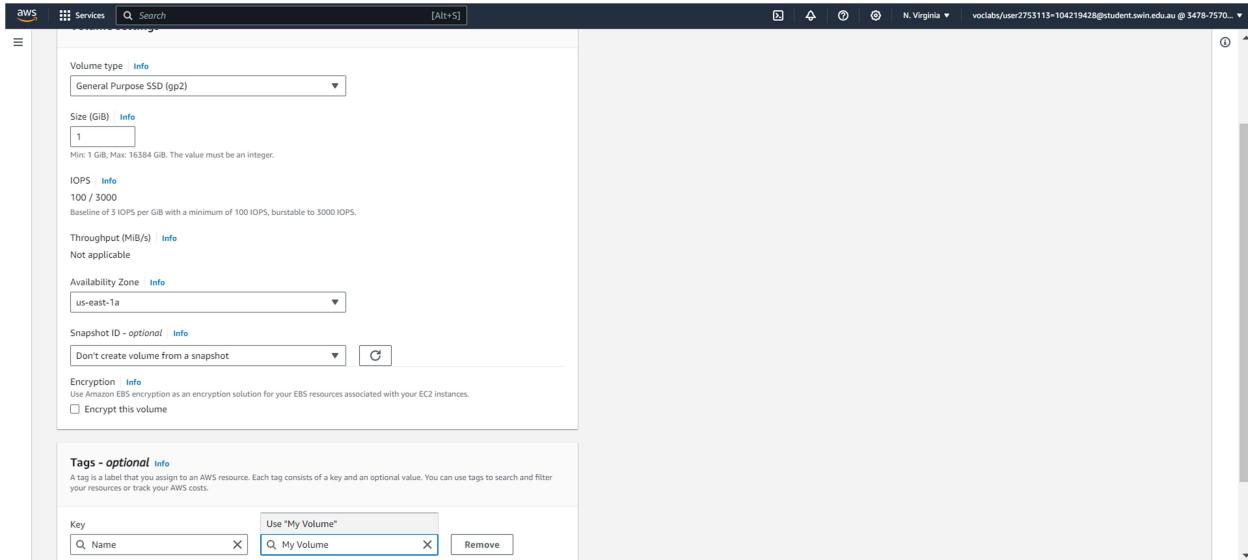


Step 1: volume creation by choose the type, size, availability zone and add tag with the info Key:"Name", Value:"My Volume"



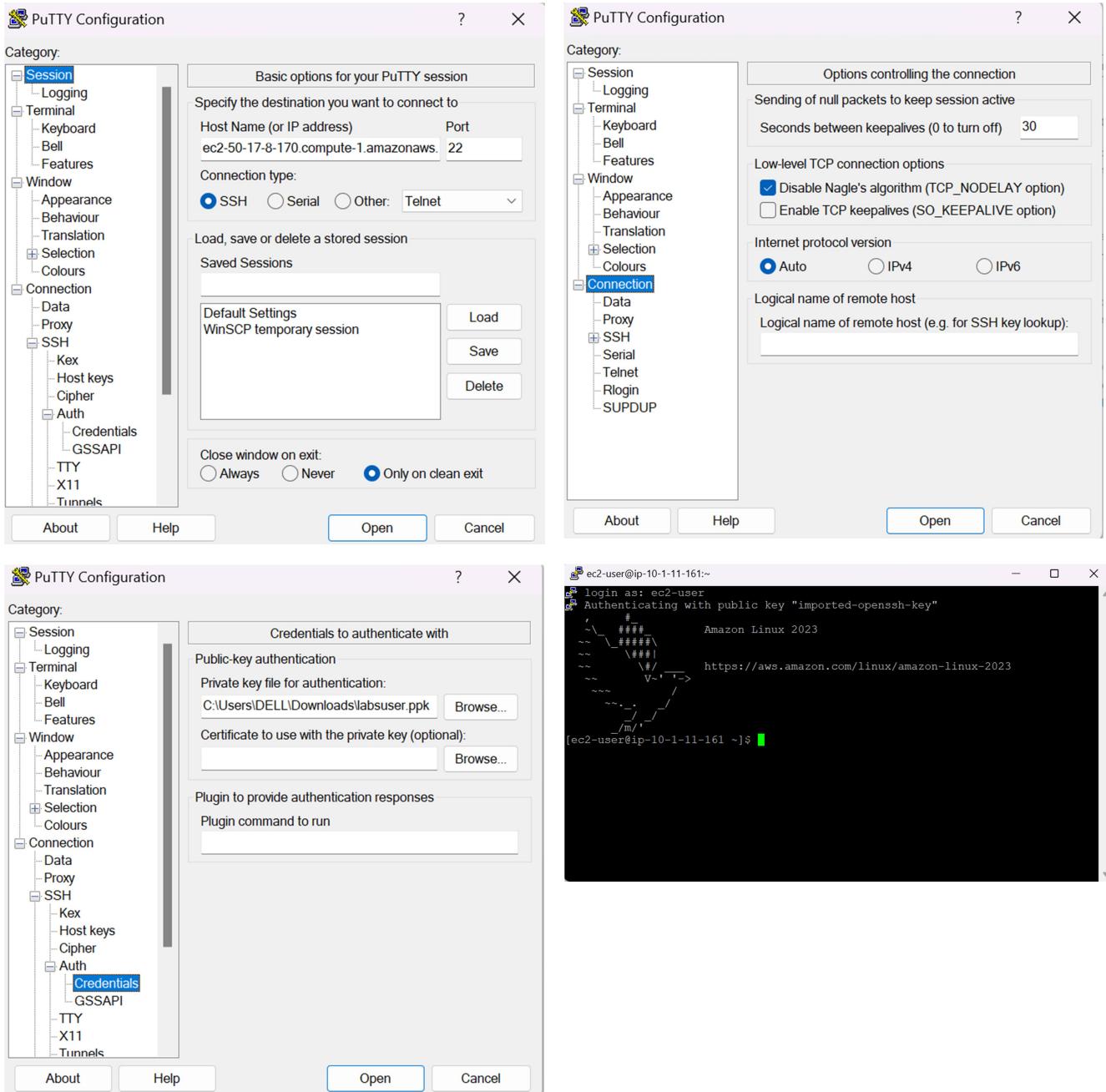
Step 2: Attach your volume to the EC2 instance "lab"

The screenshot shows the AWS EC2 Attach volume wizard. The configuration is as follows:

- Volume ID:** vol-0654619043b03009a (My Volume)
- Availability Zone:** us-east-1a
- Instance:** Info (i-098754ee31bf8a11a)
- Device name:** Info (/dev/sdf)

A note in the wizard states: "Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvdः internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdः.

Step 3: Use Putty and open connection, change the keepalive second to 30. Use public DNS as host name and use the private key download from detail of lab to log in



Step 4: See and create ext3 on the volume. Mount the new volume and test it

```
ec2-user@ip-10-1-11-161:~  
tmpfs      475M    0  475M   0% /dev/shm  
tmpfs      190M  2.9M 188M   2% /run  
/dev/xvda1  8.0G  1.5G 6.5G  19% /  
tmpfs      475M    0  475M   0% /tmp  
/dev/xvda128 10M  1.3M 8.7M  13% /boot/efi  
tmpfs      95M    0   95M   0% /run/user/1000  
[ec2-user@ip-10-1-11-161 ~]$ sudo mkfs -t ext3 /dev/sdf  
mke2fs 1.46.5 (30-Dec-2021)  
Creating filesystem with 262144 4k blocks and 65536 inodes  
Filesystem UUID: 3fe273dc-f2da-49d5-92c3-ac98be3d621d  
Superblock backups stored on blocks:  
    32768, 98304, 163840, 229376  
  
Allocating group tables: done  
Writing inode tables: done  
Creating journal (8192 blocks): done  
Writing superblocks and filesystem accounting information: done  
  
[ec2-user@ip-10-1-11-161 ~]$ sudo mkdir /mnt/data-store  
[ec2-user@ip-10-1-11-161 ~]$ sudo mount /dev/sdf /mnt/data-store  
[ec2-user@ip-10-1-11-161 ~]$ echo "/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2" | sudo tee -a /etc/fstab  
/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2  
[ec2-user@ip-10-1-11-161 ~]$
```

```
ec2-user@ip-10-1-11-161:~  
[ec2-user@ip-10-1-11-161 ~]$ df -h  
Filesystem      Size  Used Avail Use% Mounted on  
devtmpfs        4.0M    0  4.0M   0% /dev  
tmpfs          475M    0  475M   0% /dev/shm  
tmpfs          190M  2.9M 188M   2% /run  
/dev/xvda1     8.0G  1.5G 6.5G  19% /  
tmpfs          475M    0  475M   0% /tmp  
/dev/xvda128   10M  1.3M 8.7M  13% /boot/efi  
tmpfs          95M    0   95M   0% /run/user/1000  
[ec2-user@ip-10-1-11-161 ~]$ sudo mkfs -t ext3 /dev/sdf  
mke2fs 1.46.5 (30-Dec-2021)  
Creating filesystem with 262144 4k blocks and 65536 inodes  
Filesystem UUID: 3fe273dc-f2da-49d5-92c3-ac98be3d621d  
Superblock backups stored on blocks:  
    32768, 98304, 163840, 229376  
  
Allocating group tables: done  
Writing inode tables: done  
Creating journal (8192 blocks): done  
Writing superblocks and filesystem accounting information: done  
  
[ec2-user@ip-10-1-11-161 ~]$
```

```

ec2-user@ip-10-1-11-161:~ 
/dev/sdf    /mnt/data-store ext3 defaults,noatime 1 2
[ec2-user@ip-10-1-11-161 ~]$ cat /etc/fstab
#
UUID=9bbbebd1-cfa0-4f0c-b851-2dacbac7cf3c      /          xfs      defaults,noatim
e 1 1
UUID=68DE-EC82      /boot/efi      vfat      defaults,noatime,uid=0,gid=0,umask
=0077,shortname=winnt,x-systemd.automount 0 2
/dev/sdf    /mnt/data-store ext3 defaults,noatime 1 2
[ec2-user@ip-10-1-11-161 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M   0  4.0M  0% /dev
tmpfs          475M   0  475M  0% /dev/shm
tmpfs          190M  2.9M 188M  2% /run
/dev/xvda1      8.0G  1.5G  6.5G 19% /
tmpfs          475M   0  475M  0% /tmp
/dev/xvda128    10M  1.3M  8.7M 13% /boot/efi
tmpfs          95M   0  95M  0% /run/user/1000
/dev/xvdf      975M  60K  924M  1% /mnt/data-store
[ec2-user@ip-10-1-11-161 ~]$ 
sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-161 ~]$ 
cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-161 ~]$ 

```

## Step 5: Create a snapshot of your volume

The screenshot shows two windows side-by-side. The left window is a local file viewer for 'file.txt' containing the text 'some text has been written'. The right window is a browser window titled 'Create snapshot | EC2 | us-east-1' on the AWS Management Console. It shows the 'Create snapshot' wizard with the following details:

- Volume ID:** vol-0654619043b03009a (My Volume)
- Description:** lab 4
- Encryption Info:** Not encrypted
- Tags:** A tag named 'Name' with value 'My Snapshot' is being added.

Below the wizard, the AWS navigation bar and footer are visible.

Task steps listed on the left:

38. In the **AWS Management Console**, choose **Volumes** and select **My Volume**.
39. In the **Actions** menu, select **Create snapshot**.
40. Choose **Add tag** then configure:
  - Key: Name
  - Value: My Snapshot
  - Choose **Create snapshot**
41. In the left navigation pane, choose **Snapshots**.  
Your snapshot is displayed. The status will first have a state of **Pending**, which means that the snapshot is being created. It will then change to a state of **Completed**.

Volumes | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec...

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Successfully created snapshot [snap-08ffccfee82aab5561](#) from volume [vol-0654619043b03009a](#). If you need your snapshot to be immediately available consider using Fast Snapshot Restore.

**Volumes (3) Info**

Name	Volume ID	Type	Size	IOPS
-	<a href="#">vol-0bee540e3b33e31d4</a>	gp3	8 GiB	3000
-	<a href="#">vol-02bbfbddfcc6cca7f</a>	gp3	8 GiB	3000
My Volume	<a href="#">vol-0654619043b03009a</a>	gp2	1 GiB	100

Select a volume above

The screenshot shows the AWS EC2 Volumes page in the us-east-1 region. The left sidebar includes links for EC2 Dashboard, EC2 Global View, Events, Instances, Images, Elastic Block Store (with Volumes selected), and Network & Security. The main content area displays a table of volumes with columns for Name, Volume ID, Type, Size, and IOPS. Three volumes are listed: one unnamed gp3 volume of 8 GiB with 3000 IOPS, another unnamed gp3 volume of 8 GiB with 3000 IOPS, and a 'My Volume' gp2 volume of 1 GiB with 100 IOPS. A success message at the top indicates a new snapshot was created for the 'My Volume' gp2 volume. The bottom of the screen shows the AWS navigation bar and system status icons.

## Step 6: Delete from the volume

state of *Pending*, which means that the snapshot is being created. It will then change to a state of *Completed*.

Note: Only used storage blocks are copied to snapshots, so empty blocks do not occupy any snapshot storage space.

42. In your remote SSH session, delete the file that you created on your volume.

```
1 | sudo rm /mnt/data-store/file.txt
```

43. Verify that the file has been deleted.

```
1 | ls /mnt/data-store/
```

Your file has been deleted.

Snapshots  
Lifecycle Manager  
Network & Security  
Security Groups  
Elastic IPs  
Placement Groups  
Key Pairs  
Network Interfaces

Select a snapshot above.

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## Task 6: Restore the Amazon EBS

## Step 7: create the volume from previous snapshot

44. In the **AWS Management Console**, select ■ **My Snapshot**.

45. In the **Actions** menu, select **Create volume from snapshot**.

46. For **Availability Zone** Select the same availability zone that you used earlier.

47. Choose **Add tag** then configure:

- **Key:** Name
- **Value:** Restored Volume
- Choose **Create volume**

Note: When restoring a snapshot to a new volume, you can also modify the configuration, such as changing the volume type, size or Availability Zone.

General Purpose SSD (gp2)

Size (GiB)  
1

IOPS  
100 / 5000

Throughput (MiB/s)  
Not applicable

Availability Zone  
us-east-1a

Encryption  
Not enabled for selected snapshot

Tags - optional

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or track your AWS costs.

Key  
Name

Value - optional  
Restored Volume

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Volumes | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec...

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- Volumes**
- Snapshots
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Name	Volume ID	Type	Size	IOPS
-	<a href="#">vol-0bee540e3b33e31d4</a>	gp3	8 GiB	3000
-	<a href="#">vol-02bbfbddfcc6cca7f</a>	gp3	8 GiB	3000
My Volume	<a href="#">vol-0654619043b03009a</a>	gp2	1 GiB	100
Restored Volu...	<a href="#">vol-07bf4bad74c1ce9a1</a>	gp2	1 GiB	100

Select a volume above

The screenshot shows the AWS EC2 Volumes page in the us-east-1 region. The left sidebar includes links for EC2 Dashboard, EC2 Global View, Events, Instances, Images, and Network & Security. Under 'Elastic Block Store', 'Volumes' is selected, showing four volumes: 'vol-0bee540e3b33e31d4' (gp3, 8 GiB, 3000 IOPS), 'vol-02bbfbddfcc6cca7f' (gp3, 8 GiB, 3000 IOPS), 'My Volume' (gp2, 1 GiB, 100 IOPS), and 'Restored Volu...' (gp2, 1 GiB, 100 IOPS). The 'My Volume' volume is highlighted. A message at the bottom says 'Select a volume above'. The bottom navigation bar includes CloudShell, Feedback, Privacy, Terms, and Cookie preferences, along with system status icons and the date/time (12:12 PM, 9/30/2023).

Step 8: Attach the restored volume to the Lab instance

Attach volume | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec...

Services Search [Alt+S] N. Vir vclabs/user2753113=104219428@student.swin.edu.a

EC2 > Volumes > vol-07bf4bad74c1ce9a1 > Attach volume

## Attach volume Info

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

**Basic details**

Volume ID  
vol-07bf4bad74c1ce9a1 (Restored Volume)

Availability Zone  
us-east-1a

Instance Info  
i-098754ee31bf8a11a (C)

Only instances in the same Availability Zone as the selected volume are displayed.

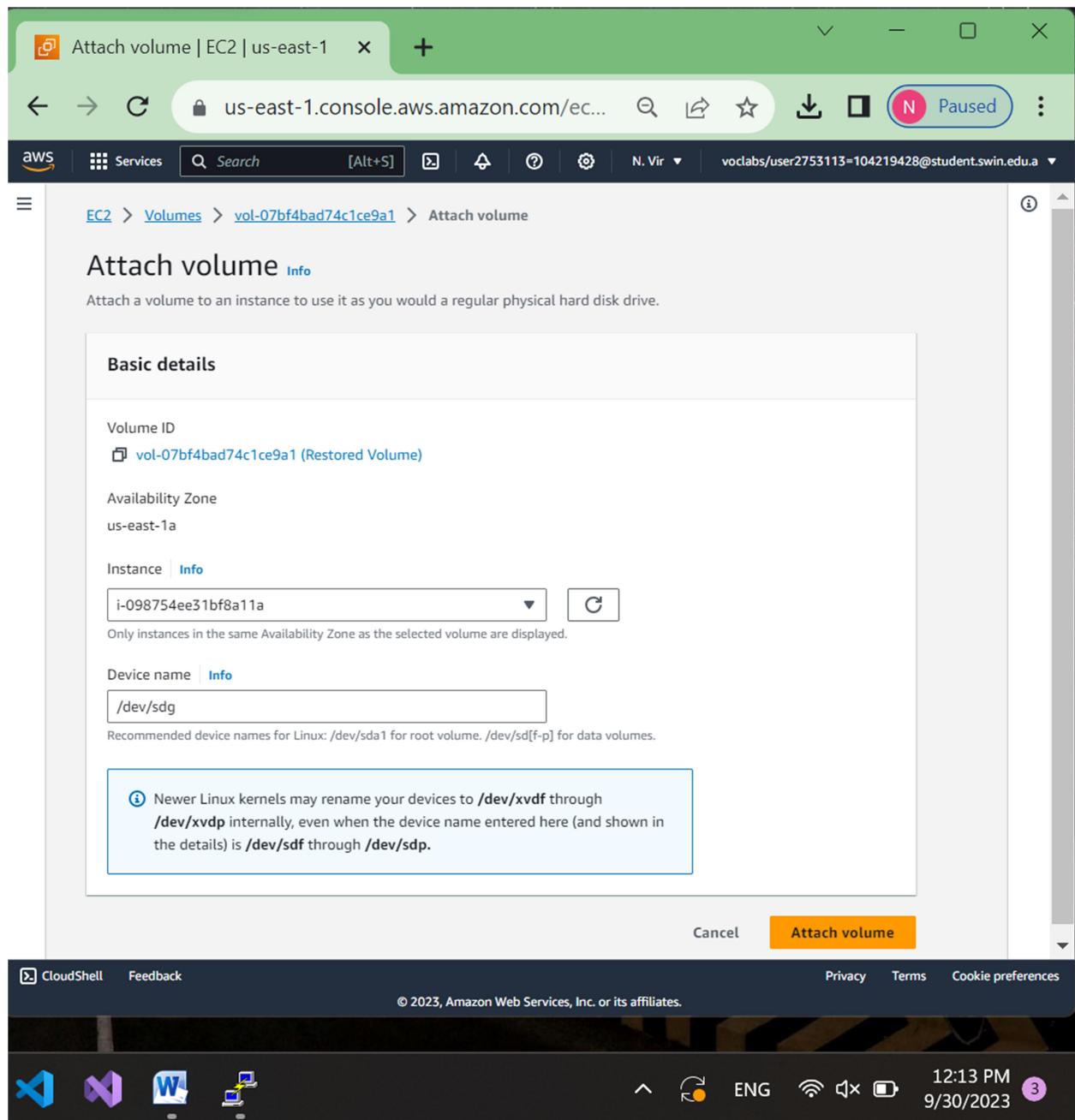
Device name Info  
/dev/sdg

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[f-p] for data volumes.

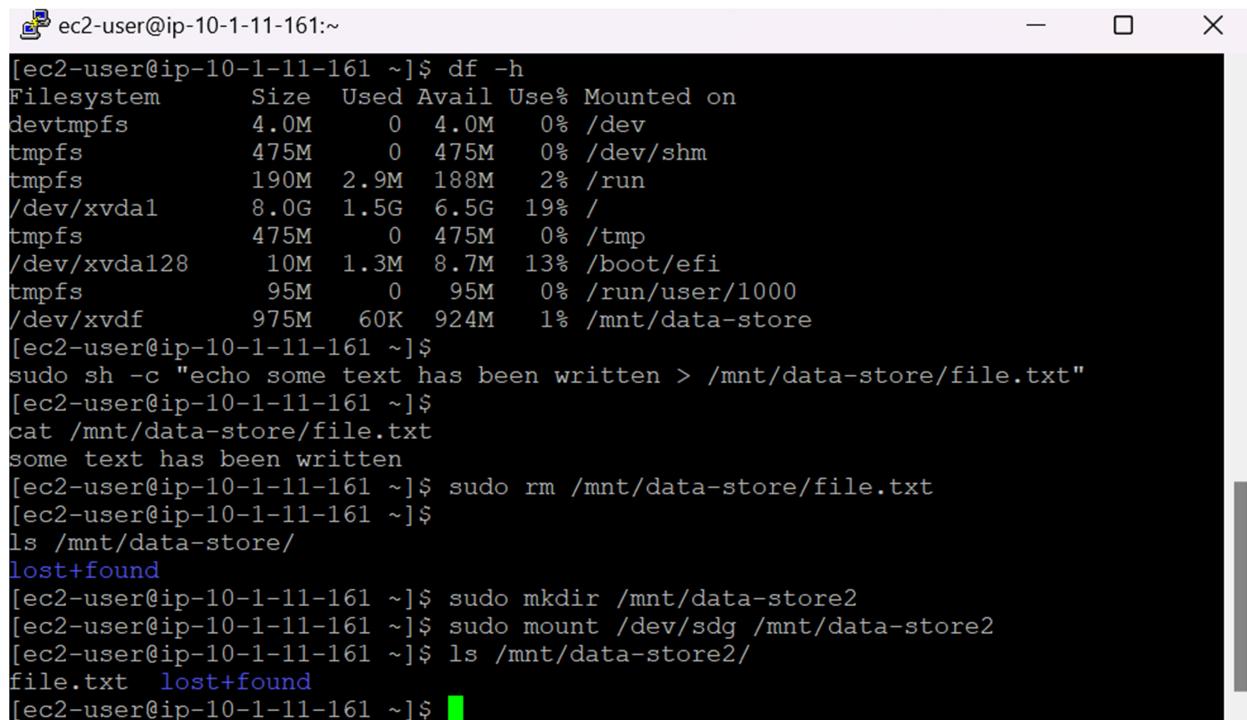
ⓘ Newer Linux kernels may rename your devices to /dev/xvdf through /dev/xvdp internally, even when the device name entered here (and shown in the details) is /dev/sdf through /dev/sdp.

Cancel **Attach volume**

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Step 9: Mount the restored volume



The screenshot shows a terminal window with a black background and white text. At the top left, it says "ec2-user@ip-10-1-11-161:~". The window contains the following command-line session:

```
[ec2-user@ip-10-1-11-161 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/tmpfs       4.0M   0    4.0M  0% /dev
tmpfs          475M   0    475M  0% /dev/shm
tmpfs          190M  2.9M  188M  2% /run
/dev/xvda1      8.0G  1.5G  6.5G  19% /
tmpfs          475M   0    475M  0% /tmp
/dev/xvda128    10M  1.3M  8.7M  13% /boot/efi
tmpfs          95M   0    95M  0% /run/user/1000
/dev/xvdf      975M  60K  924M  1% /mnt/data-store

[ec2-user@ip-10-1-11-161 ~]$
sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-161 ~]$
cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-161 ~]$
sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-161 ~]$
ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-161 ~]$
sudo mkdir /mnt/data-store2
[ec2-user@ip-10-1-11-161 ~]$
sudo mount /dev/sdg /mnt/data-store2
[ec2-user@ip-10-1-11-161 ~]$
ls /mnt/data-store2/
file.txt  lost+found
[ec2-user@ip-10-1-11-161 ~]$
```