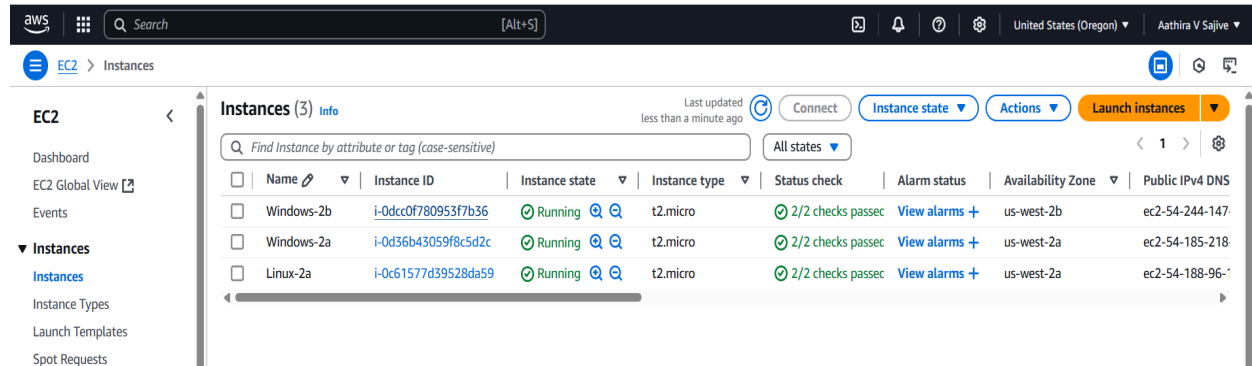


Cross-Platform and Cross-Region EBS Volume Management on AWS

1. Launch EC2 Instances in Different Subnets



a) Windows Instance in Az 2a

1. Go to EC2 > Launch Instance
2. Name: **Windows-2a**
3. AMI: Microsoft Windows Server
4. Instance type: **t2.micro**
5. Key Pair: Select/Create key pair
6. Network Settings:
 - VPC: Your custom VPC
 - Subnet: **Az-2a**
 - Auto-assign public IP: Enable
7. Launch

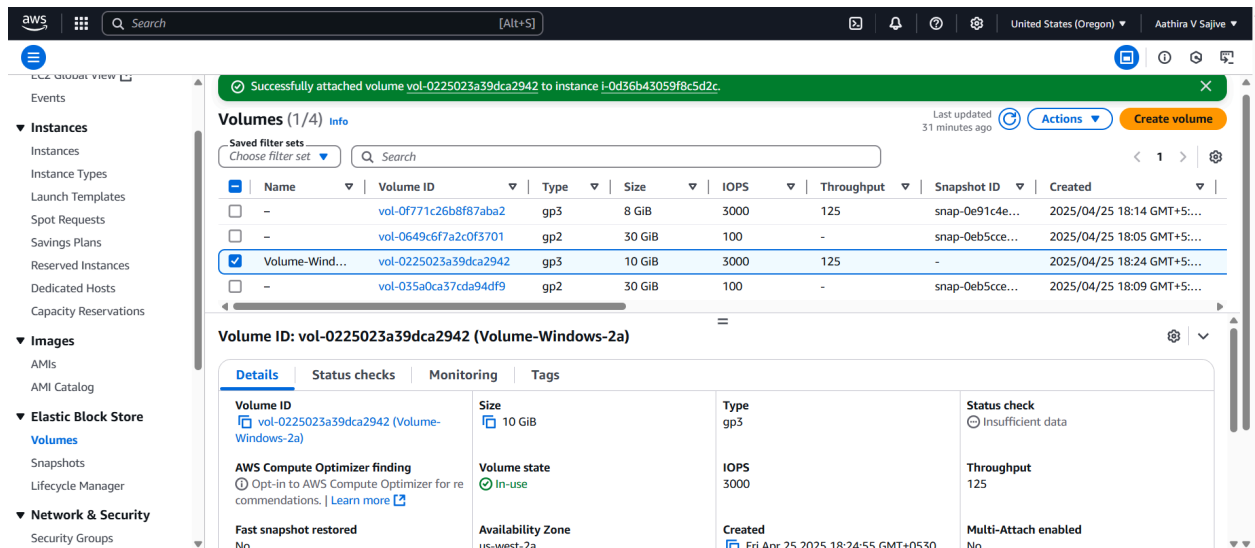
b) Windows Instance in Az 2b

1. Repeat the same steps as above
2. Name: **Windows-2b**
3. Subnet: **Az-2b**

c) Linux Instance in Az 2a

1. Go to EC2 > Launch Instance
2. Name: **Linux-2a**
3. AMI: Amazon Linux 2023
4. Instance type: **t2.micro**
5. Key Pair: Use same or new one
6. Network Settings:
 - VPC: Your custom VPC
 - Subnet: **Az-2a**
 - Auto-assign public IP: Enable
7. Launch

2. Create an EBS Volume



Create an EBS Volume to be attached to the Windows instance in Az-2a

1. Go to EC2 Dashboard > Elastic Block Store > Volumes
2. Click Create Volume
3. Volume Type: **gp3** (General Purpose SSD)
4. Size: e.g., **10 GiB**
5. Availability Zone: **us-west-2a**
6. Tags: Name , **Volume-10gb-2a**
7. Click Create Volume

3. Attach the Volume to the Windows Instance

1. Select the volume created : **Volume-10gb-2a**
2. Click Actions > Attach Volume
3. Instance: Select **Windows-2a**
4. Device: **/dev/xvdb**
5. Click Attach

4. Format & Mount the Volume in Windows

1. Connect to the Windows EC2 via RDP
 - a. Choose Instance: Select **Windows-2a**
2. Go to Server Manager
3. From Tools > Select Computer Management
4. Go to Disk Management
5. You will see the new volume as Unallocated
6. Right-click → Online → Initialize Disk
7. Right-click → Create a New Simple Volume
8. Choose File System → FAT32 → Assign a Drive
9. Create New Folder in Assigned Drive : **Windows-2a**
 - a. Add files like text file with name A-win-2a, B-win-2a, C-win-2a
10. Done

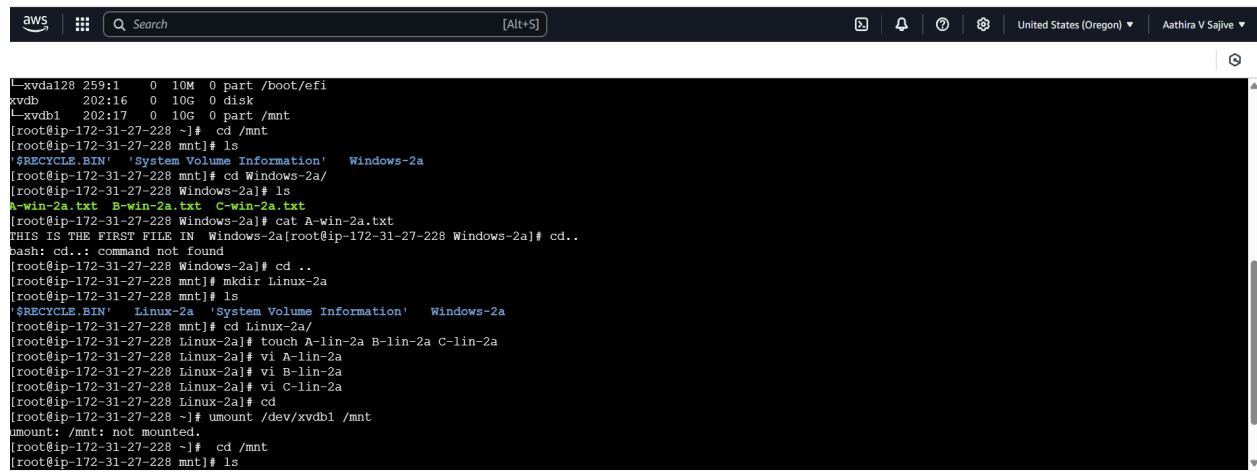
5. Detach Volume from Windows Instance

1. Go to EC2 > Volumes
2. Select the volume attached to **Windows-2a**,
 - Volume: **Volume-10gb-2a**
3. Click Actions > Detach Volume
4. Confirm the detachment
 - Wait until State: Available

6. Attach Volume to Linux Instance

1. Go to EC2 > Volumes
2. Select the same Volume created: **Volume-10gb-2a**
3. Click Actions > Attach Volume
4. Select instance: **Linux-2a**
5. Device name: **/dev/sdb**
6. Click Attach

7. Mount the Volume in Linux



The screenshot shows a terminal window with the following commands and output:

```
l-xvda128 259:1 0 10M 0 part /boot/efi
xvdb 202:16 0 10G 0 disk
l-xvdb1 202:17 0 10G 0 part /mnt
[root@ip-172-31-27-228 ~]# cd /mnt
[root@ip-172-31-27-228 mnt]# ls
'$RECYCLE.BIN' 'System Volume Information' Windows-2a
[root@ip-172-31-27-228 mnt]# cd Windows-2a/
[root@ip-172-31-27-228 Windows-2a]# ls
A-win-2a.txt B-win-2a.txt C-win-2a.txt
[root@ip-172-31-27-228 Windows-2a]# cat A-win-2a.txt
THIS IS THE FIRST FILE IN Windows-2a[root@ip-172-31-27-228 Windows-2a]# cd..
bash: cd.: command not found
[root@ip-172-31-27-228 Windows-2a]# cd ..
[root@ip-172-31-27-228 mnt]# mkdir Linux-2a
[root@ip-172-31-27-228 mnt]# ls
'$RECYCLE.BIN' Linux-2a 'System Volume Information' Windows-2a
[root@ip-172-31-27-228 mnt]# cd Linux-2a/
[root@ip-172-31-27-228 Linux-2a]# touch A-lin-2a B-lin-2a C-lin-2a
[root@ip-172-31-27-228 Linux-2a]# vi A-lin-2a
[root@ip-172-31-27-228 Linux-2a]# vi B-lin-2a
[root@ip-172-31-27-228 Linux-2a]# vi C-lin-2a
[root@ip-172-31-27-228 Linux-2a]# cd
[root@ip-172-31-27-228 ~]# umount /dev/xvdb1 /mnt
umount: /mnt: not mounted.
[root@ip-172-31-27-228 ~]# cd /mnt
[root@ip-172-31-27-228 mnt]# ls
```

i-0c61577d39528da59 (Linux-2a)
PublicIPs: 54.188.96.186 PrivateIPs: 172.31.27.228

1. Connect to the Linux EC2 via EC2 Instance Connect

- Choose Instance: Select **Linux-2a**

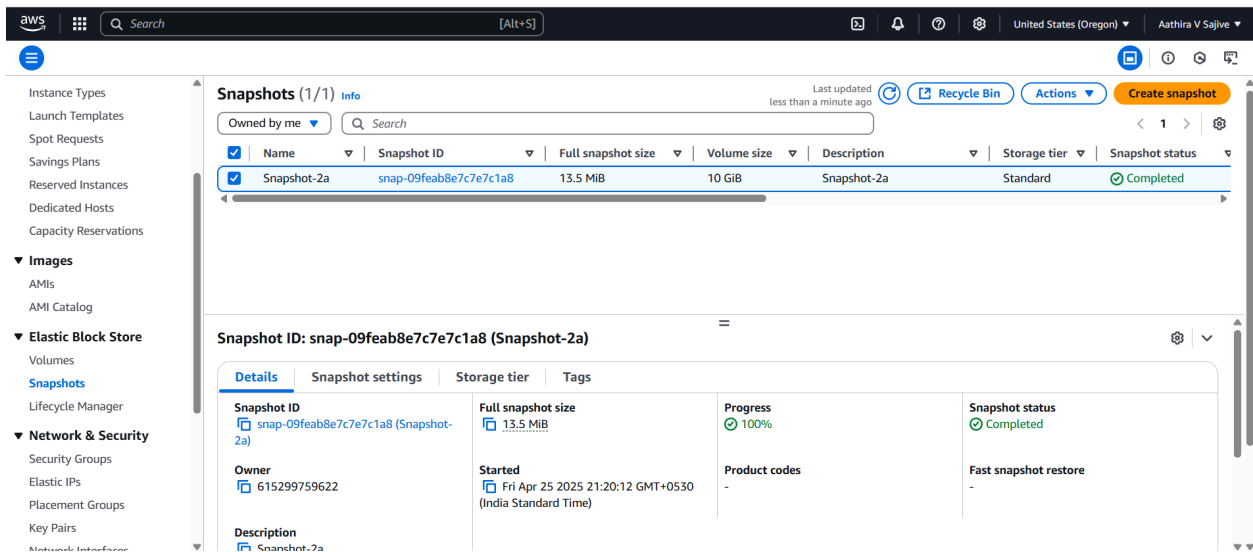
2. Task Steps (Linux-2a)

- Switch to root > **sudo su > cd**
- View available block devices > **lsblk**
- Mount the volume > **mount /dev/xvdb1 /mnt**
- Check available block devices > **lsblk**
- Navigate and verify files > **cd /mnt > ls > cd Windows-2a**
> **ls > cat A-win-2a.txt > cd ..**
- Create a new Linux directory and files > **cd /mnt >**
> **mkdir Linux-2a > cd Linux-2a**

> touch A-lin-2a B-lin-2a C-lin-2a

- Add content to file > vi A-lin-2a
- Unmount the volume (once done) > cd ~ > umount /mnt
- Confirm unmount > cd /mnt > ls

8. Create a Snapshot from Volume



1. Go to EC2 Dashboard > Volumes
2. Select the volume used previously: Volume-10gb-2a
3. Click Actions > Create Snapshot
4. Add Tag: Snapshot-10gb-2a
5. Click Create Snapshot
6. Go to Snapshots tab under EBS > Wait until Status: completed

9. Create New Volume from Snapshot

The screenshot shows the AWS Management Console interface. On the left, the navigation menu includes 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'Elastic Block Store', and 'Network & Security'. The 'Elastic Block Store' section is expanded, showing 'Volumes', 'Snapshots', and 'Lifecycle Manager'. The 'Volumes' page displays a table of volumes. The volume 'Volume-12gb-2b' with ID 'vol-0fcc0cce3abc82003' is selected. Below the table, the 'Details' tab for this volume is shown, displaying its size (12 GiB), type (gp3), and status (Available). The 'Status checks' section shows 'Status check' as 'Okay' and 'Throughput' as '125'.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot ID	Created
-	vol-0f771c26b8f87aba2	gp3	8 GiB	3000	125	snap-0e91c4e...	2025/04/25 18:14 GMT+5:...
Volume-12gb-2b	vol-0fcc0cce3abc82003	gp3	12 GiB	3000	125	snap-09feab8...	2025/04/25 21:40 GMT+5:...
-	vol-0649c6f7a2c0f3701	gp2	30 GiB	100	-	snap-0eb5cce...	2025/04/25 18:05 GMT+5:...
Volume-10gb-2a	vol-0225023a39dca2942	gp3	10 GiB	3000	125	-	2025/04/25 18:24 GMT+5:...
-	vol-035a0ca37cda94df9	gp2	30 GiB	100	-	snap-0eb5cce...	2025/04/25 18:09 GMT+5:...

Volume ID: vol-0fcc0cce3abc82003 (Volume-12gb-2b)

Details	Status checks	Monitoring	Tags
<p>Volume ID</p> <p>vol-0fcc0cce3abc82003 (Volume-12gb-2b)</p> <p>AWS Compute Optimizer finding</p> <p>Opt-in to AWS Compute Optimizer for recommendations. Learn more</p> <p>Fast snapshot restored</p> <p>No</p>	<p>Size</p> <p>12 GiB</p> <p>Volume state</p> <p>Available</p> <p>Availability Zone</p> <p>us-west-2b</p>	<p>Type</p> <p>gp3</p> <p>IOPS</p> <p>3000</p> <p>Created</p> <p>Fri Apr 25 2025 21:40:19 GMT+0530</p>	<p>Status check</p> <p>Okay</p> <p>Throughput</p> <p>125</p> <p>Multi-Attach enabled</p> <p>No</p>

1. Go to EC2 > Elastic Block Store > Snapshots
2. Select the snapshot created : **Snapshot-10gb-2a**
3. Click Actions > Create Volume

Provide:

- Volume Type: **gp3** (General Purpose SSD)
- Size: e.g., **12 GiB**
- Availability Zone: **us-west-2b**
- Tags: Name , **Volume-12gb-2b**

4. Click Create Volume

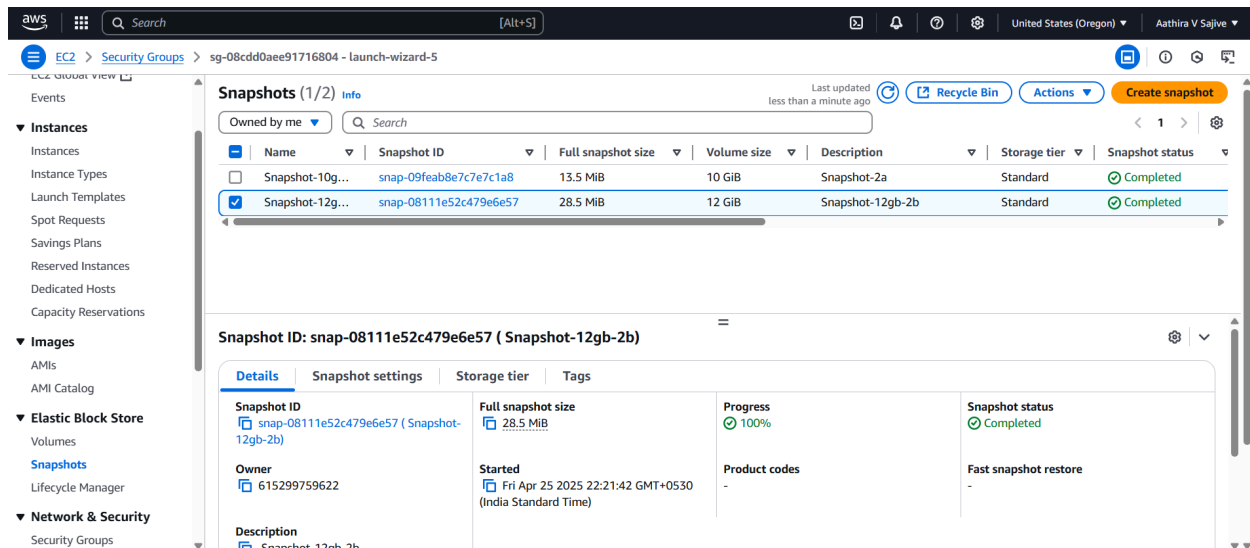
10. Attach New Volume to Windows EC2 Instance

1. Go to EC2 > Volumes
2. Select the volume created from the snapshot: **Volume-12gb-2b**
3. Click Actions > Attach Volume
4. Choose:
 - Instance: Windows instance in **us-west-2b**
 - Device name: **/dev/xvdb**
5. Click Attach

11. Format & Mount the New Volume in Windows

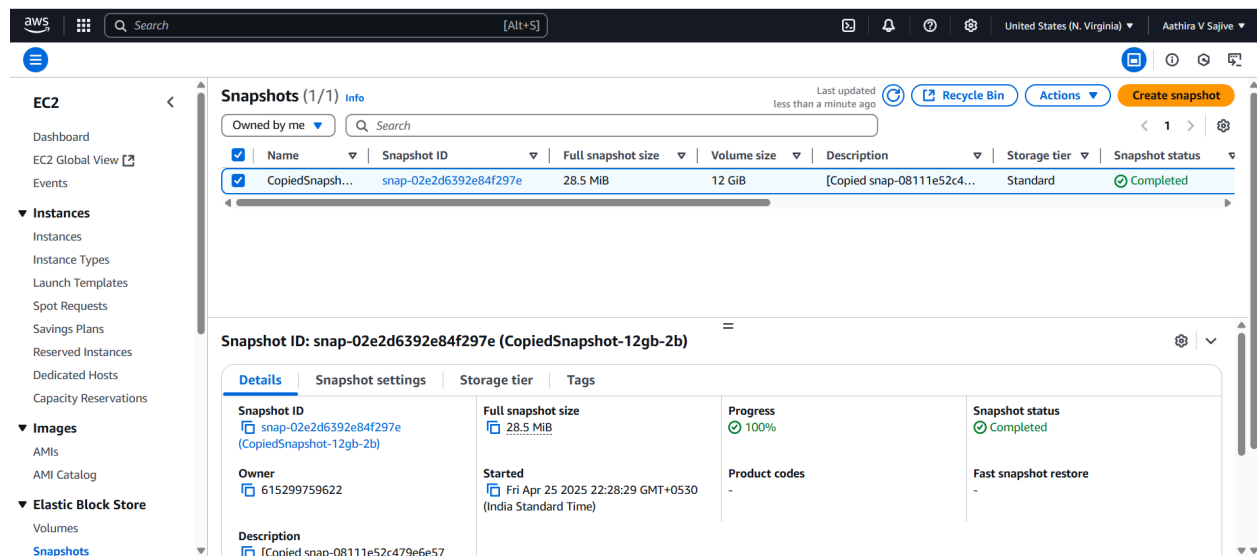
1. Connect to the Windows EC2 via RDP
 - a. Choose Instance: Select **Windows-2b**
2. Go to Server Manager
3. From Tools > Select Computer Management
4. Go to Disk Management
5. You will see the new volume as Unallocated
6. Right-click → Online → Initialize Disk
7. Right-click → Create a New Simple Volume
8. Create New Folder in Assigned Drive : **Windows-2b**
 - a. Add files like text file with name A-win-2b, B-win-2b, C-win-2b
9. Done

12. Create a Snapshot from New Volume



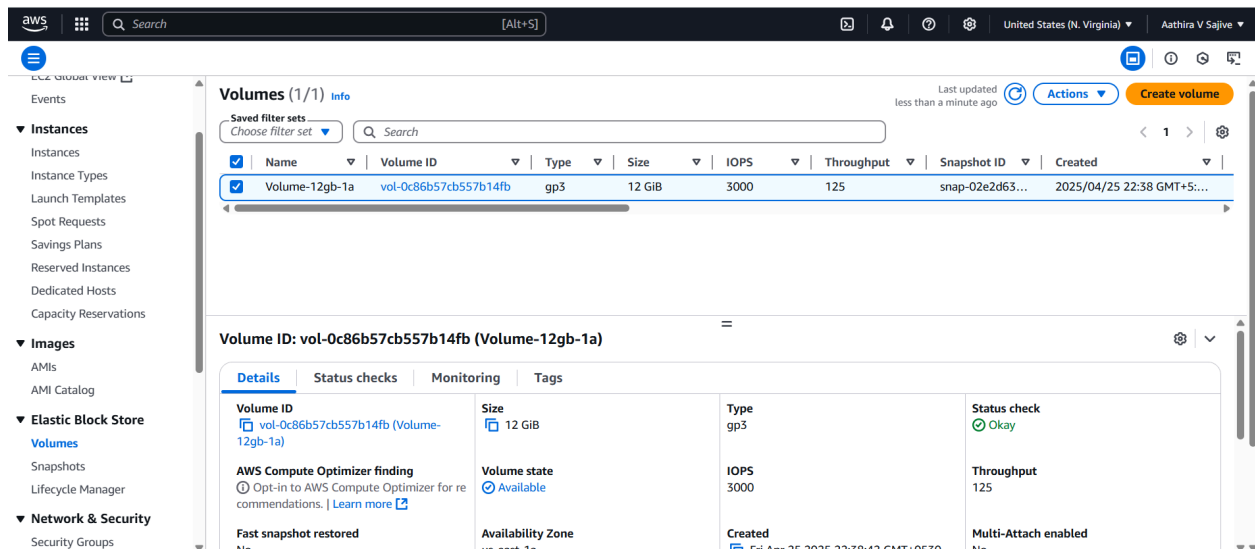
1. Go to EC2 Dashboard > Volumes
2. Select the volume: **Volume-12gb-2b**
3. Click Actions > Create Snapshot
4. Tag: **Snapshot-12gb-2b**
5. Click Create Snapshot

13. Copy Snapshot to Different Region



1. Go to EC2 Dashboard > Snapshots
2. Select your snapshot → Actions → Copy
3. Configure:
 - Destination region: **us-east-1**
 - Name: **CopiedSnapshot-12gb-2b**
4. Click Copy Snapshot > Wait until status = completed in the destination region.
5. Switch to **us-east-1 Region**
6. In AWS Console, change region to: N. Virginia (us-east-1)
7. Go to EC2 > Snapshots > Confirm your copied snapshot is there

14. Create Volume from Copy Snapshot



1. In Snapshots > select the copied snapshot:

CopiedSnapshot-12gb-2b

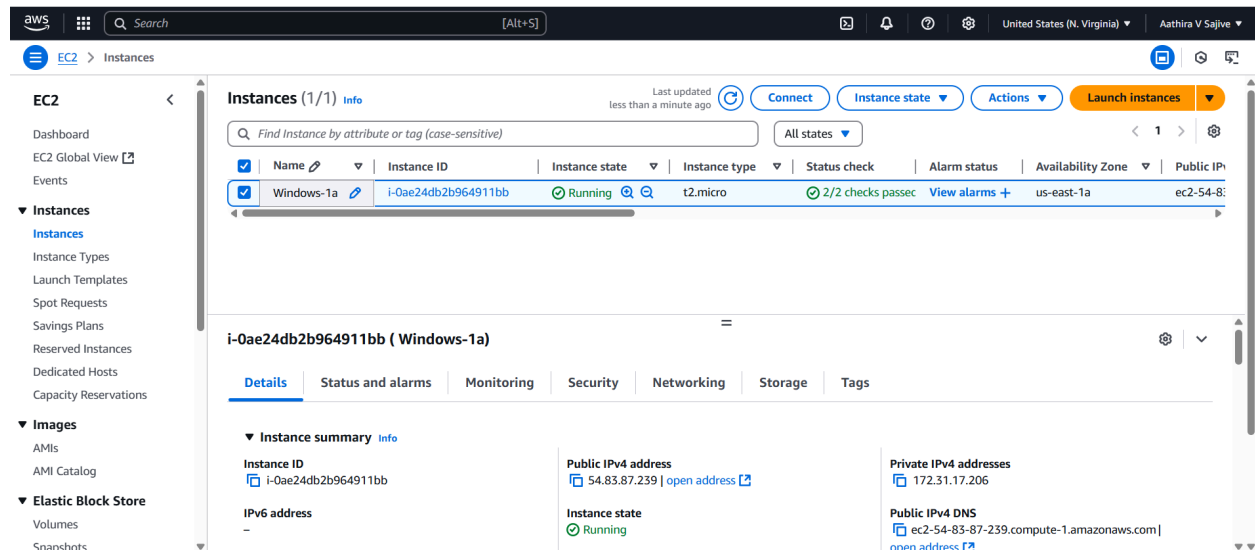
2. Click Actions > Create Volume from snapshot

3. Set:

- **Availability Zone: us-east-1a**
- **Size: Keep default or extend**
- **Tag: Volume-12gb-1a**

4. Click Create Volume

15. Launch a New Windows Instance in Copy Snapshot Region



1. Go to EC2 > Instances > Launch Instance

2. Name: **Windows-1a**

3. AMI: Microsoft Windows Server

4. Instance type: **t2.micro**

5. Key Pair: Select/Create key pair

6. Network Settings:

- VPC: Your custom VPC
- Subnet: **Az-1a**
- Auto-assign public IP: Enable

7. Launch Instance

16. Attach the Volume to the New Windows Instance

1. Go to Volumes
2. Select your volume → Actions > Attach Volume
3. Choose your Windows EC2 instance
4. Device: **/dev/xvdb**
5. Click Attach

17. Verify Volume in Windows (via RDP)

1. Connect via RDP to the new Windows EC2 (from N. Virginia)
2. Open:
 - Server Manager > Tools > Computer Management > Disk Management
3. Check for disk:
 - If offline → right-click → Online

You should now see your folders from the original volume:

- **Windows-2a**
- **Linux-2a**
- **Windows-2b**

