

Virtual Systems and Services

Working with EBS

LAB # 04

Name : Usama Basharat

Roll no : BITF20M528

LAB 04

Lab-4

Grades for bitf20m528@

Workbench - Vocareum

labs.vocareum.com/main/main.php?m=clabide&mode=s&asnid=2610322&stepid=2610323&hideNavBar=1

AWS


Start LabEnd LabAWS DetailsDetails

SubmitSubmission ReportGrades

EN-US

Lab 4: Working with EBS

Lab Overview



```
graph LR; EC2[Amazon EC2 Instance] -- Attached --> EBS[Amazon Elastic Block Store (EBS) volume]; EBS -- Created --> Snapshot[Snapshot]
```

This lab focuses on Amazon Elastic Block Store (Amazon EBS), a key underlying storage mechanism for Amazon EC2 instances. In this lab, you will learn how to create an Amazon EBS volume, attach it to an instance, apply a file system to the volume, and then take a snapshot backup.

Topics covered

Assignment details

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Workbench - Vocareum

Console Home | Console

us-east-1.console.aws.amazon.com/console/home?region=us-east-1#

aws

Services

Search

[Alt+S]

N. Virginia

voclabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

☰

Console Home

Info

Reset to default layout

+ Add widgets

Recently visited

Info

IAM

EC2

View all services

Applications (0)

Info

Create application

Region: US East (N. Virginia)

us-east-1 (Current Region)

Find applications

< 1 >

Name	Description	Region	Originating a...
No applications			
Get started by creating an application.			
Create application			

Go to myApplications

CloudShell

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Assignment detailsGrades for bitf20m528Workbench - VocareumCreate volume | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateVolume:

ServicesSearch[Alt+S]

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EC2 > Volumes > Create volume

Create volumeInfo

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

Volume settings

Volume typeInfo

General Purpose SSD (gp2)

Size (GiB)Info

1

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

IOPSInfo

100 / 3000

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

Throughput (MiB/s)Info

Not applicable

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Assignment detailsGrades for bitf20m528Workbench - VocareumVolumes | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:

ServicesSearch[Alt+S]

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EC2 DashboardEC2 Global ViewEventsConsole-to-Code Preview

InstancesInstancesInstance TypesLaunch TemplatesSpot RequestsSavings PlansReserved InstancesDedicated HostsCapacity ReservationsNew

ImagesAMIsAMI Catalog

Successfully created volume vol-0cc30b872399a775d.

Volumes (3)Info

Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
	-	vol-0397f8ff2e45dae82	gp3	9 GiB	3000	125	snap-0fc9d6b...	2024/02
	-	vol-01d7da921aa336aa0	gp3	8 GiB	3000	125	snap-0fc9d6b...	2024/02
	My Volume	vol-0cc30b872399a775d	gp2	1 GiB	100	-	-	2024/02

Summary for all volumes in this Region

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Assignment detailsGrades for bitf20m528Workbench - VocareumAttach volume | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#AttachVolume:volumeId=vol-0cc30b872399a775d

ServicesSearch[Alt+S]

N. Virginiavoclabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

EC2 > Volumes > vol-0cc30b872399a775d > 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-0cc30b872399a775d (My Volume)

Availability Zone

us-east-1a

Instance Info

I-0b80bf0cd0b471383

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

Device name Info

/dev/sdf

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Assignment detailsGrades for bitf20m528Workbench - VocareumVolumes | EC2 | us-east-1

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:

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EC2 DashboardEC2 Global ViewEventsConsole-to-Code Preview

Instances

InstancesInstance TypesLaunch TemplatesSpot RequestsSavings PlansReserved InstancesDedicated HostsCapacity Reservations New

Images

AMIsAMI Catalog

Successfully attached volume vol-0cc30b872399a775d to Instance I-0b80bf0cd0b471383.

Volumes (3) Info

Actions

Create volume

Search

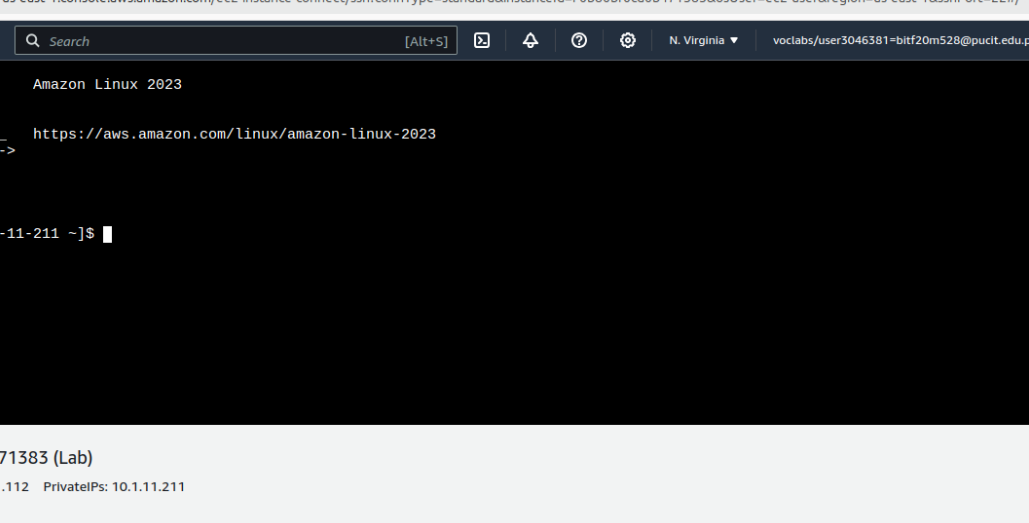
< 1 >

Created	Availability Zone	Volume state	Alarm status	Attached resources	Volume sta...
2024/02/29 12:58 GMT+5	us-east-1a	In-use	No alarms	+ I-0ae3c0cd788e913f4 (Bas...	Okay
2024/02/29 12:58 GMT+5	us-east-1a	In-use	No alarms	+ I-0b80bf0cd0b471383 (La...	Okay
2024/02/29 13:06 GMT+5	us-east-1a	In-use	No alarms	+ I-0b80bf0cd0b471383 (La...	Okay

Summary for all volumes in this Region

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The screenshot shows a terminal window with the following content:

```

AWS CLI version 2.15.12
AWS CLI help text
ec2-user@ip-10-1-11-211 ~]$

```

The terminal prompt is 'ec2-user@ip-10-1-11-211 ~]\$'.

Assignment details x Grades for bitf20m528 x Workbench - Vocareum x Instances | EC2 | us-east x EC2 Instance Connect | x +

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0b80bf0cd0b471383&osUser=ec2-user®ion=us-east-1&sshPort=22#

aws Services Search [Alt+S] N. Virginia voclabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

Writing superblocks and filesystem accounting information: done

```
[ec2-user@ip-10-1-11-211 ~]$ sudo mkdir /mnt/data-store
[ec2-user@ip-10-1-11-211 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-211 ~]$ echo "/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2" | sudo tee -a /etc/fstab
/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2
[ec2-user@ip-10-1-11-211 ~]$ cat /etc/fstab
#
UUID=81e4e009-191b-464c-8cc3-22de217d1136 / xfs defaults,noatime 1 1
UUID=EA7D-FA7D /boot/efi vfat defaults,noatime,uid=0,gid=0,umask=0077,shortname=winnt,x-systemd.automount 0 2
/dev/sdf /mnt/data-store ext3 defaults,noatime 1 2
[ec2-user@ip-10-1-11-211 ~]$ df -h
Filesystem      Size  Used Avail Use% Mounted on
devtmpfs        4.0M  0    4.0M  0% /dev
tmpfs           475M  0    475M  0% /dev/shm
tmpfs           190M  2.9M  188M  2% /run
/dev/xvda1      8.0G  1.6G  6.5G  20% /
tmpfs           475M  0    475M  0% /tmp
/dev/xvda128    10M  1.3M  8.7M  13% /boot/efi
tmpfs           95M  0    95M  0% /run/user/1000
/dev/xvdf       975M  60K  924M  1% /mnt/data-store
[ec2-user@ip-10-1-11-211 ~]$
```

i-0b80bf0cd0b471383 (Lab)

PublicIPs: 44.222.181.112 PrivateIPs: 10.1.11.211

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Assignment details x Grades for bitf20m528 x Workbench - Vocareum x Create snapshot | EC2 | x EC2 Instance Connect | x +

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateSnapshotFromVolume:volumeId=vol-0cc30b872399a775d

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Description

Add a description for your snapshot

255 characters maximum.

Encryption [Info](#)

Not encrypted

Tags [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.

Key Value - optional

Q Name X Q My Snapshot X Remove

Add tag

You can add 49 more tags.

Cancel Create snapshot

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Assignment detailsGrades for bitf20m528Workbench - VocareumCreate volume | EC2 | us-east-1EC2 Instance Connect

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#CreateVolumeFromSnapshot:snapshotId=snap-0af51106261c63e38

awsServicesSearch[Alt+S]

N. Virginiavoclabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

EC2 > Snapshots > snap-0af51106261c63e38 > Create volume

Create volume

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

Volume settings

Snapshot ID

☐ snap-0af51106261c63e38 (My Snapshot)

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

1

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Assignment detailsGrades for bitf20m528Workbench - VocareumVolumes | EC2 | us-east-1EC2 Instance Connect

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Volumes:

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N. Virginiovoclabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

Launch TemplatesSpot RequestsSavings PlansReserved InstancesDedicated HostsCapacity ReservationsNewImagesAMIAMI CatalogElastic Block StoreVolumesSnapshotsLifecycle ManagerNetwork & SecuritySecurity GroupsElastic IPs

Volumes (4) Info

Search

ActionsCreate volume

< 1 >

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
☐	-	vol-0397f8ff2e45dae82	gp3	9 GiB	3000	125	snap-0fc9d6b...	2024/02
☐	-	vol-01d7da921aa336aa0	gp3	8 GiB	3000	125	snap-0fc9d6b...	2024/02
☐	My Volume	vol-0cc30b872399a775d	gp2	1 GiB	100	-	-	2024/02
☐	Restored Volu...	vol-0a41f7ca493dac891	gp3	1 GiB	3000	125	snap-0af5110...	2024/02

Summary for all volumes in this Region

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Assignment detailsGrades for bitf20m528Workbench - VocareumVolumes | EC2 | us-east-1EC2 Instance Connect

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-0b80bf0cd0b471383&osUser=ec2-user®ion=us-east-1&sshPort=22#

awsServicesSearch[Alt+S]

N. Virginiavociabs/user3046381=bitf20m528@pucit.edu.pk @ 6546-5455-6272

tmpfs	475M	0	475M	0%	/dev/shm
tmpfs	190M	2.9M	188M	2%	/run
/dev/xvda1	8.0G	1.6G	6.5G	20%	/
tmpfs	475M	0	475M	0%	/tmp
/dev/xvda128	10M	1.3M	8.7M	13%	/boot/efi
tmpfs	95M	0	95M	0%	/run/user/1000
/dev/xvdf	975M	60K	924M	1%	/mnt/data-store

```
[ec2-user@ip-10-1-11-211 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-211 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-211 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-211 ~]$ ^[[200~ls /mnt/data-store/
-bash: $'E[200~ls': command not found
[ec2-user@ip-10-1-11-211 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-211 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-211 ~]$ sudo mkdir /mnt/data-store2
[ec2-user@ip-10-1-11-211 ~]$ sudo mount /dev/sdg /mnt/data-store2
[ec2-user@ip-10-1-11-211 ~]$ ls /mnt/data-store2/
file.txt lost+found
[ec2-user@ip-10-1-11-211 ~]$
```

i-0b80bf0cd0b471383 (Lab)

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