

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

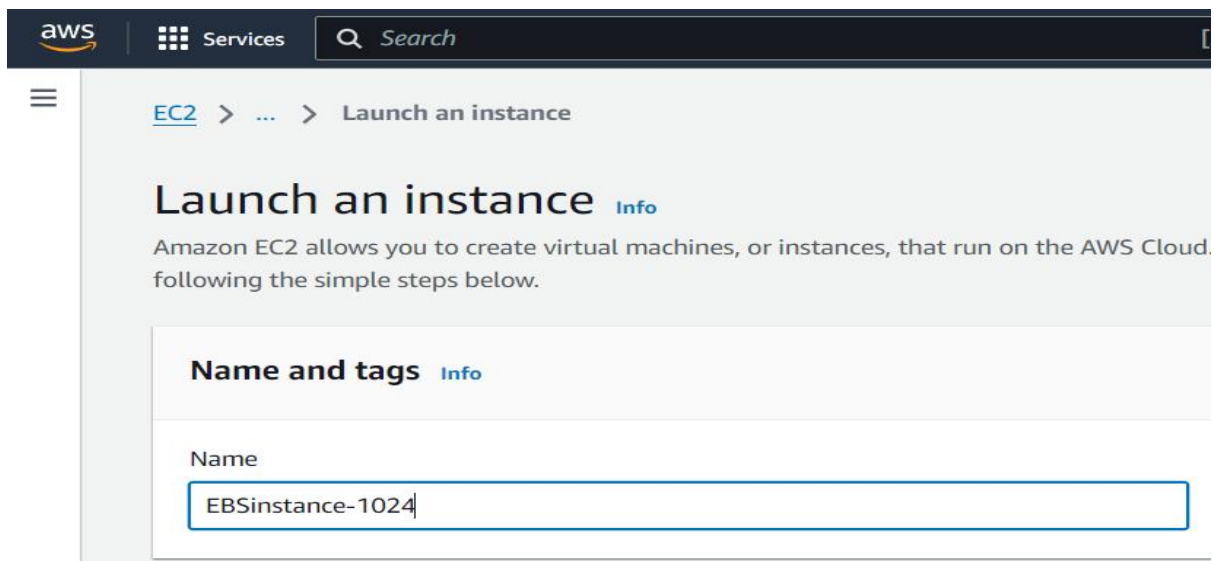
Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP1: LAUNCH ONE EC2 INSTANCE WITH SSH AND HTTP SECURITY GROUP



aws Services Search

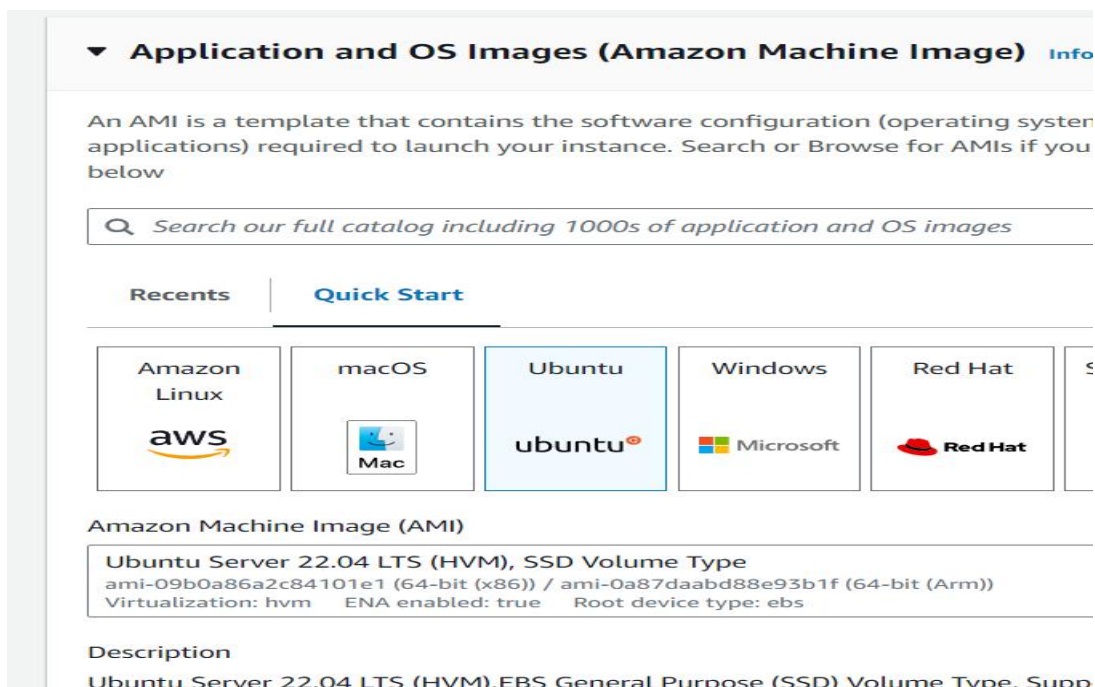
EC2 > ... > Launch an instance

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. following the simple steps below.

Name and tags Info

Name



▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system applications) required to launch your instance. Search or Browse for AMIs if you below

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

▼ **Instance type** [Info](#) | [Get advice](#)

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current ge
On-Demand Linux base pricing: 0.0124 USD per Hc
On-Demand Windows base pricing: 0.017 USD per Hc
On-Demand RHEL base pricing: 0.0268 USD per Hc
On-Demand Ubuntu Pro base pricing: 0.0142 USD
On-Demand SUSE base pricing: 0.0124 USD per Hc

[Additional costs apply for AMIs with pre-inst](#)

▼ **Key pair (login)** [Info](#)

You can use a key pair to securely connect to before you launch the instance.

Key pair name - *required*

IOdemo1

▼ **Network settings** [Info](#)

Network [Info](#)

vpc-0662aa9456cd34d0a | -defaultVPC-

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

[Additional charges apply](#) when outside of [free tier allowance](#)

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific t instance.

☐ Create security group

☒ Select existing security group

Common security groups [Info](#)

Select security groups

SG-CCSA-TY-1024 sg-08f4e0d7ab53772a8 X
VPC: vpc-0662aa9456cd34d0a

Security groups that you add or remove here will be added to or removed from all your network interfaces.

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

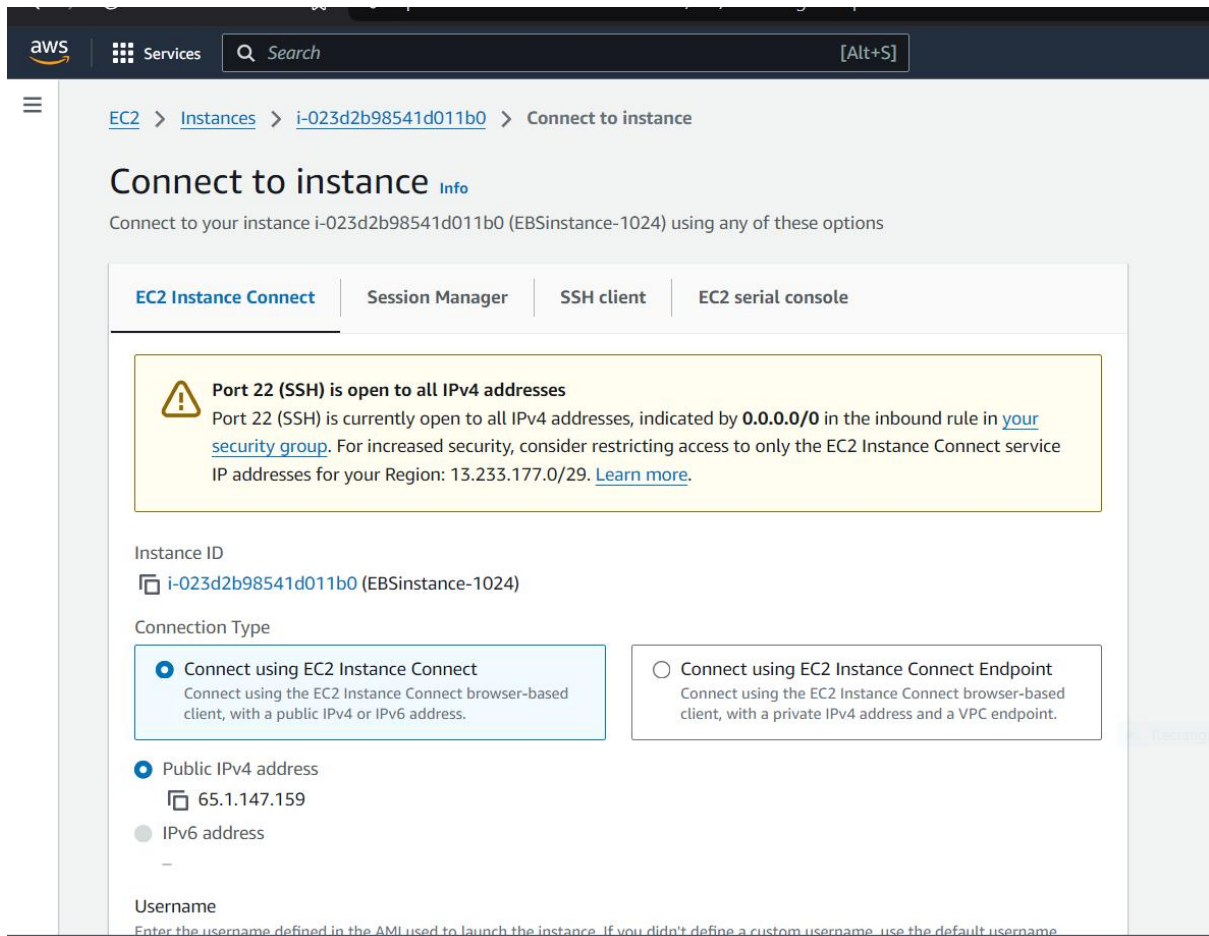
Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP2: CONNECT TO INSTANCE



The screenshot shows the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb navigation is EC2 > Instances > i-023d2b98541d011b0 > Connect to instance. The main heading is 'Connect to instance' with an 'Info' link. Below the heading, a message states: 'Connect to your instance i-023d2b98541d011b0 (EBSInstance-1024) using any of these options'. There are four tabs: 'EC2 Instance Connect' (selected), 'Session Manager', 'SSH client', and 'EC2 serial console'. A yellow warning box indicates: 'Port 22 (SSH) is open to all IPv4 addresses. Port 22 (SSH) is currently open to all IPv4 addresses, indicated by 0.0.0.0/0 in the inbound rule in your security group. For increased security, consider restricting access to only the EC2 Instance Connect service IP addresses for your Region: 13.233.177.0/29. Learn more.' Below the warning, the 'Instance ID' is shown as i-023d2b98541d011b0 (EBSInstance-1024). Under 'Connection Type', there are two main options: 'Connect using EC2 Instance Connect' (selected) and 'Connect using EC2 Instance Connect Endpoint'. The 'Connect using EC2 Instance Connect' option has a sub-option 'Public IPv4 address' which is selected, showing the IP address 65.1.147.159. There is also an option for 'IPv6 address' which is currently empty. At the bottom, the 'Username' field is visible with a placeholder text: 'Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username.'



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP3: go to root directory

```
ubuntu@ip-172-31-14-212:~$ sudo -i
root@ip-172-31-14-212:~#
```

STEP4: update the system

```
root@ip-172-31-14-212:~# apt-get update -y
Hit:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu
```

STEP5: Install the packages

```
root@ip-172-31-14-212:~#
root@ip-172-31-14-212:~# apt-get install wget zip unzip apache2 -y
Reading package lists... Done
```

Command for apache2 verification

```
root@ip-172-31-14-212:~#
root@ip-172-31-14-212:~# systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; vendor preset: enabled)
   Active: active (running) since Tue 2024-11-05 14:02:11 UTC; 1min 45s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 2513 (apache2)
```



**D Y PATIL
INTERNATIONAL
UNIVERSITY**
AKURDI PUNE

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP6: Go to Free CSS website and copy the zip link address of any html website



CARVILLA FREE CSS TEMPLATE

OUR S



Themesine

HTML 5

Responsive, 4 Columns

Dark on Light

Author Specific Licence

04 October 2023

Bootstrap, Cars, eCommerce, jQuery, Multipurpose, One Page, Online Shop, Responsive

Rectangular Shop

DOWNLOAD

LIVE DEMO

« [Inance Template](#) | [Templates](#) | [Neogym Template](#) »

PRN: 20220801024

5



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP7: Download the zip file in EC2 instance

```
root@ip-172-31-14-212:~#  
root@ip-172-31-14-212:~# wget https://www.free-css.com/assets/files/free-css-templates/download/page296/carvilla.zip
```

```
i-023d2b98541d011b0 (EBSinstance-1024)
```

```
root@ip-172-31-14-212:~# ls  
carvilla.zip snap
```

Unzip the zip file--

```
root@ip-172-31-14-212:~#  
root@ip-172-31-14-212:~# unzip carvilla.zip  
Archive: carvilla.zip  
creating: carvilla-v1.0/assets/
```

```
root@ip-172-31-14-212:~#  
root@ip-172-31-14-212:~# ls  
carvilla-v1.0 carvilla.zip snap  
root@ip-172-31-14-212:~#
```

Now go to that unzip folder and move all files and folder into server directory--

```
root@ip-172-31-14-212:~#  
root@ip-172-31-14-212:~# cd carvilla-v1.0/  
root@ip-172-31-14-212:~/carvilla-v1.0#
```

```
root@ip-172-31-14-212:~/carvilla-v1.0# ls  
assets index.html readme.txt
```

```
root@ip-172-31-3-118:~/carvilla-v1.0# mv * /var/www/html/  
root@ip-172-31-3-118:~/carvilla-v1.0# cd /var/www/html/  
root@ip-172-31-3-118:/var/www/html#
```

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

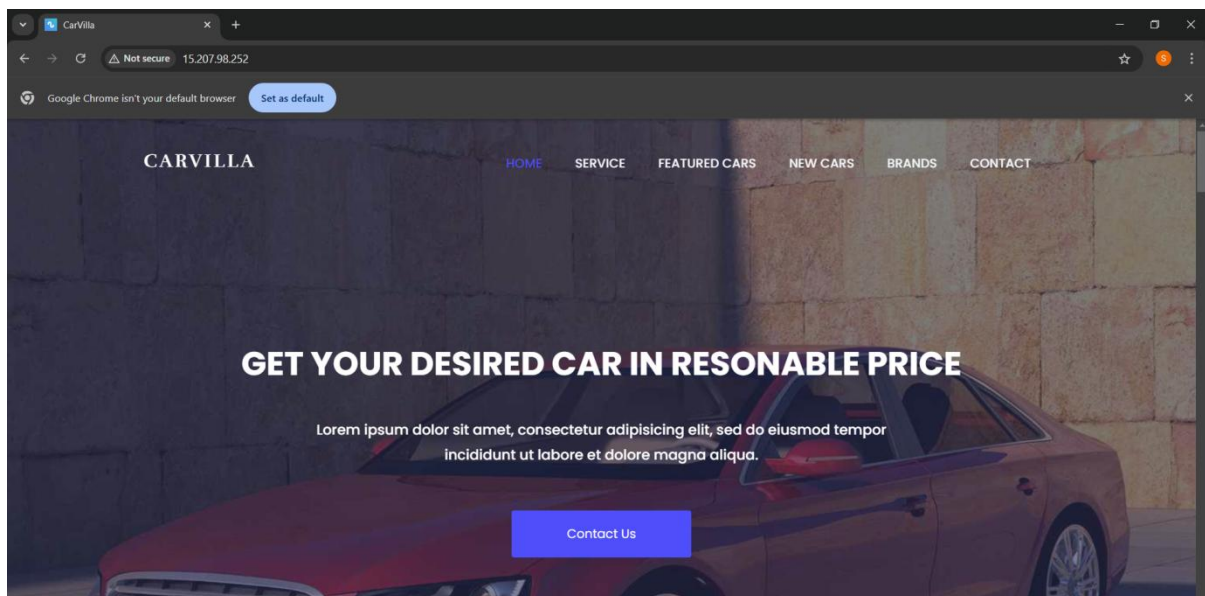
```
root@ip-172-31-3-118:/var/www/html# ls
assets index.html readme.txt
root@ip-172-31-3-118:/var/www/html#
```

```
root@ip-172-31-3-118:/var/www/html# cd assets/
root@ip-172-31-3-118:/var/www/html/assets#
```

```
root@ip-172-31-3-118:/var/www/html/assets# ls
css fonts images js logo
```

```
root@ip-172-31-3-118:/var/www/html/assets# cd images/
root@ip-172-31-3-118:/var/www/html/assets/images# ls
brand clients featured-cars new-cars-model welcome-hero
root@ip-172-31-3-118:/var/www/html/assets/images#
```

STEP8: check in browser if website is visible



Move to temp file



**D Y PATIL
INTERNATIONAL
UNIVERSITY**
AKURDI PUNE

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

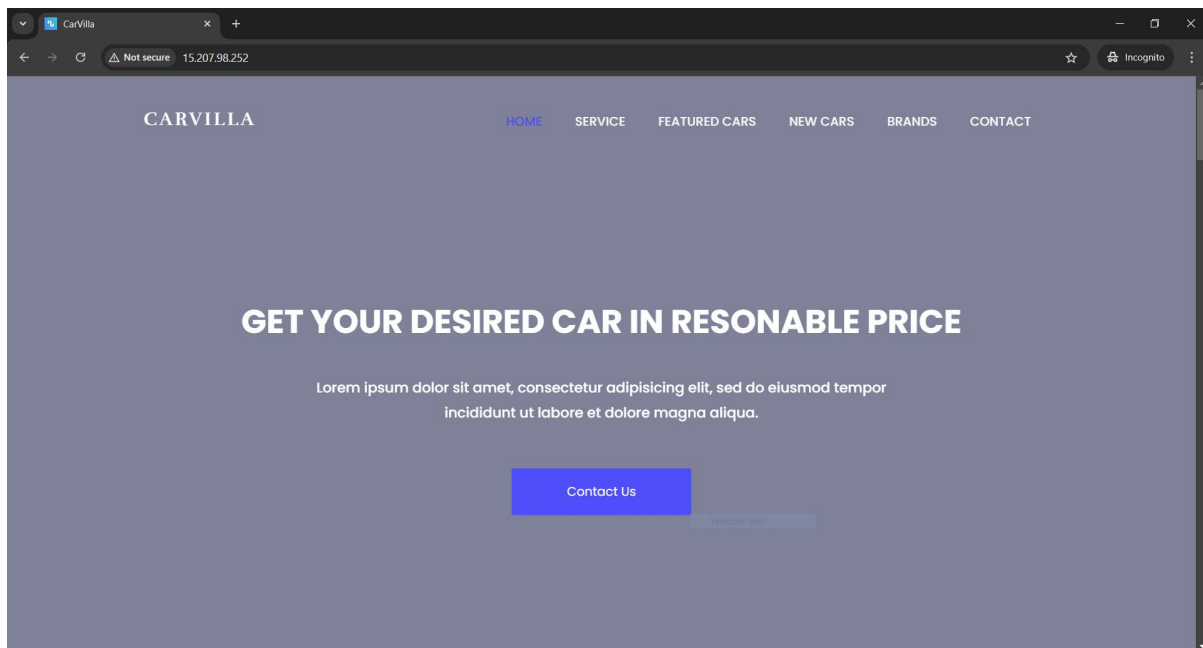
PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
root@ip-172-31-3-118:/var/www/html/assets/images#  
root@ip-172-31-3-118:/var/www/html/assets/images# mkdir /tmp/all-img  
root@ip-172-31-3-118:/var/www/html/assets/images# mv * /tmp/all-img/  
root@ip-172-31-3-118:/var/www/html/assets/images# ls  
root@ip-172-31-3-118:/var/www/html/assets/images#
```

Refresh the page---



```
root@ip-172-31-3-118:/var/www/html/assets/images# cd  
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# ls /tmp/all-img/  
brand clients featured-cars new-cars-model welcome-hero  
root@ip-172-31-3-118:~#
```


School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

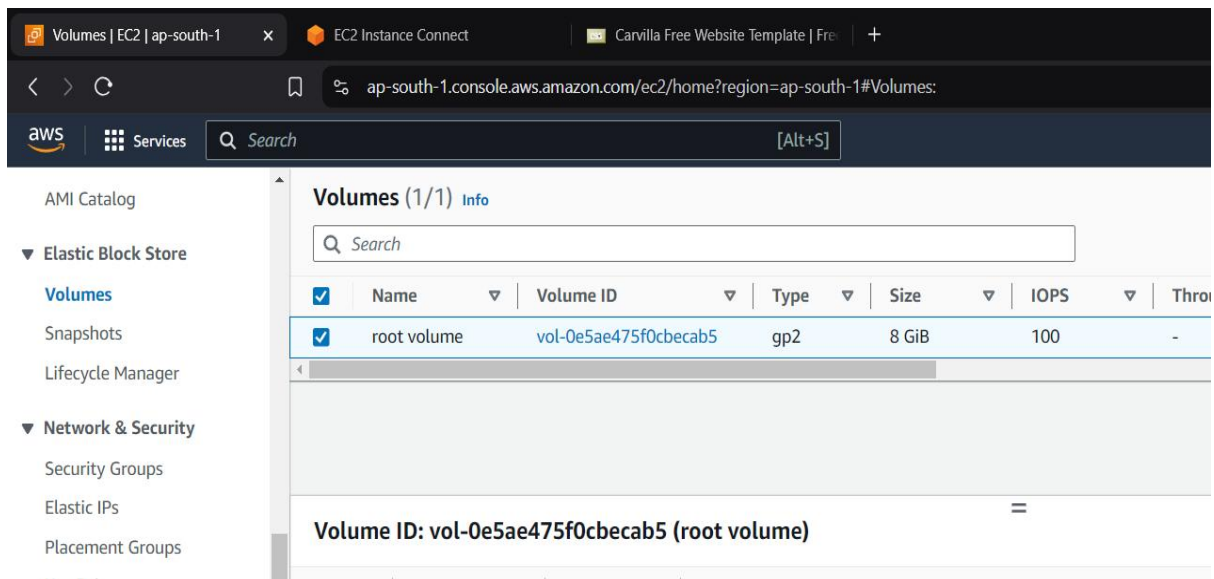
PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP9: create one ebs volume and attach to ec2

This is root volume--

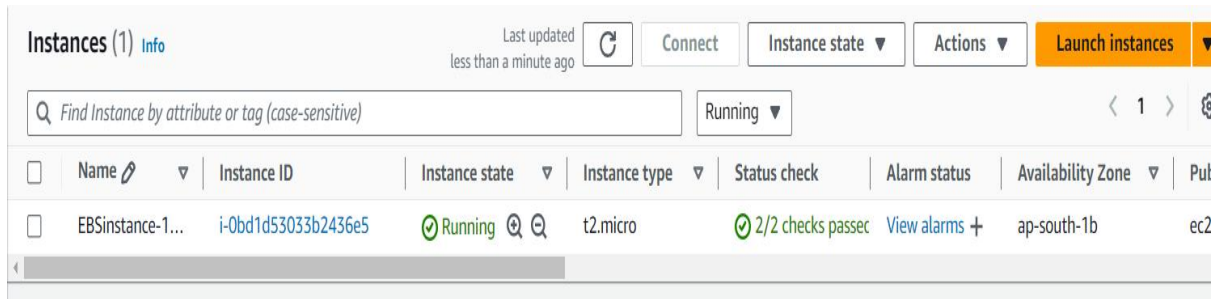


The screenshot shows the AWS Management Console for the 'ap-south-1' region. The left sidebar shows the 'Elastic Block Store' section with 'Volumes' selected. The main content area displays 'Volumes (1/1)' with a table containing one volume:

<input checked="" type="checkbox"/>	Name	Volume ID	Type	Size	IOPS	Throughput
<input checked="" type="checkbox"/>	root volume	vol-0e5ae475f0cbecab5	gp2	8 GiB	100	-

Below the table, the 'Volume ID: vol-0e5ae475f0cbecab5 (root volume)' is displayed.

Go to instance and check the Availability Zone of your instance, as AZ of Volume must be same as instance



The screenshot shows the AWS Management Console for the 'ap-south-1' region. The left sidebar shows the 'EC2' section with 'Instances' selected. The main content area displays 'Instances (1)' with a table containing one instance:

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Platform
<input type="checkbox"/>	EBSInstance-1...	i-0bd1d53033b2436e5	Running	t2.micro	2/2 checks passed	View alarms	ap-south-1b	ec2

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

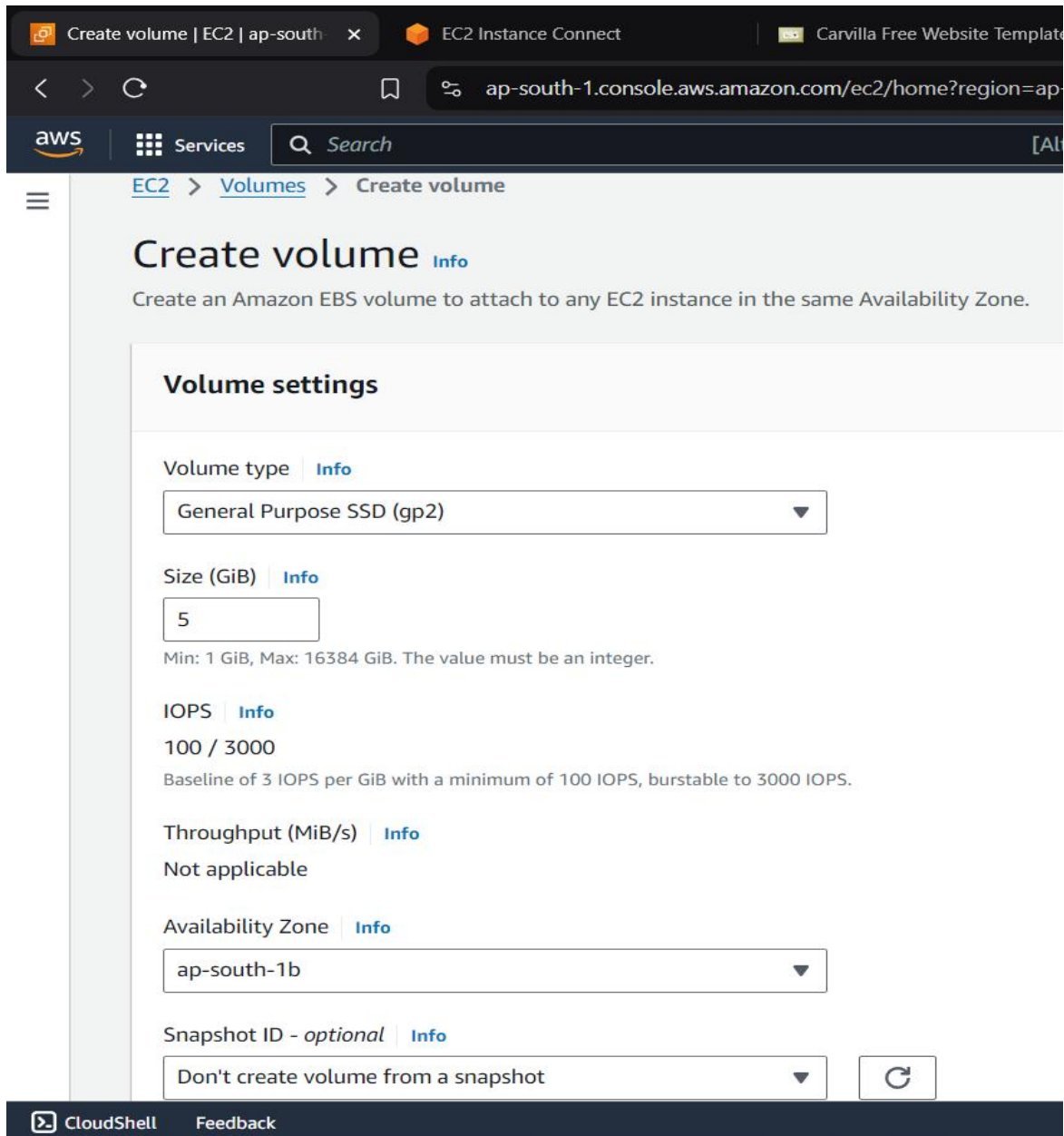
Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

Create volume



Create volume | EC2 | ap-south-1 | x

EC2 Instance Connect

Carvilla Free Website Template

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1

aws Services Search [Alt]

EC2 > Volumes > Create volume

Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone.

Volume settings

Volume type [Info](#)

General Purpose SSD (gp2)

Size (GiB) [Info](#)

5

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

IOPS [Info](#)

100 / 3000

Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS.

Throughput (MiB/s) [Info](#)

Not applicable

Availability Zone [Info](#)

ap-south-1b

Snapshot ID - optional [Info](#)

Don't create volume from a snapshot

CloudShell Feedback

School of Computer Science, Engineering and Applications(SCSEA)
B.C.A. TY (CCSA)
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav **PRN:** 20220801024

Title of Practical : Managing and Optimizing Amazon EBS Volumes in AWS

✓ Successfully created volume [vol-01472b970ad2ee274](#).

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

🔍 Search

	Name	Volume ID	Type	Size	IOPS	Thru
<input checked="" type="checkbox"/>	new_5G_1024	vol-01472b970ad2ee274	gp2	5 GiB	100	-
<input type="checkbox"/>	root volume	vol-0e5ae475f0cbcab5	gp2	8 GiB	100	-

The volume created is not attached yet to the instance--

```
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M    0  479M   0% /dev/shm
tmpfs            192M  872K  191M   1% /run
tmpfs            5.0M    0   5.0M   0% /run/lock
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   4.0K   96M   1% /run/user/1000
root@ip-172-31-3-118:~#
```

Go to volume and attach it to instance--

✓ Successfully created volume [vol-01472b970ad2ee274](#).

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

🔍 Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot
<input checked="" type="checkbox"/>	new_5G_1024	vol-01472b970ad2ee274	gp2	5 GiB	100	-	-
<input type="checkbox"/>	root volume	vol-0e5ae475f0cbcab5	gp2	8 GiB	100	-	snap-03ca

Actions

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

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

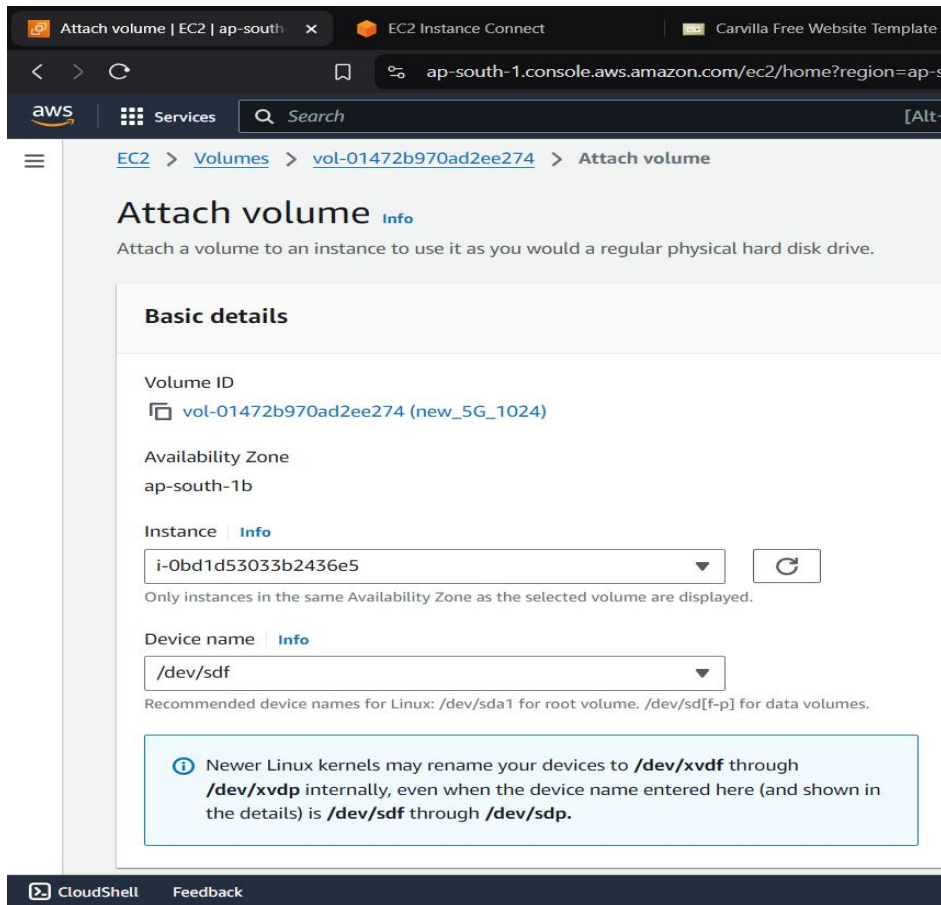
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS



Attach volume | EC2 | ap-south-1 | EC2 Instance Connect | Carvilla Free Website Template

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1

Services Search [Alt+]

EC2 > Volumes > vol-01472b970ad2ee274 > Attach volume

Attach volume Info

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID
vol-01472b970ad2ee274 (new_5G_1024)

Availability Zone
ap-south-1b

Instance Info
i-0bd1d53033b2436e5

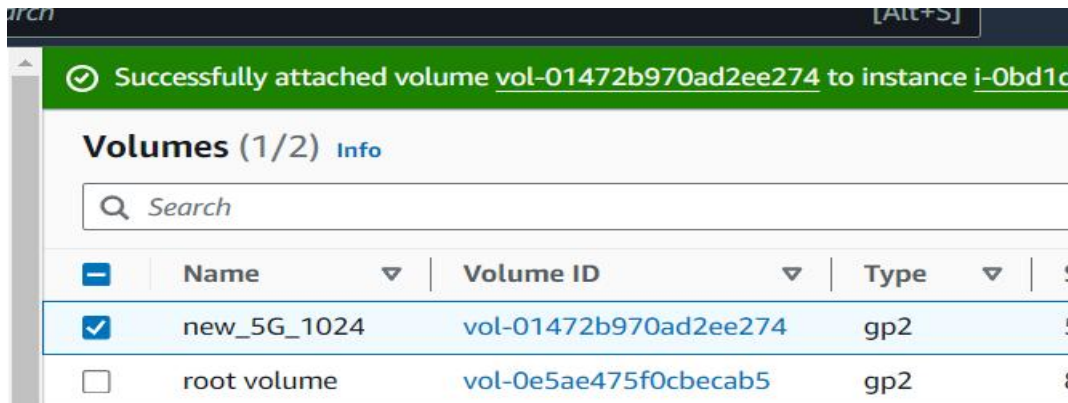
Only instances in the same Availability Zone as the selected volume are displayed.

Device name Info
/dev/sdf

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

ⓘ 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.

CloudShell Feedback



Successfully attached volume vol-01472b970ad2ee274 to instance i-0bd1d53033b2436e5

Volumes (1/2) Info

Search

	Name	Volume ID	Type	Size
<input checked="" type="checkbox"/>	new_5G_1024	vol-01472b970ad2ee274	gp2	5 GiB
<input type="checkbox"/>	root volume	vol-0e5ae475f0cbcab5	gp2	8 GiB



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

STEP10: Partition the volume

Check whether attach volume is available in ec2 or not, use 'fdisk -l' command

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# fdisk -l  
Disk /dev/loop0: 25.24 MiB, 26464256 bytes, 51688 sectors  
Units: sectors of 1 * 512 = 512 bytes  
Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

Start partition---

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# fdisk /dev/xvdf  
  
Welcome to fdisk (util-linux 2.37.2).  
Changes will remain in memory only, until you decide  
Be careful before using the write command.
```

```
Created a new DOS disklabel with disk label:   
Command (m for help): m  
  
Help:  
  
DOS (MBR)  
a toggle a bootable flag
```

n - New partition



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
Command (m for help): n
Partition type
  p   primary (0 primary, 0 extended, 4 free)
  e   extended (container for logical partitions)
Select (default p):
```

p - Primary partition

```
  e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1):
```

```
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-10485759, default 2048):
Last sector, +/-sectors or +/-size[K,M,G,T,P] (2048-10485759, default 10485759):

Created a new partition 1 of type 'Linux' and of size 5 GiB.
Command (m for help):
```

p - View partition table

```
Command (m for help): p
Disk /dev/xvdf: 5 GiB, 5368709120 bytes, 10485760 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xe5d49732

Device      Boot Start      End  Sectors  Size Id Type
/dev/xvdf1           2048 10485759 10483712    5G 83 Linux

Command (m for help):
```

w - Write changes

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.

root@ip-172-31-3-118:~#
```

Check partition done or not---

```
root@ip-172-31-3-118:~# fdisk -l
Disk /dev/loop0: 25.24 MiB, 26464256 bytes, 516
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512
I/O size (minimum/optimal): 512 bytes / 512 byt
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xe5d49732

Device            Boot Start      End  Sectors  Size Id Type
/dev/xvdf1         2048 10485759 10483712    5G 83 Linux
root@ip-172-31-3-118:~#
```

i-0bd1d53033b2436e5 (EBSinstance-1024)

format partition: mkfs.ext4 /dev/xvdd1.

```
root@ip-172-31-3-118:~# mkfs.ext4 /dev/xvdf1
mke2fs 1.46.5 (30-Dec-2021)
Creating filesystem with 1310464 4k blocks and 327680 inodes
Filesystem UUID: bc43a54b-5b2e-4d33-82f6-ae6eb9e745a2
Superblock backups stored on blocks:
    32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

root@ip-172-31-3-118:~#
```

Permanent mounting--



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
root@ip-172-31-3-118:~# vi /etc/fstab
root@ip-172-31-3-118:~#
```

The screenshot shows the AWS console interface for an EC2 instance. The top navigation bar includes 'Volumes | EC2 | ap-south-1', 'EC2 Instance Connect', and a search bar. The main content area displays the terminal output of an SSH session. The terminal shows the root user at an IP address, editing the /etc/fstab file. The output of the 'cat /etc/fstab' command is visible, showing the following entries:

```
i.LABEL=cloudimg-rootfs / ext4 discard,errors=remount-ro 0 1
LABEL=UEFI /boot/efi vfat umask=0077 0 1
/dev/xvdf1 /var/www/html/assets/images ext4 defaults 0 0
```

Below the terminal output, the instance ID 'i-0bd1d53033b2436e5 (EBSinstance-1024)' and its public/private IP addresses are listed.



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
root@ip-172-31-3-118:~# mount -a
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M    0  479M   0% /dev/shm
tmpfs            192M  880K  191M   1% /run
tmpfs            5.0M    0  5.0M   0% /run/lock
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs             96M   4.0K   96M   1% /run/user/1000
/dev/xvdf1       4.9G   24K   4.6G   1% /var/www/html/assets/images
root@ip-172-31-3-118:~#
```

```
/dev/xvdf1       4.9G   24K   4.6G   1%
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# reboot
```

```
ubuntu@ip-172-31-3-118:~$
ubuntu@ip-172-31-3-118:~$ sudo -i
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M    0  479M   0% /dev/shm
tmpfs            192M  888K  191M   1% /run
tmpfs            5.0M    0  5.0M   0% /run/lock
/dev/xvdf1       4.9G   24K   4.6G   1% /var/www/html/assets/images
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs             96M   4.0K   96M   1% /run/user/1000
root@ip-172-31-3-118:~#
```

BACKUP AND RECOVERY



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
Last login: Tue Nov  5 16:08:47 2024 from 13.233.177.4
ubuntu@ip-172-31-3-118:~$
ubuntu@ip-172-31-3-118:~$
ubuntu@ip-172-31-3-118:~$
ubuntu@ip-172-31-3-118:~$ sudo -i
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  888K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvdf1       4.9G   24K  4.6G   1% /var/www/html/assets/ima
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   4.0K   96M   1% /run/user/1000
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# ls
carvilla-v1.0  carvilla.zip  snap
root@ip-172-31-3-118:~# rm -rf carvilla-v1.0/
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# ls
carvilla.zip  snap
root@ip-172-31-3-118:~# unzip carvilla.zip
Archive:  carvilla.zip
  creating: carvilla-v1.0/assets/
  creating: carvilla-v1.0/assets/css/
  inflating: carvilla-v1.0/assets/css/animate.css
```


School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

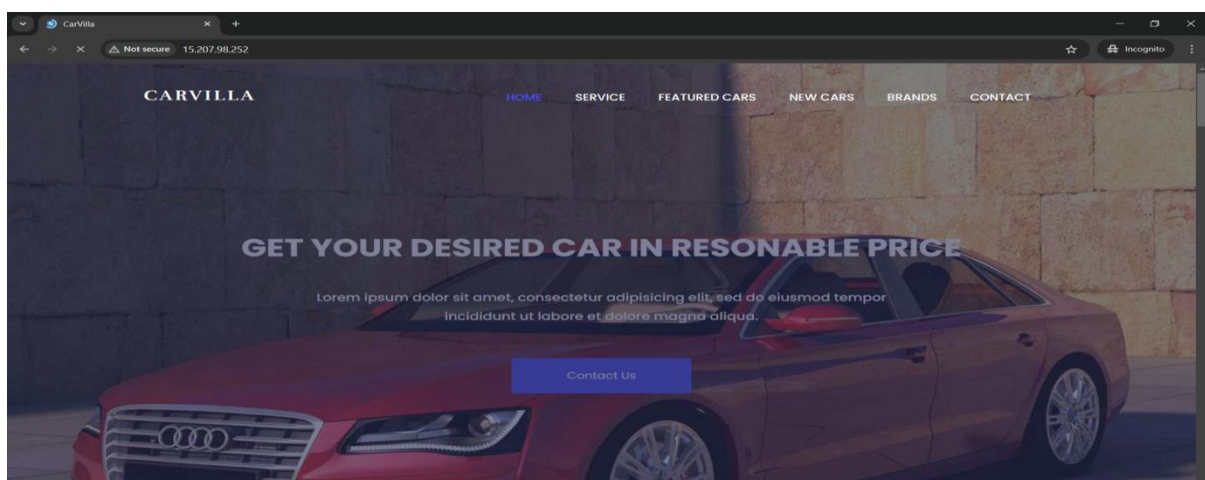
```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# ls  
carvilla-v1.0  carvilla.zip  snap  
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~# cd carvilla-v1.0/  
root@ip-172-31-3-118:~/carvilla-v1.0#
```

```
root@ip-172-31-3-118:~/carvilla-v1.0# cd assets/  
root@ip-172-31-3-118:~/carvilla-v1.0/assets# ls  
css  fonts  images  js  logo  
root@ip-172-31-3-118:~/carvilla-v1.0/assets#
```

```
root@ip-172-31-3-118:~/carvilla-v1.0/assets# cd images/  
root@ip-172-31-3-118:~/carvilla-v1.0/assets/images# ls  
brand  clients  featured-cars  new-cars-model  welcome-hero  
root@ip-172-31-3-118:~/carvilla-v1.0/assets/images#
```

```
root@ip-172-31-3-118:~/carvilla-v1.0/assets/images# mv * /var/www/html/assets/images/  
root@ip-172-31-3-118:~/carvilla-v1.0/assets/images# cd  
root@ip-172-31-3-118:~#
```





School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# cd /var/www/html/assets/images/  
root@ip-172-31-3-118:/var/www/html/assets/images# ls  
assets brand clients featured-cars index.html lost+found new-cars-model readme.txt welcome-hero  
root@ip-172-31-3-118:/var/www/html/assets/images#
```

```
root@ip-172-31-3-118:/var/www/html/assets/images#  
root@ip-172-31-3-118:/var/www/html/assets/images# cd  
root@ip-172-31-3-118:~# df -h  
Filesystem      Size  Used Avail Use% Mounted on  
/dev/root        7.6G  1.9G  5.8G  25% /  
tmpfs            479M    0  479M   0% /dev/shm  
tmpfs            192M  888K  191M   1% /run  
tmpfs            5.0M    0   5.0M   0% /run/lock  
/dev/xvdf1       4.9G  4.7M  4.6G   1% /var/www/html/assets/images  
/dev/xvda15      105M   6.1M   99M   6% /boot/efi  
tmpfs            96M   4.0K   96M   1% /run/user/1000  
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# umount /var/www/html/assets/images/  
root@ip-172-31-3-118:~#
```

i-0bd1d53033b2436e5 (EBSinstance-1024)

Here xvdf1 isn't visible---('df -h' command)

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# umount /var/www/html/assets/images/  
root@ip-172-31-3-118:~# df -h  
Filesystem      Size  Used Avail Use% Mounted on  
/dev/root        7.6G  1.9G  5.8G  25% /  
tmpfs            479M    0  479M   0% /dev/shm  
tmpfs            192M  888K  191M   1% /run  
tmpfs            5.0M    0   5.0M   0% /run/lock  
/dev/xvda15      105M   6.1M   99M   6% /boot/efi  
tmpfs            96M   4.0K   96M   1% /run/user/1000  
root@ip-172-31-3-118:~#
```



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

Try with 'fdisk -l' and its visible---

```
Disk /dev/xvdf: 5 GiB, 5368709120 bytes, 10485760 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disklabel type: dos
Disk identifier: 0xe5d49732
```

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/xvdf1		2048	10485759	10483712	5G	83	Linux

For disaster recovery we need snapshot and we haven't created snapshot so for now do temporary mounting and take snapshot of volume

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# mount /dev/xvdf1 /var/www/html/assets/images/
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs           479M    0  479M   0% /dev/shm
tmpfs           192M  888K  191M   1% /run
tmpfs           5.0M    0   5.0M   0% /run/lock
/dev/xvda15     105M   6.1M   99M   6% /boot/efi
tmpfs           96M   4.0K   96M   1% /run/user/1000
/dev/xvdf1      4.9G  4.7M  4.6G   1% /var/www/html/assets/images
root@ip-172-31-3-118:~#
```

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

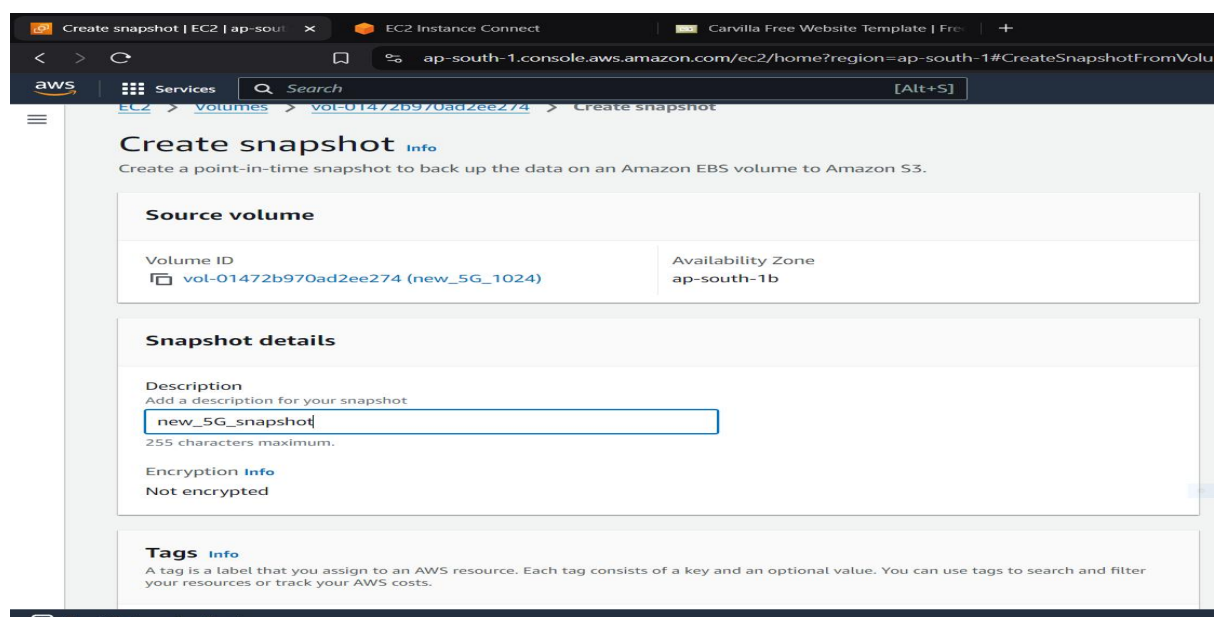
Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# df -h  
Filesystem      Size  Used Avail Use% Mounted on  
/dev/root       7.6G  1.9G  5.8G  25% /  
tmpfs           479M    0  479M   0% /dev/shm  
tmpfs           192M  888K  191M   1% /run  
tmpfs           5.0M    0   5.0M   0% /run/lock  
/dev/xvda15     105M   6.1M   99M   6% /boot/efi  
tmpfs           96M   4.0K   96M   1% /run/user/1000  
/dev/xvdf1      4.9G  4.7M  4.6G   1% /var/www/html/assets/images  
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#  
root@ip-172-31-3-118:~# ls -l /var/www/html/assets/images/  
total 76  
drwxr-xr-x 7 root root  4096 May 24  2018 assets  
drwxr-xr-x 2 root root  4096 May 24  2018 brand  
drwxr-xr-x 2 root root  4096 May 24  2018 clients  
drwxr-xr-x 2 root root  4096 May 26  2018 featured-cars  
-rw-r--r-- 1 root root 30896 Jun  5  2018 index.html  
drwx----- 2 root root 16384 Nov  5 16:40 lost+found  
drwxr-xr-x 2 root root  4096 May 26  2018 new-cars-model  
-rw-r--r-- 1 root root   889 Jun 13  2018 readme.txt  
drwxr-xr-x 2 root root  4096 May 26  2018 welcome-hero  
root@ip-172-31-3-118:~#
```

Take snapshot ---



The screenshot shows the AWS Management Console interface for creating a snapshot. The breadcrumb navigation indicates the path: EC2 > Volumes > vol-01472b970ad2ee274 > Create snapshot. The main heading is 'Create snapshot' with an 'Info' link. Below the heading, a description states: 'Create a point-in-time snapshot to back up the data on an Amazon EBS volume to Amazon S3.'

The form is divided into three sections:

- Source volume:** Contains a 'Volume ID' field with the value 'vol-01472b970ad2ee274 (new_5G_1024)' and an 'Availability Zone' field with the value 'ap-south-1b'.
- Snapshot details:** Contains a 'Description' field with the value 'new_5G_snapshot' and a note '255 characters maximum.' Below this is an 'Encryption' section with an 'Info' link and the text 'Not encrypted'.
- Tags:** Contains an 'Info' link and a description: '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.'

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

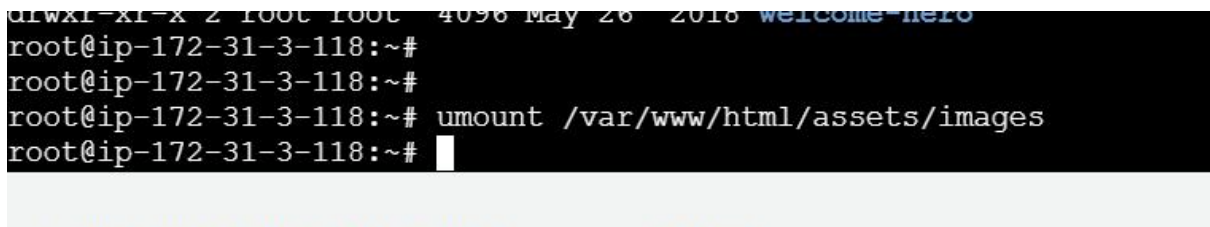
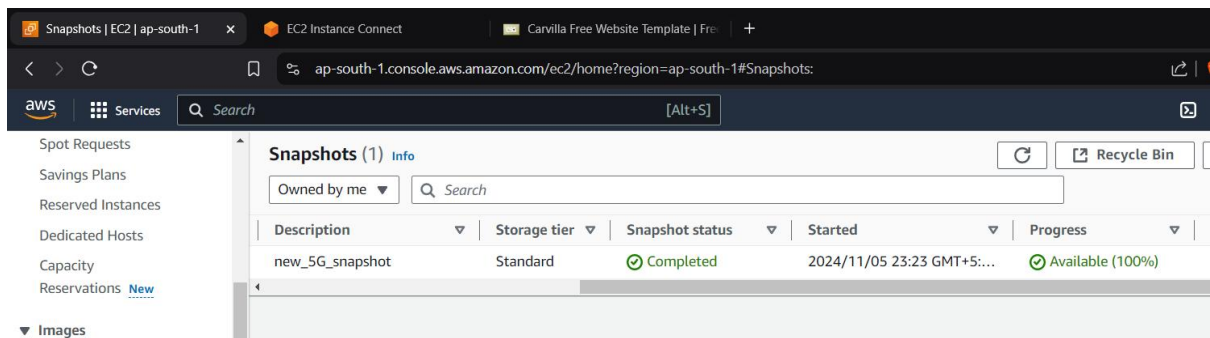
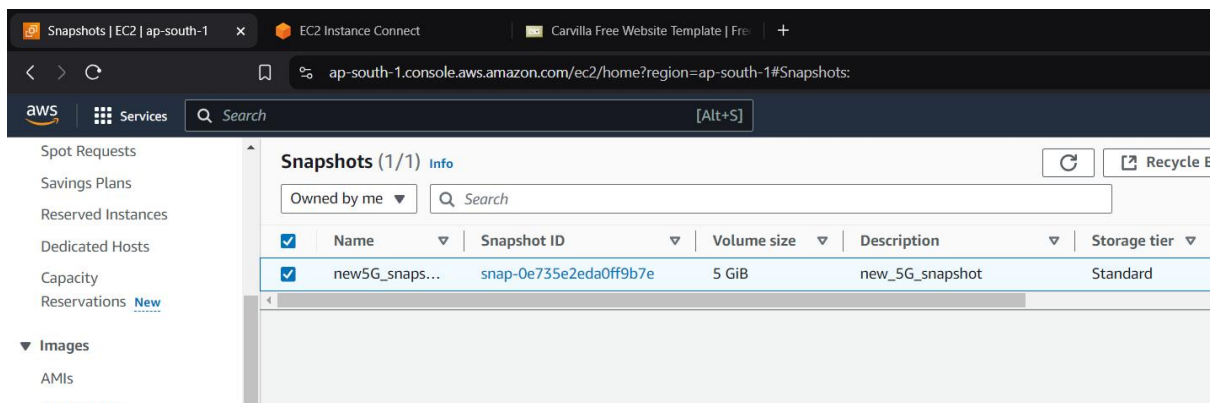
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

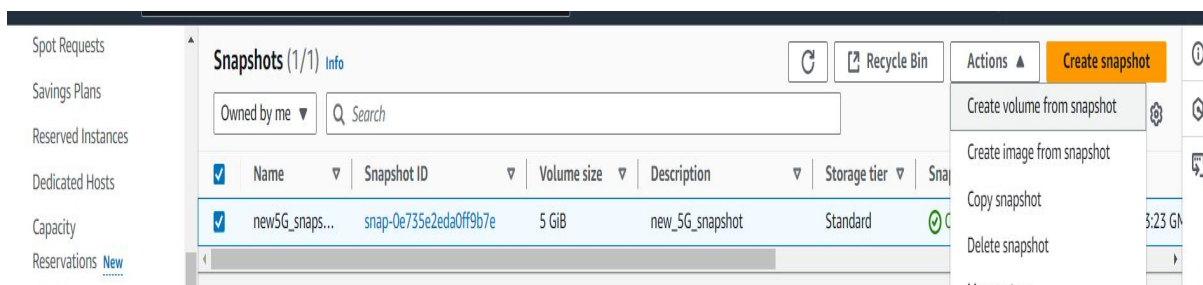
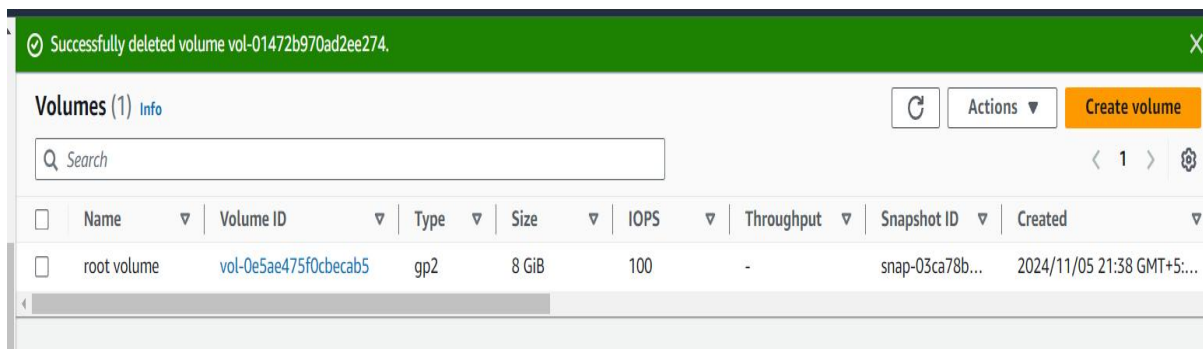
Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

Now manually delete the new volume and we will restore it using snapshot.



Now create volume from snapshot----



**D Y PATIL
INTERNATIONAL
UNIVERSITY**
AKURDI PUNE

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

Create volume [Info](#)

Create an Amazon EBS volume to attach to any EC2 instance in the same Availability Zone

Volume settings

Snapshot ID
 [snap-0e735e2eda0ff9b7e \(new5G_snapshot\)](#)

Volume type [Info](#)
General Purpose SSD (gp2)

Size (GiB) [Info](#)
5
Min: 1 GiB, Max: 16384 GiB. The value must be an integer.

IOPS [Info](#)
100 / 3000
Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS.

Throughput (MiB/s) [Info](#)
Not applicable

Availability Zone [Info](#)
ap-south-1b

PRN: 20220801024

25



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

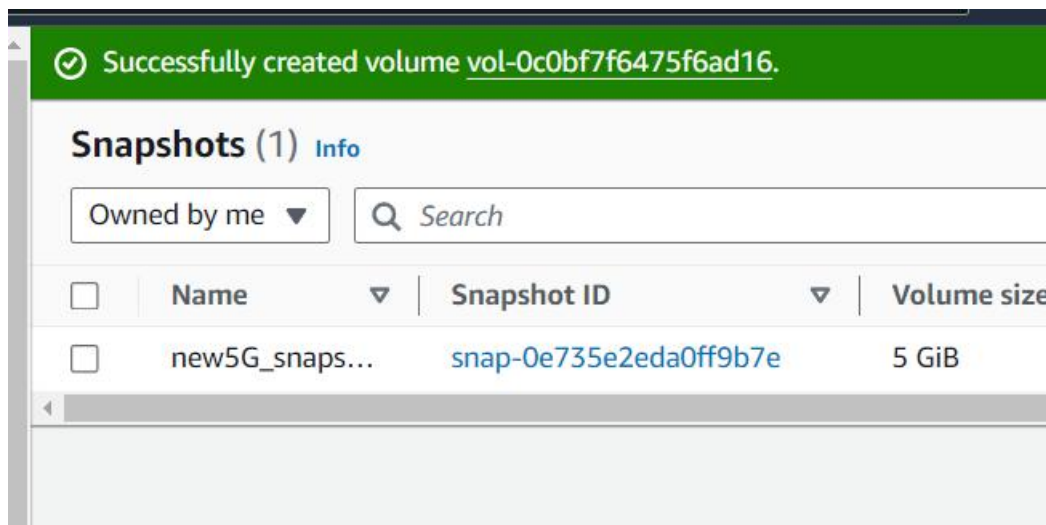
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

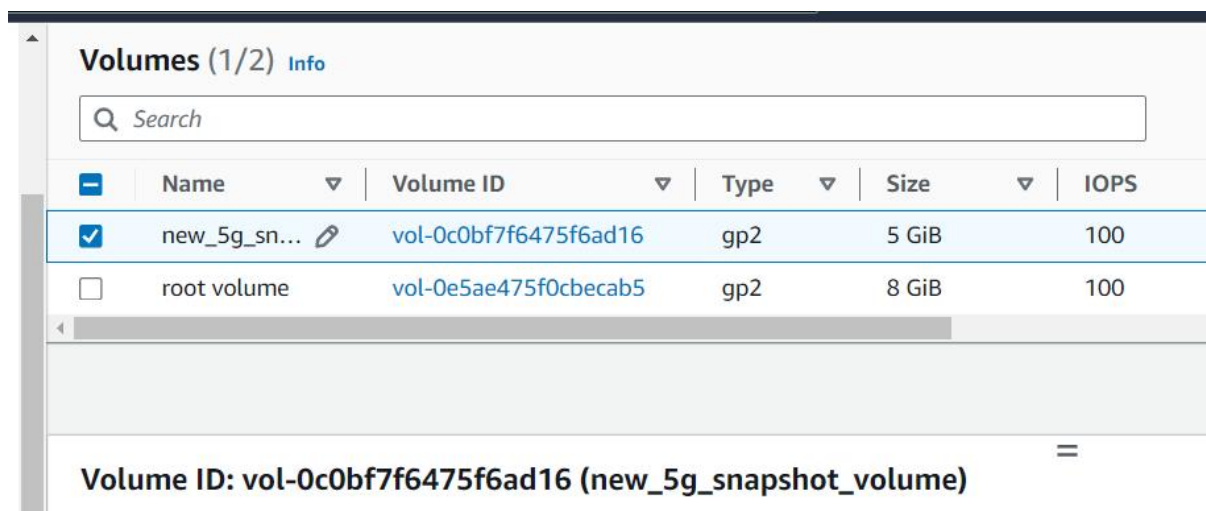
PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS



New volume created---





School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

Attach volume again to the instance---

Attach volume | EC2 | ap-south-1 | EC2 Instance Connect | Carvilla Free Website Template | Fr

ap-south-1.console.aws.amazon.com/ec2/home?region=ap-sou

aws Services Search [Alt+S]

EC2 > Volumes > vol-0c0bf7f6475f6ad16 > Attach volume

Attach volume [Info](#)

Attach a volume to an instance to use it as you would a regular physical hard disk drive.

Basic details

Volume ID
vol-0c0bf7f6475f6ad16 (new_5g_snapshot_volume)

Availability Zone
ap-south-1b

Instance [Info](#)
i-0bd1d53033b2436e5 [Refresh](#)

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.

[Info](#) 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**.



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
Disk identifier: 0xe5d49732
```

```
Device      Boot Start      End  Sectors  Size Id Type
/dev/xvdf1   2048 10485759 10483712    5G 83 Lin
root@ip-172-31-3-118:~#
```

i-0bd1d53033b2436e5 (EBSinstance-1024)

PublicIPs: 15.207.98.252 PrivateIPs: 172.31.3.118

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  888K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   4.0K   96M   1% /run/user/1000
root@ip-172-31-3-118:~#
```

i-0bd1d53033b2436e5 (EBSinstance-1024)

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# ls -l /var/www/html/assets/images/
total 0
root@ip-172-31-3-118:~#
```

i-0bd1d53033b2436e5 (EBSinstance-1024)



School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS

```
total 0
root@ip-172-31-3-118:~# mount /dev/xvdf1 /var/www/html/assets/images/
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/root        7.6G  1.9G  5.8G  25% /
tmpfs            479M   0  479M   0% /dev/shm
tmpfs            192M  888K  191M   1% /run
tmpfs            5.0M   0   5.0M   0% /run/lock
/dev/xvda15      105M   6.1M   99M   6% /boot/efi
tmpfs            96M   4.0K   96M   1% /run/user/1000
/dev/xvdf1       4.9G   4.7M   4.6G   1% /var/www/html/assets/images
root@ip-172-31-3-118:~#
```

```
root@ip-172-31-3-118:~#
root@ip-172-31-3-118:~# ls -l /var/www/html/assets/images/
total 76
drwxr-xr-x 7 root root 4096 May 24 2018 assets
drwxr-xr-x 2 root root 4096 May 24 2018 brand
drwxr-xr-x 2 root root 4096 May 24 2018 clients
drwxr-xr-x 2 root root 4096 May 26 2018 featured-cars
-rw-r--r-- 1 root root 30896 Jun 5 2018 index.html
drwx----- 2 root root 16384 Nov 5 16:40 lost+found
drwxr-xr-x 2 root root 4096 May 26 2018 new-cars-model
-rw-r--r-- 1 root root 889 Jun 13 2018 readme.txt
drwxr-xr-x 2 root root 4096 May 26 2018 welcome-hero
root@ip-172-31-3-118:~#
```

School of Computer Science, Engineering and Applications(SCSEA)

B.C.A. TY (CCSA)

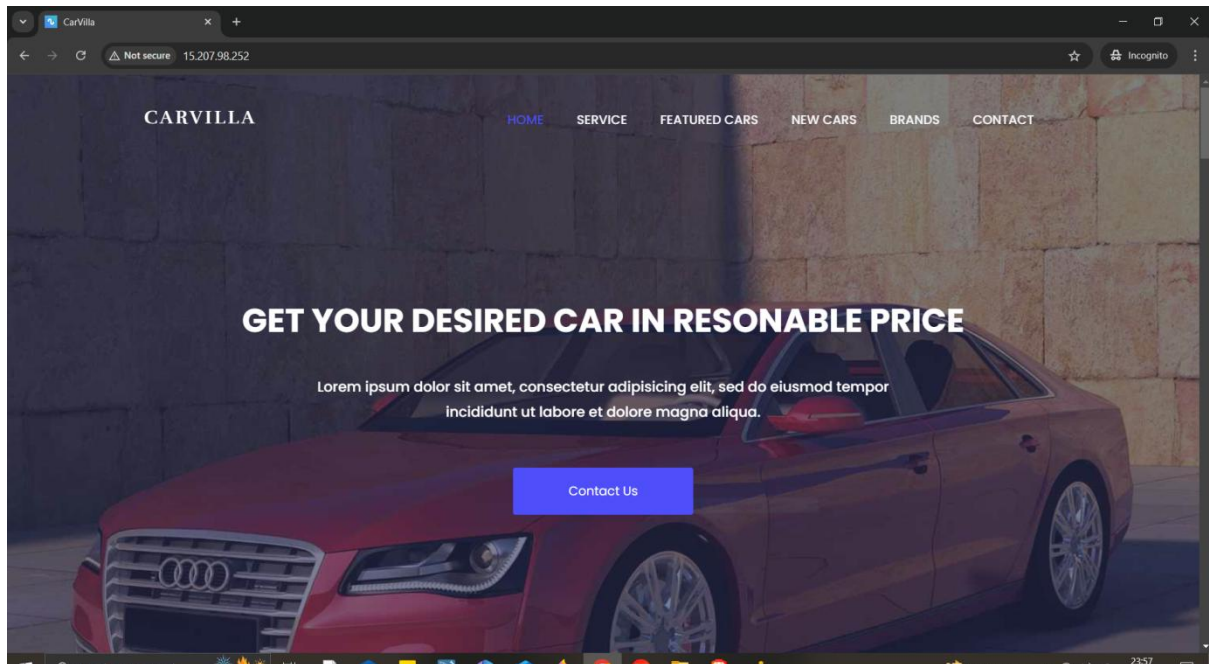
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav

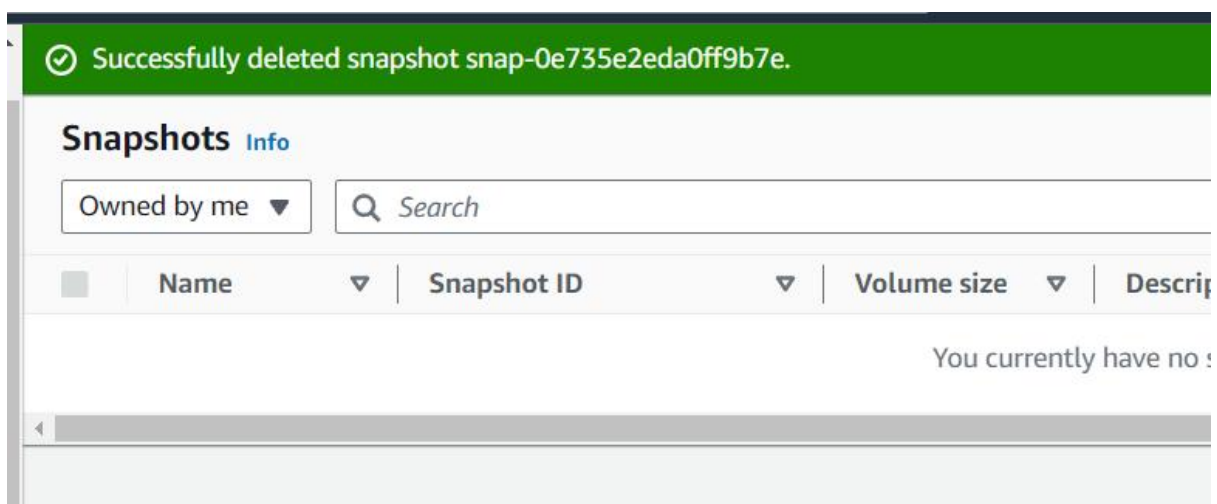
PRN: 20220801024

Title of Practical :

Managing and Optimizing Amazon EBS Volumes in AWS



Delete---



Delete---

School of Computer Science, Engineering and Applications(SCSEA)
B.C.A. TY (CCSA)
Subject : Infrastructure Orchestration (P)

Name of the Student: Shrushti Krishna shrivastav **PRN:** 20220801024

Title of Practical : Managing and Optimizing Amazon EBS Volumes in AWS

