

LAB ASSIGNMENTS 3: What is Amazon S3?

Simple Storage Service is a scalable and secure cloud storage service provided by Amazon Web Services (AWS).

It allows you to store and retrieve any amount of data from anywhere on the web.

Instruction:

1. Explore option with S3 bucket creation
2. create a bucket to put data and apply versioning over it
3. Explore S3 bucket policies
4. Write Spring boot application to interact with S3
5. Install AWS CLI and create and access s3 from your terminal

USING AWS CLI

1. Creating access token for IAM user

us-east-1.console.aws.amazon.com/iam/home?region=ap-south-1#/security_credentials/access-key-wizard

aws Search [Alt+S]

Global bca-admin-rahul @ 3966-0880-4235

IAM > Security credentials > Create access key

Access key created
This is the only time that the secret access key can be viewed or downloaded. You cannot recover it later. However, you can create a new access key any time.

Step 1
● Access key best practices & alternatives
Step 2 - optional
● Set description tag
Step 3
● **Retrieve access keys**

Retrieve access keys Info

Access key
If you lose or forget your secret access key, you cannot retrieve it. Instead, create a new access key and make the old key inactive.

Access key | Secret access key

AKIAVYV52CWF4I5V5AZQ | ***** Show

Access key best practices

- Never store your access key in plain text, in a code repository, or in code.
- Disable or delete access key when no longer needed.
- Enable least-privilege permissions.

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ENG IN 16:36 24-02-2025

2. Use that token to configure cli and create bucket

```
Command Prompt
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\rahul.kalekar>aws configure
AWS Access Key ID [*****G6IW]: AKIAVYV52CWF4I5V5AZQ
AWS Secret Access Key [*****X1Zg]: AQpPwDk3sNcqsXPp9x6LWPJSwTB0h5BaYXT+Pse
Default region name [None]:
Default output format [json]: json

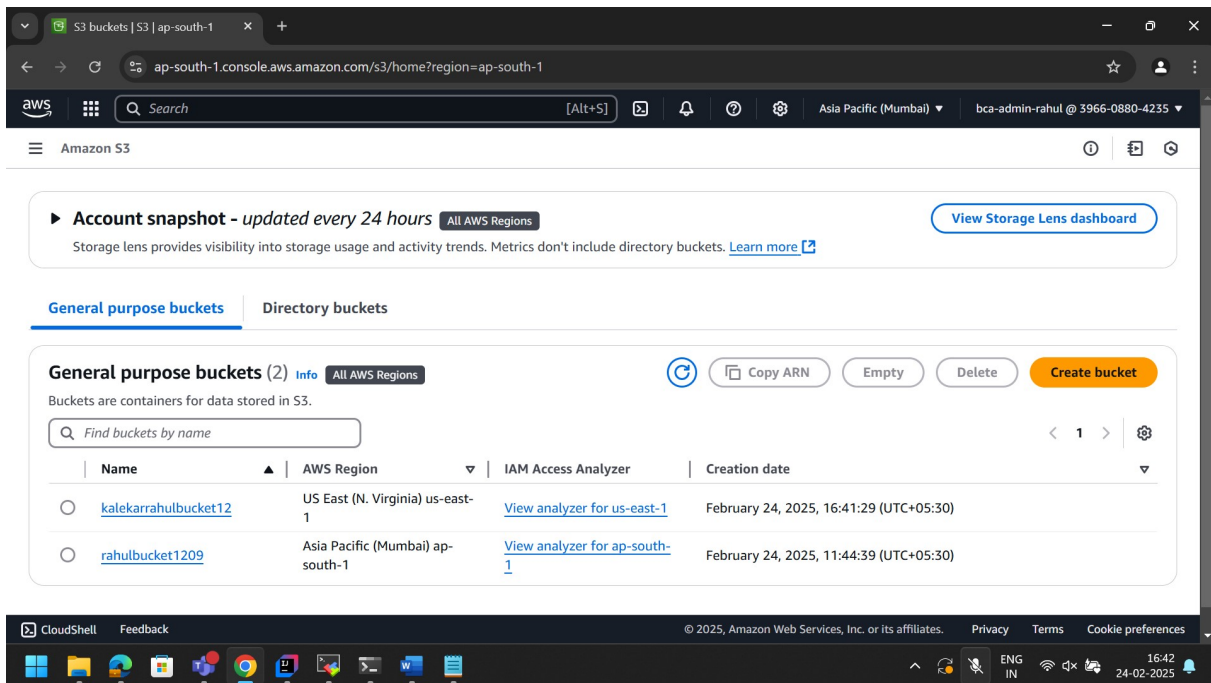
C:\Users\rahul.kalekar>aws s3 ls
2025-02-24 11:44:39 rahulbucket1209

C:\Users\rahul.kalekar>aws s3api create-bucket --bucket kalekarrahulbucket12 --region ap-south-1

An error occurred (IllegalLocationConstraintException) when calling the CreateBucket operation: The unspecified location constraint is incompatible for the region specific endpoint this request was sent to.

C:\Users\rahul.kalekar>aws s3api create-bucket --bucket kalekarrahulbucket12
{
  "Location": "/kalekarrahulbucket12"
}

C:\Users\rahul.kalekar>
```



VERSIONING

The screenshot shows the AWS S3 console interface. The left sidebar displays the 'Amazon S3' menu with options like 'General purpose buckets', 'Directory buckets', 'Table buckets', 'Access Grants', 'Access Points', 'Object Lambda Access Points', 'Multi-Region Access Points', 'Batch Operations', and 'IAM Access Analyzer for S3'. The main content area shows the 'Versions' tab for the object 'Koerber Logo wallpaper.png'. The 'Versions' table lists two versions of the object:

Version ID	Type	Last modified	Size	Storage
_VEQGMTALzr... (Current version)	png	February 24, 2025, 16:47:34 (UTC+05:30)	248.0 KB	Standard
nult.O9CwSt...	png	February 24, 2025, 11:45:35 (UTC+05:30)	248.0 KB	Standard

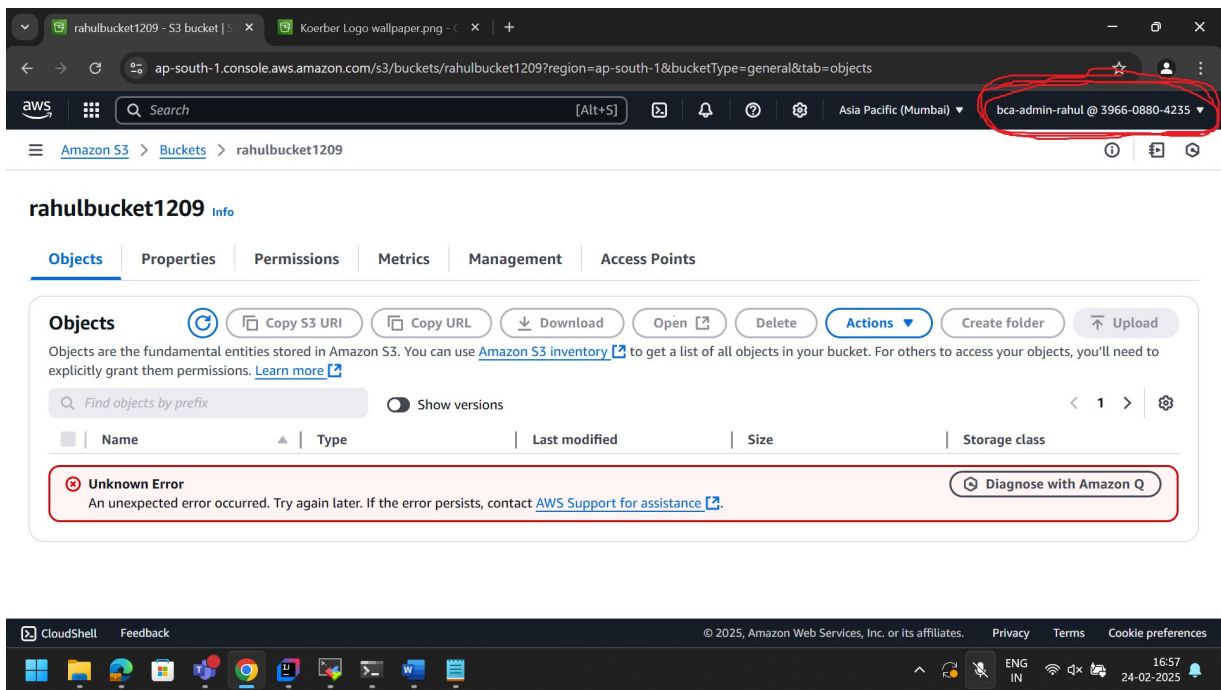
The bottom of the screenshot shows the Windows taskbar with various application icons and the system clock displaying 16:48 on 24-02-2025.

S3 BUCKET POLICY

The screenshot shows the AWS S3 console interface for the 'Bucket policy' of the bucket 'rahulbucket1209'. The policy is written in JSON and restricts access to the bucket to the current IAM user. The policy text is as follows:

```
{
  "Version": "2012-10-17",
  "Id": "RestrictBucketToIAMUsersOnly",
  "Statement": [
    {
      "Sid": "AllowOwnerOnlyAccess",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:*",
      "Resource": [
        "arn:aws:s3:::rahulbucket1209/*",
        "arn:aws:s3:::rahulbucket1209"
      ],
      "Condition": {
        "StringNotEquals": {
          "aws:PrincipalArn": "arn:aws:iam::396608804235:root"
        }
      }
    }
  ]
}
```

The bottom of the screenshot shows the Windows taskbar with various application icons and the system clock displaying 16:56 on 24-02-2025.



USING SPRING BOOT APPLICATION

