Managing Storage – AWS Lab Guide

Lab Overview

AWS provides multiple ways to manage data on Amazon Elastic Block Store (Amazon EBS) volumes. In this lab, you use AWS CLI to create snapshots of an EBS volume and schedule Python scripts to delete older snapshots. You also sync EBS data to Amazon S3.

Objectives

• Create and maintain snapshots for Amazon EC2 instances.
• Use Amazon S3 sync to copy files from EBS to S3.
• Use Amazon S3 versioning to recover deleted files.

Duration

Approximately 45 minutes.

Task 1: Creating Resources

Create an Amazon S3 bucket and attach the IAM role S3BucketAccess to the Processor EC2 instance.

Task 2: Snapshot Management Using AWS CLI

You connect to the Command Host instance and use AWS CLI commands to identify volumes, stop instances, create snapshots, and restart instances.

Key AWS CLI Commands

Task 3: Automating Snapshots with Cron

A cron job is configured to take snapshots every minute. A Python script is then used to retain only the two most recent snapshots for each volume.

Task 4: S3 Sync and Versioning Challenge

You enable S3 versioning, sync local files to S3, delete files using sync --delete, and recover deleted files using object versions.

Conclusion

You successfully managed EBS snapshots, automated snapshot retention, synced files to Amazon S3, and restored deleted files using versioning.

Important Commands Reference

```
aws ec2 describe-instances --filter 'Name=tag:Name,Values=Processor' --query 'Reservations[0].Instances
```

```
aws ec2 stop-instances --instance-ids INSTANCE-ID
```

```
aws ec2 create-snapshot --volume-id VOLUME-ID
```

```
aws ec2 start-instances --instance-ids INSTANCE-ID
```

```
echo "* * * * * aws ec2 create-snapshot --volume-id VOLUME-ID" > cronjob
crontab cronjob
```

```
aws s3api put-bucket-versioning --bucket S3-BUCKET-NAME --versioning-configuration Status=Enabled
```

```
aws s3 sync files s3://S3-BUCKET-NAME/files/ --delete
```

```
aws s3api list-object-versions --bucket S3-BUCKET-NAME --prefix files/file1.txt
```

```
aws s3api get-object --bucket S3-BUCKET-NAME --key files/file1.txt --version-id VERSION-ID files/file1.
```