



NAME:SOWMYA

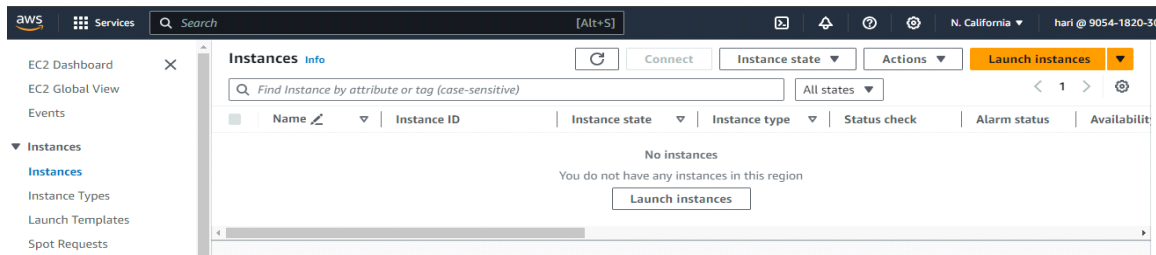
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EBS VOLUME CHANGE ONE EC2 TO OTHER EC2 INSTANCE WITHOUT ANY LOSSING DATA

EBS stands for Elastic block store and it is used for create storage volumes and attach them to Amazon EC2 instances.

Amazon EBS is an easy-to-use, scalable, high-performance block-storage service designed for Amazon Elastic Compute Cloud (Amazon EC2).

- First we need to launch instance for that go to ec2 instance and then click on instance running
- click on launch instance



- give the name and create key pair
- select subnet which has availability zone 1a
- come down and click on launch instance

Key pair name - *required*

mykey123 ↕ [Create new key pair](#)

▼ **Network settings** [Info](#)

VPC - *required* [Info](#)

vpc-0f0c3a11b8a1ac0c5 (default) ↕

Subnet [Info](#)

subnet-018490029c0fe55e8 ↕ [Create new subnet](#)

VPC: vpc-0f0c3a11b8a1ac0c5 Owner: 905418203034 Availability Zone: us-west-1a
IP addresses available: 4091 CIDR: 172.31.0.0/20

An Amazon EBS volume is a durable, block-level storage device that we can attach to our instances.

EBS volumes are storage volumes that you attach to Amazon EC2 instances

- Now go to volumes and click on volumes and create a volume

The screenshot shows the Amazon EBS console with the 'Volumes' tab selected. A table lists the existing volumes.

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	-	vol-0c04160ab86ac6669	gp3	8 GiB	3000	125	snap-04d1f75...	2024/06

- In volume settings change Gib (GB) which size you want i.e 10gb

Volume settings

Volume type [Info](#)

General Purpose SSD (gp3) ↕

General Purpose SSD gp3 is now the default selection. gp3 provides up to 20% lower cost per GB than gp2.
[Learn More](#)

Size (GiB) [Info](#)

10

Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

- choose availability zone which we already given in the ec2 instance
- click on create volume

Availability Zone [Info](#)

us-west-1a

Snapshot ID - optional [Info](#)

Don't create volume from a snapshot

Encryption [Info](#)

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.

No tags associated with the resource.

Add tag

You can add 50 more tags.

Snapshot summary [Info](#)

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**

- After creat the volume and enter the name to the volume and save it

Successfully created volume vol-083f1ba52b7d9551c.

Volumes (1/2) [Info](#)

Search

	Name	Volume ID	Type	Size	IOPS
<input type="checkbox"/>	-	vol-0c04160ab86ac6669	gp3	8 GiB	3000
<input checked="" type="checkbox"/>	volume	vol-083f1ba52b7d9551c	gp3	10 GiB	3000

Edit Name

volume

Cancel **Save**

- select volume and go to actions , click on attach volume

Volumes (1/2) [Info](#)

Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
<input type="checkbox"/>	-	vol-0c04160ab86ac6669	gp3	8 GiB	3000	125	snap-04
<input checked="" type="checkbox"/>	volume	vol-083f1ba52b7d9551c	gp3	10 GiB	3000	125	-

Actions

- Modify volume
- Create snapshot
- Create snapshot lifecycle policy
- Delete volume
- Attach volume
- Detach volume

- click on instance and choose instance already we created
- select device name whatever you want /dev/sdf
- click on attach volume

Volume ID
vol-083f1ba52b7d9551c (volume)

Availability Zone
us-west-1a

Instance | Info
i-06c13174a67eeda22

Only instances in the same Availability Zone as the selected volume are displayed.

Device name | Info
/dev/sdf

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[f-p] for data volumes.

i 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

- now go to ec2 instance
- click on instance which we created
- connect to web

Connect to your instance i-06c13174a67eeda22 (my-instance) using any of these options

EC2 Instance Connect | Session Manager | SSH client | EC2 serial console

Instance ID
i-06c13174a67eeda22 (my-instance)

Connection Type

☒ **Connect using EC2 Instance Connect**
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

☐ **Connect using EC2 Instance Connect Endpoint**
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address
18.144.164.108

Username
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.

ubuntu

i **Note:** In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel Connect

- For root user, we use to enter the command is "sudo -i"
- To verify the disk usage statistics for the Amazon File Caches currently mounted on your Linux-based Amazon EC2 instance. we use to enter the command is "df -h."
- To get information about all of the devices attached to the instance, we use enter the command is "lsblk"(list all block devices in linux machine)

To run a command as administrator (user "root"), use "sudo <command>". See "man sudo_root" for details.

```
ubuntu@ip-172-31-10-142:~$ sudo -i
root@ip-172-31-10-142:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.6G  5.2G  24% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  872K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   76M  744M  10% /boot
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
root@ip-172-31-10-142:~# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0      0 25.2M  1 loop /snap/amazon-ssm-agent/7983
loop1        7:1      0 55.7M  1 loop /snap/core18/2812
loop2        7:2      0 38.7M  1 loop /snap/snapd/21465
xvda         202:0     0    8G  0 disk
├─xvda1      202:1     0    7G  0 part /
├─xvda14     202:14    0    4M  0 part
├─xvda15     202:15    0 106M  0 part /boot/efi
└─xvda16     259:0     0  913M  0 part /boot
xvdf         202:80    0   10G  0 disk
```

- To check is there any file system on this device,the command is `file -s /dev/xvdf`
- To create a file , the command is `mkfs -t xfs /dev/xvdf`
- After creation of file system to check the file system is there or not, the command is `file -s /dev/xvdf`

```
root@ip-172-31-10-142:~# file -s /dev/xvdf
/dev/xvdf: data
root@ip-172-31-10-142:~# mkfs -t xfs /dev/xvdf
meta-data=/dev/xvdf          isize=512    agcount=4, agsize=655360 blks
                     =                  sectsz=512   attr=2, projid32bit=1
                     =                  crc=1        finobt=1, sparse=1, rmapbt=1
                     =                  reflink=1     bigtime=1 inobtcount=1 nrext64=0
data      =                  bsize=4096   blocks=2621440, imaxpct=25
                     =                  sunit=0      swidth=0 blks
naming     =version 2          bsize=4096   ascii-ci=0, ftype=1
log        =internal log      bsize=4096   blocks=16384, version=2
                     =                  sectsz=512   sunit=0 blks, lazy-count=1
realtime   =none              extsz=4096   blocks=0, rtextents=0
root@ip-172-31-10-142:~# file -s /dev/xvdf
/dev/xvdf: SGI XFS filesystem data (blksz 4096, inosz 512, v2 dirs)
```

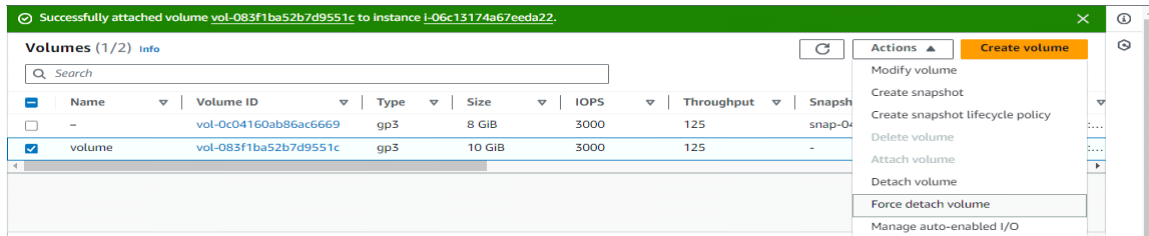
- Now create a directory te command is `mkdir -p vcube/varsha`
- enter `df -h`.,To see the path will be created

```

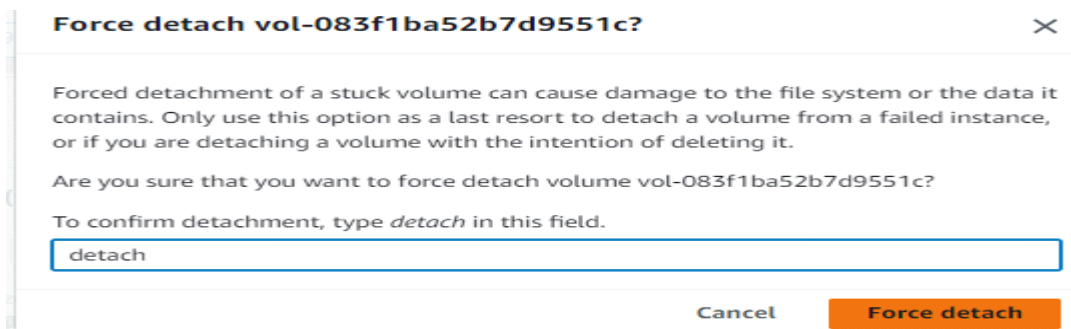
realtime =none              extsz=4096   blocks=0, rtextents=0
root@ip-172-31-10-142:~# file -s /dev/xvdf
/dev/xvdf: SGI XFS filesystem data (blksz 4096, inosz 512, v2 dirs)
root@ip-172-31-10-142:~# mount /dev/xvdf app/volume
mount: app/volume: mount point does not exist.
dmesg(1) may have more information after failed mount system call.
root@ip-172-31-10-142:~# mkdir -p vcube/varsha
root@ip-172-31-10-142:~# mount /dev/xvdf vcube/varsha
root@ip-172-31-10-142:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.6G  5.2G  24% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  872K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   76M  744M  10% /boot
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdf        10G  228M   9.8G   3% /root/vcube/varsha
root@ip-172-31-10-142:~#
```

How to detach the volume and that data will be store in new volume

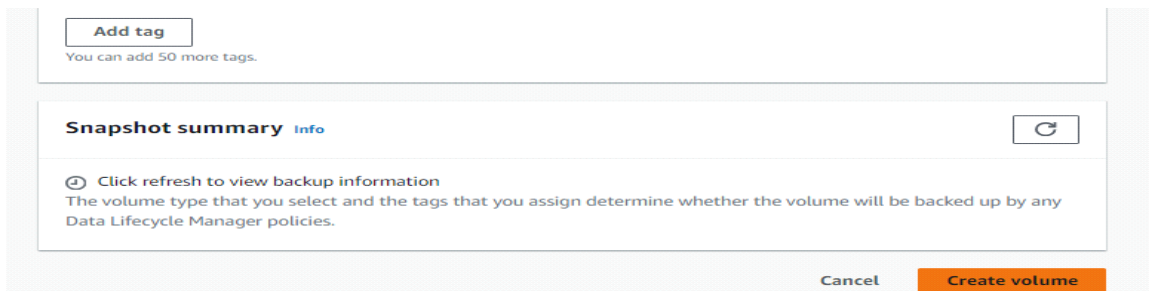
- for that create new volume
- Now go to ec2 and in the navigation pane click on volumes
- select the volume go to actions click on force to detach



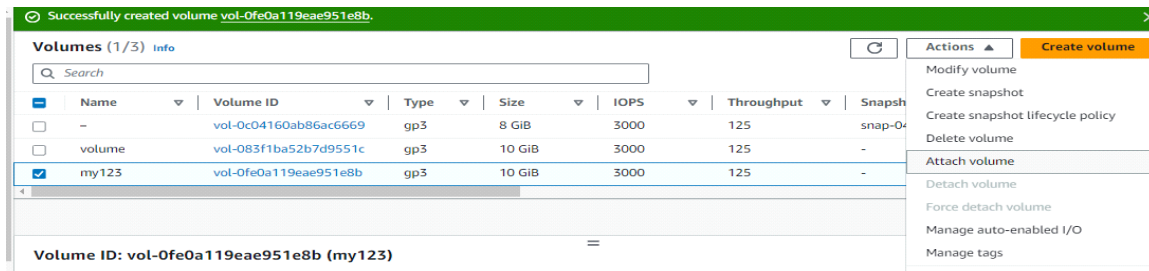
- Enter the detach and click on force detach



- Now create a new volume



- select the volume and go to actions
- select attach volume



- choose the instance which we created in ec2 instance
- select device name and click on attach volumes

Basic details

Volume ID

 vol-0fe0a119eae951e8b (my123)

Availability Zone

us-west-1a

Instance [Info](#)

i-06c13174a67eeda22 ▼



Only instances in the same Availability Zone as the selected volume are displayed.

Device name [Info](#)

/dev/sdf ▼

Recommended device names for Linux: /dev/sda1 for root volume. /dev/sd[f-p] for data volumes.

- Now go to ec2 instance and connect it

Connect to your instance i-06c13174a67eeda22 (my-instance) using any of these options

EC2 Instance Connect | Session Manager | SSH client | EC2 serial console

Instance ID

 i-06c13174a67eeda22 (my-instance)

Connection Type


☒ **Connect using EC2 Instance Connect**

Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.

☐ **Connect using EC2 Instance Connect Endpoint**

Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

Public IP address

 18.144.164.108

Username

Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ubuntu.

X

Note: In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

Connect

- enter "sudo -i" and enter "df -h" and also enter "lsblk"
- enter "file -s /dev/xvdf" to check file system

```
Last login: Thu Jun 20 06:05:49 2024 from 13.52.6.115
ubuntu@ip-172-31-10-142:~$ sudo -i
root@ip-172-31-10-142:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.6G  5.2G  24% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  880K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   76M  744M  10% /boot
/dev/xvda15      105M   6.1M  99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdf        10G  228M  9.8G   3% /root/vcube/varsha
root@ip-172-31-10-142:~# lsblk
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINTS
loop0        7:0    0  25.2M  1 loop /snap/amazon-ssm-agent/7983
loop1        7:1    0  55.7M  1 loop /snap/core18/2812
loop2        7:2    0  38.7M  1 loop /snap/snapd/21465
xvda        202:0    0    8G  0 disk
└─xvda1      202:1    0    7G  0 part /
└─xvda14     202:14   0    4M  0 part
└─xvda15     202:15   0   106M 0 part /boot/efi
└─xvda16     259:0    0   913M 0 part /boot
xvdf         202:80    0   10G  0 disk /root/vcube/varsha
root@ip-172-31-10-142:~# file -s /dev/xvdf
/dev/xvdf: data
root@ip-172-31-10-142:~#
```

To check the file enter "ls" command

we are able to see the file (which we detach the volume dad)

```
data      =          bsize=4096   blocks=2621440, imaxpct=25
          =          sunit=0      swidth=0 blks
naming    =version 2   bsize=4096   ascii-ci=0, ftype=1
log       =internal log bsize=4096   blocks=16384, version=2
          =          sectsz=512   sunit=0 blks, lazy-count=1
realtime  =none       extsz=4096   blocks=0, rtextents=0
root@ip-172-31-10-142:~# file -s /dev/xvdf
/dev/xvdf: SGI XFS filesystem data (blkisz 4096, inosz 512, v2 dirs)
root@ip-172-31-10-142:~# mkdir -p app/volume
root@ip-172-31-10-142:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        6.8G  1.6G  5.2G  24% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  880K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda16      881M   76M  744M  10% /boot
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   12K   96M   1% /run/user/1000
/dev/xvdf        10G  228M   9.8G   3% /root/vcube/varsha
root@ip-172-31-10-142:~# ls
app  f1  f2  f3  snap  vcube
root@ip-172-31-10-142:~# mount /dev/xvdf app/volume
root@ip-172-31-10-142:~# ls
app  f1  f2  f3  snap  vcube
root@ip-172-31-10-142:~#
```