Working with Amazon S3 – Lab Guide

Lab Overview

In this lab, you create and configure an Amazon Simple Storage Service (Amazon S3) bucket to share images with an external user at a media company (mediacouser). You also configure the S3 bucket to automatically send an email notification to the administrator when the bucket contents are modified.

Objectives
• Use the s3api and s3 AWS CLI commands to create and configure an S3 bucket
• Verify write permissions to a user on an S3 bucket
• Configure event notification on an S3 bucket

Duration
Approximately 90 minutes

Task 1: Connecting to the CLI Host EC2 instance and configuring the AWS CLI

1. Open EC2 console → Instances → Select CLI Host → Connect → EC2 Instance Connect
2. Configure AWS CLI using:
`aws configure`
Enter Access Key, Secret Key, region us-west-2, output json.

Task 2: Creating and initializing the S3 share bucket

Create bucket:
```
aws s3 mb s3://cafe-xxxnnn --region us-west-2
```

Upload images:
```
aws s3 sync ~/initial-images/ s3://cafe-xxxnnn/images
```

Verify upload:
```
aws s3 ls s3://cafe-xxxnnn/images/ --human-readable --summarize
```

Task 3: Reviewing IAM group and user permissions

Review mediaco IAM group policies and mediacouser permissions. User can upload, view, and delete objects only inside images/ prefix and cannot modify bucket permissions.

Task 4: Configuring event notifications on the S3 share bucket

• Create SNS topic: s3NotificationTopic
• Configure SNS access policy to allow S3 publish
• Subscribe email to SNS topic
• Create event notification JSON configuration for ObjectCreated and ObjectRemoved events on images/ prefix

Task 5: Testing S3 event notifications

Upload object:

```
aws s3api put-object --bucket cafe-xxxnnn --key images/Caramel-Delight.jpg --body
~/new-images/Caramel-Delight.jpg
```

Download object (no notification):

```
aws s3api get-object --bucket cafe-xxxnnn --key images/Donuts.jpg Donuts.jpg
```

Delete object:

```
aws s3api delete-object --bucket cafe-xxxnnn --key images/Strawberry-Tarts.jpg
```

Unauthorized operation test:

```
aws s3api put-object-acl --bucket cafe-xxxnnn --key images/Donuts.jpg --acl
public-read
```

Conclusion

You successfully created and configured an Amazon S3 bucket, verified IAM permissions, and implemented event notifications using SNS.