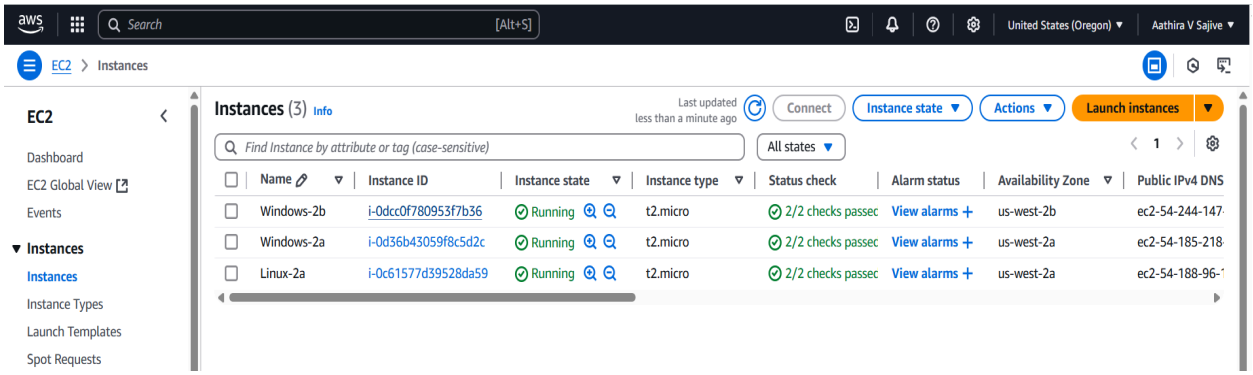
Cross-Platform and Cross-Region EBS Volume Management on AWS

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**

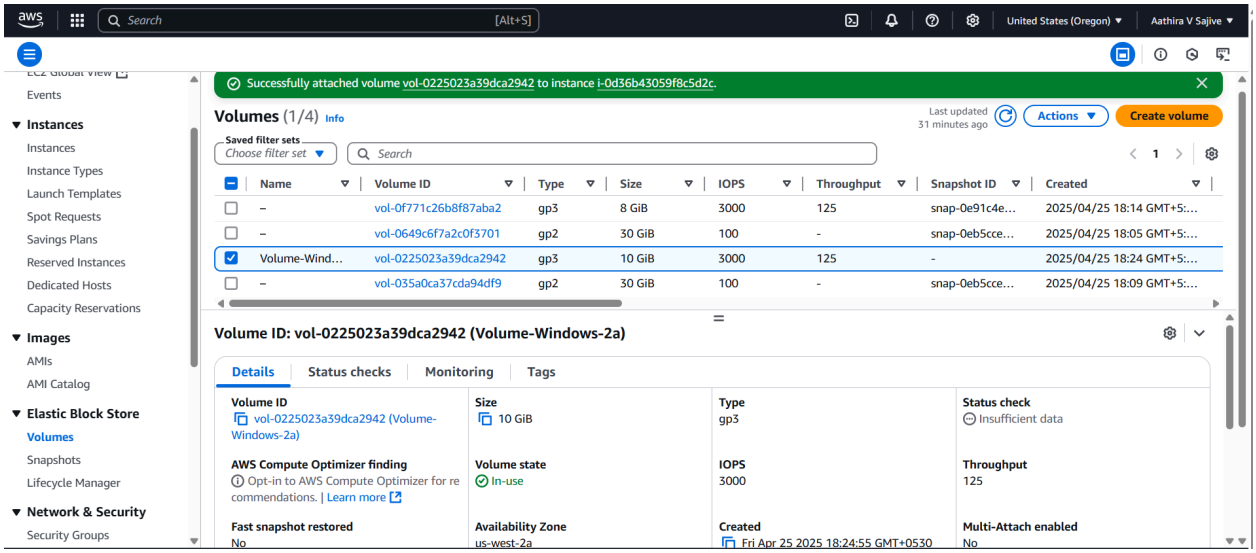
b) Windows Instance in Az 2b

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**

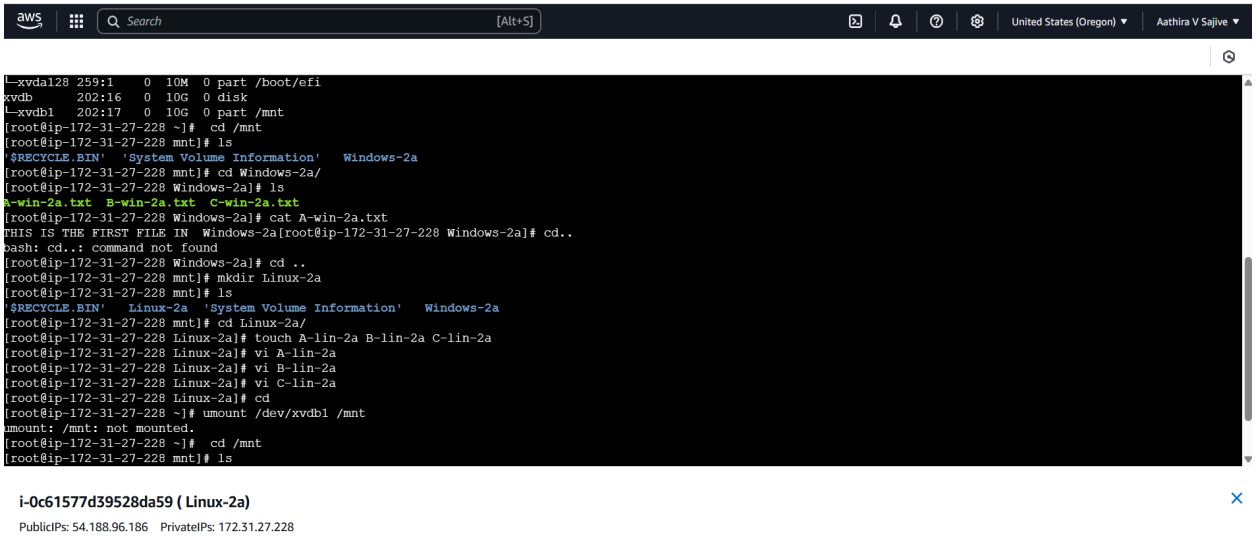
5. Detach Volume from Windows Instance

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

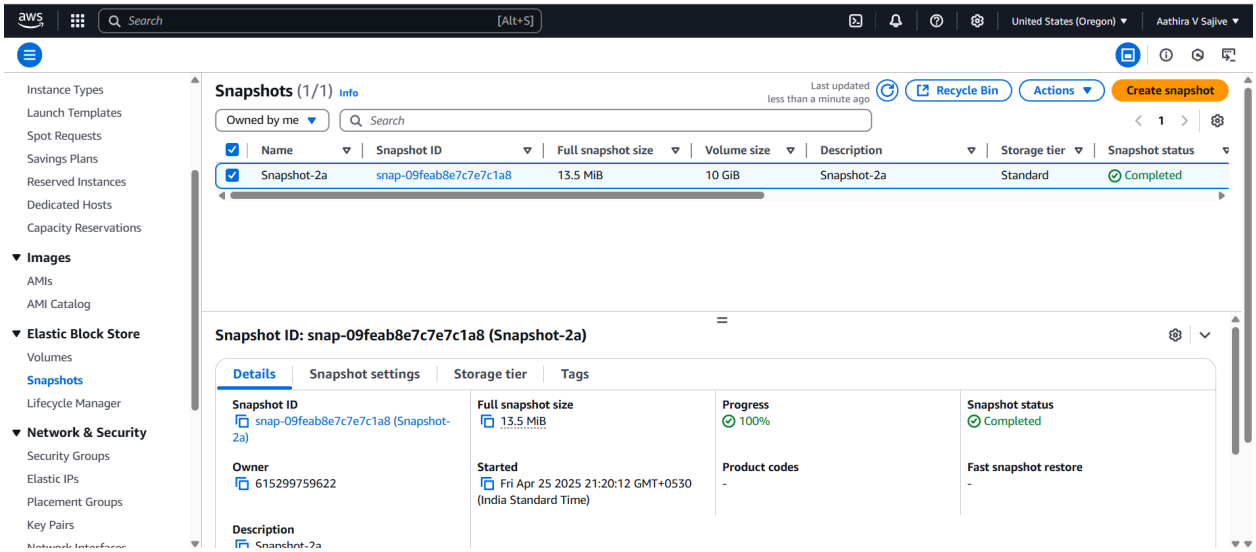
7. Mount the Volume in Linux



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**

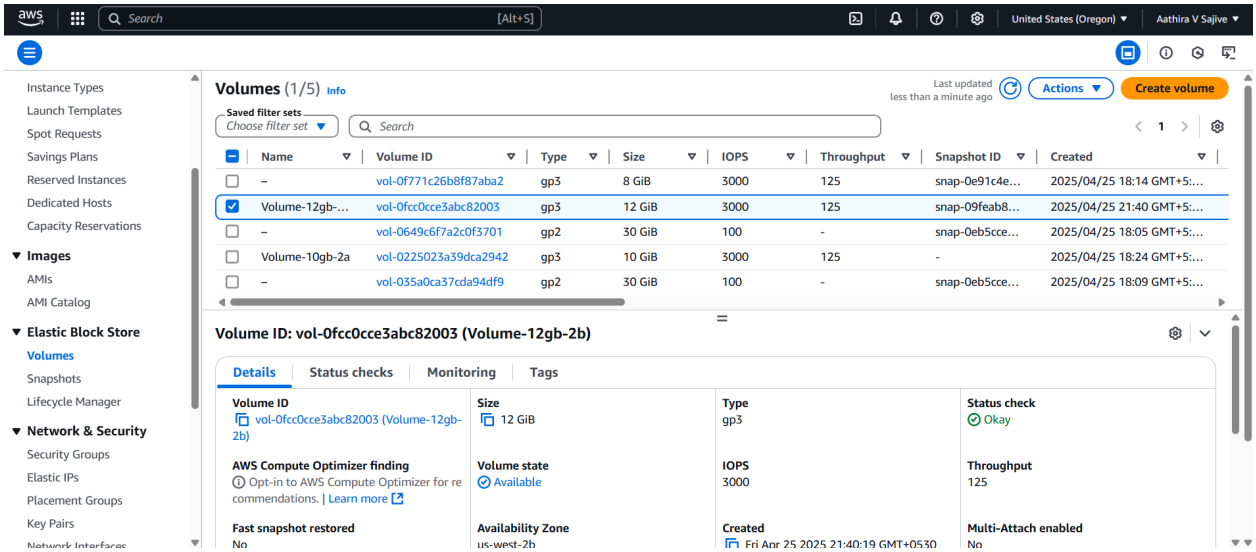
- Unmount the volume (once done) > cd ~ > umount /mnt
- Confirm unmount > cd /mnt > ls

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



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**

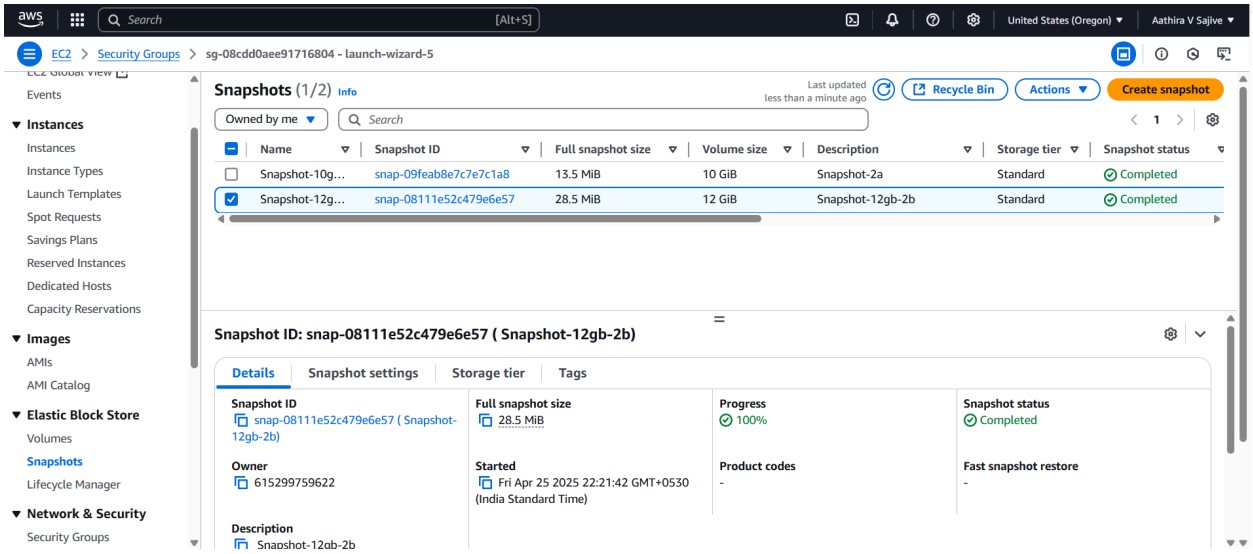
10. Attach New Volume to Windows EC2 Instance

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

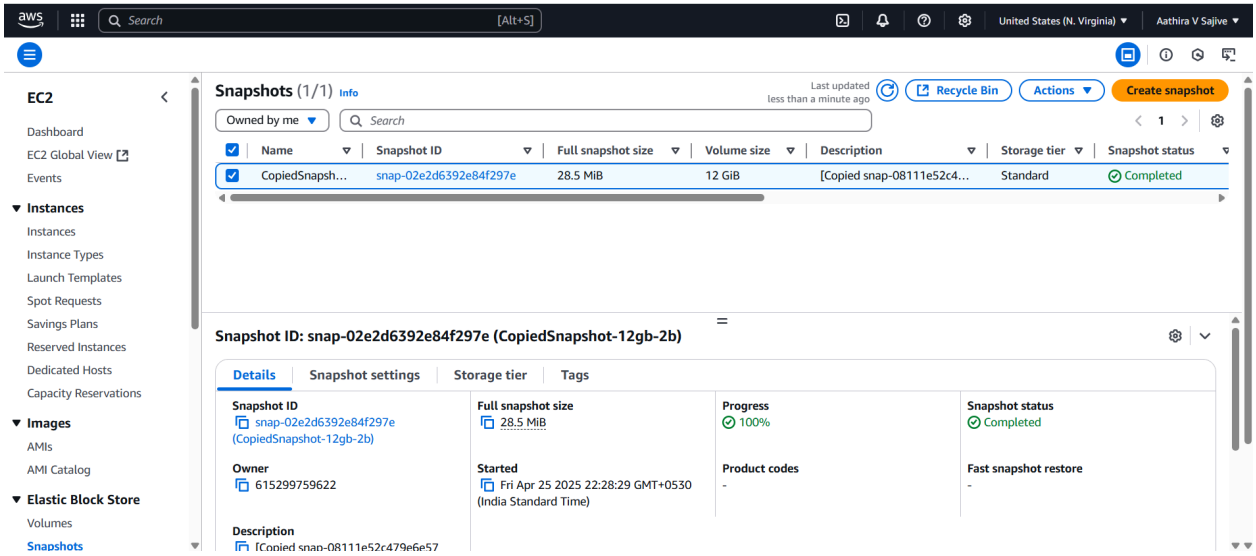
1. Connect to the Windows EC2 via RDP
    a. Choose Instance: Select Windows-2b
2. Go to Server Manager
3. From Tools > Select Computer Management
4. Go to Disk Management
5. You will see the new volume as Unallocated
6. Right-click → Online → Initialize Disk
7. Right-click → Create a New Simple Volume
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



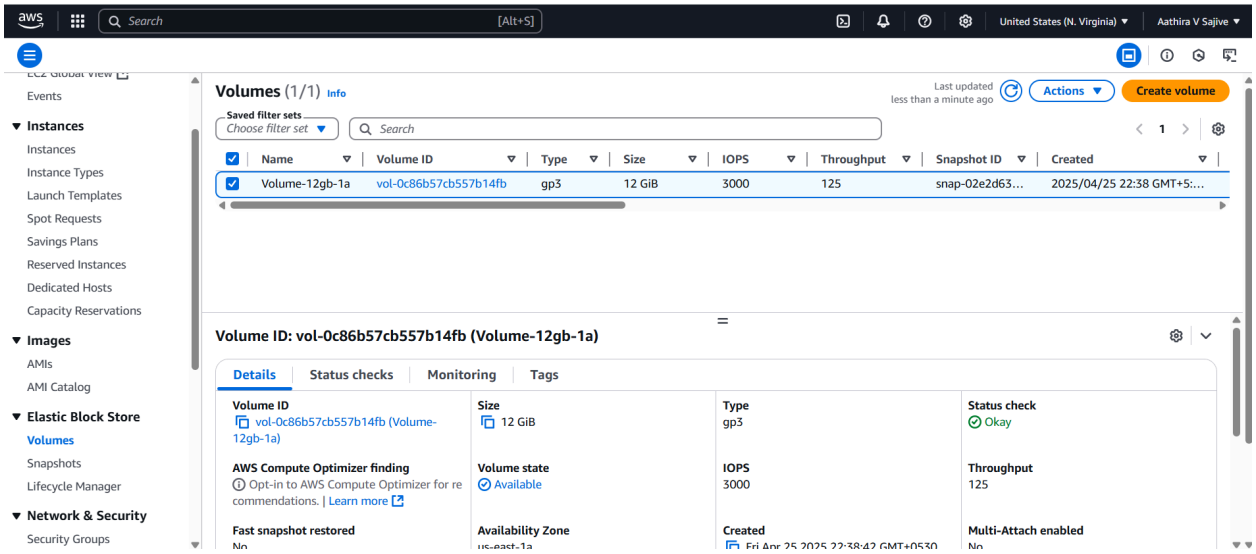
1. Go to `EC2 Dashboard > Volumes`
2. Select the volume: **Volume-12gb-2b**
3. Click Actions > Create Snapshot
4. Tag: `Snapshot-12gb-2b`
5. Click Create Snapshot

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

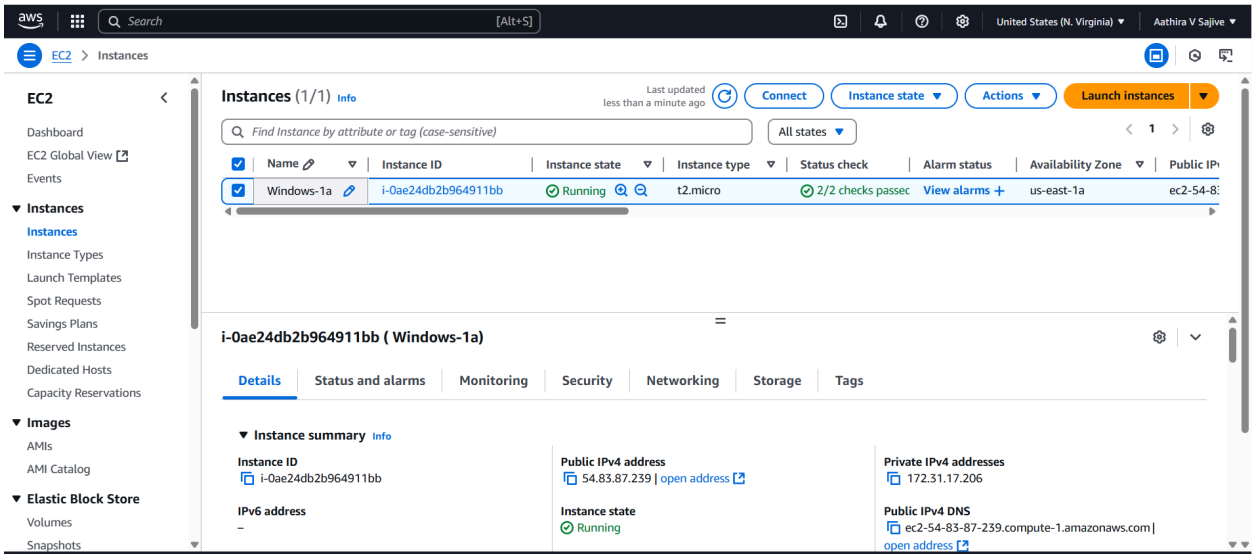


1. **In Snapshots > select the copied snapshot:**

   `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

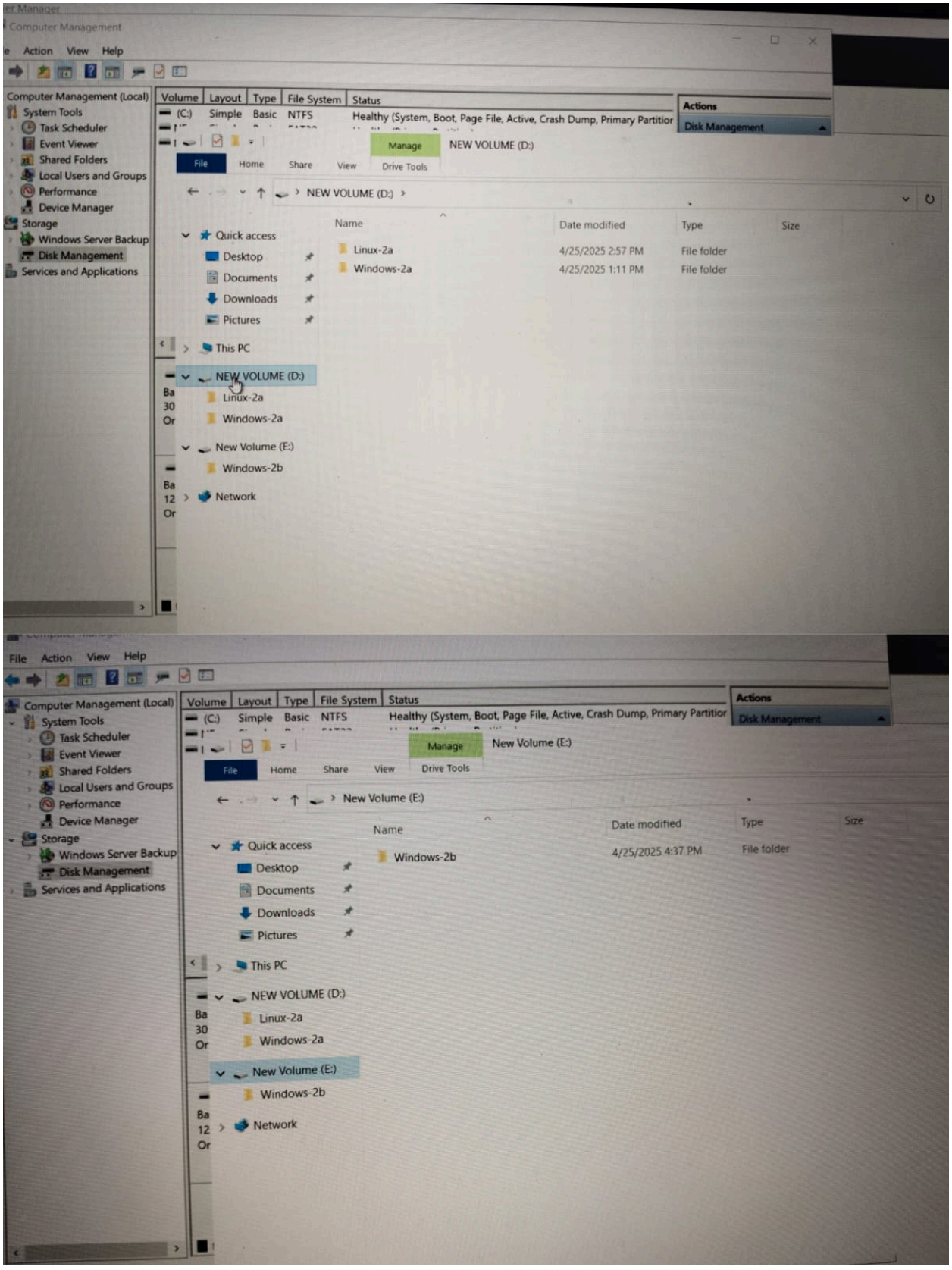
1. **Go to Volumes**
2. **Select your volume → Actions > Attach Volume**
3. **Choose your Windows EC2 instance**
4. **Device: /dev/xvdb**
5. **Click Attach**

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`


Computer Management
Action View Help
Computer Management (Local)
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and Groups
Performance
Device Manager
Storage
Windows Server Backup
Disk Management
Services and Applications
Volume Layout Type File System Status
(C:) Simple Basic NTFS Healthy (System, Boot, Page File, Active, Crash Dump, Primary Partitior
Actions
Disk Management
Manage
NEW VOLUME (D:)
File Home Share View Drive Tools
NEW VOLUME (D:)
Quick access
Desktop
Documents
Downloads
Pictures
This PC
NEW VOLUME (D:)
Linux-2a
Windows-2a
New Volume (E:)
Windows-2b
Network
Name
Date modified
Type
Size
Linux-2a
4/25/2025 2:57 PM
File folder
Windows-2a
4/25/2025 1:11 PM
File folder
File Action View Help
Computer Management (Local)
System Tools
Task Scheduler
Event Viewer
Shared Folders
Local Users and Groups
Performance
Device Manager
Storage
Windows Server Backup
Disk Management
Services and Applications
Volume Layout Type File System Status
(C:) Simple Basic NTFS Healthy (System, Boot, Page File, Active, Crash Dump, Primary Partitior
Actions
Disk Management
Manage
New Volume (E:)
File Home Share View Drive Tools
New Volume (E:)
Quick access
Desktop
Documents
Downloads
Pictures
This PC
NEW VOLUME (D:)
Linux-2a
Windows-2a
New Volume (E:)
Windows-2b
Network
Name
Date modified
Type
Size
Windows-2b
4/25/2025 4:37 PM
File folder