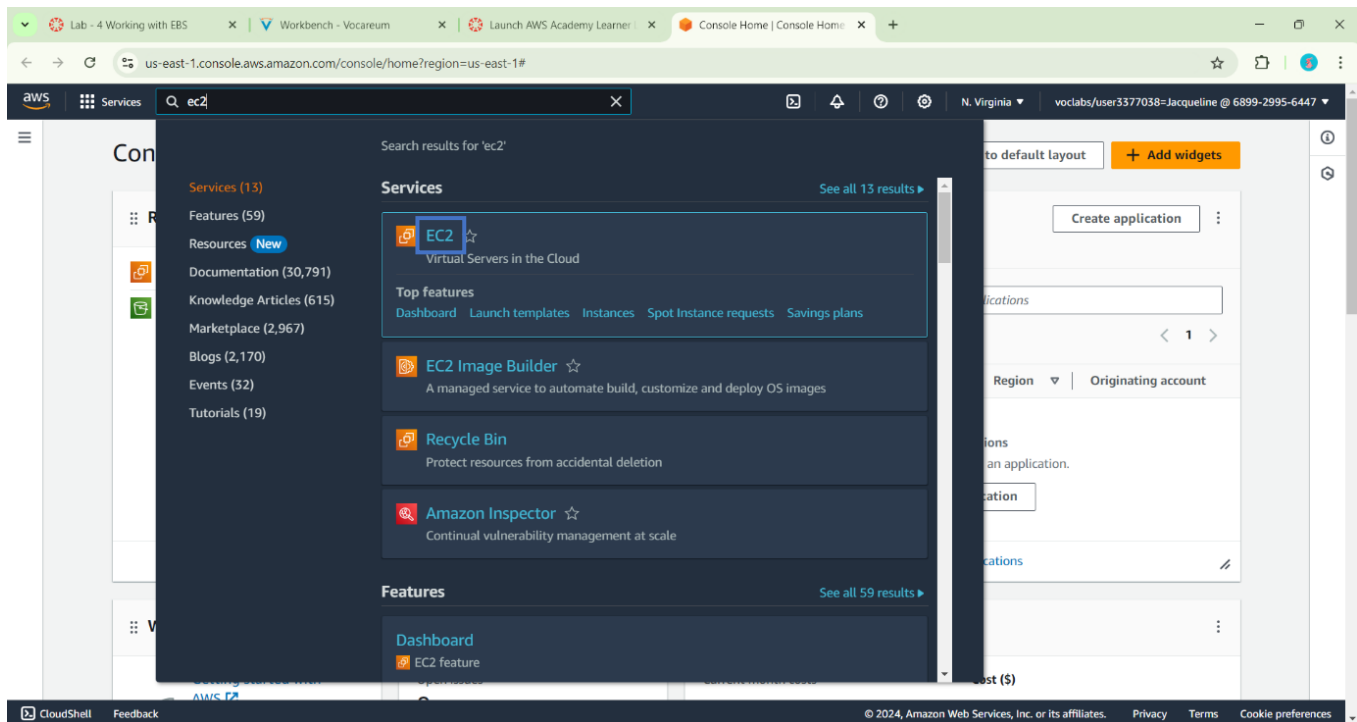


Working with EBS

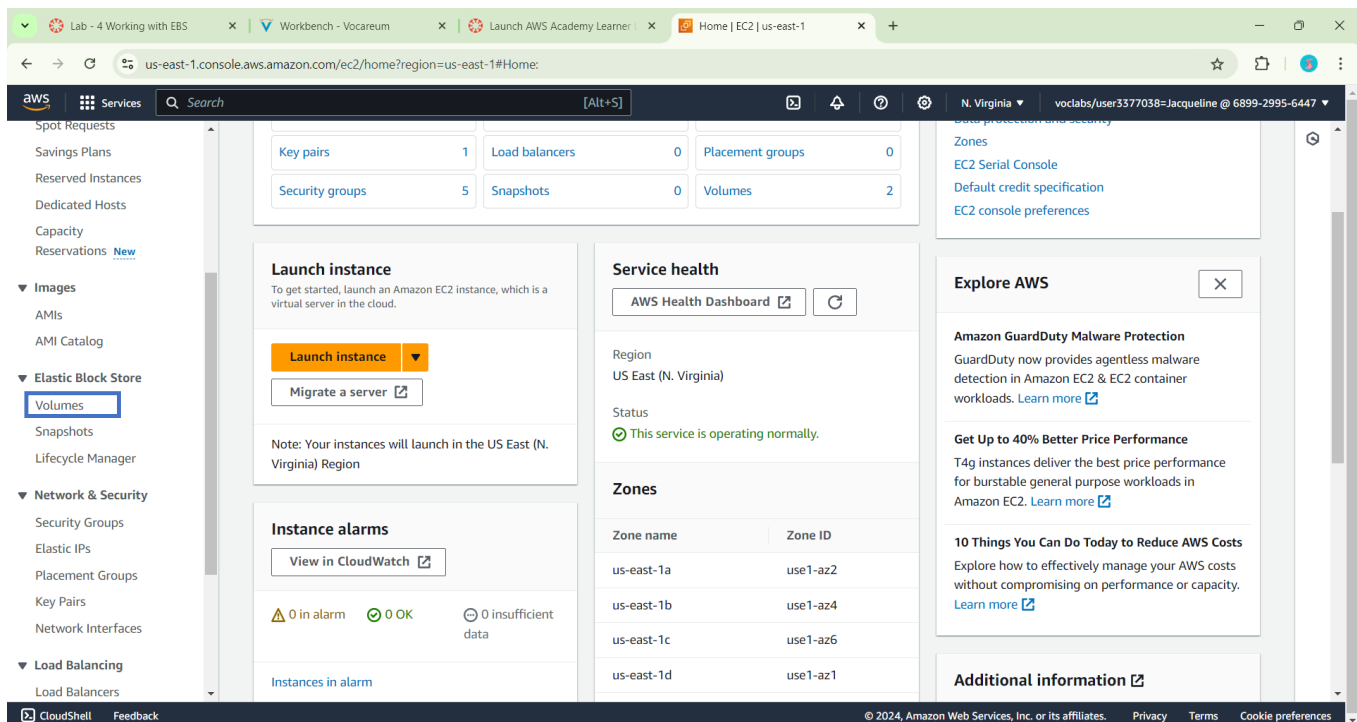
- Create an Amazon EBS volume
 - Attach and mount your volume to an EC2 instance
 - Create a snapshot of your volume
 - Create a new volume from your snapshot
 - Attach and mount the new volume to your EC2 instance
-

Task 1: Create a New EBS Volume

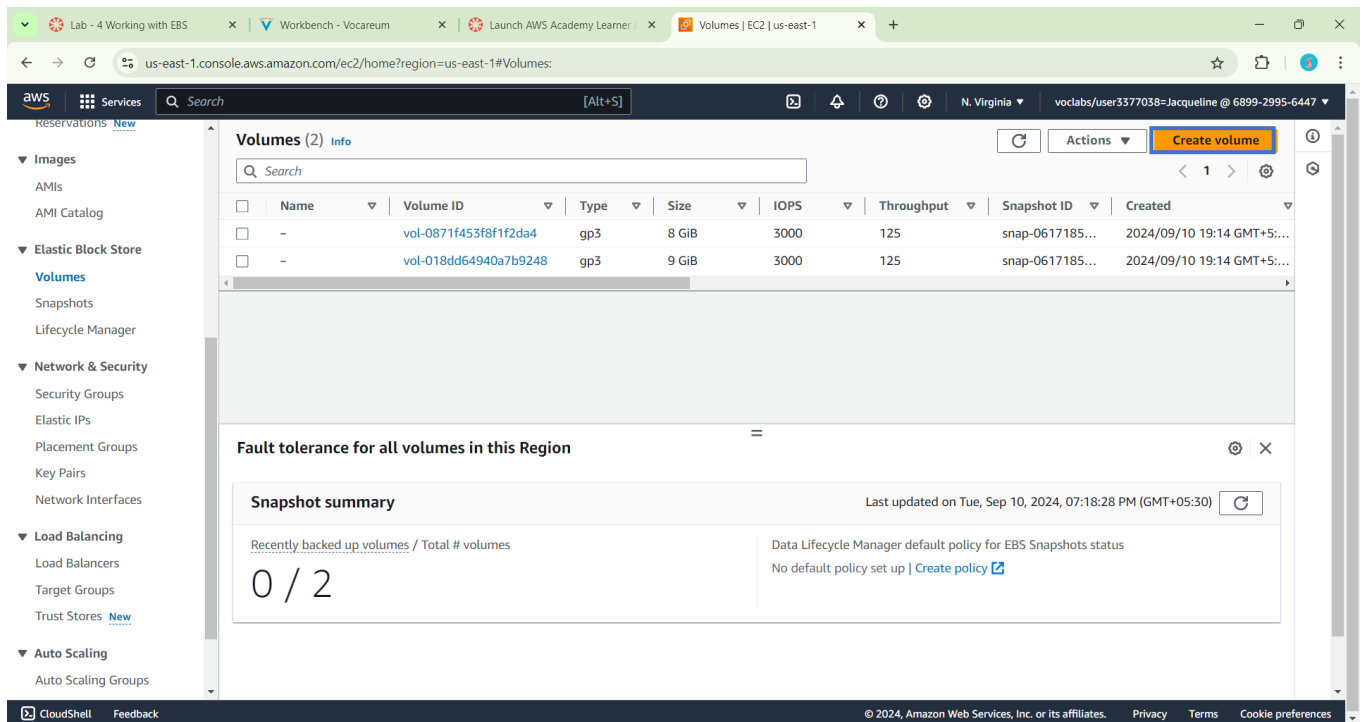
Step 1: Go to compute services and select EC2.



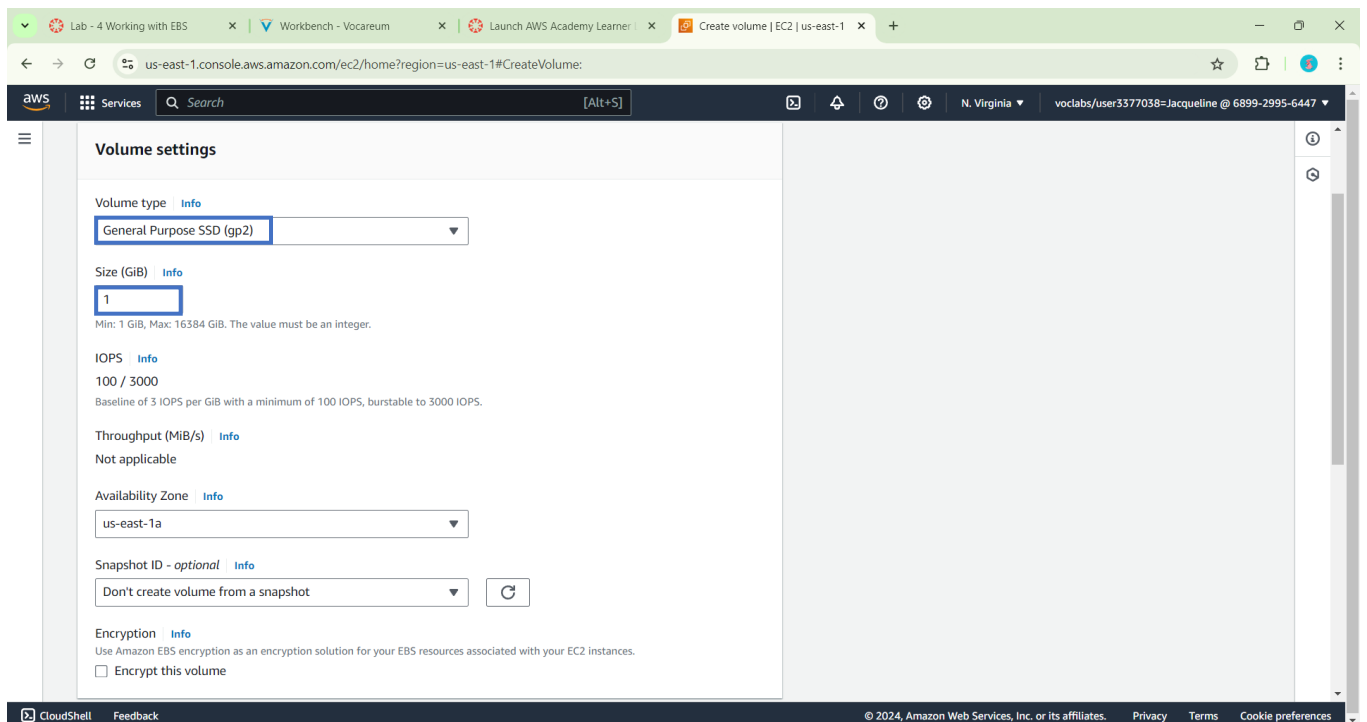
Step 2: Go to left navigation pane and select volumes.



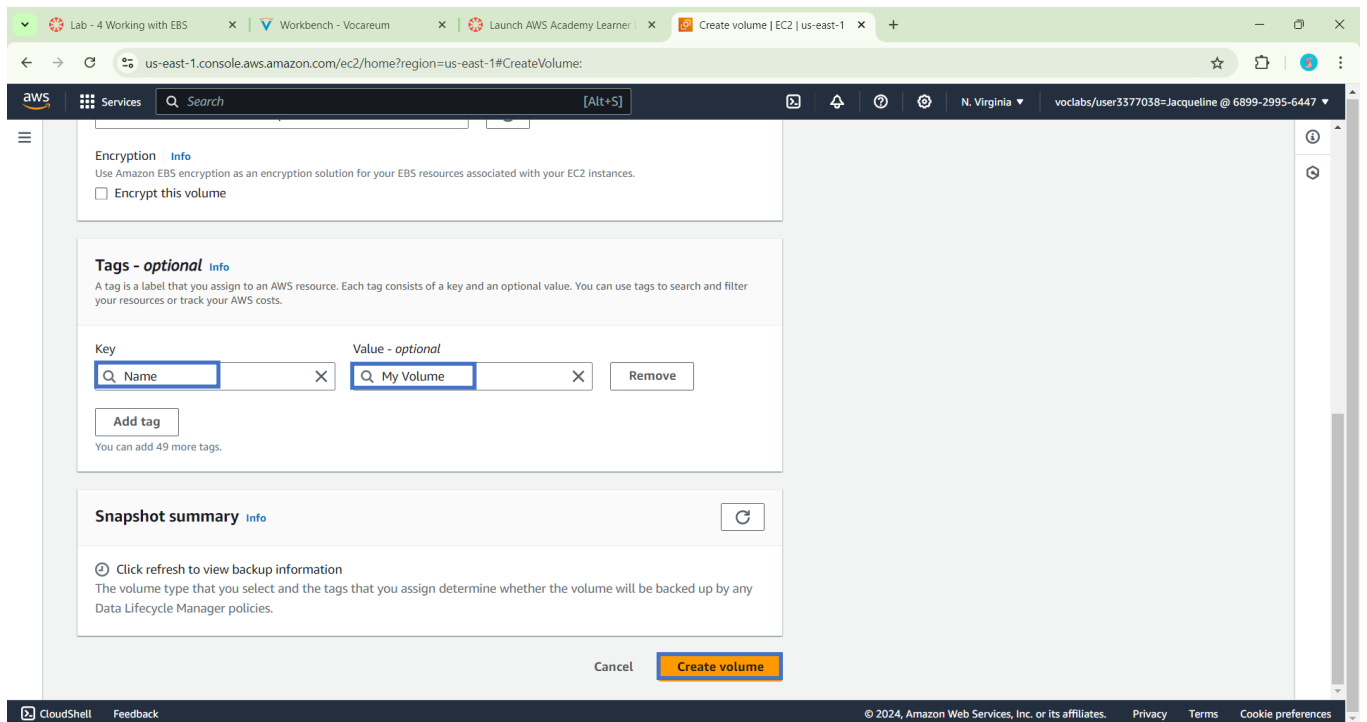
Step 3: Click create volume.



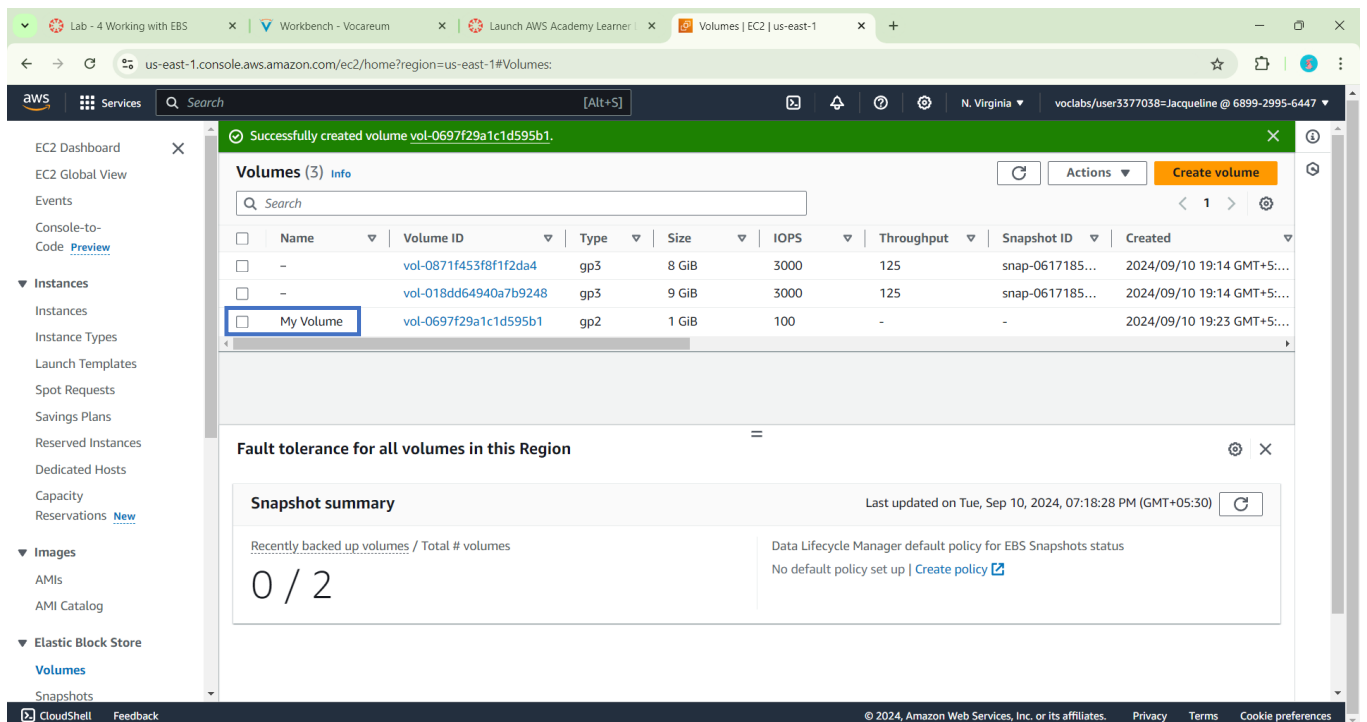
Step 4: Select volume type as 'General purpose SSD (gp2)' and size as 1



Step 5: Now give the key and value name in tag and say create volume.

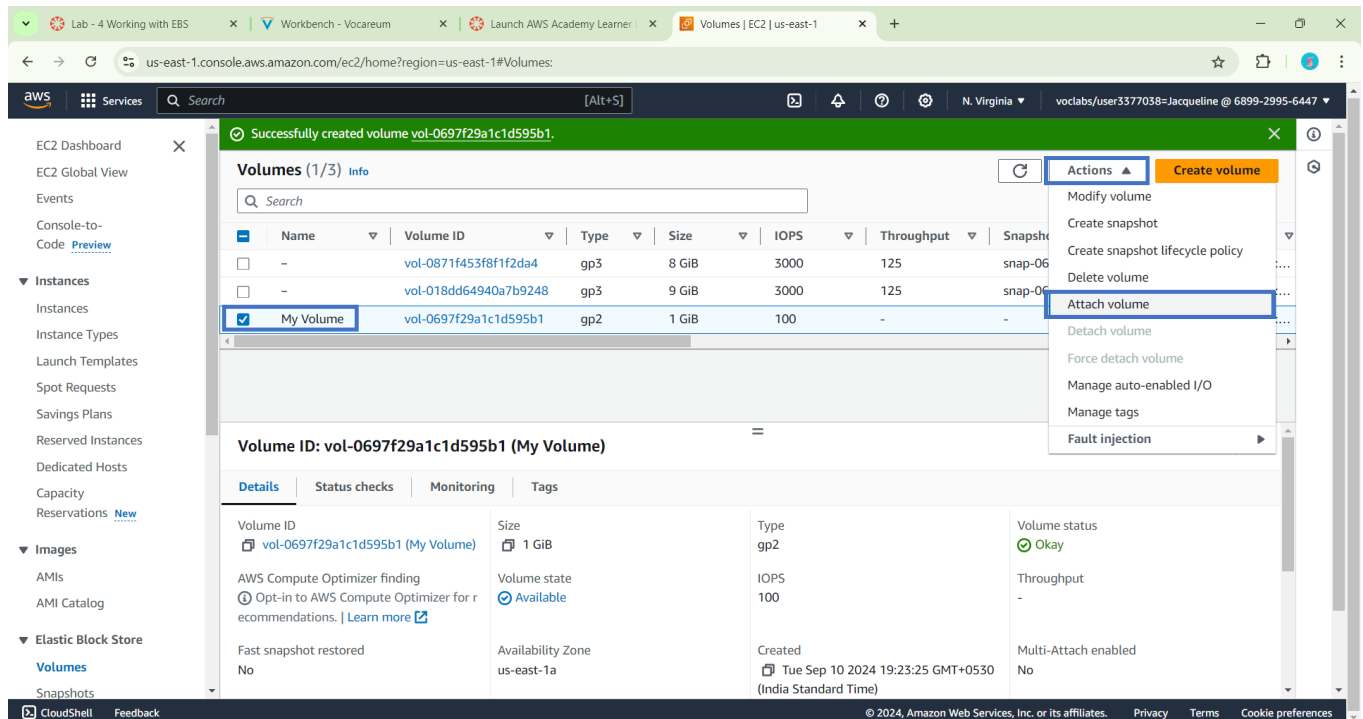


Step 6: The new volume is been created now which is available.

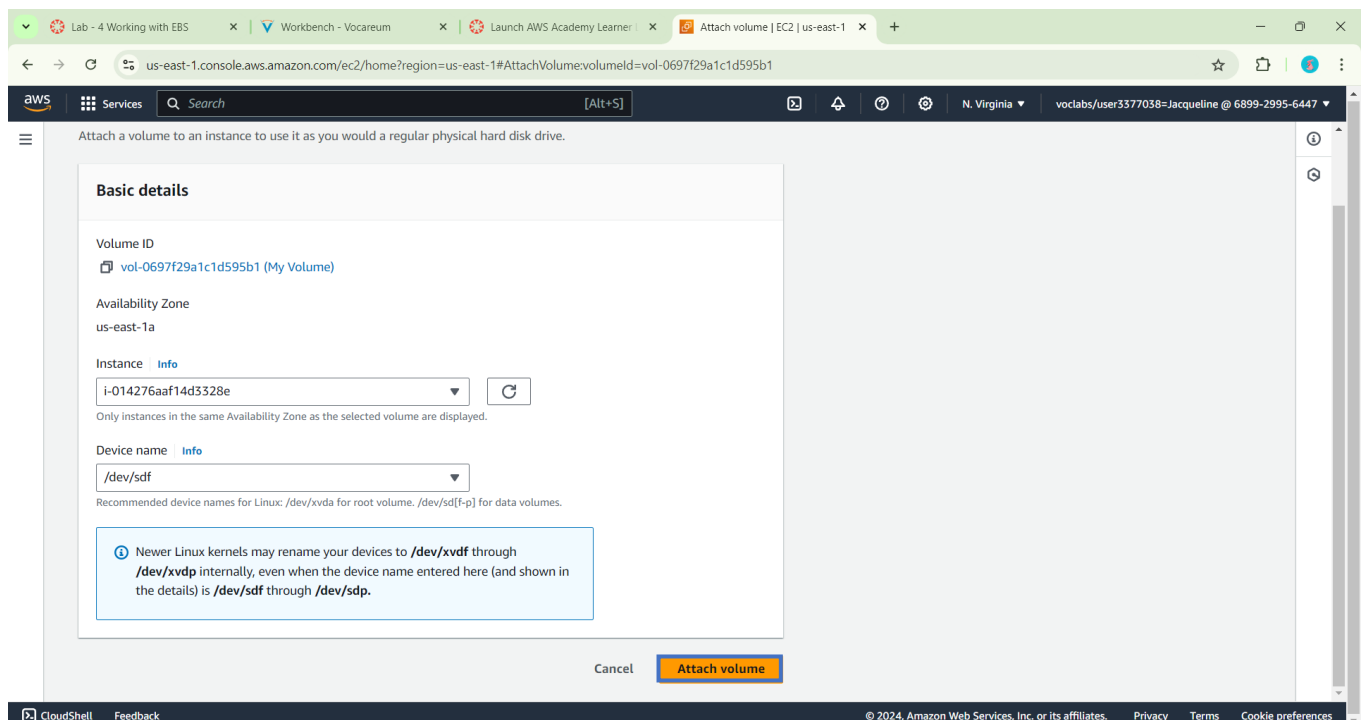


Task 2: Attach the Volume to an Instance

Step 7: Now select the new volume created and then go to actions tab and say attach volume.

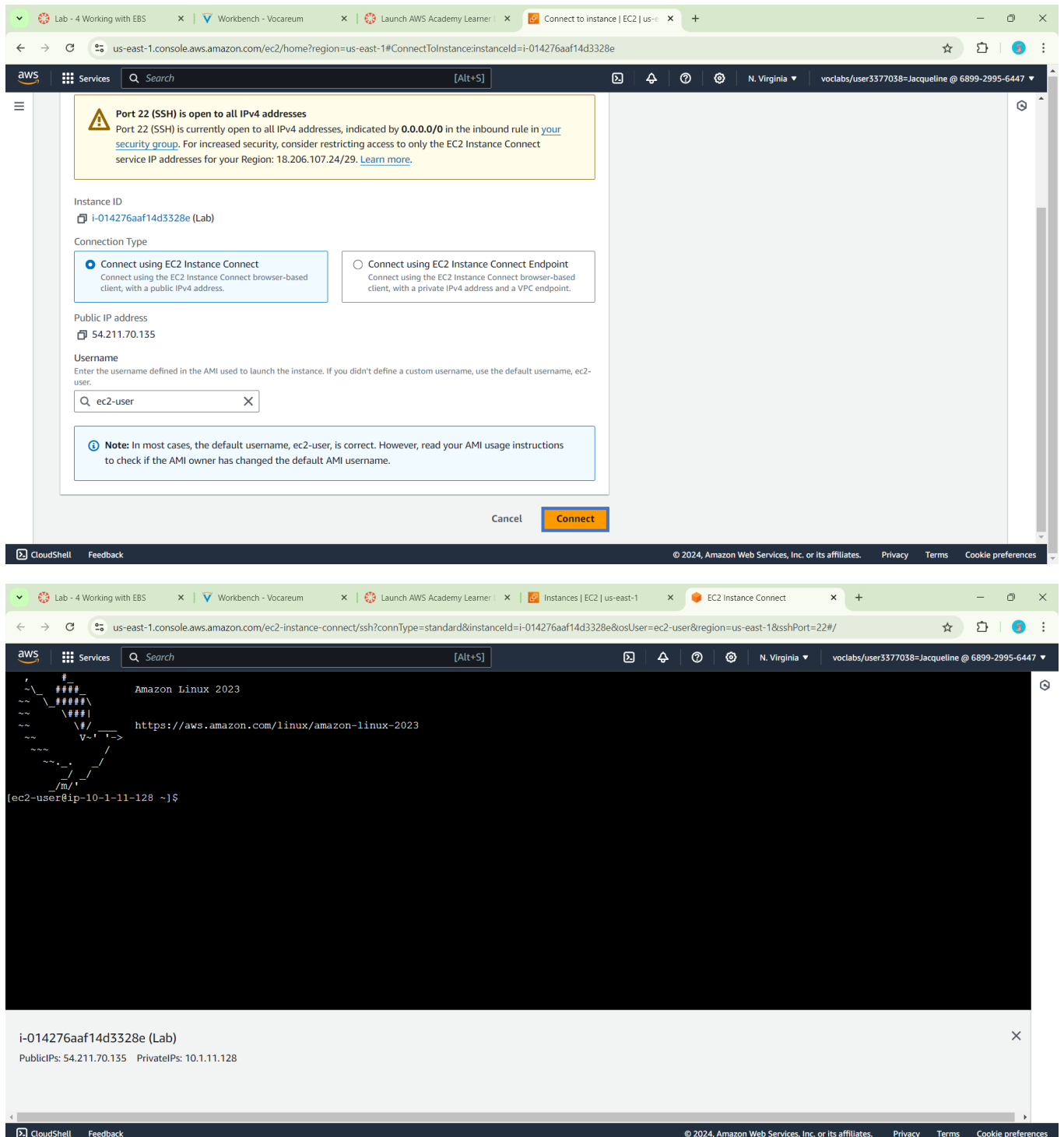


Step 8: Now select the instance from instance info and set the device name to `/dev/sdf` and then say attach volume.



Task 3: Connect to Your Amazon EC2 Instance

Step 9: Now go to instance state and select the lab and then say connect the following screen will open.




```

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[ec2-user@ip-10-1-11-128 ~]$ sudo mkdir /mnt/data-store
[ec2-user@ip-10-1-11-128 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-128 ~]$ 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-10-1-11-128 ~]$ cat /etc/fstab
#
UUID=c9033ch1-d3d9-473c-ba89-939fd978b4cb / xfs defaults,noatime 1 1
UUID=AB3F-1FE8 /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-10-1-11-128 ~]$ 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  444K  190M   1% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
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-10-1-11-128 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-128 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-128 ~]$

```

i-014276aaf14d3328e (Lab)

PublicIPs: 54.211.70.135 PrivateIPs: 10.1.11.128

Task 5: Create an Amazon EBS Snapshot

Step 10: Now go volumes tab and then select the created volume and go to actions tab and then select create snapshot.

Successfully attached volume vol-0697f29a1c1d595b1 to instance i-014276aaf14d3328e.

Volumes (1/3) Info

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshots
-	vol-0871f453f8f1f2da4	gp3	8 GiB	3000	125	snap-06
-	vol-018dd64940a7b9248	gp3	9 GiB	3000	125	snap-06
<input checked="" type="checkbox"/> My Volume	vol-0697f29a1c1d595b1	gp2	1 GiB	100	-	-

Volume ID: vol-0697f29a1c1d595b1 (My Volume)

Details	Status checks	Monitoring	Tags
Volume ID vol-0697f29a1c1d595b1 (My Volume)	Size 1 GiB	Type gp2	Volume status Okay
AWS Compute Optimizer finding Opt-in to AWS Compute Optimizer for recommendations. Learn more	Volume state In-use	IOPS 100	Throughput -
Fast snapshot restored No	Availability Zone us-east-1a	Created Tue Sep 10 2024 19:23:25 GMT+0530 (India Standard Time)	Multi-Attach enabled No

Step 11: Add tag and give key and value and then say create snapshot.

The screenshot shows the 'Create snapshot' page in the AWS Management Console. The 'Tags' section is active, showing a key 'Name' with a value 'My Snapshot'. The 'Create snapshot' button is highlighted in orange.

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:

You can add 49 more tags.

Step 12: Now go to left navigation pane and choose snapshots the following screen will display.

The screenshot shows the 'Snapshots' page in the AWS Management Console. The left navigation pane has 'Snapshots' selected. The main content area displays a table of snapshots with one entry: 'My Snapshot' (snap-0e24a087c8f671175, 1 GiB, Completed).

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

Owned by me

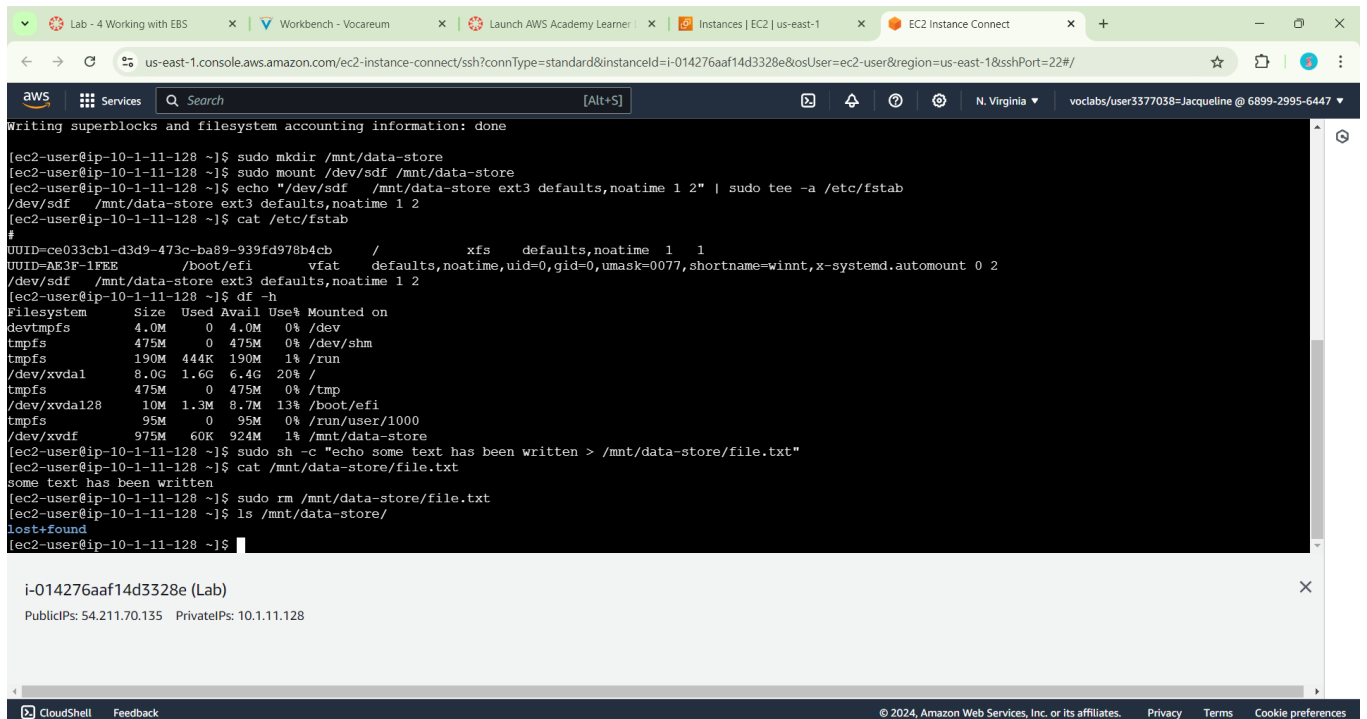
<input checked="" type="checkbox"/>	Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
<input checked="" type="checkbox"/>	My Snapshot	snap-0e24a087c8f671175	1 GiB	-	Standard	Completed	2024/09/10 19:35

Snapshot ID: snap-0e24a087c8f671175 (My Snapshot)

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

Snapshot ID snap-0e24a087c8f671175 (My Snapshot)	Progress Available (100%)	Snapshot status Completed	Owner 689929956447
Started Tue Sep 10 2024 19:35:57 GMT+0530 (India Standard Time)	Product codes -	Fast snapshot restore -	Description -
Source volume Volume ID: vol-0697f29a1c1d595b1 Volume size: 1 GiB			

Step 13: Now again go to EC2 instance connect and type the commands to delete the file.



The screenshot shows a terminal window for an EC2 instance. The user is logged in as ec2-user. The terminal output shows the following commands and their results:

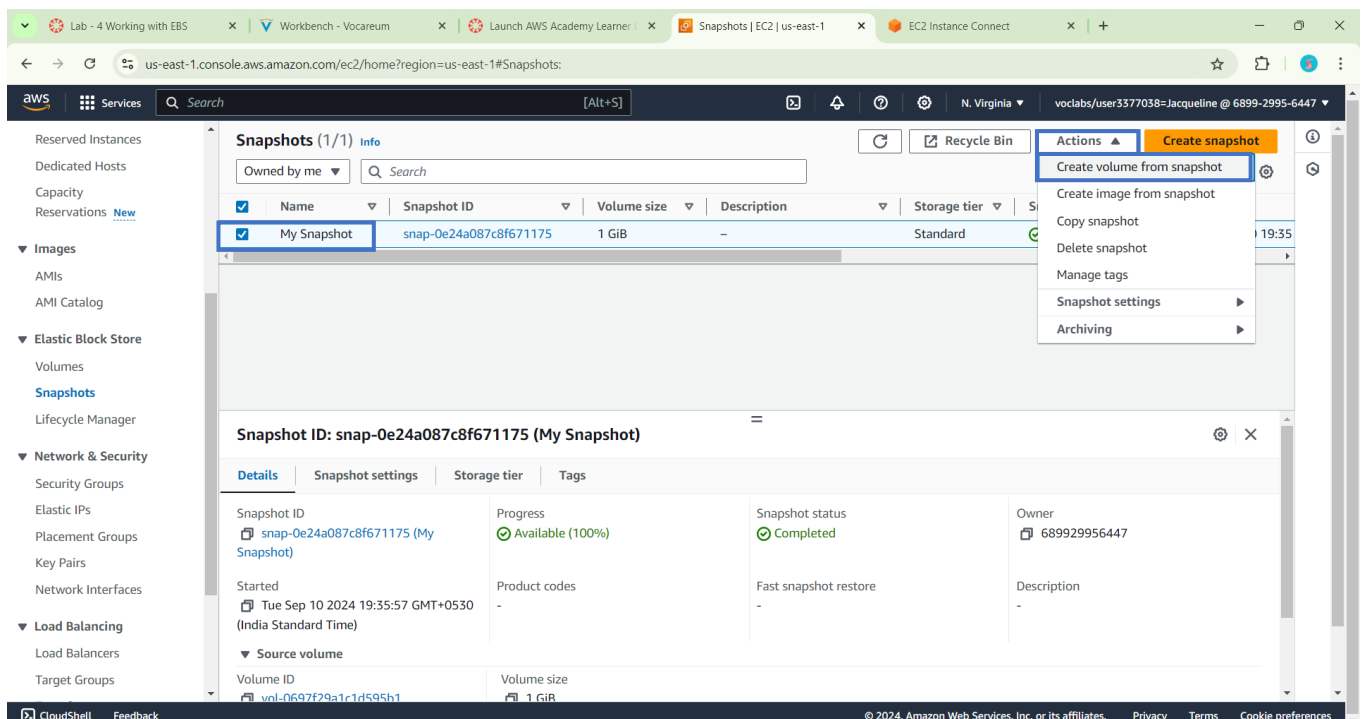
```
Writing superblocks and filesystem accounting information: done

[ec2-user@ip-10-1-11-128 ~]$ sudo mkdir /mnt/data-store
[ec2-user@ip-10-1-11-128 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-128 ~]$ 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-10-1-11-128 ~]$ cat /etc/fstab
#
UUID=ce033ch1-d3d9-473c-ba89-939fd978b4cb / xfs defaults,noatime 1 1
UUID=AE3F-1FEE /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-10-1-11-128 ~]$ 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  444K  190M  1% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
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-10-1-11-128 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-128 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-128 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-128 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-128 ~]$
```

Below the terminal window, there is a box for the instance ID: i-014276aaf14d3328e (Lab). It also shows Public IPs: 54.211.70.135 and Private IPs: 10.1.11.128.

Task 6: Restore the Amazon EBS Snapshot

Step 14: Now go to EC2 console and select the created snapshot and then go to actions and then select create volume from snapshot.



Step 15: Now select add tag and then give key and value and then create volume.

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateVolumeFromSnapshotsnapshotId=snap-0e24a087c8f671175

Volume settings

Snapshot ID
snap-0e24a087c8f671175 (My Snapshot)

Volume type [Info](#)
General Purpose SSD (gp2)

Size (GiB) [Info](#)
1
Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)
100 / 3000
Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS.

Throughput (MiB/s) [Info](#)
Not applicable

Availability Zone [Info](#)
us-east-1a

Fast snapshot restore [Info](#)
Not enabled for selected snapshot

Encryption

Use Amazon EBS encryption as an encryption solution for your EBS resources associated with your EC2 instances.
☐ Encrypt this volume

Tags - optional [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	
Name	Restored Volume	Remove

[Add tag](#)
You can add 49 more tags.

Snapshot summary [Refresh](#)

[Click refresh to view backup information](#)
The volume type that you select and the tags that you assign determine whether the volume will be backed up by any Data Lifecycle Manager policies.

[Cancel](#) [Create volume](#)

Step 16: Now go back to volumes tab in left navigation pane and select the restored volume and then go to actions tab and select attach volume.

The screenshot shows the AWS Management Console 'Volumes' page. The left navigation pane has 'Volumes' selected under 'Elastic Block Store'. The main content area displays a table of volumes. The volume 'vol-01aaab7f05c00cdad' (Restored Volume) is selected. The 'Actions' dropdown menu is open, showing options like 'Modify volume', 'Create snapshot', and 'Attach volume', with 'Attach volume' highlighted.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
-	vol-0871f453f8f1f2da4	gp3	8 GiB	3000	125	snap-06
-	vol-018dd64940a7b9248	gp3	9 GiB	3000	125	snap-06
My Volume	vol-0697f29a1c1d595b1	gp2	1 GiB	100	-	-
Restored Volume	vol-01aaab7f05c00cdad	gp2	1 GiB	100	-	snap-0e

Volume ID: vol-01aaab7f05c00cdad (Restored Volume)

Details | Status checks | Monitoring | Tags

Property	Value
Volume ID	vol-01aaab7f05c00cdad (Restored Volume)
Size	1 GiB
Type	gp2
Volume status	Okay
AWS Compute Optimizer finding	Opt-in to AWS Compute Optimizer for recommendations. Learn more
Volume state	Available
IOPS	100
Throughput	-
Fast snapshot restored	No
Availability Zone	us-east-1a
Created	Tue Sep 10 2024 19:41:44 GMT+0530
Multi-Attach enabled	No

The screenshot shows the 'Attach volume' wizard in the AWS Management Console. The 'Basic details' section is visible, showing the volume ID 'vol-01aaab7f05c00cdad (Restored Volume)', availability zone 'us-east-1a', instance ID 'i-014276aaf14d3328e', and device name '/dev/sdg'. A note mentions that newer Linux kernels may rename devices to /dev/xvdf through /dev/xvdp internally.

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

Basic details

Volume ID
vol-01aaab7f05c00cdad (Restored Volume)

Availability Zone
us-east-1a

Instance
i-014276aaf14d3328e

Device name
/dev/sdg

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

Step 17: Now go to EC2 instance connect and write command for second volume created to mount it.

The screenshot shows the AWS CloudShell terminal interface. The terminal output displays the following commands and their results:

```
#
UUID=ce033cb1-d3d9-473c-ba89-939fd978b4cb / xfs defaults,noatime 1 1
UUID=AE3F-1FEE /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-10-1-11-128 ~]$ 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  444K 190M   1% /run
/dev/xvda1      8.0G  1.6G  6.4G  20% /
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-10-1-11-128 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-128 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-128 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-128 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-128 ~]$
[ec2-user@ip-10-1-11-128 ~]$
[ec2-user@ip-10-1-11-128 ~]$ sudo mount /dev/sdg /mnt/data-store2
mount: /mnt/data-store2: mount point does not exist.
[ec2-user@ip-10-1-11-128 ~]$ sudo mkdir /mnt/data-store2
[ec2-user@ip-10-1-11-128 ~]$ sudo mkdir /dev/sdg /mnt/data-store2
[ec2-user@ip-10-1-11-128 ~]$ ls /mnt/data-store2/
file.txt  lost+found
[ec2-user@ip-10-1-11-128 ~]$
```

Below the terminal, a box displays the instance ID: i-014276aaf14d3328e (Lab). Public IPs: 54.211.70.135 Private IPs: 10.1.11.128.

Step 18: Now detach the volume and then delete it.

The screenshot shows the AWS Management Console interface. A dialog box titled "Force detach 2 volumes?" is displayed, warning that forced detachment of a stuck volume can cause damage to the file system or the data it contains. The dialog lists the following volumes for detachment:

- vol-0697f29a1c1d595b1
- vol-01aaab7f05c00cdad

To confirm detachment, type `detach` in the field. The field contains the text `detach`. The dialog has "Cancel" and "Force detach" buttons.

The background shows the "Volumes (2/4) Info" page with a table of volumes:

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
-	vol-0871f453f8f1f2da4	gp3	8 GiB	3000	125	snap-0617185...	2024/09/10 19:14 GMT+5...
My Volume	vol-0697f29a1c1d595b1	gp3	8 GiB	3000	125	17185...	2024/09/10 19:23 GMT+5...
Restored Volu...	vol-01aaab7f05c00cdad	gp3	8 GiB	3000	125	24a08...	2024/09/10 19:41 GMT+5...

Step 19: Now delete the snapshots as well that was earlier created.

The screenshot shows the AWS Management Console for the 'us-east-1' region. The left sidebar contains navigation links for various services. The main content area displays the 'Snapshots (1/1)' page. A table lists the snapshot 'My Snapshot' with ID 'snap-0e24a087c8f671175', a volume size of '1 GiB', and a status of 'Completed'. The 'Actions' menu is open, showing options like 'Create volume from snapshot', 'Create image from snapshot', 'Copy snapshot', 'Delete snapshot', 'Manage tags', 'Snapshot settings', and 'Archiving'. The 'Delete snapshot' option is highlighted.

Name	Snapshot ID	Volume size	Description	Storage tier	Status
My Snapshot	snap-0e24a087c8f671175	1 GiB	-	Standard	Completed

Snapshot ID: snap-0e24a087c8f671175 (My Snapshot)

Details | Snapshot settings | Storage tier | Tags

Snapshot ID: snap-0e24a087c8f671175 (My Snapshot)

Progress: Available (100%)

Snapshot status: Completed

Owner: 689929956447

Started: Tue Sep 10 2024 19:35:57 GMT+0530 (India Standard Time)

Product codes: -

Fast snapshot restore: -

Description: -

Source volume

Volume ID: vol-0697f29a1c1d595b1

Volume size: 1 GiB

The screenshot shows the same AWS Management Console page, but with a confirmation dialog box open. The dialog box is titled 'Delete snap-0e24a087c8f671175?' and contains the text 'Are you sure that you want to delete snap-0e24a087c8f671175?'. Below this, it says 'To confirm deletion, type delete in the field.' and provides a text input field where the word 'delete' has been typed. There are 'Cancel' and 'Delete' buttons at the bottom of the dialog.

Delete snap-0e24a087c8f671175?

Are you sure that you want to delete snap-0e24a087c8f671175?

To confirm deletion, type delete in the field.

delete

Cancel Delete

Step 20: At the end terminate the instance and sign out and then end lab.

The screenshot shows the AWS Management Console with the 'Instances' page selected. A modal dialog box titled 'Terminate (delete) instance?' is displayed in the center. The dialog contains a warning icon and text: 'On an EBS-backed instance, the default action is for the root EBS volume to be deleted when the instance is terminated. Storage on any local drives will be lost.' Below this, it asks 'Are you sure you want to terminate these instances?'. A table lists the instance to be terminated: 'i-014276aaf14d3328e (Lab)' with 'Termination protection' set to 'Disabled'. Under the 'Clean up associated resources' section, it states 'Associated resources may incur costs after these instances are terminated.' and lists 'Delete EBS volumes' as an option. At the bottom right of the dialog are 'Cancel' and 'Terminate (delete)' buttons. The background shows the 'Instances' list with columns for Name, ID, and State.

The screenshot shows the AWS Management Console 'Home' page for the EC2 console. The page is divided into several sections. On the left is a navigation sidebar with links to 'EC2 Dashboard', 'EC2 Global View', 'Events', 'Console-to-Code', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity', 'Reservations', 'Images', 'AMIs', 'AMI Catalog', 'Elastic Block Store', 'Volumes', and 'Snapshots'. The main content area includes a 'Launch instance' button, a 'Migrate a server' button, a note about the region (US East (N. Virginia)), 'Instance alarms' (0 in alarm, 0 OK, 0 insufficient data), 'Instances in alarm', 'Scheduled events' (US East (N. Virginia), No scheduled events), and an 'AWS Health Dashboard' showing the region status as 'This service is operating normally.' and a table of 'Zones' with columns 'Zone name' and 'Zone ID'. On the right side, there is a '10 Things You Can' section, an 'Account' section with a 'Sign out' button, and an 'Additional information' section with links to 'Getting started guide', 'Documentation', 'All EC2 resources', 'Forums', and 'Pricing'.

awsacademy.com/vforcesite/L/v

Workbench - Vocareum

Launch AWS Academy Learner

awsacademy.instructure.com/courses/86436/modules/items/7859818

Launch AWS Academy Learner Lab

Account

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Grades

Lucid

AWS

Used \$0 of \$100

03:44

Start Lab

End Lab

AWS Details

Readme

Reset

Are you sure you want to end the lab?

Yes

No

Learner Lab

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[Region restriction](#)
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