

# Experiment No 4

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Cloud Computing

CSL605

***Aim:*** To study and Implement Storage as a Service using AWS S3, Glaciers/ Azure Storage.

## ***Theory:***

To delve into studying and implementing Storage as a Service (STaaS) via AWS S3, Glacier, or Azure Storage requires a comprehensive grasp of their respective functionalities and advantages. Amazon S3 stands out as a cornerstone of cloud storage solutions, offering unparalleled scalability and durability for storing a vast array of data types. With features like versioning, encryption, and flexible storage classes, S3 caters to diverse needs, from serving as a repository for website assets to housing critical backups. Glacier, as an extension of S3, specializes in long-term archival with cost-efficient storage options, ensuring data retention compliance and facilitating seamless retrieval through its tiered storage model. Meanwhile, Azure Storage provides a robust ecosystem encompassing Blob, Queue, and File storage services, empowering businesses with scalable and resilient storage solutions tailored to their specific requirements.

By embarking on the journey of studying and implementing STaaS using AWS S3, Glacier, or Azure Storage, organizations unlock a realm of possibilities in managing their data assets effectively in the cloud. Through meticulous examination and hands-on experience with features like data lifecycle management, cross-region replication, and integration with other cloud services, businesses can optimize their storage strategies to align with scalability, reliability, and cost-effectiveness. Moreover, harnessing the power of these cloud storage platforms facilitates seamless collaboration, data sharing, and disaster recovery, enabling organizations to stay agile and competitive in today's dynamic digital landscape.

OUTPUT:

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

Instances

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity

Reservations [New](#)

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Successfully created volume vol-0a9541bd22119f077.

Volumes (3) Info

Search

	Name	Volume ID	Type	Size	IOPS	Throughput	Snapshot	Created
<input type="checkbox"/>	-	vol-0b64092d17b06404a	gp3	9 GiB	3000	125	snap-029f30d...	2024/04/04 07:34 GMT+5:00
<input type="checkbox"/>	-	vol-04137d29f21f7cd6	gp3	8 GiB	3000	125	snap-029f30d...	2024/04/04 07:35 GMT+5:00
<input type="checkbox"/>	My Volume	vol-0a9541bd22119f077	gp2	1 GiB	100	-	-	2024/04/04 07:41 GMT+5:00

Summary for all volumes in this Region

Amazon Linux 2023

<https://aws.amazon.com/linux/amazon-linux-2023>

ec2-user@ip-10-1-11-178 ~]\$

i-09e7fa7af65d2dbd8 (Lab)

PublicIPs: 3.84.50.178 PrivateIPs: 10.1.11.178

```
aws us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-09e7fa7af65d2dbd8&osUser=ec2-user&region=us-east-1&sshPort=22#/
[ec2-user@ip-10-1-11-178 ~]$ sudo mount /dev/sdf /mnt/data-store
[ec2-user@ip-10-1-11-178 ~]$ 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-10-1-11-178 ~]$ cat /etc/fstab
#
UUID=3d668946-b9eb-4d6b-acbd-da437d796ee8 / xfs defaults,noatime 1 1
UUID=1753-28B3 /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-10-1-11-178 ~]$ 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  19% /
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-10-1-11-178 ~]$ sudo sh -c "echo some text has been written > /mnt/data-store/file.txt"
[ec2-user@ip-10-1-11-178 ~]$ cat /mnt/data-store/file.txt
some text has been written
[ec2-user@ip-10-1-11-178 ~]$ sudo rm /mnt/data-store/file.txt
[ec2-user@ip-10-1-11-178 ~]$ ls /mnt/data-store
lost+found
[ec2-user@ip-10-1-11-178 ~]$ ls /mnt/data-store/
lost+found
[ec2-user@ip-10-1-11-178 ~]$
```

i-09e7fa7af65d2dbd8 (Lab)  
PublicIPs: 3.84.50.178 PrivateIPs: 10.1.11.178

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

EC2 Dashboard

EC2 Global View

Events

Console-to-Code [Preview](#)

Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
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- Capacity
- Reservations [New](#)

Images

- AMIs
- AMI Catalog

Elastic Block Store

- Volumes
- Snapshots**

Successfully created volume vol-0d56c816c5a80e0e2.

**Snapshots (1)** Info

Owned by me Search

	Name	Snapshot ID	Volume size	Description	Storage tier	Snapshot status	Started
<input type="checkbox"/>	My Snapshot	snap-0a198bb61480f5a372	1 GiB	-	Standard	Completed	2024/04/04 07:54 GMT

Select a snapshot above.

**Conclusion:** We have successfully implemented S3.