/snapd/20092
xvda
├─xvda1   ext4   1.0   cloudimg-rootfs 4f575094-453e-450d-aeed-215d8cbcbf58     5.5G    27% /
├─xvda14
└─xvda15  vfat   FAT32 UEFI            60A8-A611                                98.3M     6% /boot/efi
xvdk        xfs                        dd8a2bf1-5acf-4f10-a667-90ff28474079     14.8G     1% /export
ubuntu@nw-animesh-cli:~$ sudo nano /e
etc/    export/
ubuntu@nw-animesh-cli:~$ sudo nano /etc/fstab
```
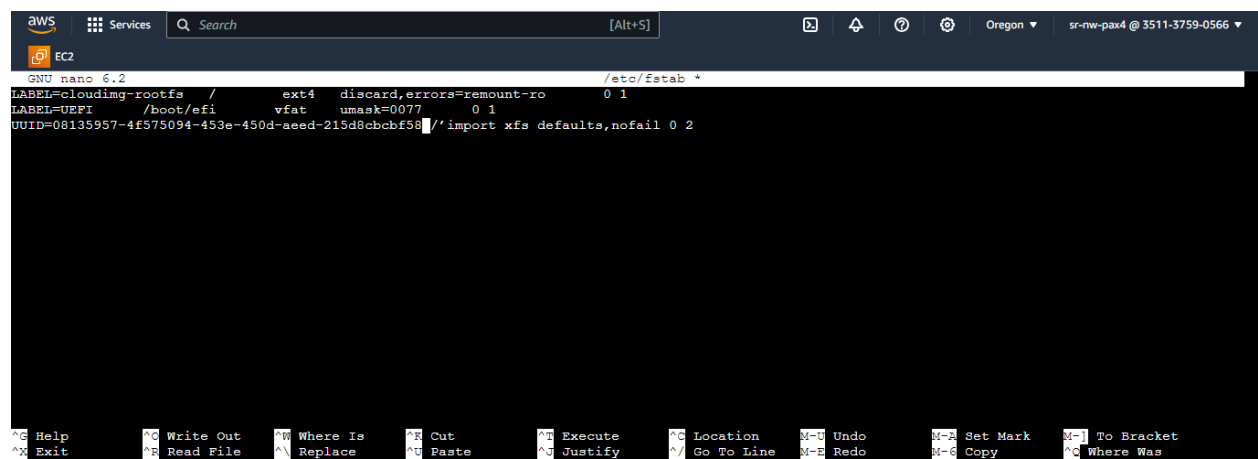
```
  GNU nano 6.2                                          /etc/fstab *
LABEL=cloudimg-rootfs   /          ext4   discard,errors=remount-ro   0 1
LABEL=UEFI       /boot/efi        vfat   umask=0077        0 1
UUID=08135957-4f575094-453e-450d-aeed-215d8cbcbf58/'import xfs defaults,nofail 0 2
```

```
^G Help       ^O Write Out    ^W Where Is    ^K Cut      ^T Execute     ^C Location    M-U Undo    M-A Set Mark    M-] To Bracket
^X Exit       ^R Read File    ^\ Replace     ^U Paste    ^J Justify     ^/ Go To Line  M-E Redo    M-6 Copy       ^Q Where Was
```

Instances (1/4) Info

[⟳] [Connect] [Instance state ▼] [Actions ▼] **[Launch instances]** ▼

Q Find instance by attribute or tag (case-sensitive)

[Instance state = running ✕] [Clear filters]   ‹ 1 › ⚙

	Name	Instance ID	Instance state ▽	Instance type ▽	Status check	Alarm status	Availab
☐	nw-padmakar-cli	i-0060169bfc5126a54	⊘ Running ⊕ ⊖	t2.micro	⊘ 2/2 checks passed	No alarms ＋	us-west
☑	nw-animesh-cliaccess	i-0032e11cfb2b65af6	⧖ Stopping ⊕ ⊖	t2.micro	⊘ 2/2 checks passed	No alarms ＋	us-west

=

Instance: i-0032e11cfb2b65af6 (nw-animesh-cliaccess)   ⚙ ✕

```
NAME         MAJ:MIN RM     SIZE RO  TYPE MOUNTPOINTS
loop0          7:0    0    24.6M  1  loop /snap/amazon-ssm-agent/7528
loop1          7:1    0    55.7M  1  loop /snap/core18/2790
loop2          7:2    0    63.5M  1  loop /snap/core20/2015
loop3          7:3    0   111.9M  1  loop /snap/lxd/24322
loop4          7:4    0    40.8M  1  loop /snap/snapd/20092
xvda         202:0    0      8G   0  disk
├─xvda1      202:1    0     7.9G  0  part /
├─xvda14     202:14   0      4M   0  part
└─xvda15     202:15   0    106M   0  part /boot/efi
xvdk         202:160  0     15G   0  disk /import
ubuntu@nw-animesh-cli:~$
```