

Placement Empowerment Program

Cloud Computing and DevOps Centre

Use Cloud Storage Create a storage bucket on your cloud platform and upload/download files.
Configure access permissions for the bucket.



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DEPT: INFORMATION TECHNOLOGY

Introduction and Overview

- In this (PoC), we will explore AWS S3 (Simple Storage Service) to understand its functionality as a reliable cloud storage solution. The task involves creating an S3 bucket, uploading and downloading files, and configuring access permissions to manage who can access the stored data. This PoC demonstrates S3's versatility in securely storing and retrieving files, both publicly and privately. We will also set bucket policies to control access and test public URLs for hosted files. By completing this task, we gain hands-on experience with S3 and its key features, such as scalability, security, and cost-efficiency.

Objective

The goal of this project is to:

1. Understand AWS S3 Basics: Learn how to create, configure, and manage an S3 bucket for cloud storage.
2. File Operations: Gain hands-on experience in uploading, downloading, and managing files within the S3 bucket.
3. Access Control: Configure bucket policies and permissions to manage secure and public access to stored data.

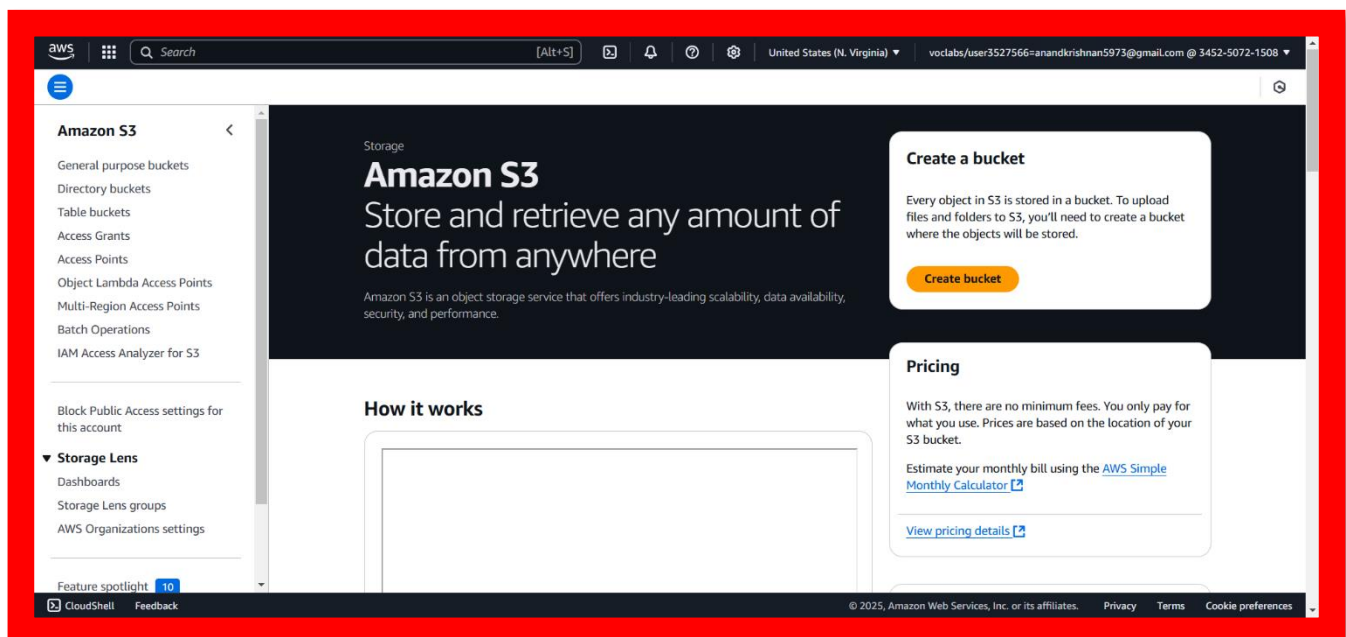
➤ Importance of Storage Bucket(S3)

Foundation for Advanced Use Cases: Learning how to handle S3 storage is a stepping stone for mastering cloud computing and deploying large-scale applications.

- **Hands-On Learning of Cloud Storage: AWS S3** provides a practical platform to learn cloud storage concepts, enabling users to create buckets, upload/download files, and manage data at scale.
- **Data Security and Access Control:** By configuring bucket policies and permissions, users can secure their data and manage who can access it.

Step-by-Step Overview

- Go to the AWS Management Console, Search for and click on S3.



- Click the "Create bucket" button.
- Enter a unique bucket name (e.g., my-storage-bucket-123).

Create bucket [Info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region
US East (N. Virginia) us-east-1

Bucket type [Info](#)

☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)
myakbucket
Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.
[Choose bucket](#)
Format: s3://bucket/prefix

Object Ownership [Info](#)

➤ Leave "Block all public access" enabled for now (you can modify it later).

Default encryption [Info](#)

Server-side encryption is automatically applied to new objects stored in this bucket.

Encryption type [Info](#)

☒ **Server-side encryption with Amazon S3 managed keys (SSE-S3)**

☐ Server-side encryption with AWS Key Management Service keys (SSE-KMS)

☐ Dual-layer server-side encryption with AWS Key Management Service keys (DSSE-KMS)
Secure your objects with two separate layers of encryption. For details on pricing, see DSSE-KMS pricing on the Storage tab of the [Amazon S3 pricing page](#)

Bucket Key
Using an S3 Bucket Key for SSE-KMS reduces encryption costs by lowering calls to AWS KMS. S3 Bucket Keys aren't supported for DSSE-KMS. [Learn more](#)

☐ Disable

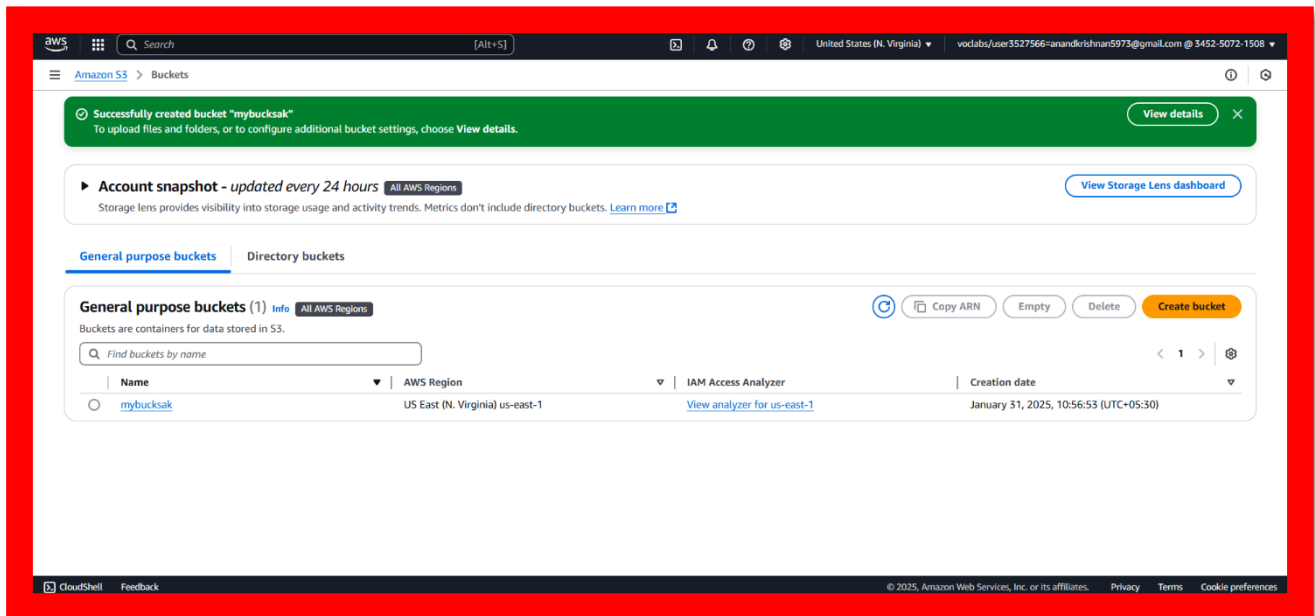
☒ Enable

Advanced settings

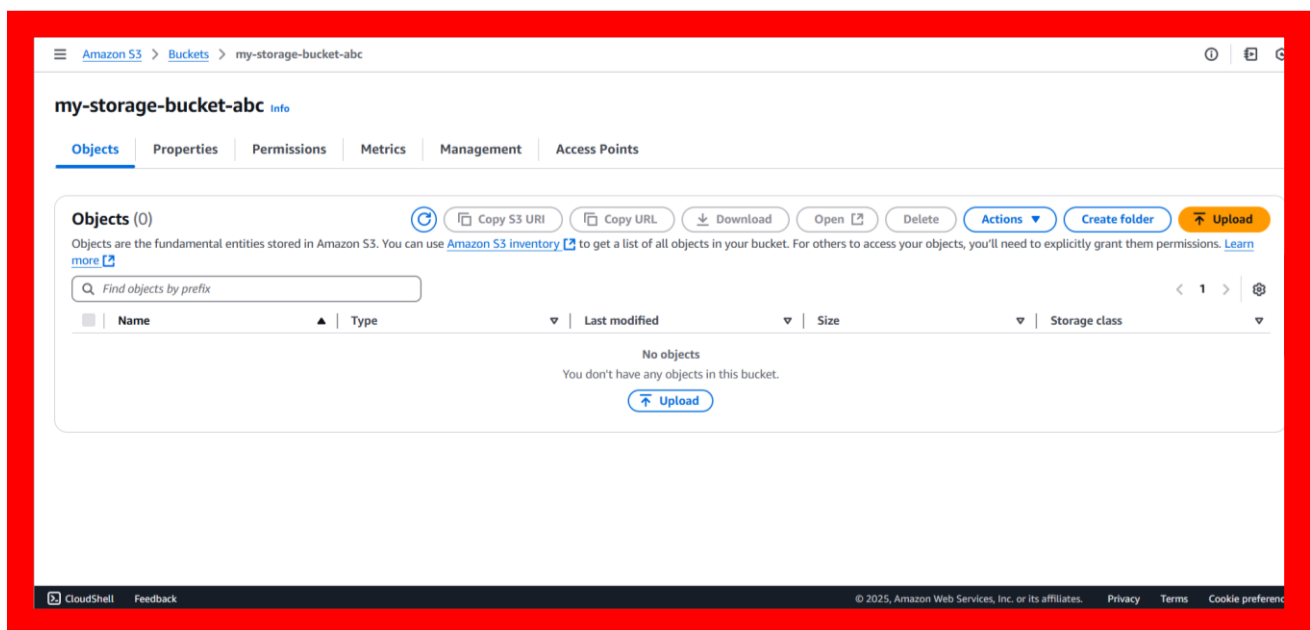
1 After creating the bucket, you can upload files and folders to the bucket, and configure additional bucket settings.

[Cancel](#) [Create bucket](#)

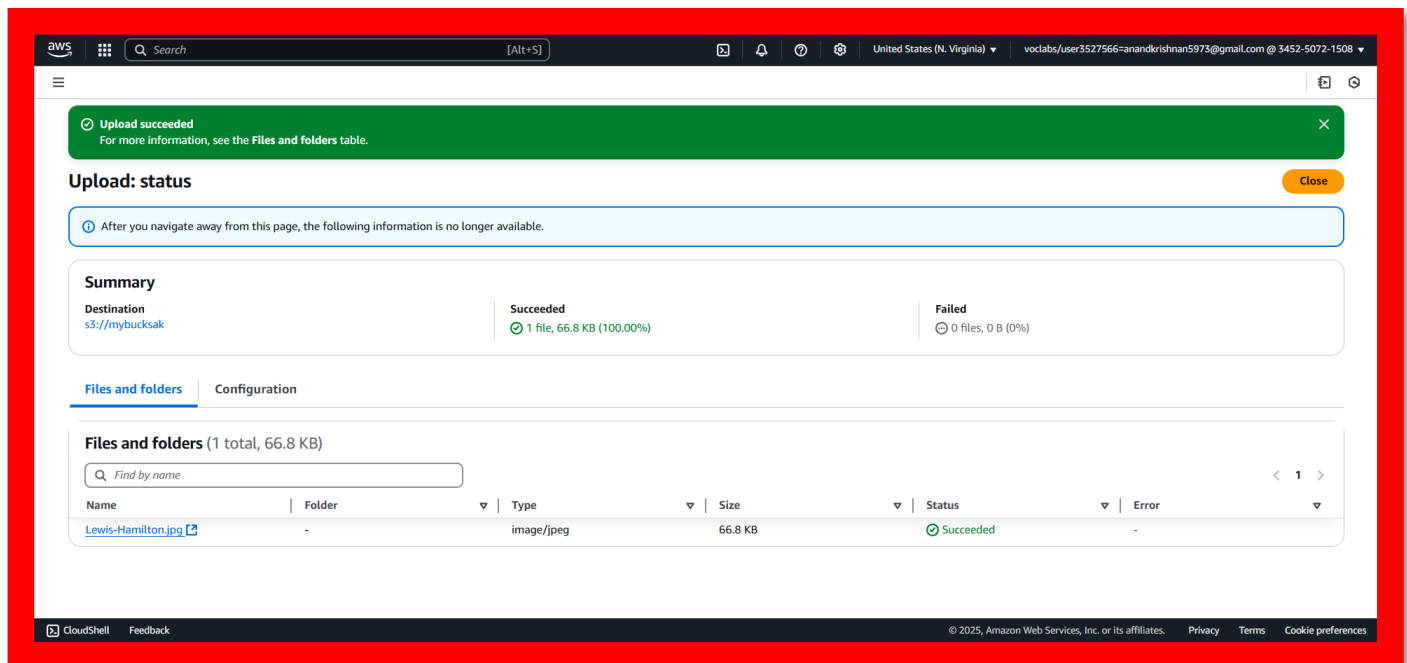
➤ Click "Create bucket".



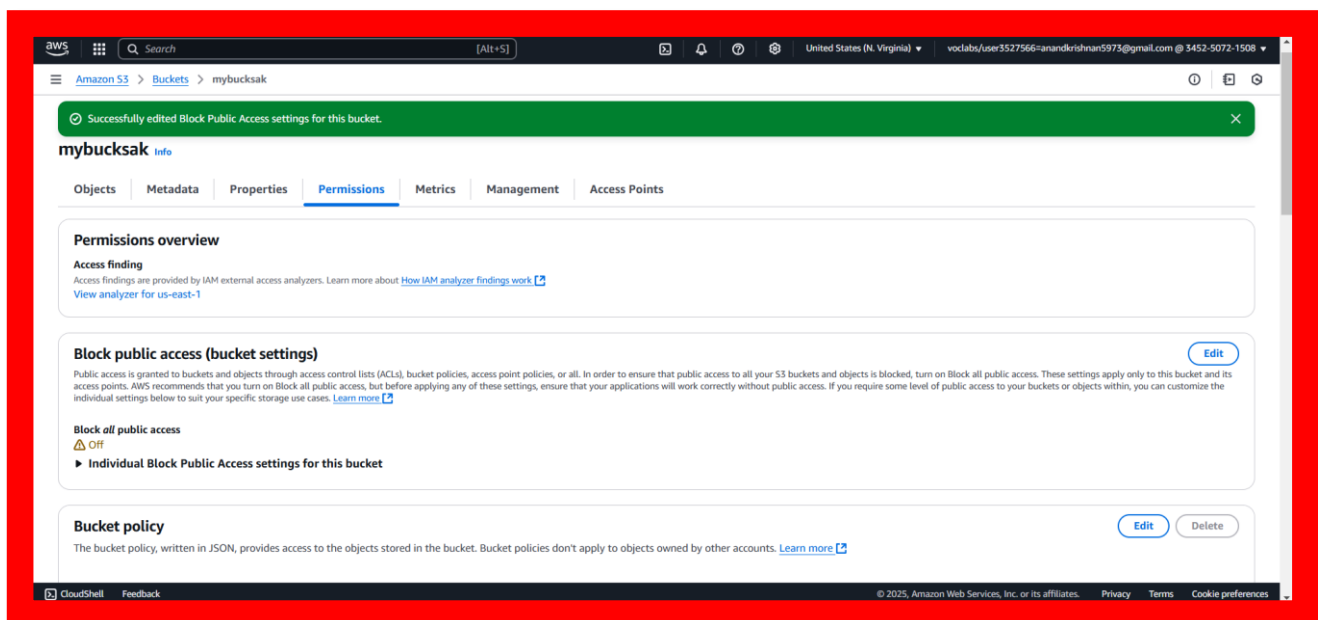
➤ Open your newly created bucket from the S3 console.



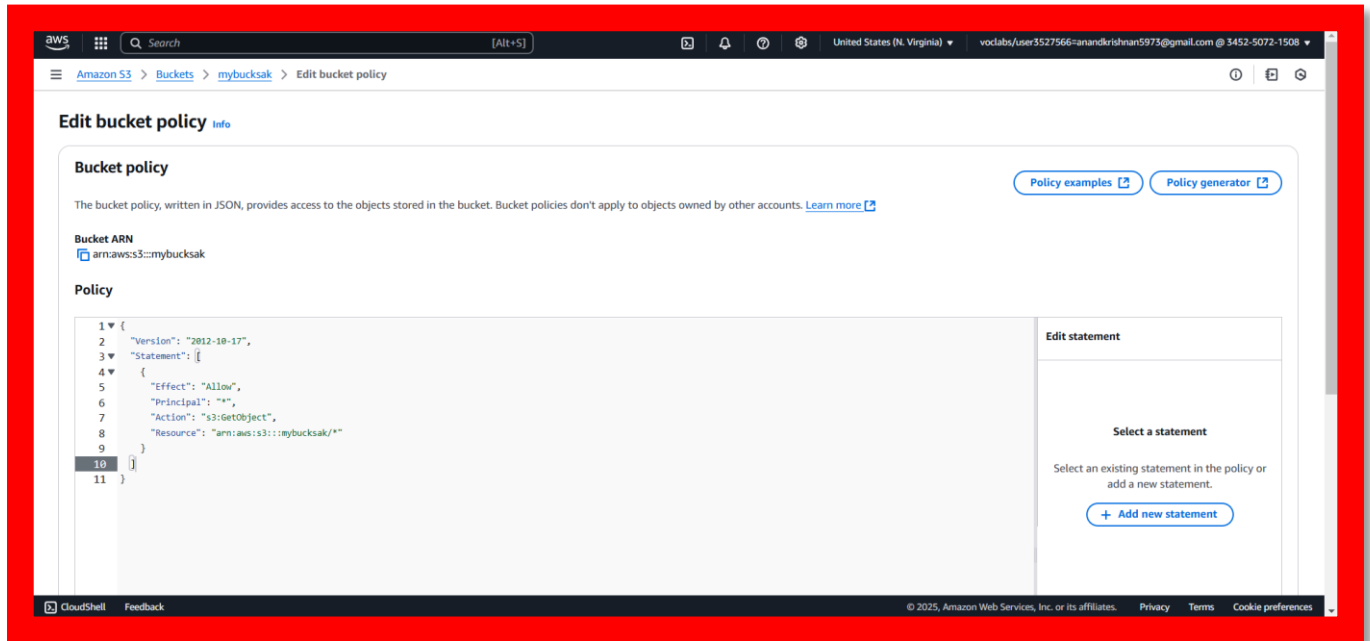
➤ Click "Upload" and then, Drag and drop your file(s) or use the Add files button. Click Upload to complete.



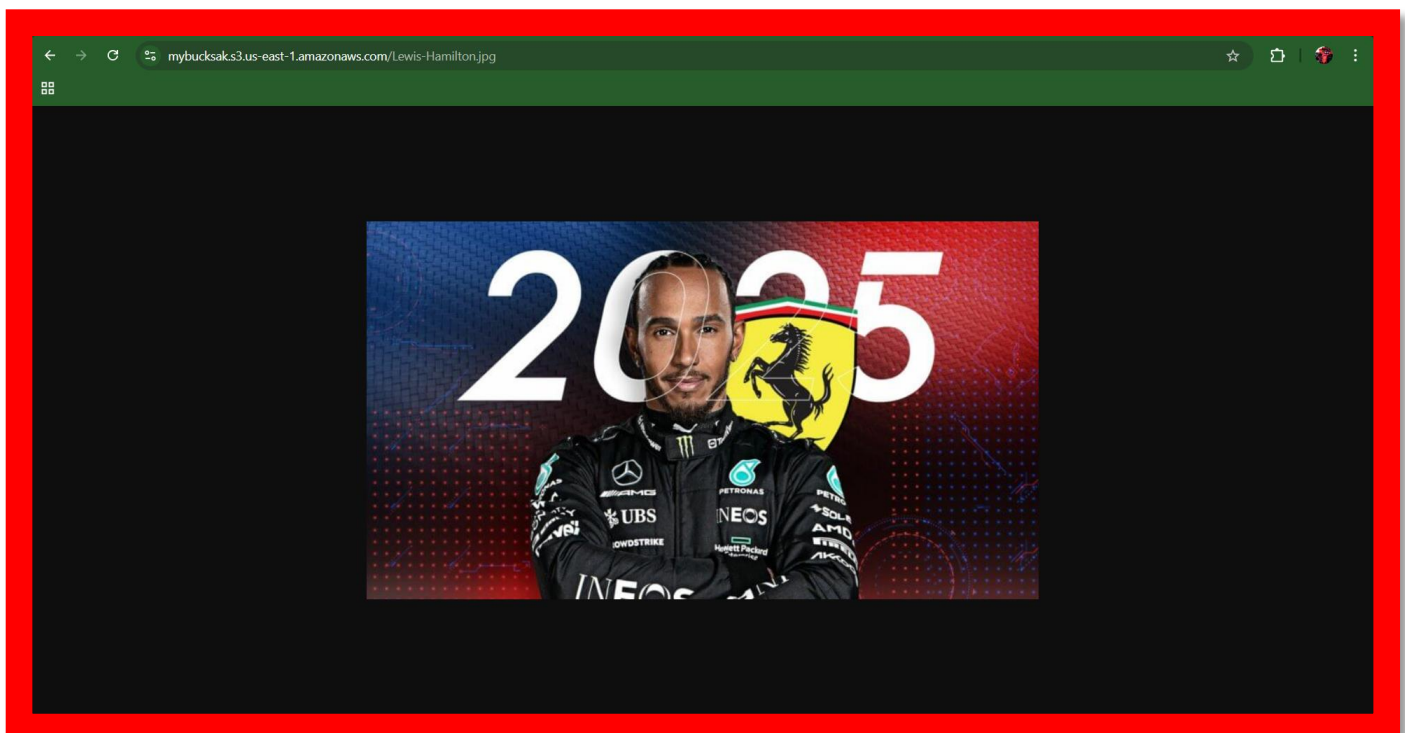
- Go to the uploaded file in your bucket. Click the file name to open its details. Select Download to save the file locally.
- Open your bucket and navigate to the "Permissions" tab.
- Under Block public access, click Edit and uncheck "Block all public access". Confirm by typing "confirm" and save.



- In the "Permissions" tab, scroll to Bucket Policy and click Edit. Replace your-bucket-name with your actual bucket name. Save changes.



- Use the S3 bucket URL or public file URL to test access permissions.



THANK YOU!