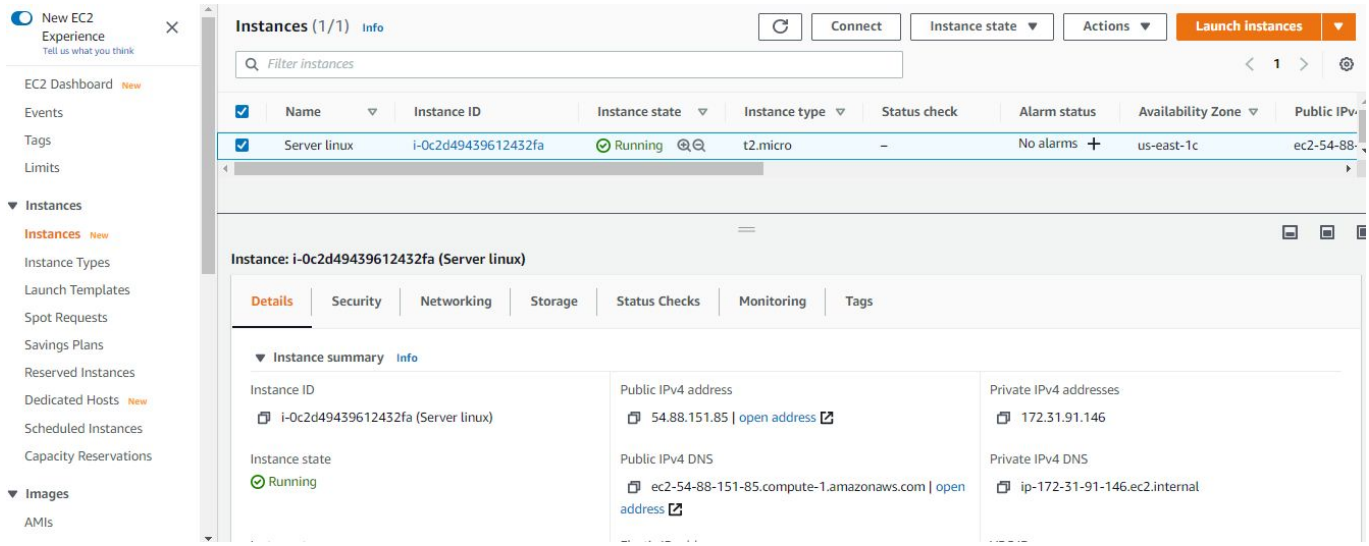
Week 2 Lab-Part 2

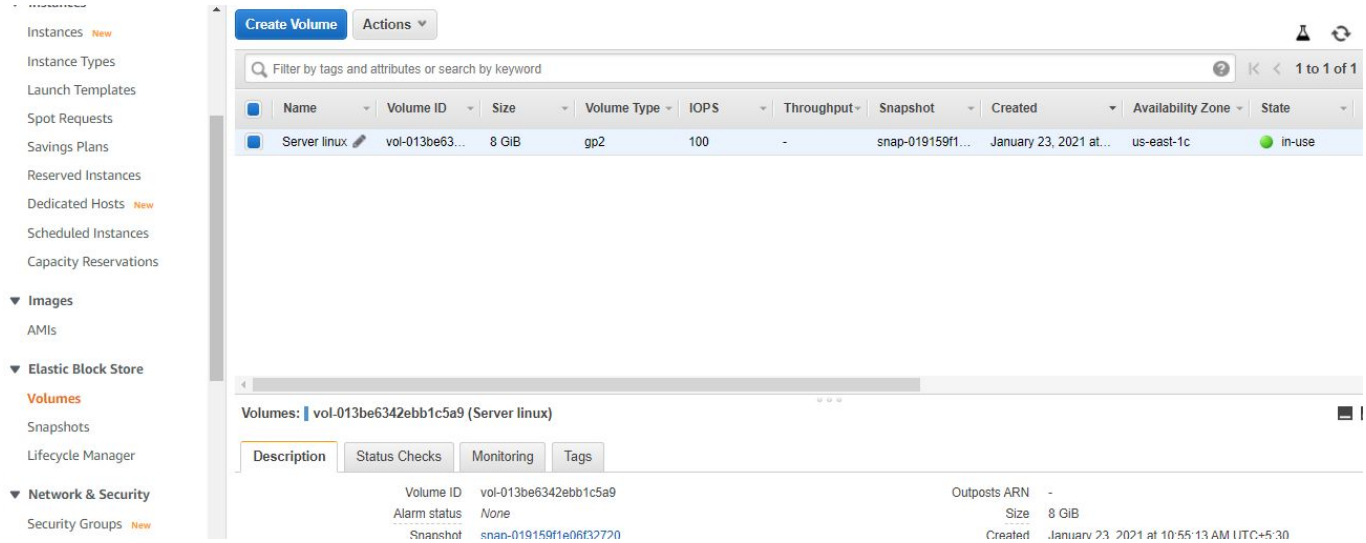
Launch EC2 in the N. Virginia region

Step 1: Go to the Launch page in the console after selecting the region to N. Virginia. Select Amazon Linux 2 AMI
Step 2: Use the free tier instance type
Step 3: Use the default VPC and change the subnet to **1a**. Remaining can be left as default.
Step 4: Default EBS volume of 8GiB is sufficient.
Step 5: Add the name tag for server identification
Step 6: By default a security group is created with port 22 open to the public.
Step 7: Review the configuration - Click Launch->Use the existing key pair if available else create a new one.

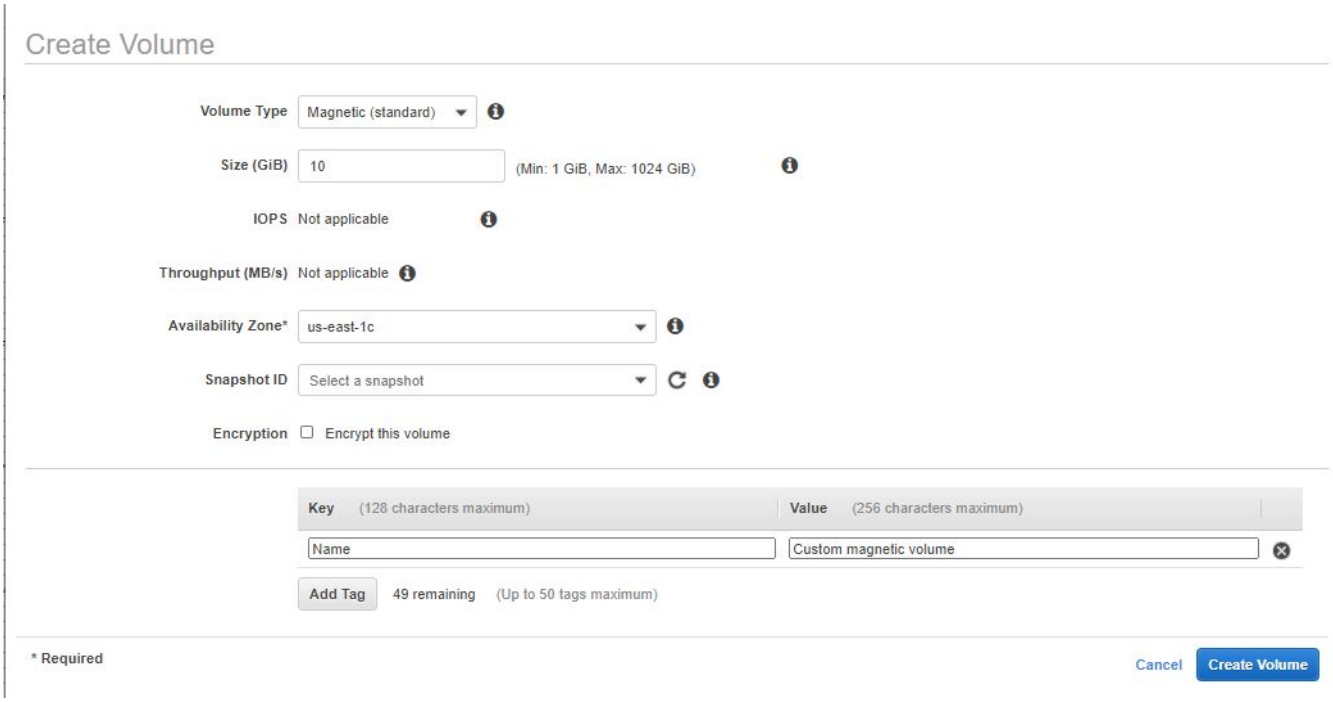


Volume creation

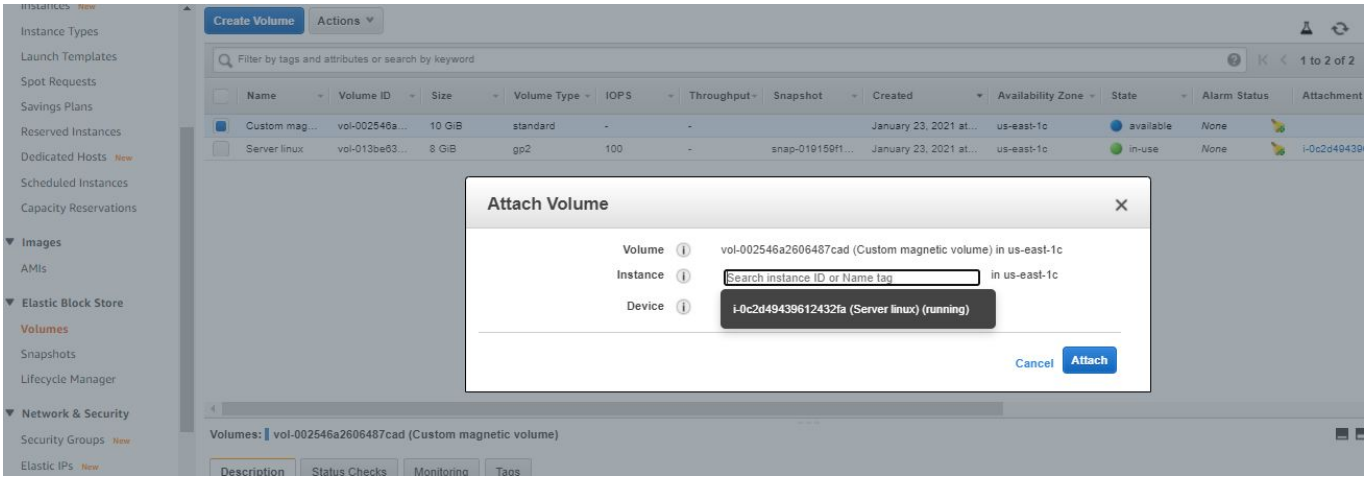
Go to the volume console



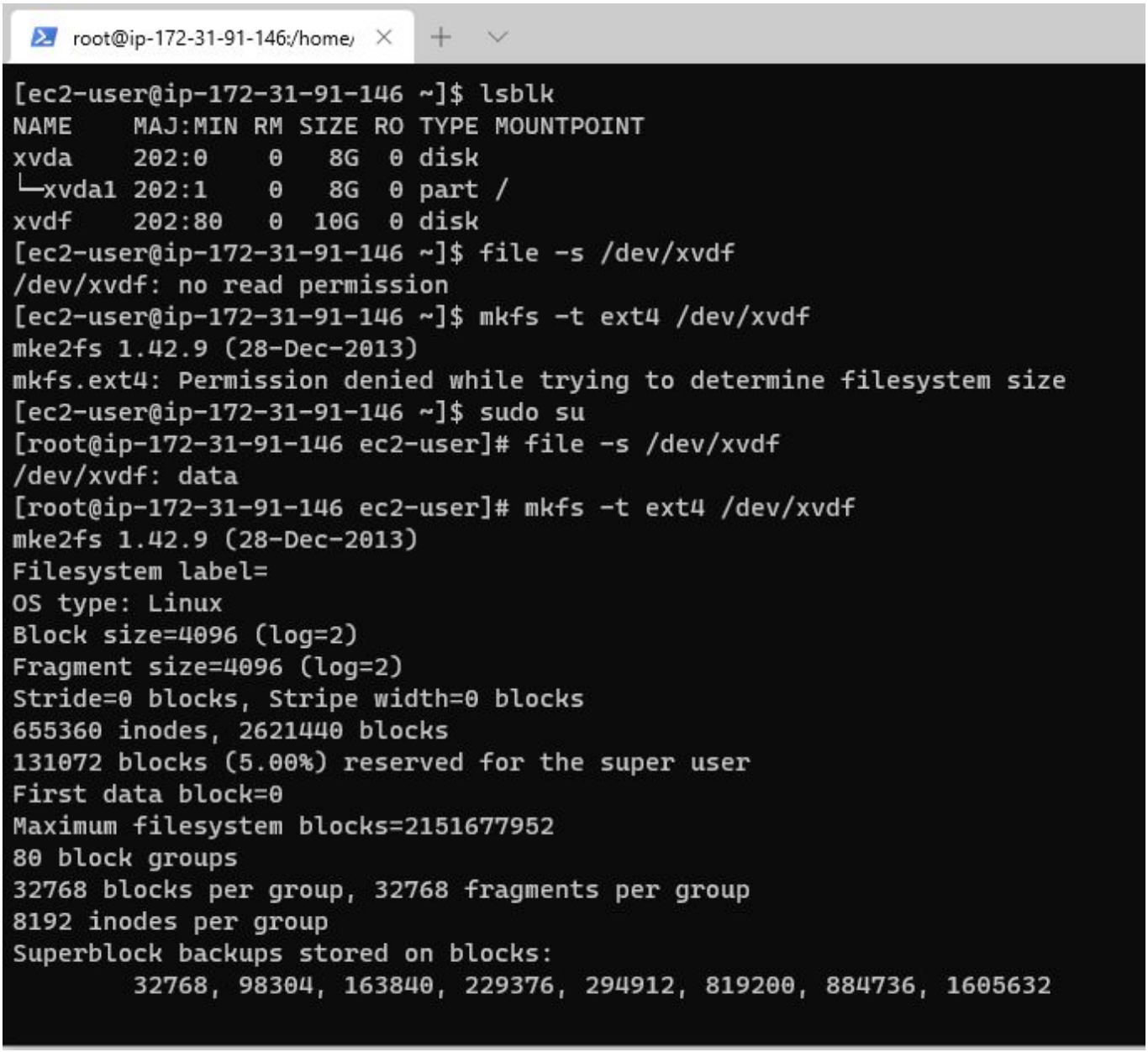
Note the AZ on which the current volume is present and create another disk on the same AZ.



Attach the volume to the running instance



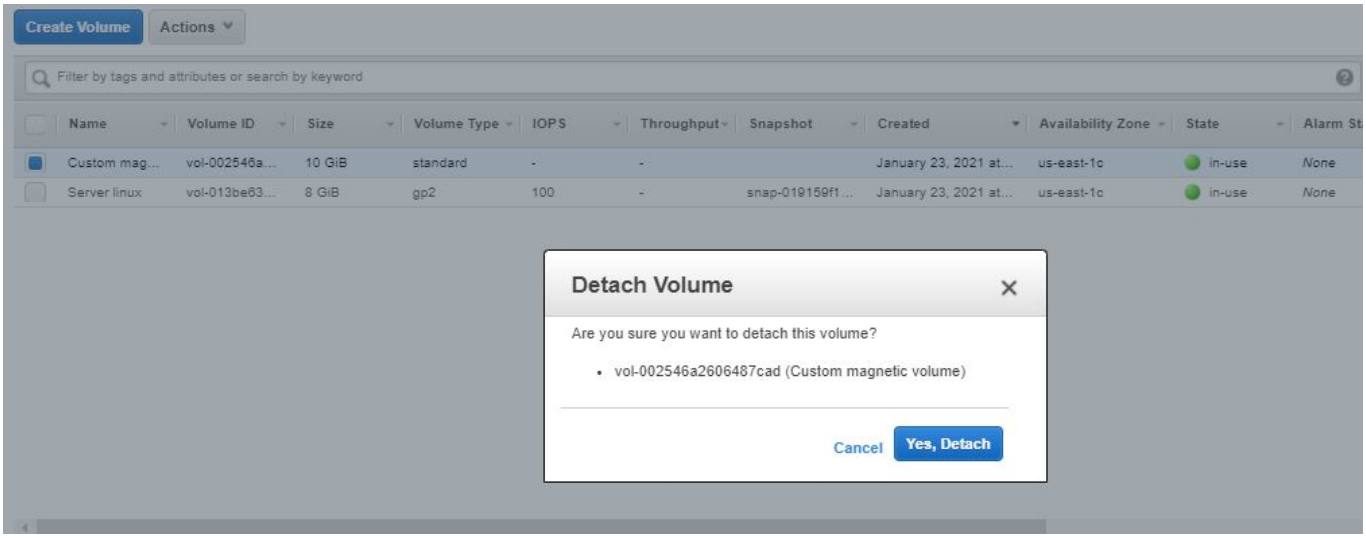
After SSHing into the server, Format and mount the custom volume with the provided commands



root@ip-172-31-91-146:/home/

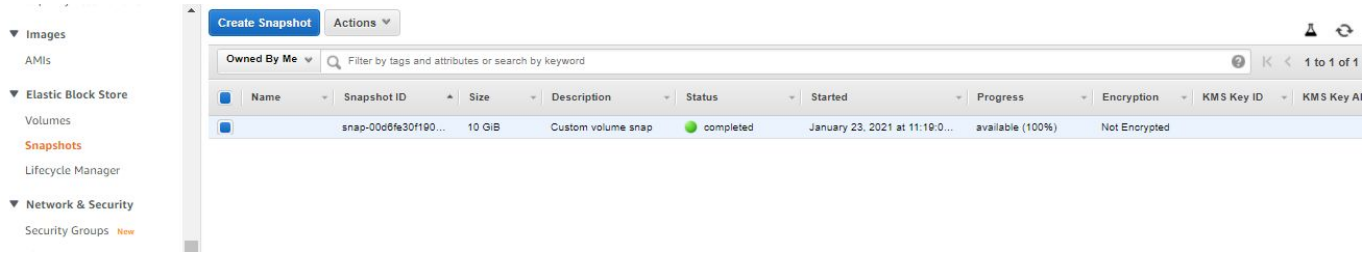
```
[root@ip-172-31-91-146 ec2-user]# file -s /dev/xvdf
/dev/xvdf: data
[root@ip-172-31-91-146 ec2-user]# mkfs -t ext4 /dev/xvdf
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
655360 inodes, 2621440 blocks
131072 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2151677952
80 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@ip-172-31-91-146 ec2-user]# mkdir /appdata
[root@ip-172-31-91-146 ec2-user]# mount /dev/xvdf /appdata
[root@ip-172-31-91-146 ec2-user]# echo "This is a sample file" > /appdata/sample.txt
[root@ip-172-31-91-146 ec2-user]# echo "This is a custome file added to the custom volume" > /appdata/custom.txt
[root@ip-172-31-91-146 ec2-user]# umount /dev/xvdf
[root@ip-172-31-91-146 ec2-user]#
```

Detaching the volume

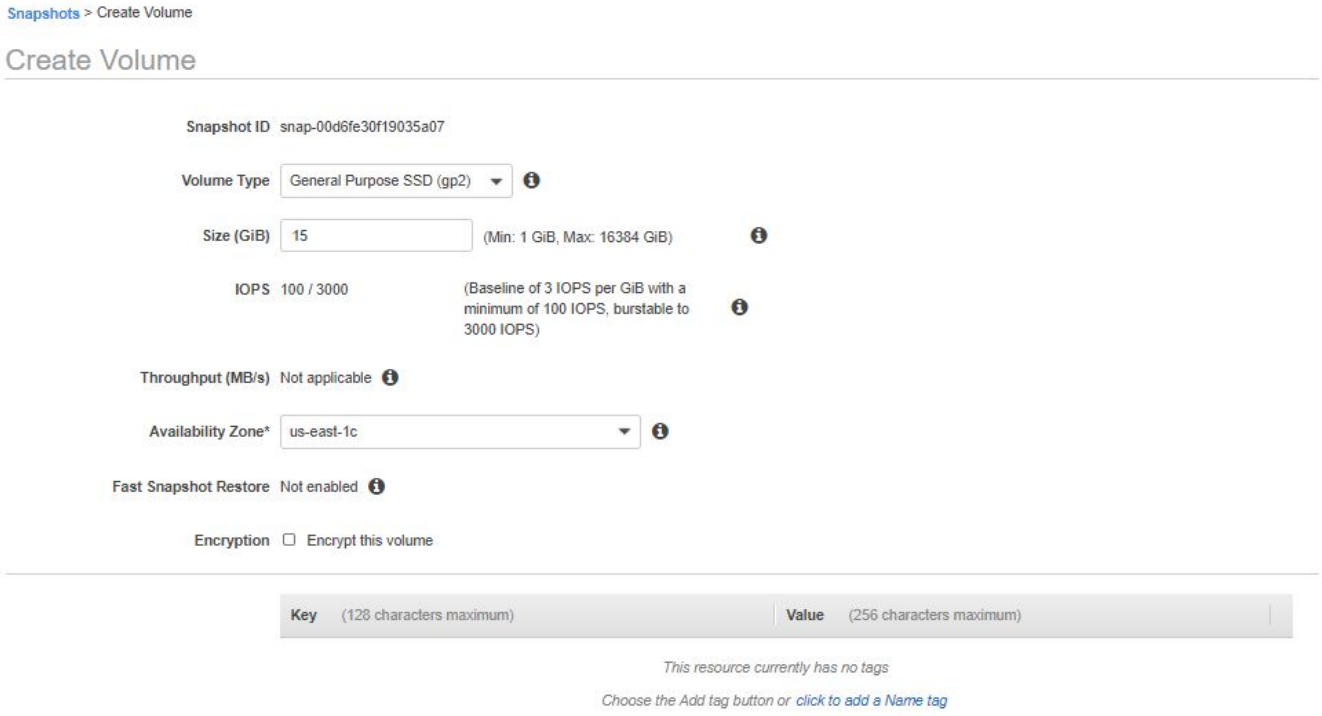


Snapshot

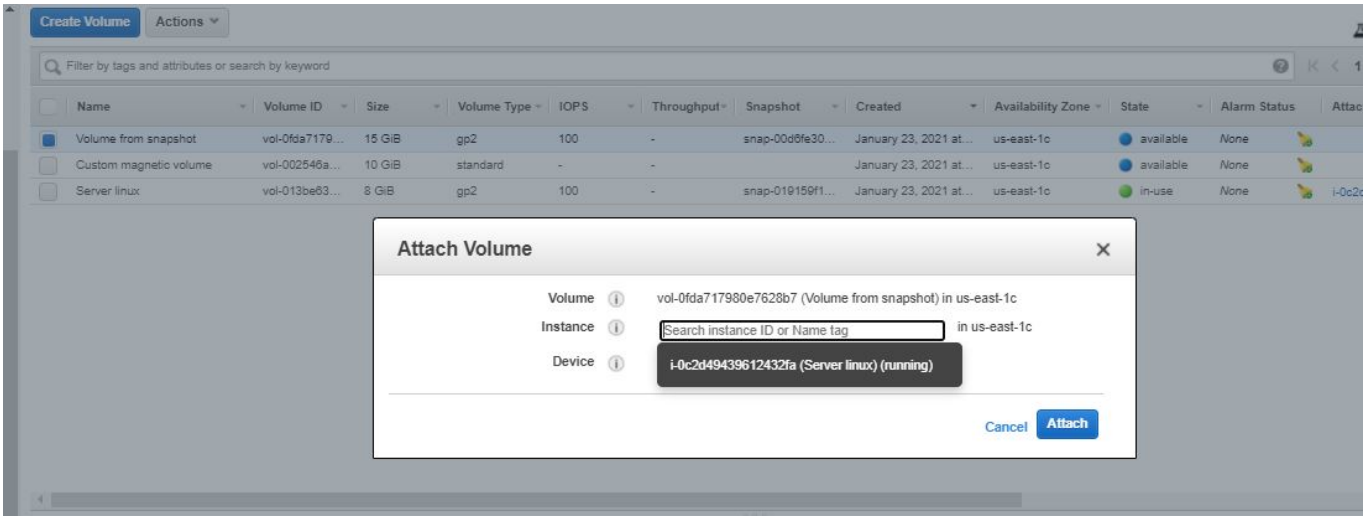
Creating a snapshot of the custom volume. Could be accessed thru the Snapshots console



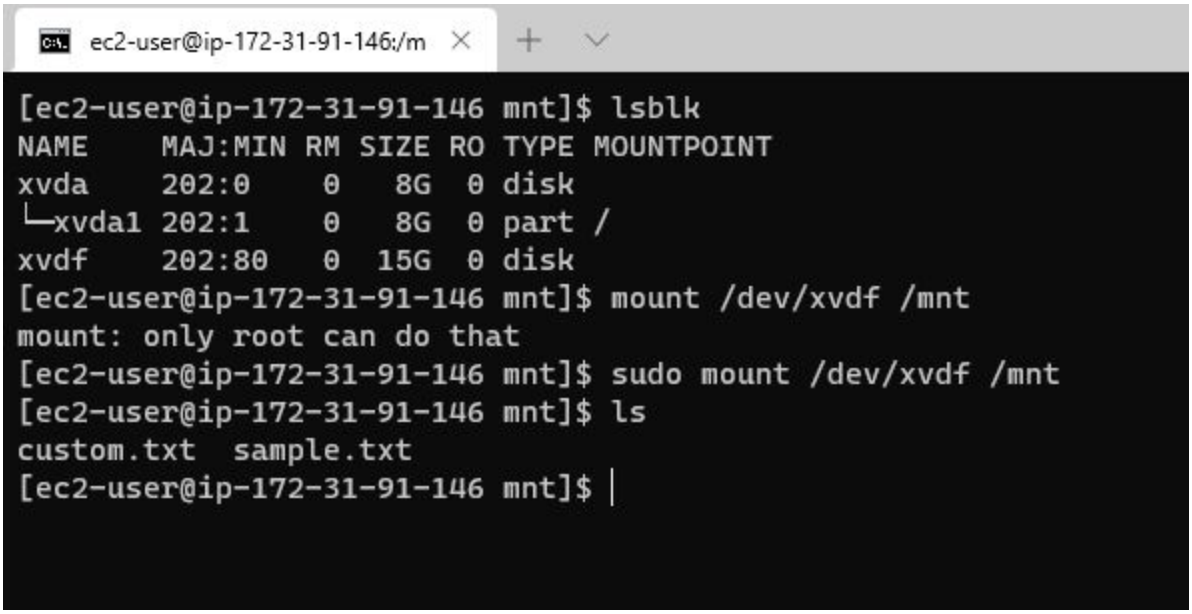
Select the snapshot and create a volume from there. Make sure the AZ is the same as where your EC2 is present and on which you are planning to mount.



Attach the new volume to the EC2 and check the files

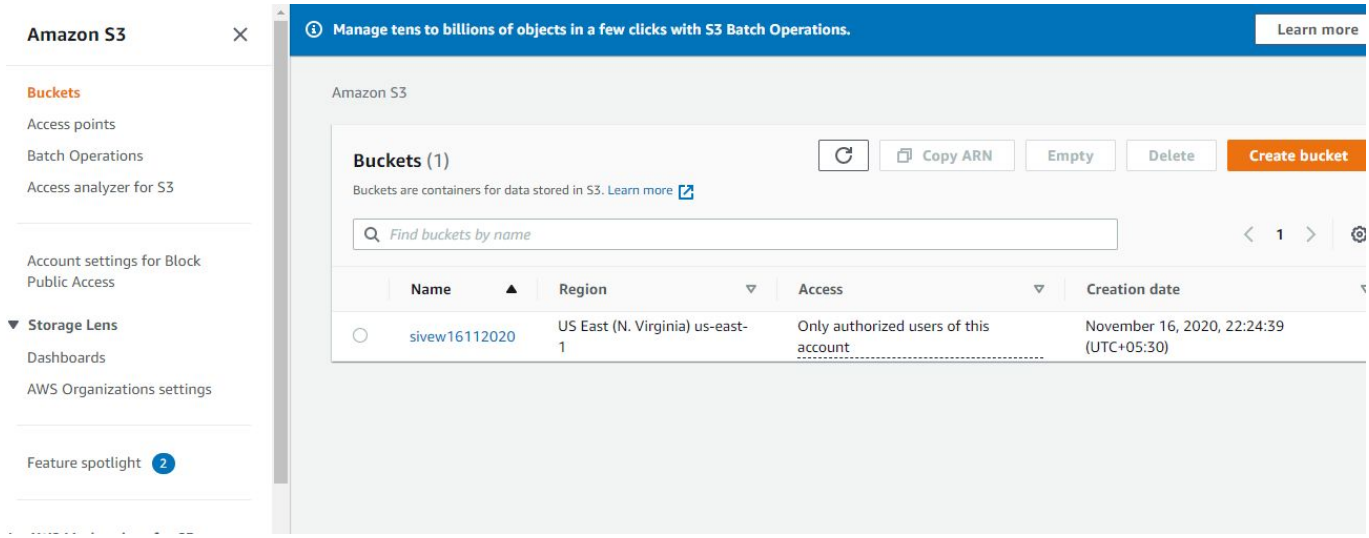


Mount and check for the file system you created is present or not.

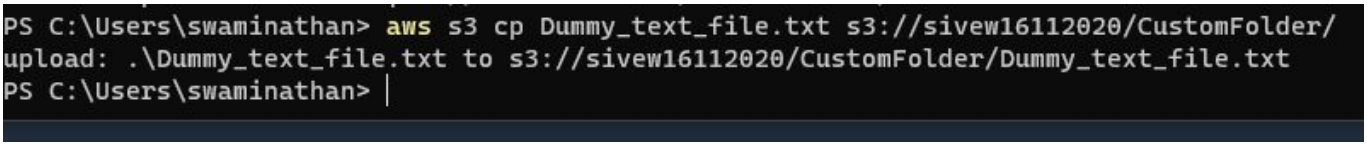


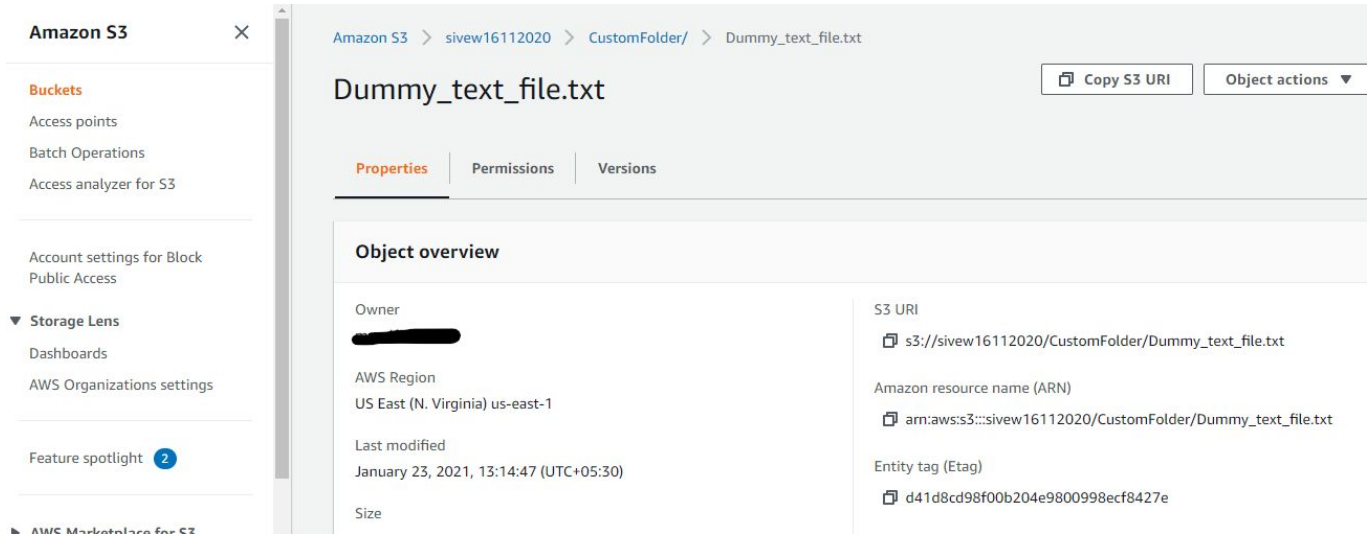
S3 Operations

Creating a bucket in a region of your choice.



Copy local file to bucket





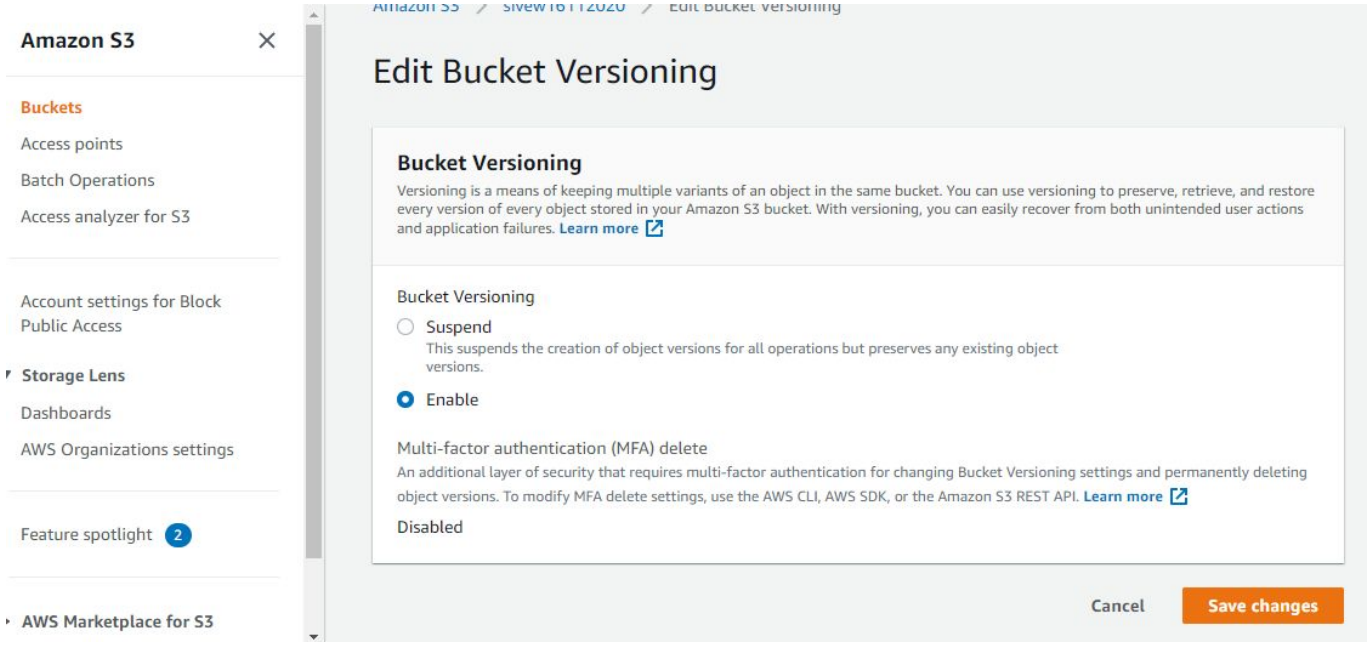
List of bucket

```
upload: .\Dummy_text_file.txt to s3://sivew16112020/CustomFolder/Dummy_text_file.txt
PS C:\Users\swaminathan> aws s3api list-buckets
{
    "Buckets": [
        {
            "Name": "sivew16112020",
            "CreationDate": "2020-11-16T16:54:39.000Z"
        }
    ],
    "Owner": {
        "DisplayName": "[redacted]",
        "ID": "4172d8ff9dd5e20e9f249b694d63e749590179797e8eb3414eb8181291ef230c"
    }
}
PS C:\Users\swaminathan>
```

List of file in the bucket

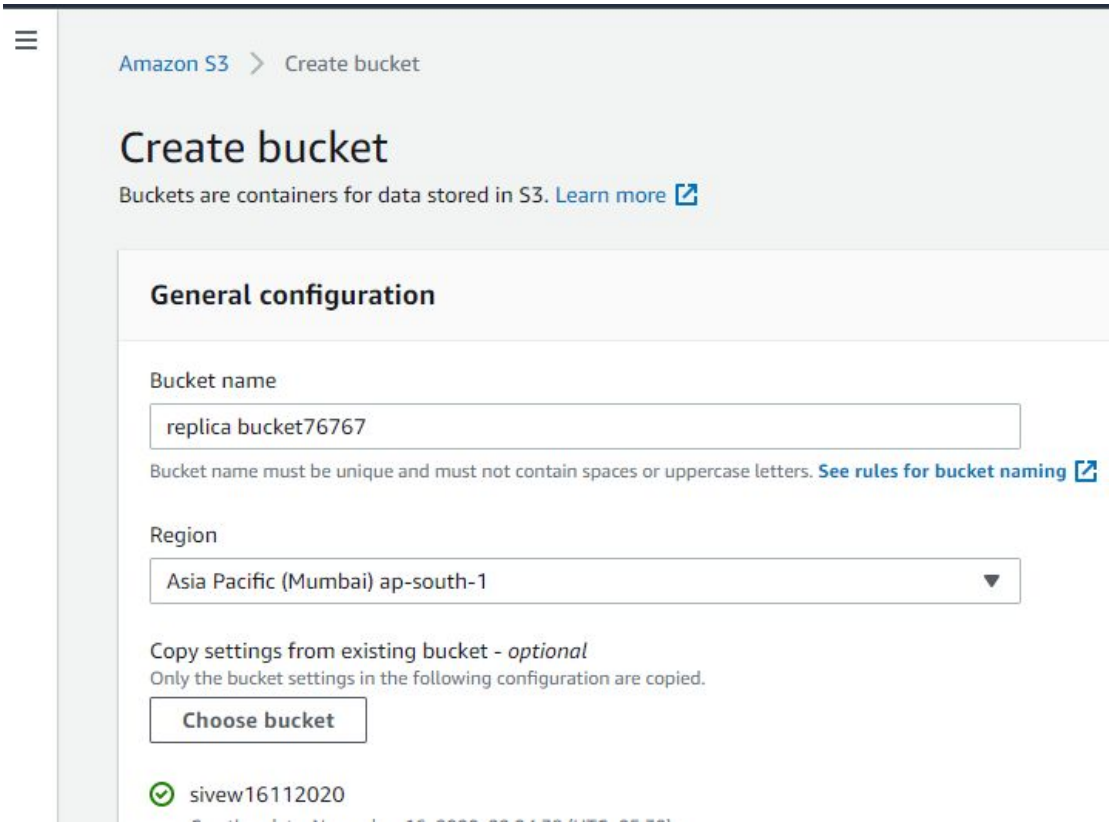
```
PS C:\Users\swaminathan> aws s3 ls sivew16112020
                           PRE CustomFolder/
                           PRE css/
                           PRE css_404/
                           PRE fonts/
                           PRE images/
                           PRE js/
                           PRE scss/
                           PRE trail_ezhil/
2020-12-02 23:13:51       8196 .DS_Store
2020-12-07 12:29:00        942 currentpage.html
2020-12-04 00:30:22       1302 error_page.html
2020-12-02 23:13:51      32823 index.html
2020-12-02 23:13:51      12010 prepros-6.config
2020-12-02 23:13:51      19265 single.html
PS C:\Users\swaminathan>
```

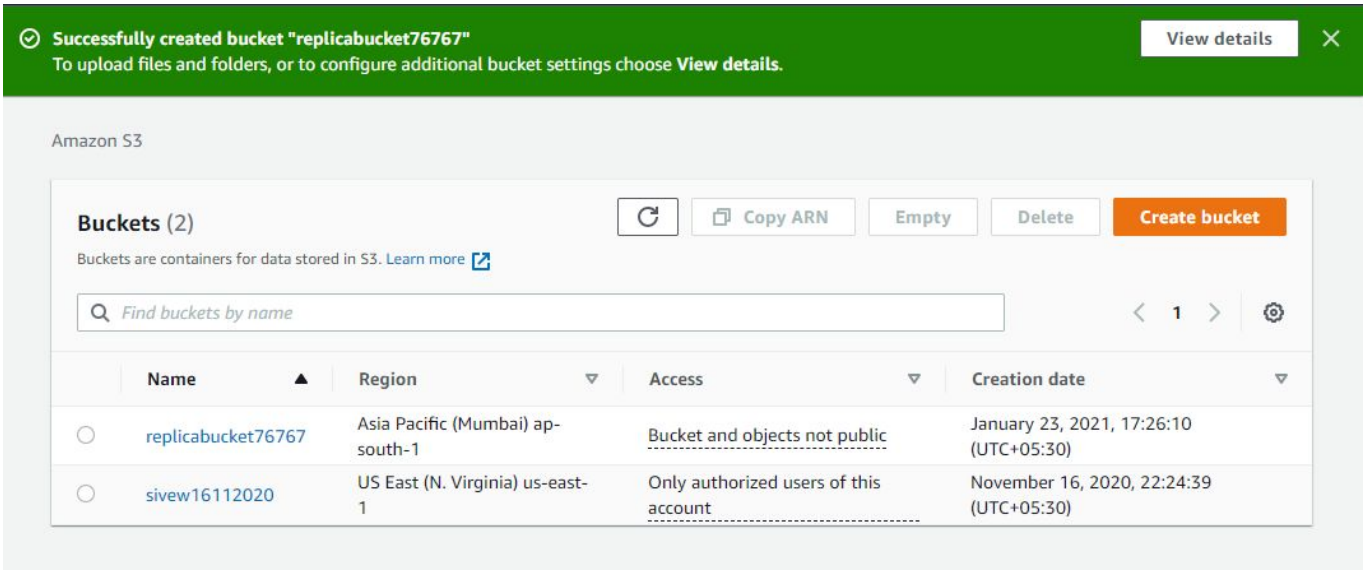
Enabling versioning in bucket

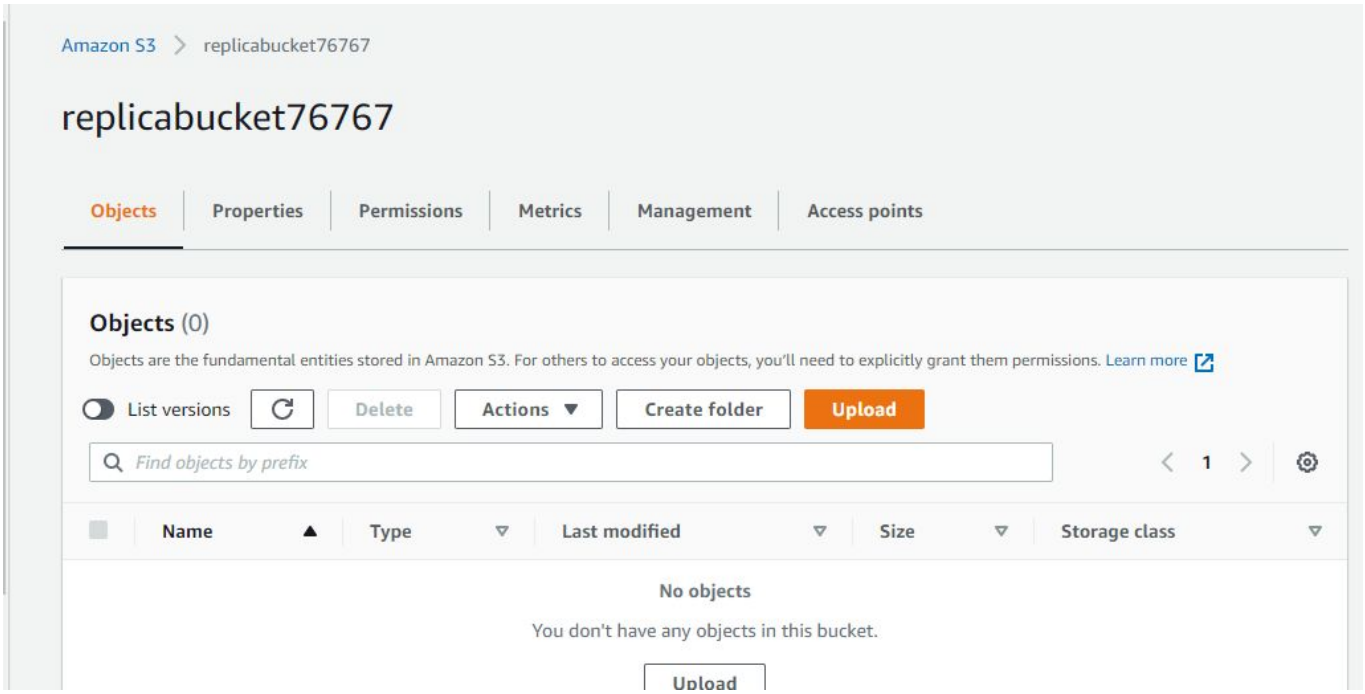


Enabling Cross regions replication

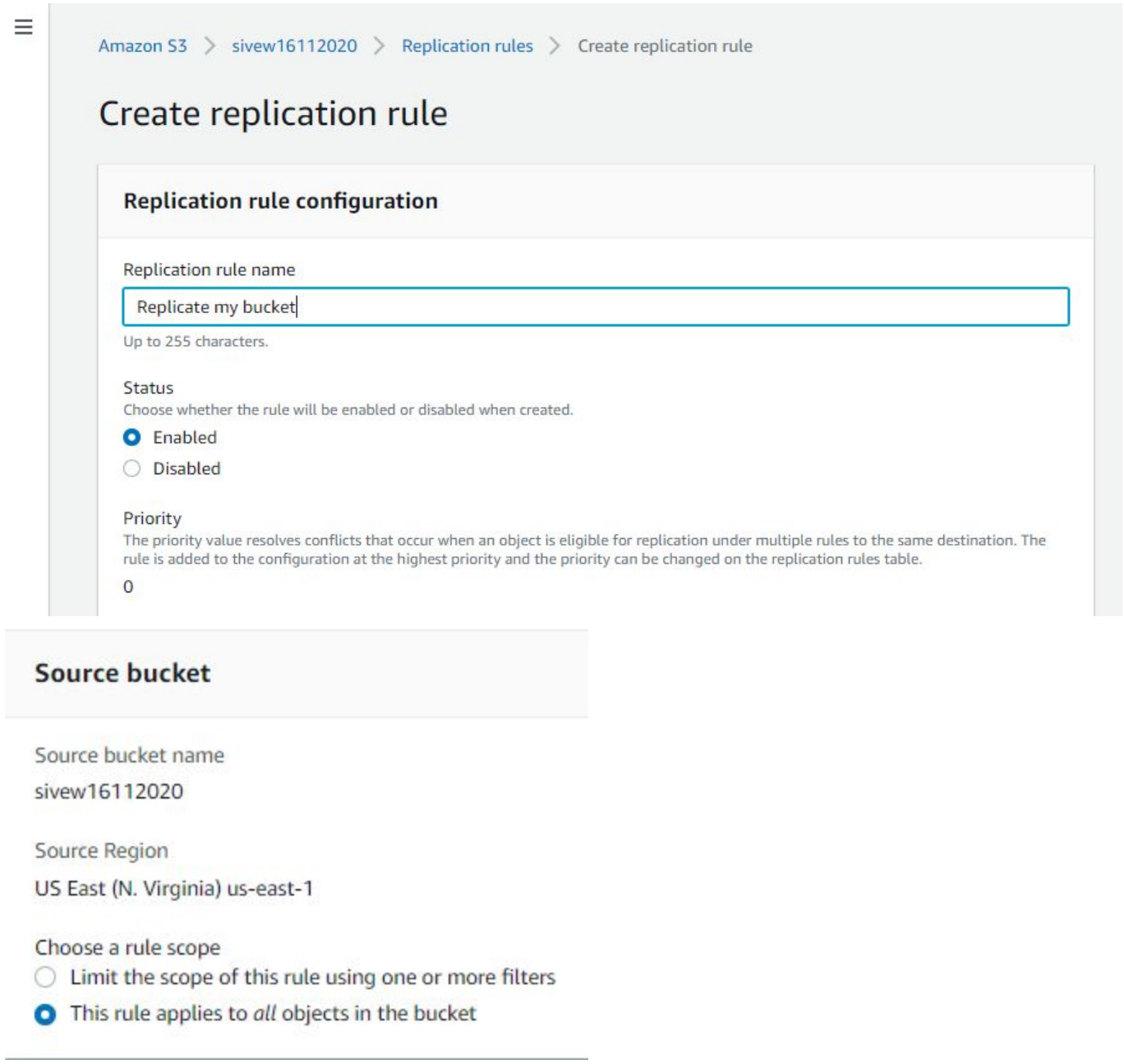
Create a bucket in another region with settings similar to the current bucket.

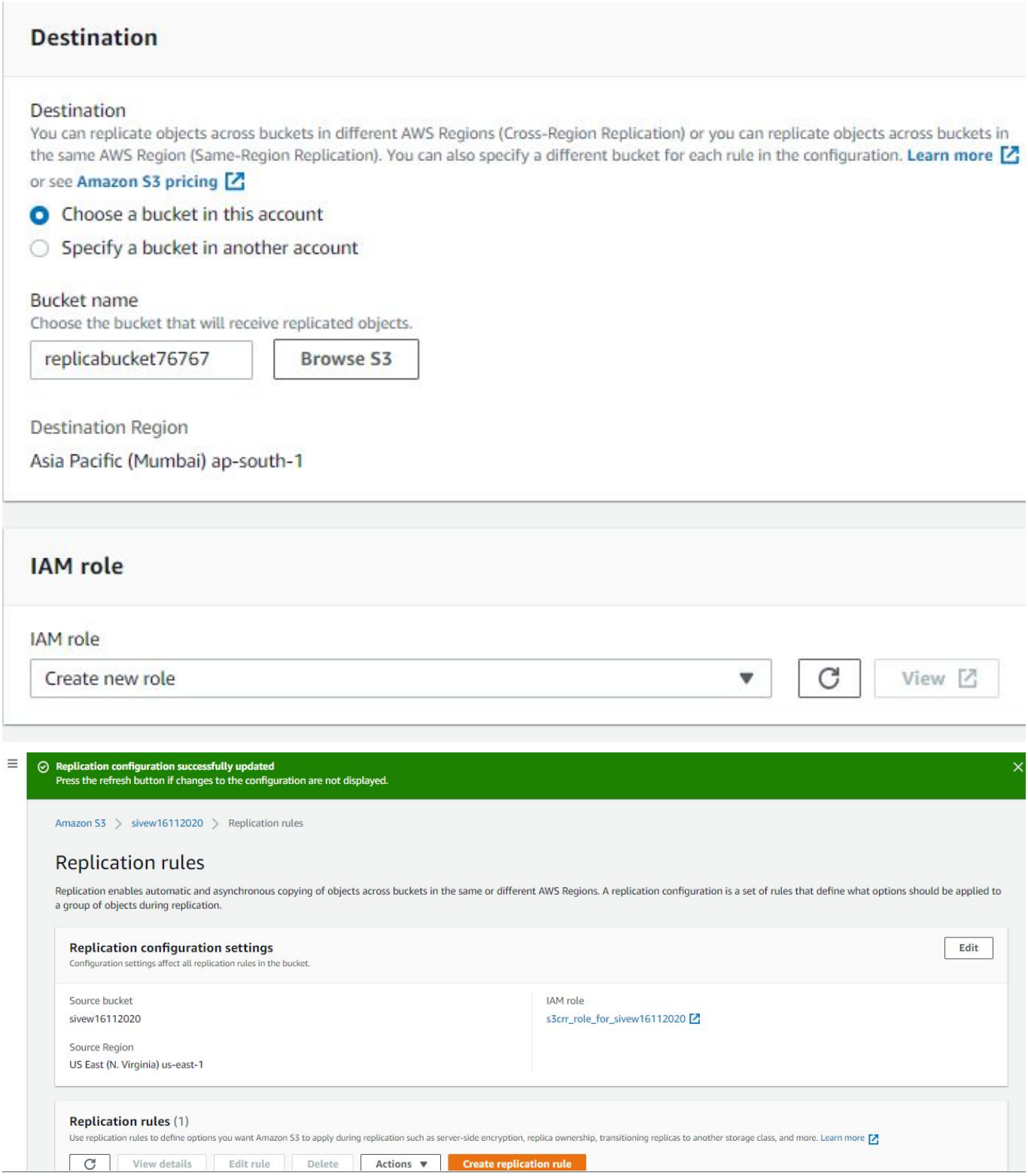






Configure the replica rule now

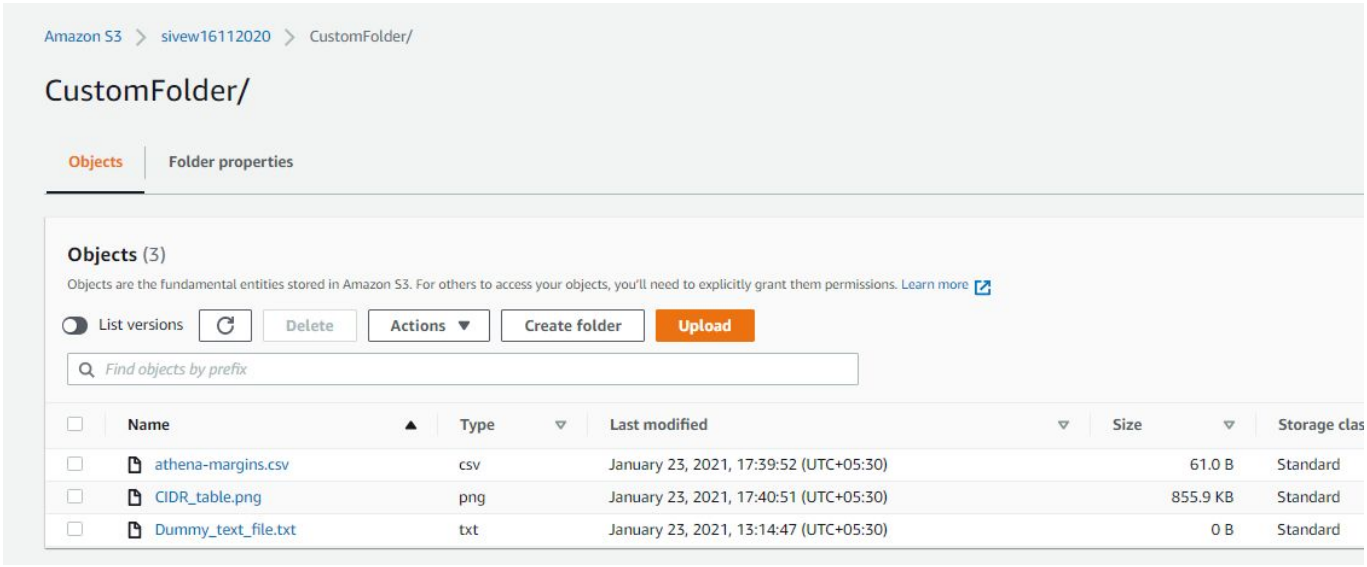




Adding new object to the first bucket after creating the replication rule

```
2020-12-02 23:13:51      19265 single.html
PS C:\Users\swaminathan> aws s3 cp athena-margins.csv s3://sivew16112020/CustomFolder/
upload: .\athena-margins.csv to s3://sivew16112020/CustomFolder/athena-margins.csv
PS C:\Users\swaminathan> aws s3 cp CIDR_table.png s3://sivew16112020/CustomFolder/
upload: .\CIDR_table.png to s3://sivew16112020/CustomFolder/CIDR_table.png
PS C:\Users\swaminathan>
```

On the original bucket



On the replication bucket added automatically