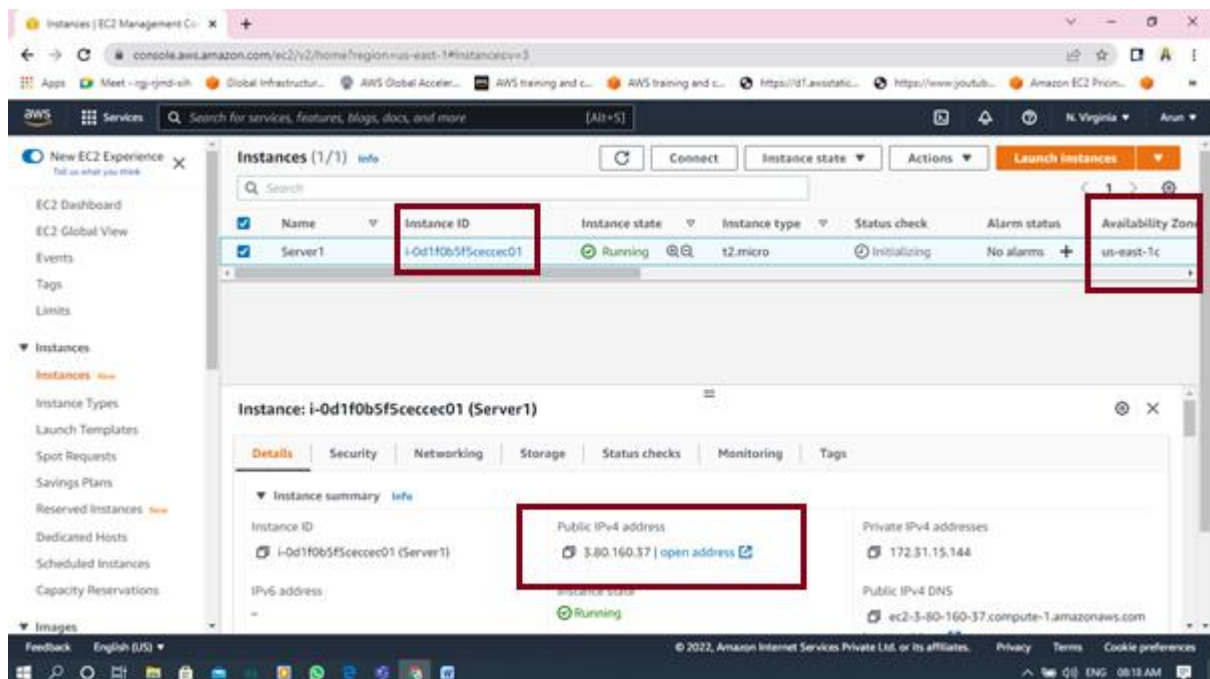


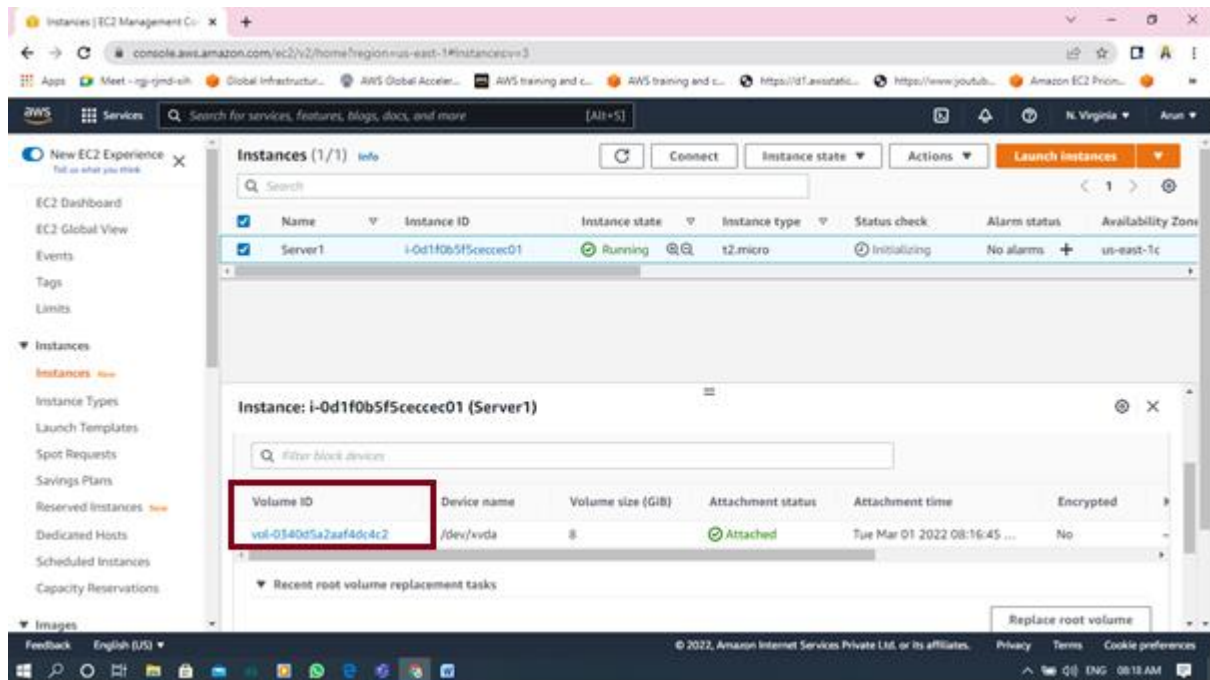
CASE 1 : Replication of EBS volume in single AZ

CASE 2: Replication of EBS volume in accross AZs within the Region (snapshot)

CASE 1 : Attaching EBS of one instance to another instance within same AZ

Step 1: Create a Instance. Notedown Instance ID, **AZ**, Public IP, Volume ID



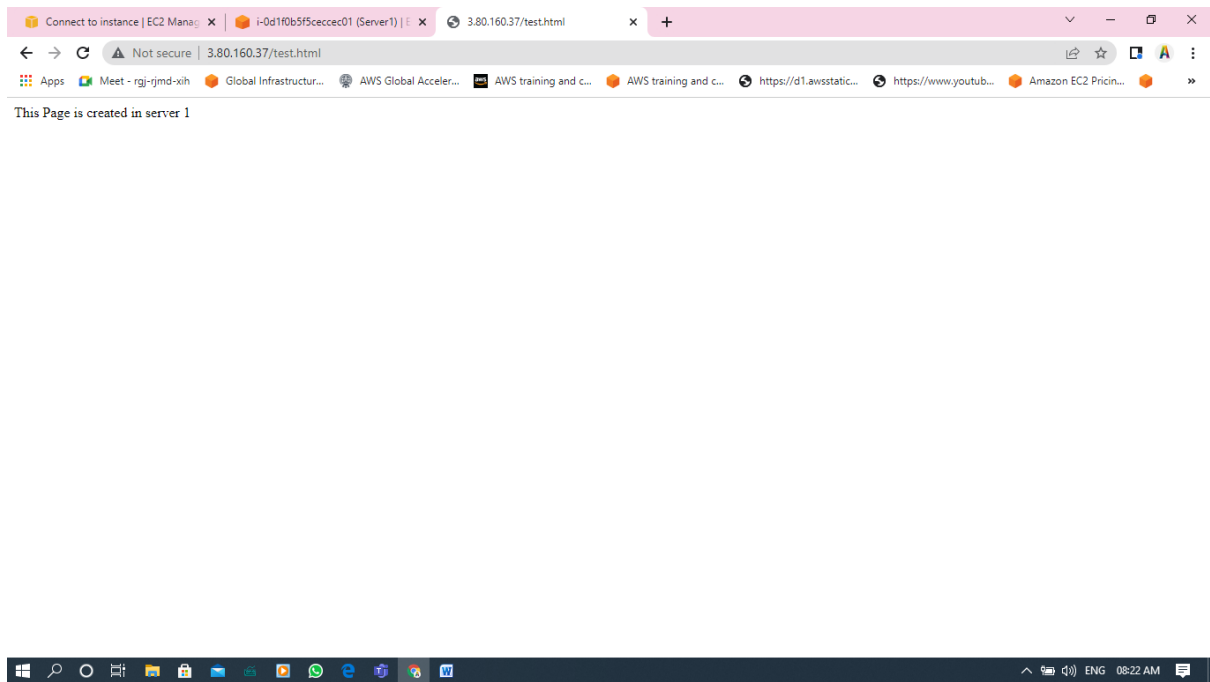


Step 2 : Connect system using ssh and run the following commands

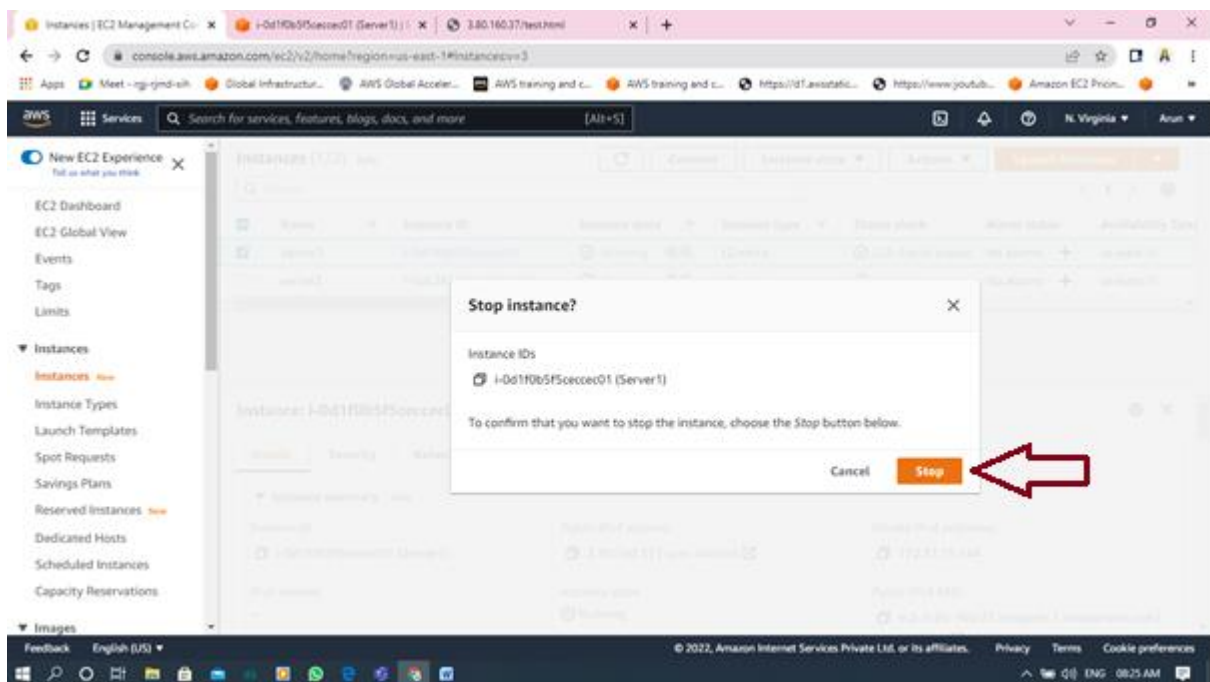
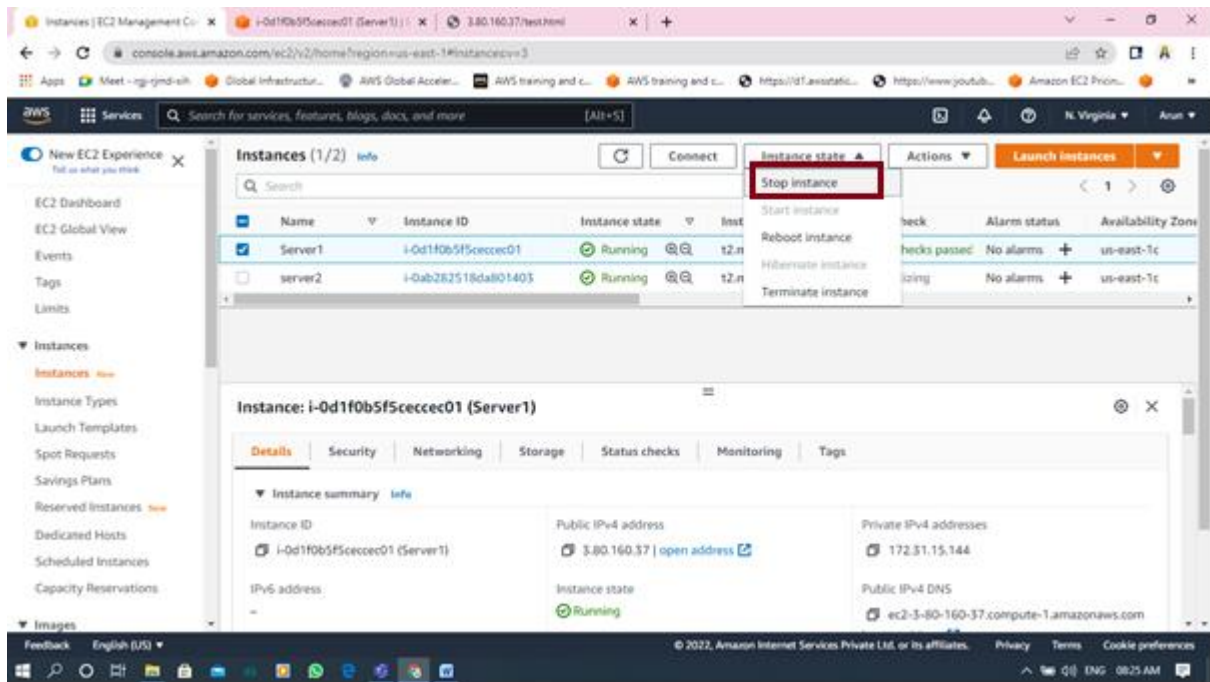
```
sudo su –  
yum update –y  
yum install –y httpd  
systemctl start httpd  
systemctl enable httpd  
cd /var/www/html  
touch test.html  
vi test.html  
<html>  
<h1>  
this page is created using server 1  
</h1>  
</html>
```

Step 3 : Then capture public ip : 3.80.160.37

Goto browser 3.80.160.37/test.html following screen will appear

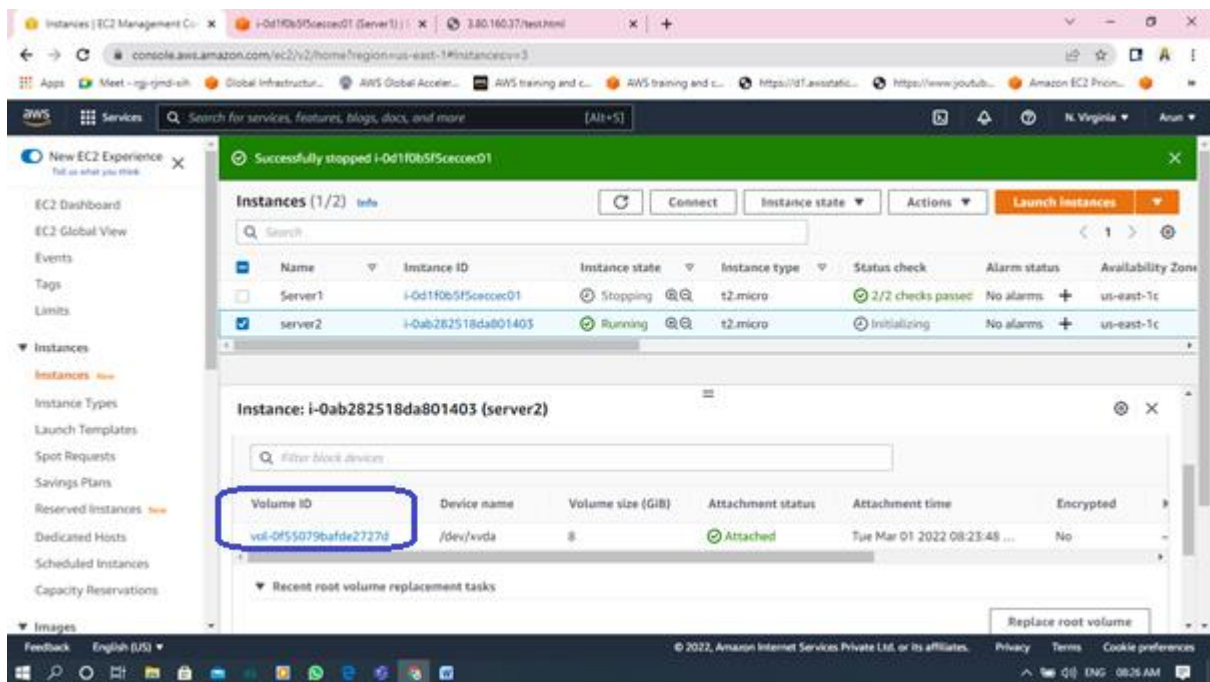
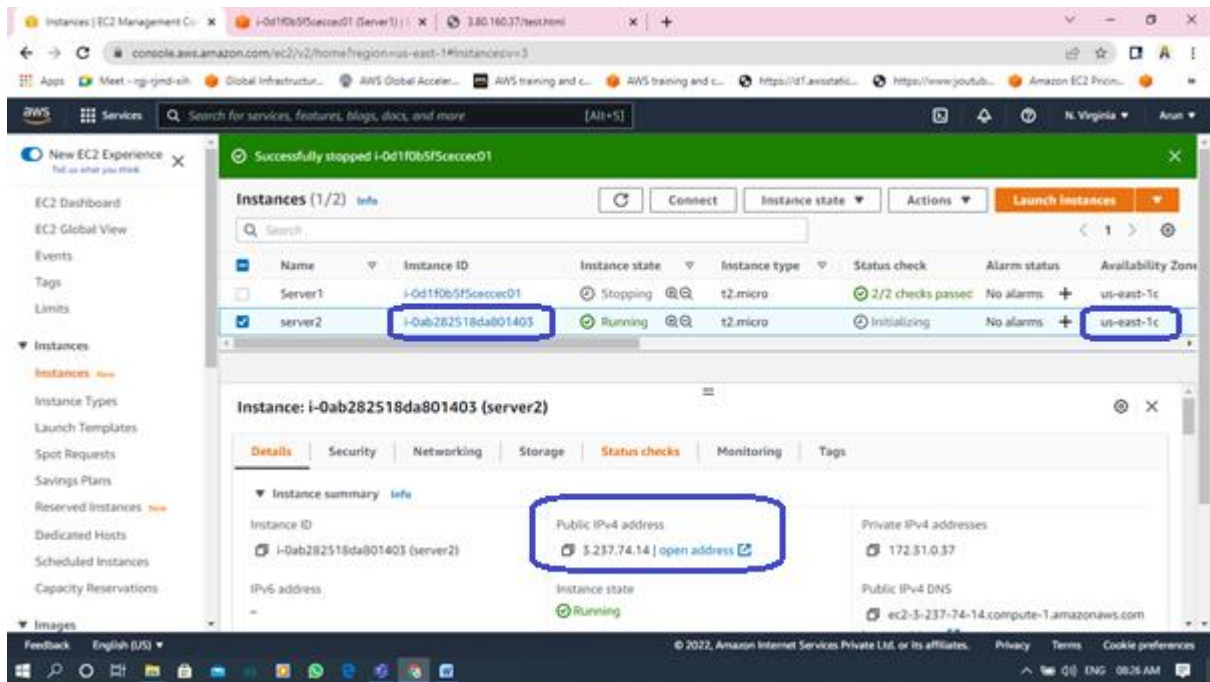


Step 4 : Stop 1 Instance Server1



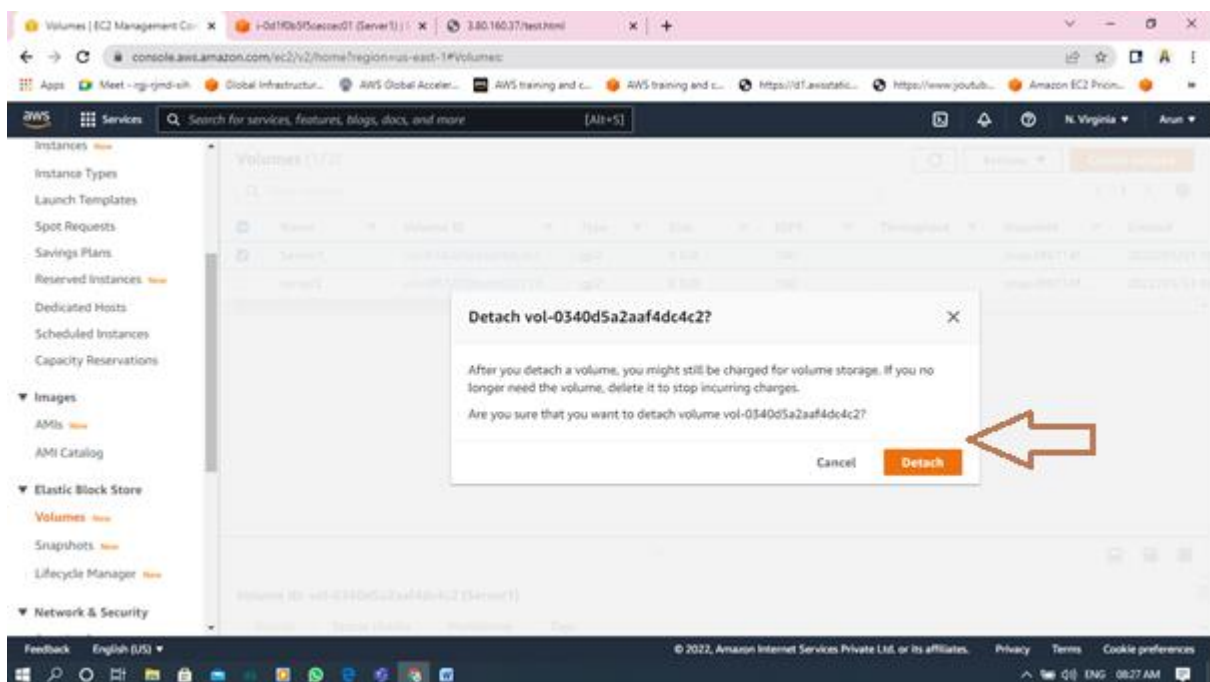
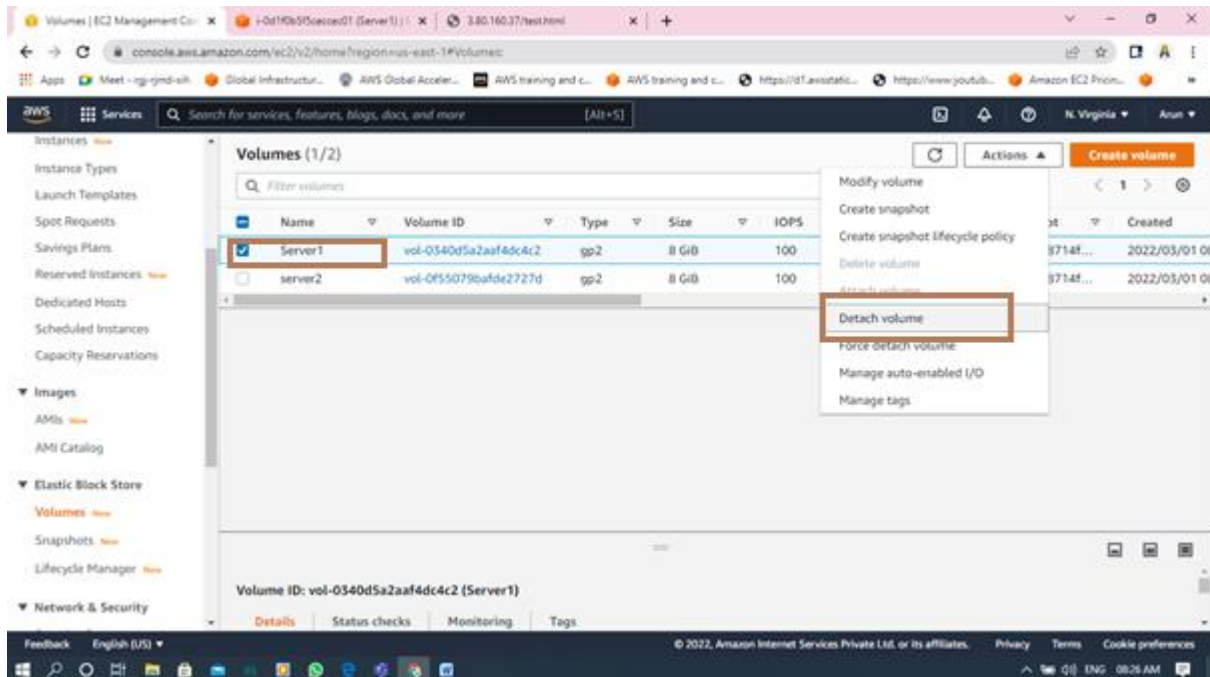
Step 5 : Launch the second instance in the same availability zone

Instance ID, Volume ID, Public IP

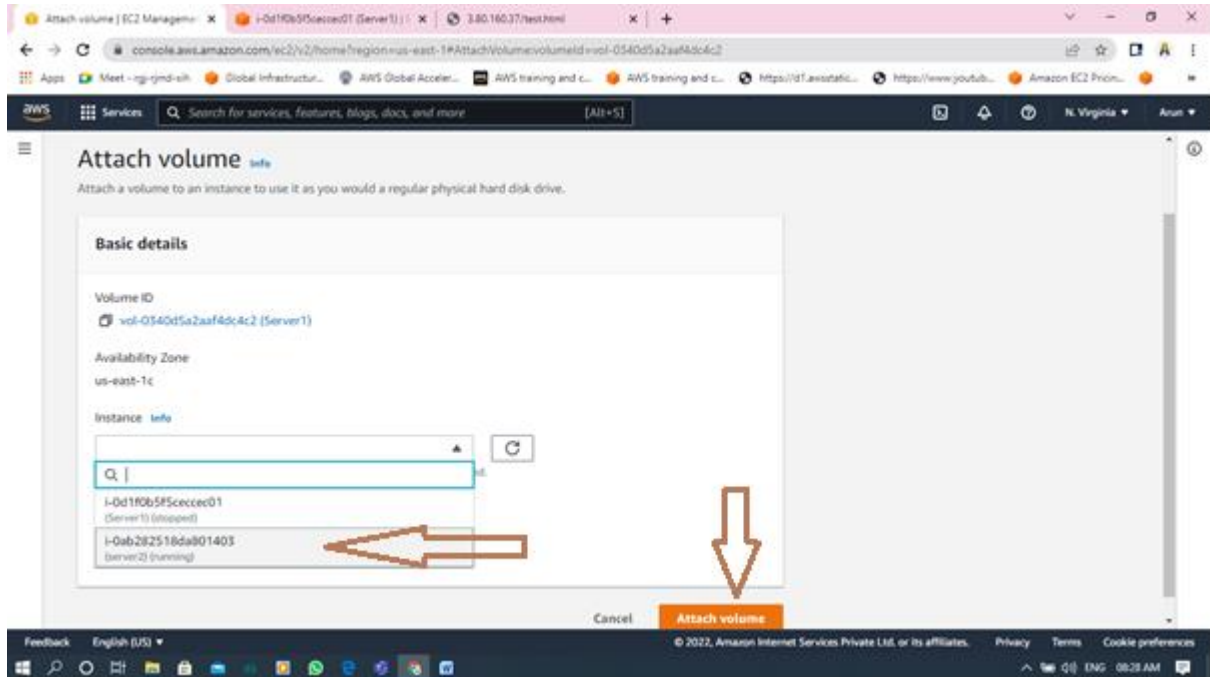
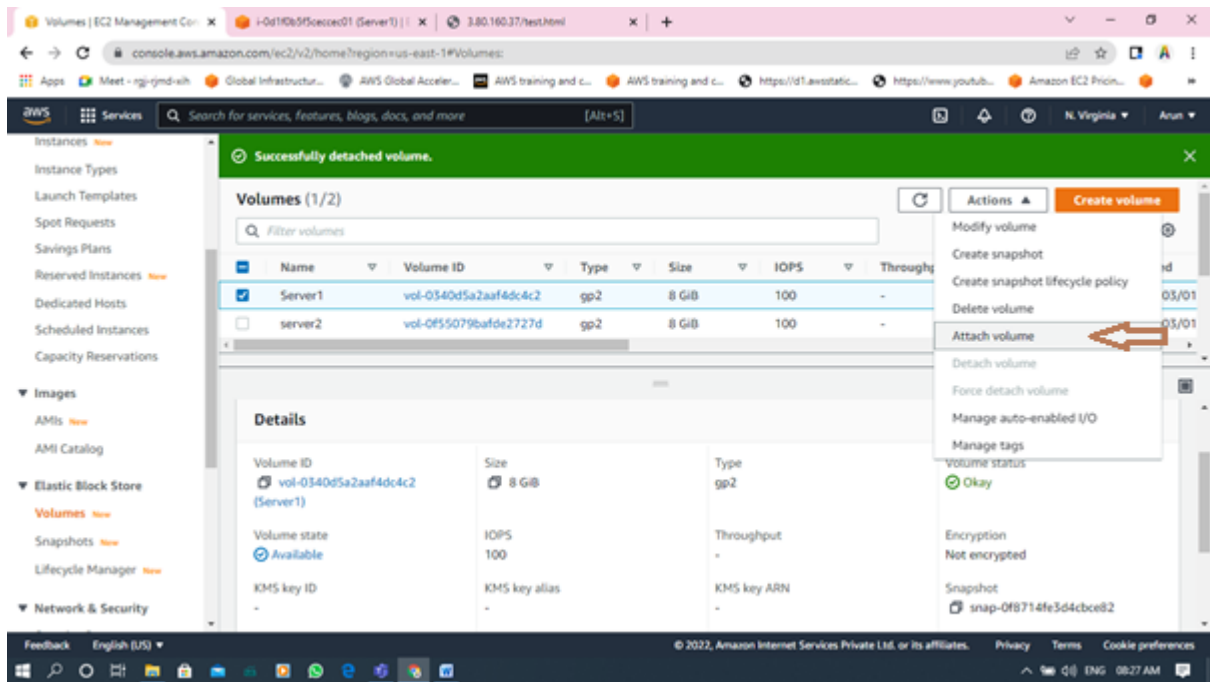


Step 6: Stop the Instance server1. Then move on to left menu. Go to Volume

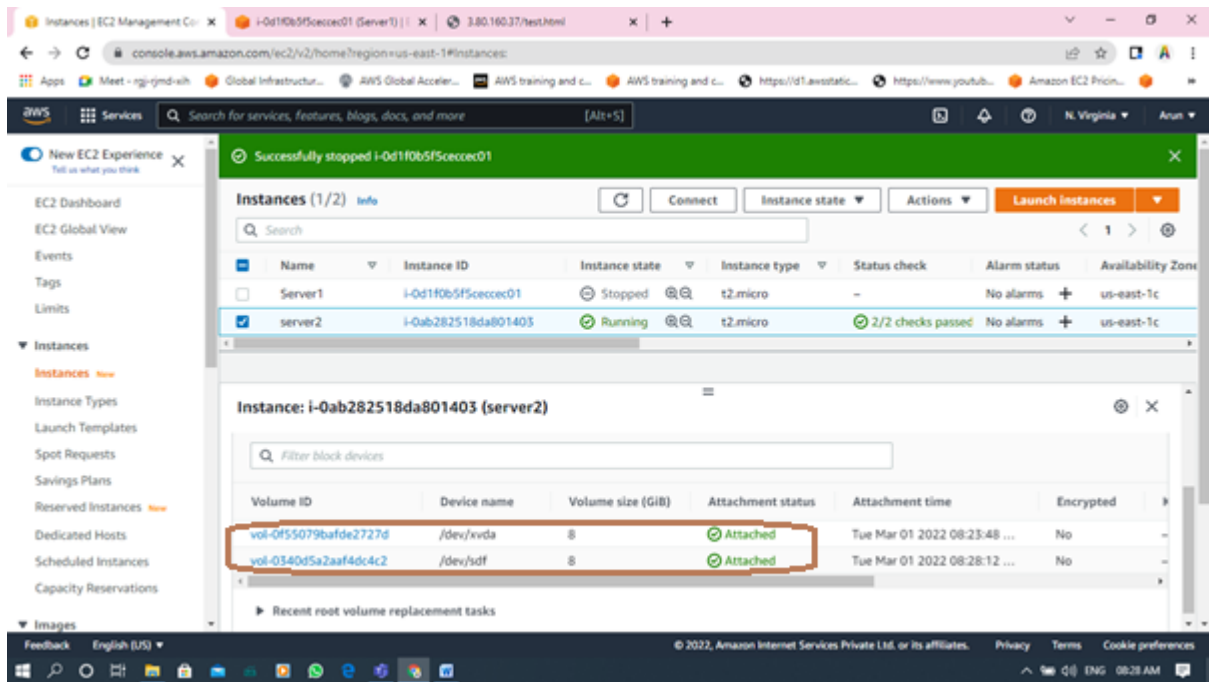
Detach the Volume 1 from server 1, in which httpd server installed , also there is webpage test.html



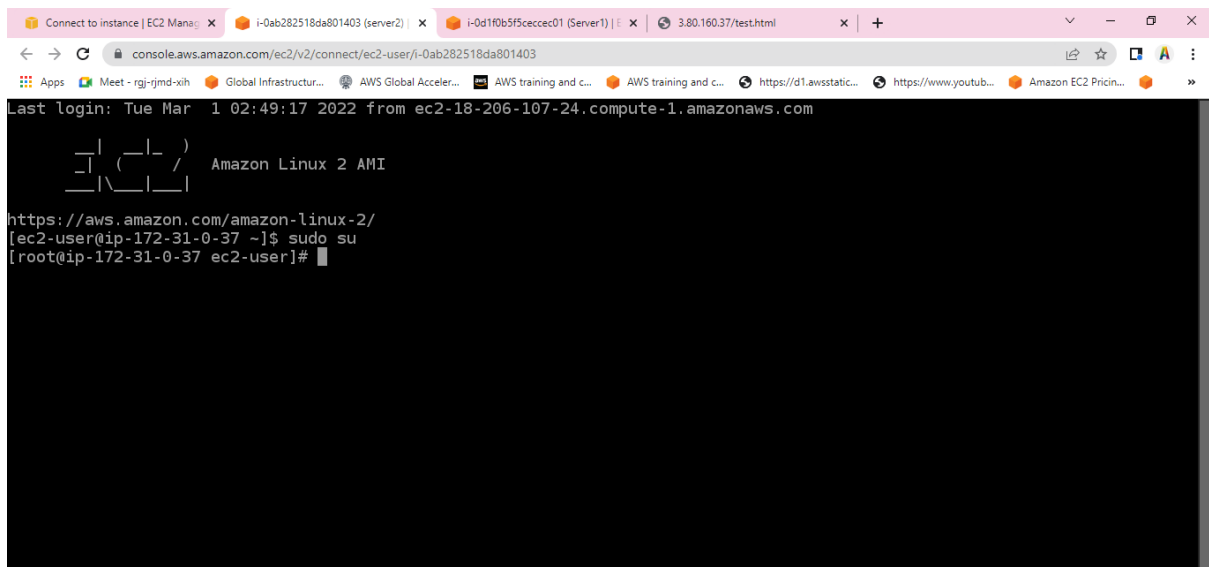
Step 7 : Attach the server 1 volume to server 2



Step 8 : Now check the instance attached with both the volumes



Step 9 : **Reboot the Instance** and then Connect to second server (SSH)



i-0ab282518da801403 (server2)

Public IPs: 3.237.74.14 Private IPs: 172.31.0.37

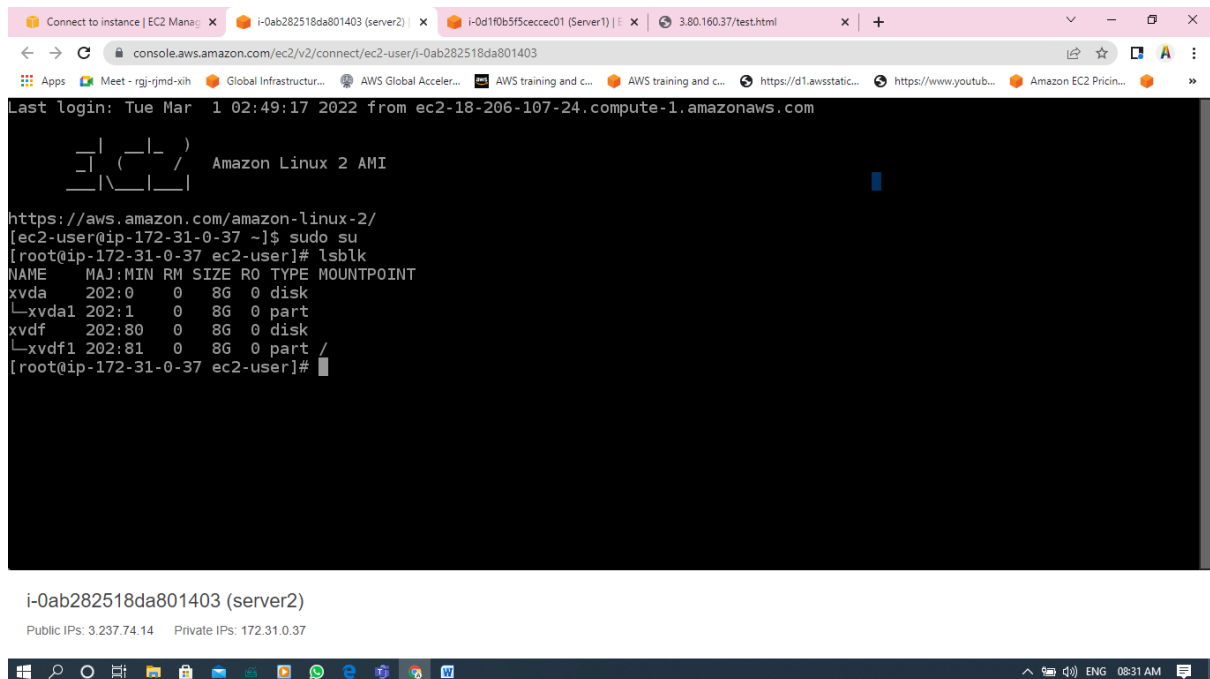


Step10 : check using lsblk it shows xvdf is mounted

Execute the codes

Sudo mkdir vol

Sudo mount /dev/svdf1 vol



The screenshot shows a terminal window within the AWS Management Console. The terminal output is as follows:

```
Last login: Tue Mar 1 02:49:17 2022 from ec2-18-206-107-24.compute-1.amazonaws.com

 _ _ _ _ _
| |   ( _ | /
 _ | \ _ | _ |
Amazon Linux 2 AMI

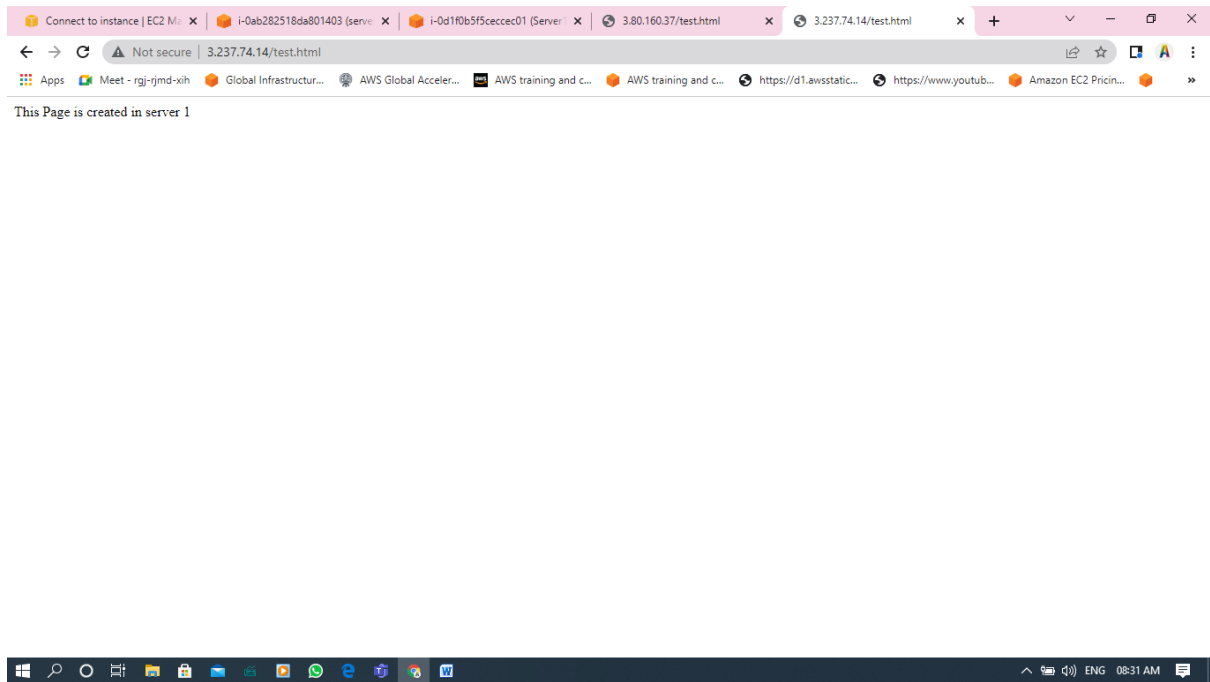
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-0-37 ~]$ sudo su
[root@ip-172-31-0-37 ec2-user]# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
xvda         202:0    0   8G  0 disk
└─xvda1      202:1    0   8G  0 part
xvdf         202:80   0   8G  0 disk
└─xvdf1      202:81   0   8G  0 part /
[root@ip-172-31-0-37 ec2-user]#
```

Below the terminal window, the instance details are shown:

i-0ab282518da801403 (server2)
Public IPs: 3.237.74.14 Private IPs: 172.31.0.37

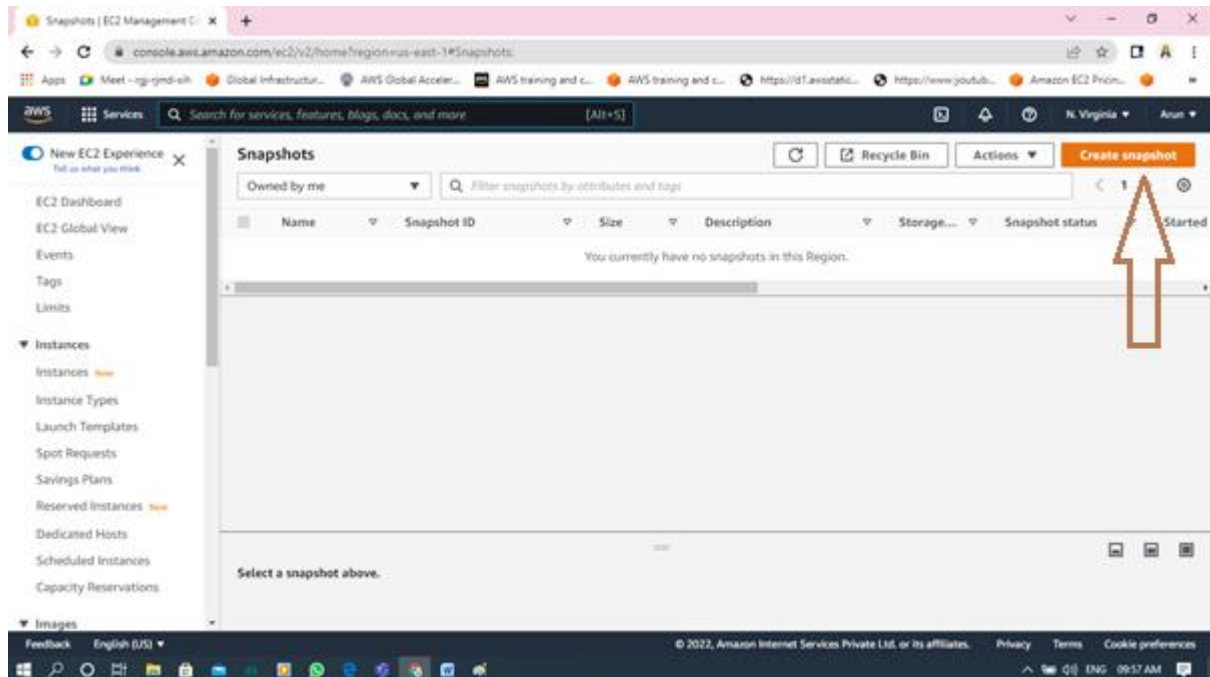
The bottom of the image shows a Windows taskbar with various application icons and a system tray indicating the time as 08:31 AM on 03/01/2022.

Step11 : go with server to IP address : 3.237.74.14/test.html

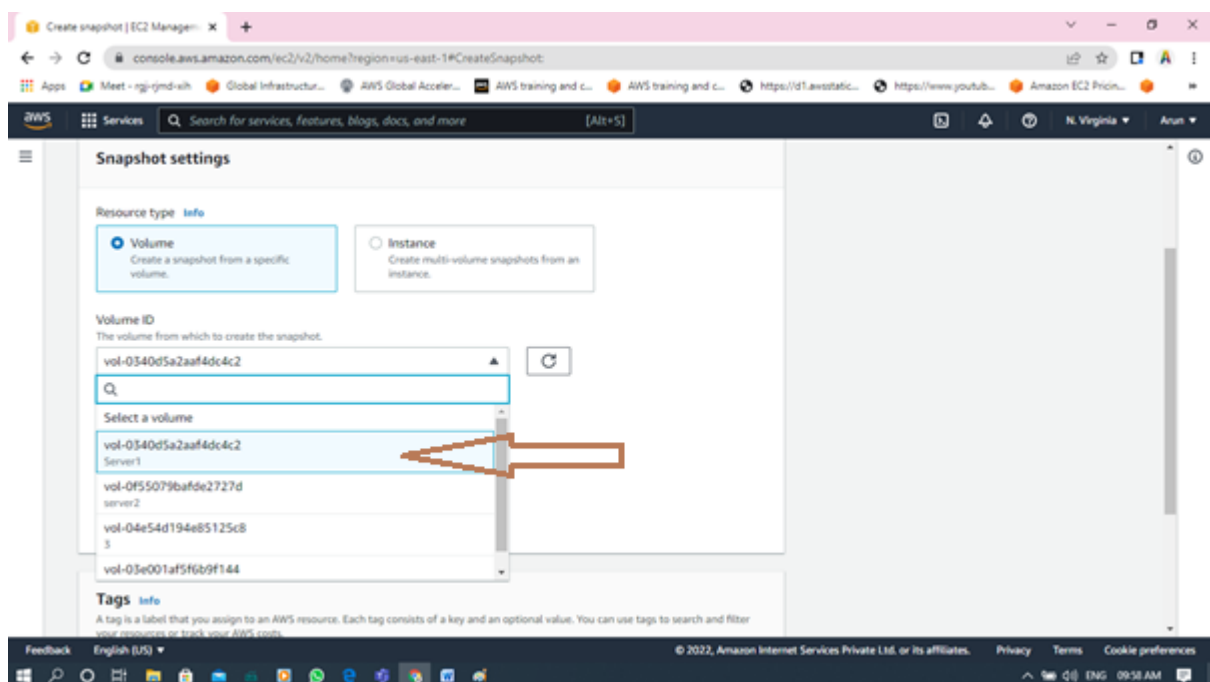


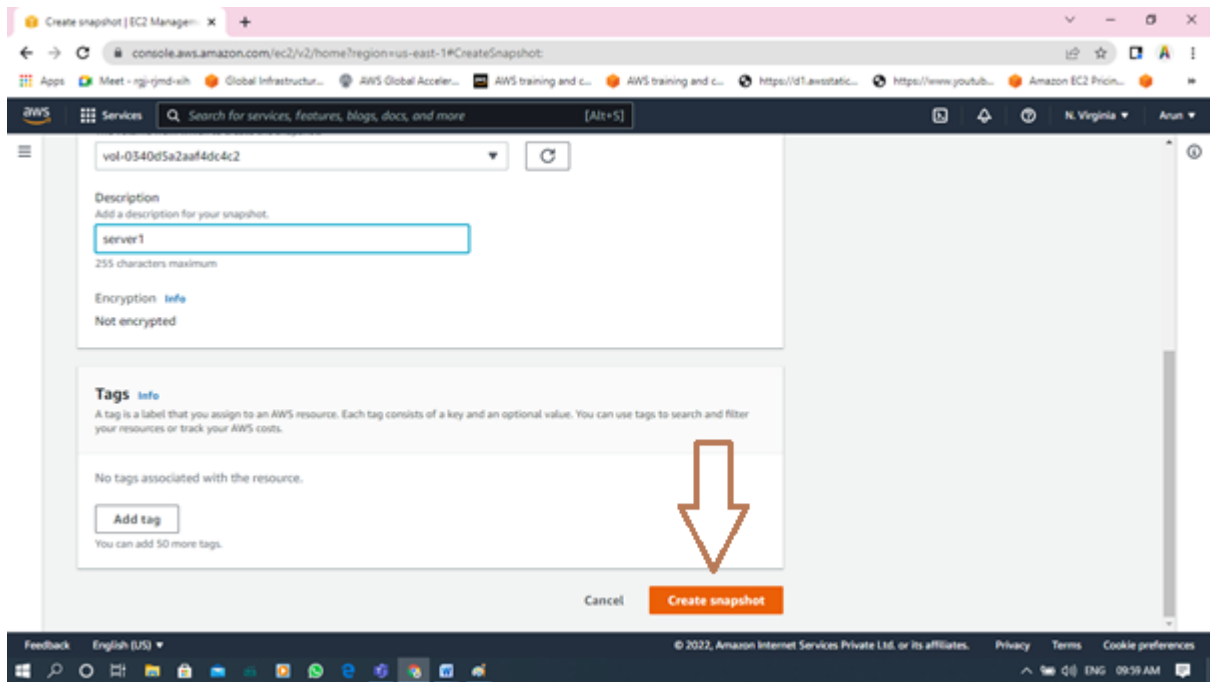
Case 2: Move EBS Across AZ within the Region

Step1: Create snapshot of the volume server1

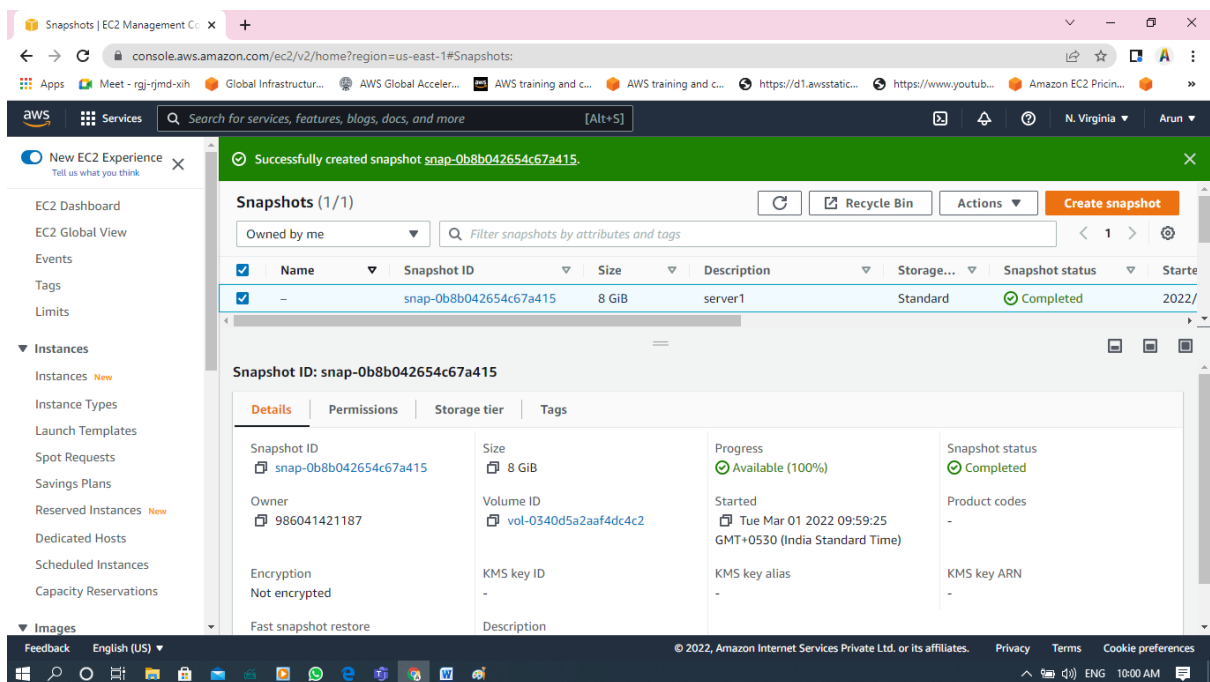


Step 2 : select the volume id and click create snapshot

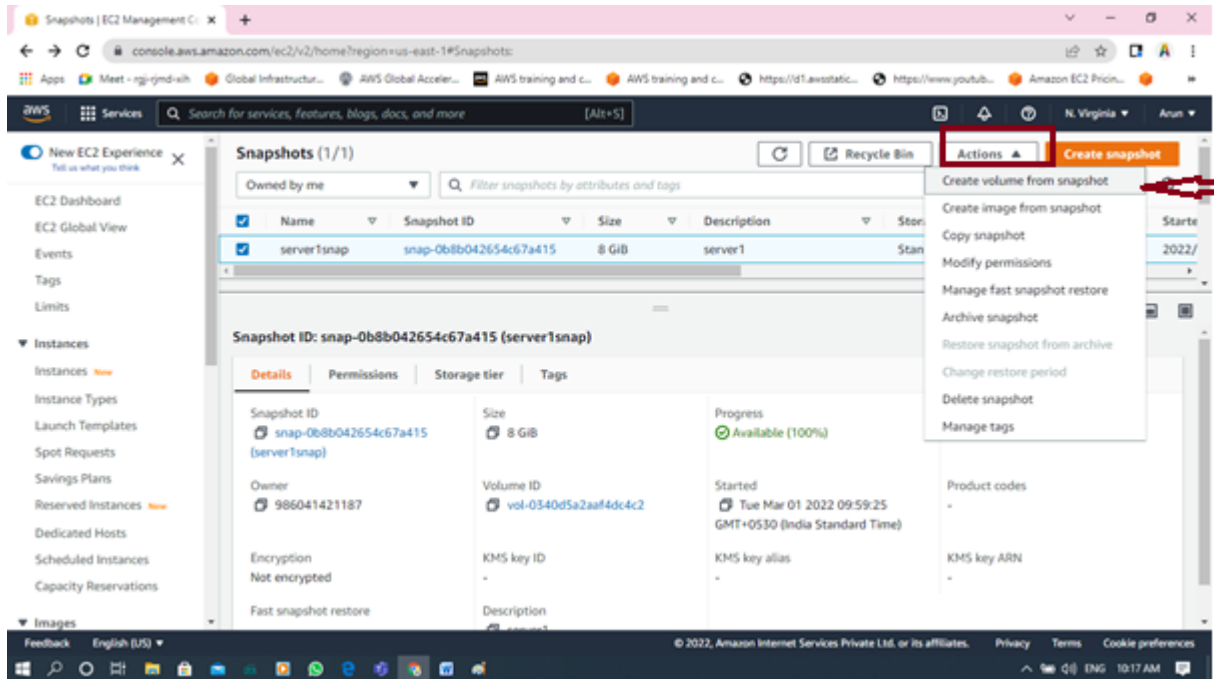




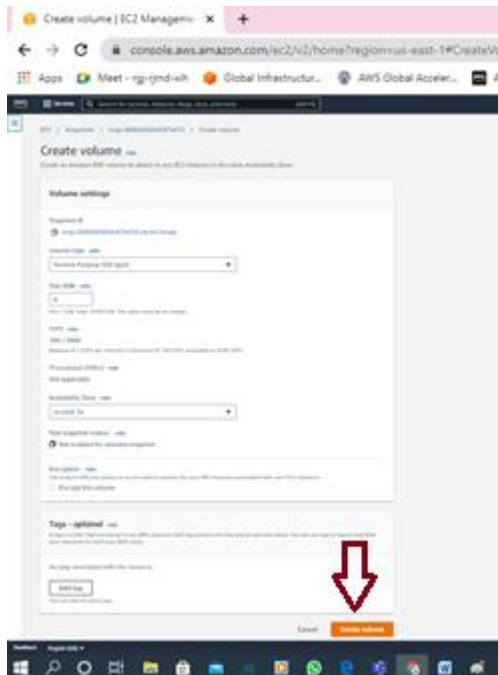
Step 4: Snapshot Created



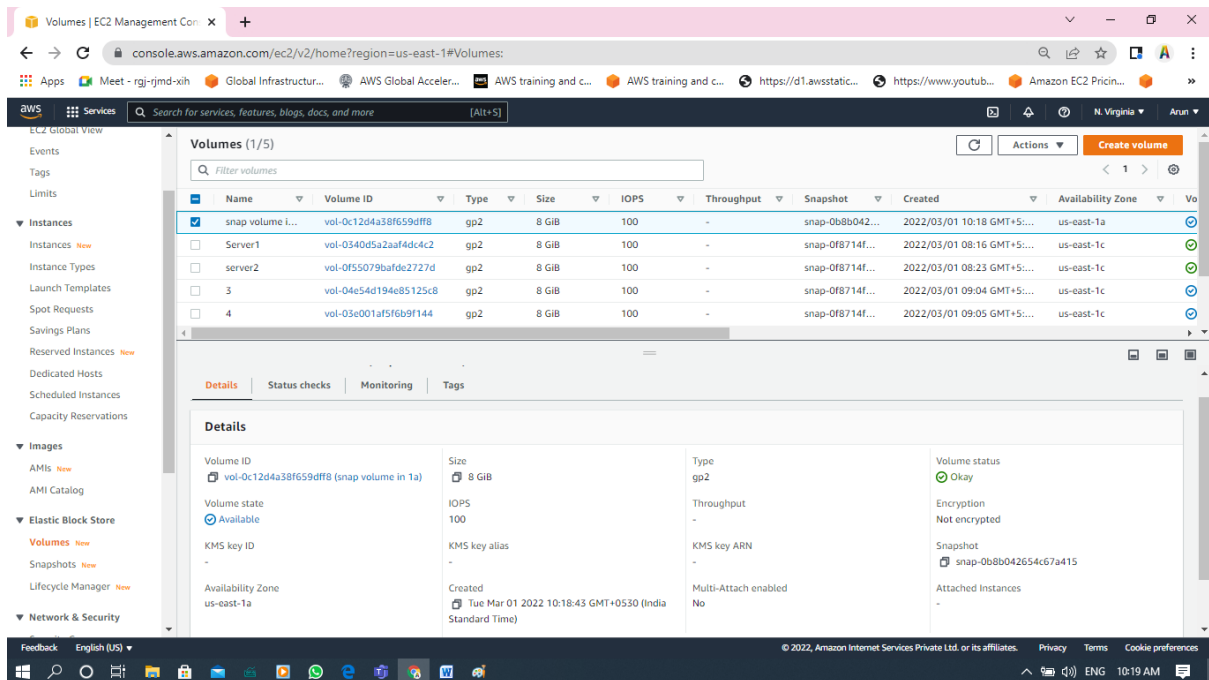
Step 5 : select the snapshot >> goto action >> create volume from snapshot



Step 6 : select the desired availability zone and click create volume



Step 7 : New volume created in AZ us-east – 1a



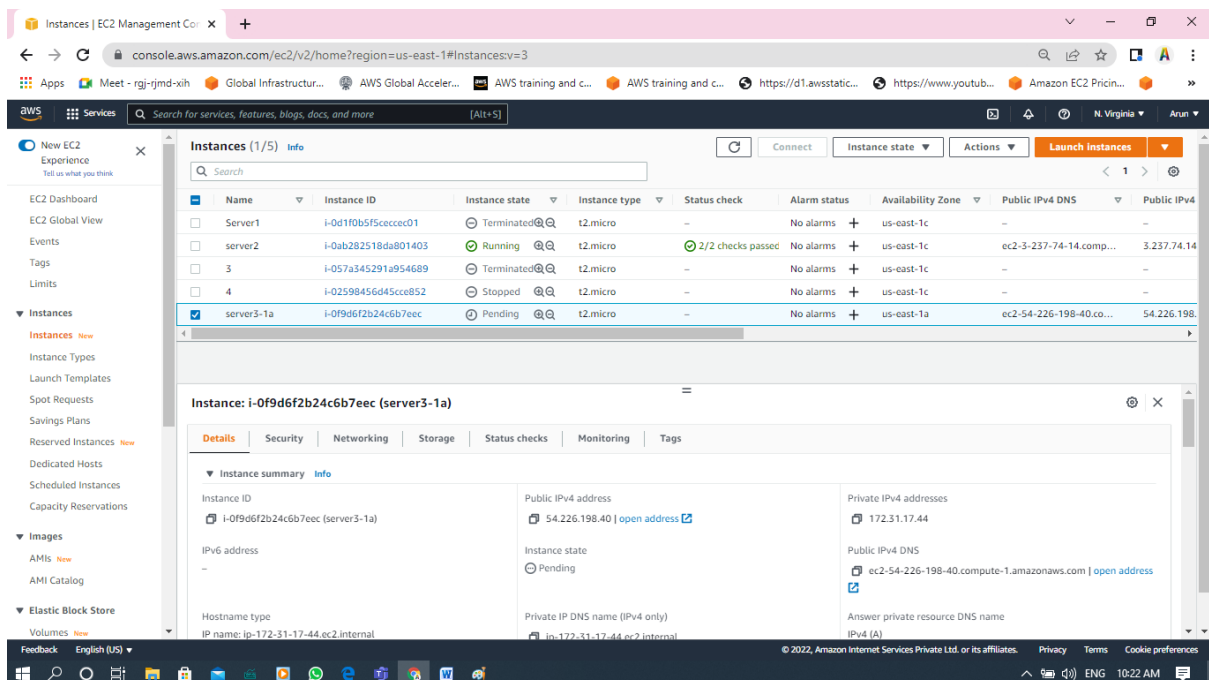
The screenshot shows the AWS Management Console 'Volumes' page. A table lists five volumes, including 'snap volume i-0c12d4a38f659dff8' which is highlighted. Below the table, the 'Details' tab for this volume is expanded, showing its configuration.

Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created	Availability Zone
✓ snap volume i-0c12d4a38f659dff8	vol-0c12d4a38f659dff8	gp2	8 GiB	100	-	snap-0b8b042...	2022/03/01 10:18 GMT+5:...	us-east-1a
□ Server1	vol-0340d5a2aaf4dc4c2	gp2	8 GiB	100	-	snap-0f8714f...	2022/03/01 08:16 GMT+5:...	us-east-1c
□ server2	vol-0f55079bafde2727d	gp2	8 GiB	100	-	snap-0f8714f...	2022/03/01 08:23 GMT+5:...	us-east-1c
□ 3	vol-04e54d194e85125c8	gp2	8 GiB	100	-	snap-0f8714f...	2022/03/01 09:04 GMT+5:...	us-east-1c
□ 4	vol-03e001af5f6b9f144	gp2	8 GiB	100	-	snap-0f8714f...	2022/03/01 09:05 GMT+5:...	us-east-1c

Details

Volume ID	Size	Type	Volume status
i-0c12d4a38f659dff8 (snap volume in 1a)	8 GiB	gp2	✓ Okay
Volume state	IOPS	Throughput	Encryption
Available	100	-	Not encrypted
KMS key ID	KMS key alias	KMS key ARN	Snapshot
-	-	-	snap-0b8b042654c67a415
Availability Zone	Created	Multi-Attach enabled	Attached Instances
us-east-1a	Tue Mar 01 2022 10:18:43 GMT+0530 (India Standard Time)	No	-

Step 8: Create the new instance in the AZ us-east 1a



The screenshot shows the AWS Management Console 'Instances' page. A table lists five instances, including 'server3-1a' which is highlighted. Below the table, the 'Details' tab for this instance is expanded, showing its configuration.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4
□ Server1	i-0d1f0b5f5ccec01	Terminated	t2.micro	-	No alarms	us-east-1c	-	-
□ server2	i-0ab282518da801403	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-3-237-74-14.comp...	3.237.74.14
□ 3	i-057a345291a954689	Terminated	t2.micro	-	No alarms	us-east-1c	-	-
□ 4	i-02598456d45cce852	Stopped	t2.micro	-	No alarms	us-east-1c	-	-
✓ server3-1a	i-0f9d6f2b24c6b7eec	Pending	t2.micro	-	No alarms	us-east-1a	ec2-54-226-198-40.co...	54.226.198...

Instance: i-0f9d6f2b24c6b7eec (server3-1a)

Details

Instance summary	Public IPv4 address	Private IPv4 addresses
Instance ID	54.226.198.40 open address	172.31.17.44
IPV6 address	Instance state	Public IPv4 DNS
-	Pending	ec2-54-226-198-40.compute-1.amazonaws.com open address
Hostname type	Private IP DNS name (IPv4 only)	Answer private resource DNS name
IP name: ip-172-31-17-44.ec2.internal	ip-172-31-17-44.ec2.internal	IPv4 (A)

Step 9 : Proceed with same steps as in case 1 to attach the volume to new instance and mounting

The screenshot displays the AWS Management Console interface. The top navigation bar shows the 'Instances' page. On the left, a sidebar lists various AWS services, with 'Instances' selected. The main content area shows a list of EC2 instances. The instance 'server3-1a' (ID: i-0f9d6f2b24c6b7eec) is highlighted. Below the list, the details for this instance are shown, including its state (Running), type (t2.micro), and availability zone (us-east-1a). The 'Block devices' section is expanded, showing two attached volumes: 'vol-073255fac76563f3f' (8 GiB, /dev/xvda) and 'vol-0c12d4a38f659dffb' (8 GiB, /dev/sdf). Both volumes are in an 'Attached' state.

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4
server3-1a	i-0f9d6f2b24c6b7eec	Running	t2.micro	Initializing	No alarms	us-east-1a	ec2-54-226-198-40.co...	54.226.198.
Server1	i-0d1f0b5f5ceceec01	Terminated	t2.micro	-	No alarms	us-east-1c	-	-
server2	i-0ab282518da801403	Running	t2.micro	2/2 checks passed	No alarms	us-east-1c	ec2-3-237-74-14.comp...	3.237.74.14
3	i-057a345291a954689	Terminated	t2.micro	-	No alarms	us-east-1c	-	-
4	i-02598456d45cce852	Stopped	t2.micro	-	No alarms	us-east-1c	-	-

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID	Dele
vol-073255fac76563f3f	/dev/xvda	8	Attached	Tue Mar 01 2022 10:22:27 ...	No	-	Yes
vol-0c12d4a38f659dffb	/dev/sdf	8	Attached	Tue Mar 01 2022 10:23:48 ...	No	-	No

Here we completed two cases of replication of ebs volume in single AZ and cross AZs within the Region