

Lab 4: Working with EBS

Task 1: Create a New EBS Volume

Successfully created volume vol-089daec5c5ce48031.

Volumes (3) Info

Save filter sets Choose filter set Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Source volume ID	Created
<input type="checkbox"/>	My Volume	vol-089daec5c5ce48031	gp2	1 GiB	100	-	-	-	2025/11/...
<input type="checkbox"/>		vol-09bf1205113368745	gp3	9 GiB	3000	125	snap-0881c81...	-	2025/11/...
<input type="checkbox"/>		vol-0ede54c865b16ff94	gp3	8 GiB	3000	125	snap-0881c81...	-	2025/11/...

Fault tolerance for all volumes in this Region

Snapshot summary

Recently backed up volumes / Total # volumes

0 / 2

Data Lifecycle Manager default policy for EBS Snapshots status

No default policy set up | [Create policy](#)

Task 2: Attach the Volume to an Instance

EC2 > Volumes > vol-089daec5c5ce48031 > Attach volume

Basic details

Volume ID

vol-089daec5c5ce48031 (My Volume)

Availability Zone

us-east-1a (us-east-1a)

Instance Info

i-0c9e45266c84198ce (Lab) (running)

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

Device name Info

/dev/sdf

Recommended device names for Linux: /dev/xvda 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

Task 3: Connect to Your Amazon EC2 Instance

The screenshot shows the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb navigation at the top reads: **EC2** > **Instances** > **i-0c9e45266c84198ce** > **Connect to instance**. The page has four tabs: **EC2 Instance Connect** (selected), **Session Manager**, **SSH client**, and **EC2 serial console**.

Under the **EC2 Instance Connect** tab, the **Instance ID** is **i-0c9e45266c84198ce (Lab)**. The **Connection type** section has two radio buttons: **Connect using a Public IP** (selected) and **Connect using a Private IP**. Below the **Public IP** option, there are three radio buttons: **Public IPv4 address** (selected), **Public IPv6 address**, and **Private IPv4 address**. The **Public IPv4 address** is **34.227.13.110**. The **Username** field is **ec2-user**. A note states: "Note: In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username."

At the bottom right, there are **Cancel** and **Connect** buttons. The footer of the console shows "CloudShell" and copyright information for Amazon Web Services.

Task 4: Create and Configure Your File System

The screenshot shows the AWS CloudShell terminal interface. The prompt is **ec2-user@ip-10-1-11-236 ~**. The user has run **df -h** and the output is as follows:

Filesystem	Size	Used	Avail	Use%	Mounted on
devtmpfs	4.0M	0	4.0M	0%	/dev
tmpfs	475M	0	475M	0%	/dev/shm
tmpfs	190M	452K	190M	1%	/run
/dev/xvda1	8.0G	1.6G	6.4G	21%	/
tmpfs	475M	0	475M	0%	/tmp
/dev/xvda128	10M	1.3M	8.7M	13%	/boot/efi
tmpfs	95M	0	95M	0%	/run/user/1000

The user has then run **sudo mkfs -t ext3 /dev/sdf** and the output is as follows:

```
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 262144 4k blocks and 65536 inodes
Filesystem UUID: b719f563-4cda-43da-a549-3d6faea2a6a2
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
```

The user has then run **mkdir /mnt/data-store**. The terminal shows the **CloudShell** logo and a **Feedback** button. The footer of the console shows "Microsoft Store" and copyright information for Amazon Web Services.

Task 5: Create an Amazon EBS Snapshot

aws

Search

[Alt+S]

United States (N. Virginia)

Account ID: 9054-1811-8217
voclabs/user4312498=Shreyas_K

EC2 > Volumes > vol-089daec5c5ce48031 > Create snapshot

Snapshot details

Description
Add a description for your snapshot

255 characters maximum.

[Encryption info](#)
Not encrypted

Tags [info](#)

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	Value - optional
<div><div>Q</div>Name</div>	<div><div>Q</div>My Snapshot</div>

Add tag

You can add 49 more tags.

Cancel

Create snapshot

aws

Search

[Alt+S]

United States (N. Virginia)

Account ID: 9054-1811-8217
voclabs/user4312498=Shreyas_K

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Snapshots (1)

Owned by me

Q Search

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Create snapshot

<input type="checkbox"/>	Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapshot status
<input type="checkbox"/>	My Snapshot	snap-0c1671a8c83d1d4a0	-	1 GiB	-	Standard	Pending

Select a snapshot above.

aws [Search] [Alt+S] United States (N. Virginia) Account ID: 9054-1811-8217 voclabs/user4312498=Shreyas_K

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Snapshots (1/1) Info

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<input checked="" type="checkbox"/>	Name	Snapshot ID	Full snapshot size	Volume size	Description
<input checked="" type="checkbox"/>	My Snapshot	snap-0c1671a8c83d1d4a0	53 MiB	1 GiB	-

Snapshot ID: snap-0c1671a8c83d1d4a0 (My Snapshot)

[Details](#) [Snapshot settings](#) [Storage tier](#) [Tags](#)

Snapshot ID snap-0c1671a8c83d1d4a0 (My Snapshot)	Full snapshot size 53 MiB	Progress 100%	Snapshot status Completed
Owner 905418118217	Started Thu Nov 20 2025 12:43:28 GMT+0530 (India Standard Time)	Product codes -	Fast snapshot restore -
Description			

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Create a Volume Using Your Snapshot

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Successfully created volume vol-0f4415c04689e9d79.

Snapshots (1) Info

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<input type="checkbox"/>	Name	Snapshot ID	Full snapshot size	Volume size	Description	Storage tier	Snapshot status
<input type="checkbox"/>	My Snapshot	snap-0c1671a8c83d1d4a0	53 MiB	1 GiB	-	Standard	Completed

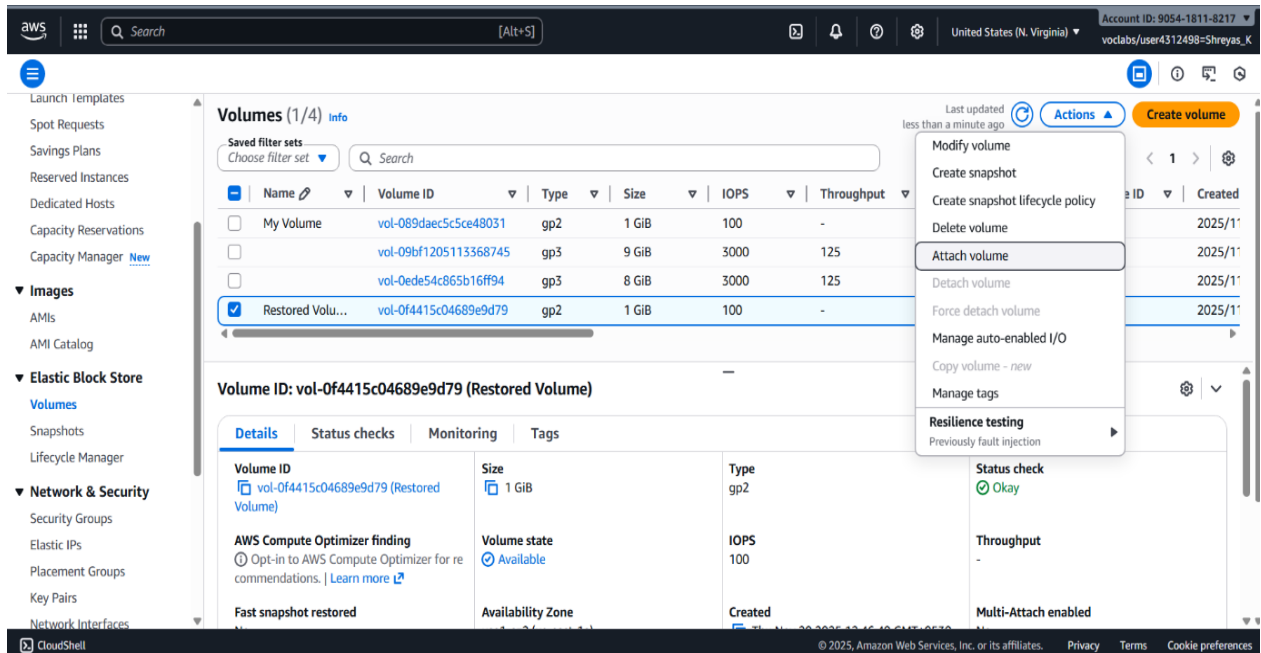
Select a snapshot above.

<https://us-east-1.console.aws.amazon.com/console/home?region=us-east-1>

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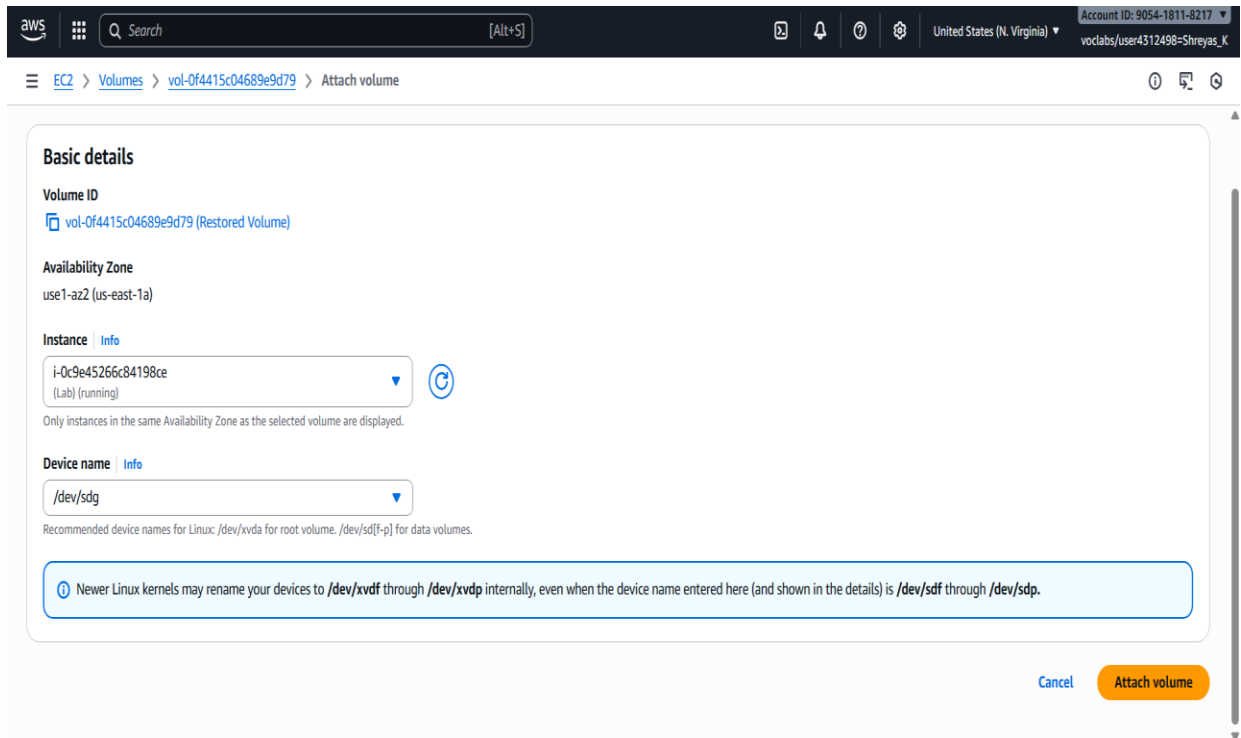
Task 6: Restore the Amazon EBS Snapshot

Create a Volume Using Your Snapshot



The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes sections like Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Capacity Reservations, Capacity Manager, Images, Elastic Block Store, and Network & Security. The main content area displays a list of EBS volumes. A table with columns 'Name', 'Volume ID', 'Type', 'Size', 'IOPS', and 'Throughput' lists several volumes. The volume 'vol-0f4415c04689e9d79' is selected. A context menu is open over this volume, showing actions such as 'Modify volume', 'Create snapshot', 'Delete volume', 'Attach volume', 'Detach volume', 'Force detach volume', 'Manage auto-enabled I/O', 'Copy volume - new', 'Manage tags', and 'Resilience testing'. The 'Attach volume' option is highlighted. Below the table, the details for the selected volume are shown, including its ID, size (1 GiB), type (gp2), and status (Available).

Attach the Restored Volume to Your EC2 Instance



The screenshot shows the 'Attach volume' page in the AWS Management Console. The page title is 'EC2 > Volumes > vol-0f4415c04689e9d79 > Attach volume'. The 'Basic details' section shows the volume ID 'vol-0f4415c04689e9d79 (Restored Volume)' and the availability zone 'us-east-1a'. The 'Instance' dropdown is set to 'i-0c9e45266c84198ce (Lab) (running)'. The 'Device name' dropdown is set to '/dev/sdg'. A note at the bottom states: '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.' At the bottom right, there are 'Cancel' and 'Attach volume' buttons.

Mount the Restored Volume

```
aws [Search] [Alt+S] [Icons] United States

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-10-1-11-236 ~]$ sudo mkdir /mnt/data-store
[ec2-user@ip-10-1-11-236 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-236 ~]$ 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-10-1-11-236 ~]$ cat /etc/fstab
#
UUID=9a57ac2f-bfe7-4e29-bf89-56caddc22c97 / xfs defaults,noatime 1 1
UUID=9682-52BE /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-10-1-11-236 ~]$ 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  448K  190M   1% /run
/dev/xvda1      8.0G  1.6G   6.4G  21% /
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-10-1-11-236 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-236 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-236 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-236 ~]$ ls /mnt/data-store/

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```

```
aws [Search] [Alt+S] [Icons] United States

Writing superblocks and filesystem accounting information: done

[ec2-user@ip-10-1-11-236 ~]$ sudo mkdir /mnt/data-store
[ec2-user@ip-10-1-11-236 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-236 ~]$ 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-10-1-11-236 ~]$ cat /etc/fstab
#
UUID=9a57ac2f-bfe7-4e29-bf89-56caddc22c97 / xfs defaults,noatime 1 1
UUID=9682-52BE /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-10-1-11-236 ~]$ 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  448K  190M   1% /run
/dev/xvda1      8.0G  1.6G   6.4G  21% /
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-10-1-11-236 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-236 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-236 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-236 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-236 ~]$ sudo mkdir /mnt/data-store2
[ec2-user@ip-10-1-11-236 ~]$ sudo mount /dev/sdg /mnt/data-store2
[ec2-user@ip-10-1-11-236 ~]$ ls /mnt/data-store2/
file.txt  lost+found
[ec2-user@ip-10-1-11-236 ~]$ ss
```