

# **S3 : Image Hosting and Website Setup with AWS S3**

## **S3 : Explanation**

Amazon **S3** is basically a huge online storage space provided by AWS. Think of it like a super-safe, super-fast hard drive on the internet where you can keep any type of file, photos, videos, documents, backups, logs, etc.

## **S3 Bucket**

- A bucket is the top-level container in Amazon S3.
- All files (objects) are stored inside a bucket.
- Every bucket name must be globally unique.
- You control access permissions for the bucket.

## **S3 Objects**

- File data (image, video, pdf etc.)
- Metadata (size, type, permissions)
- A unique key (file name or path)

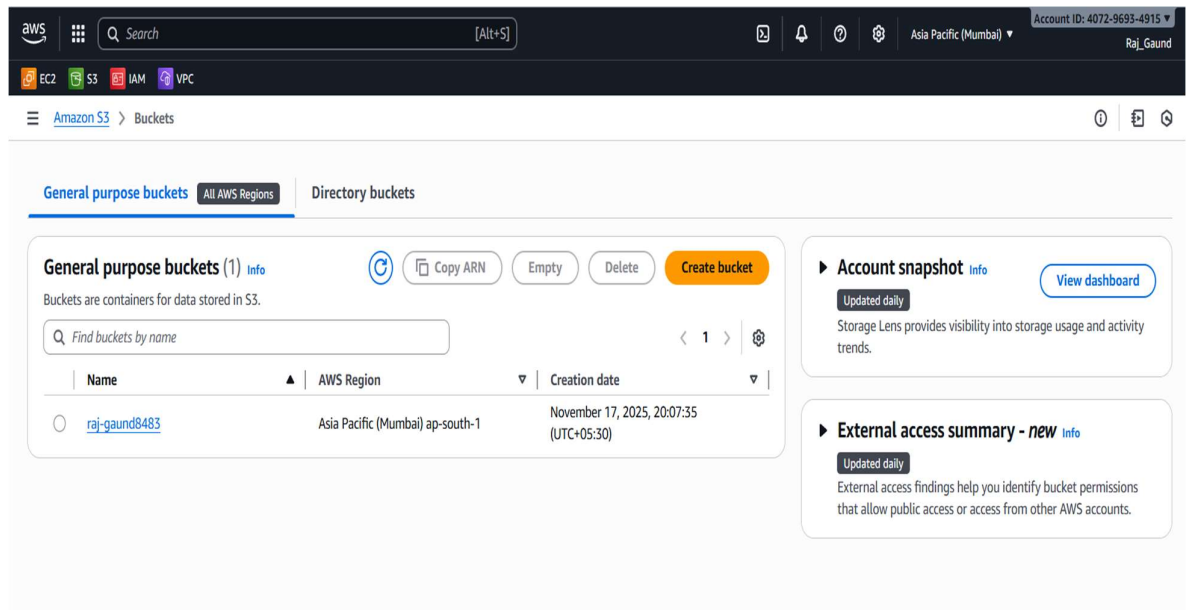
## **S3 Classes**

- **Standard** → For frequently accessed data; high performance.
- **Standard-IA** → For infrequent access; cheaper storage, extra retrieval cost.
- **One Zone-IA** → Cheaper but stored in one zone only.
- **Glacier Instant Retrieval** → For rare access with faster restores.
- **Glacier Flexible Retrieval** → Long-term storage; slower restore.
- **Glacier Deep Archive** → Very long-term storage; slowest but cheapest.

## Steps For Practicals

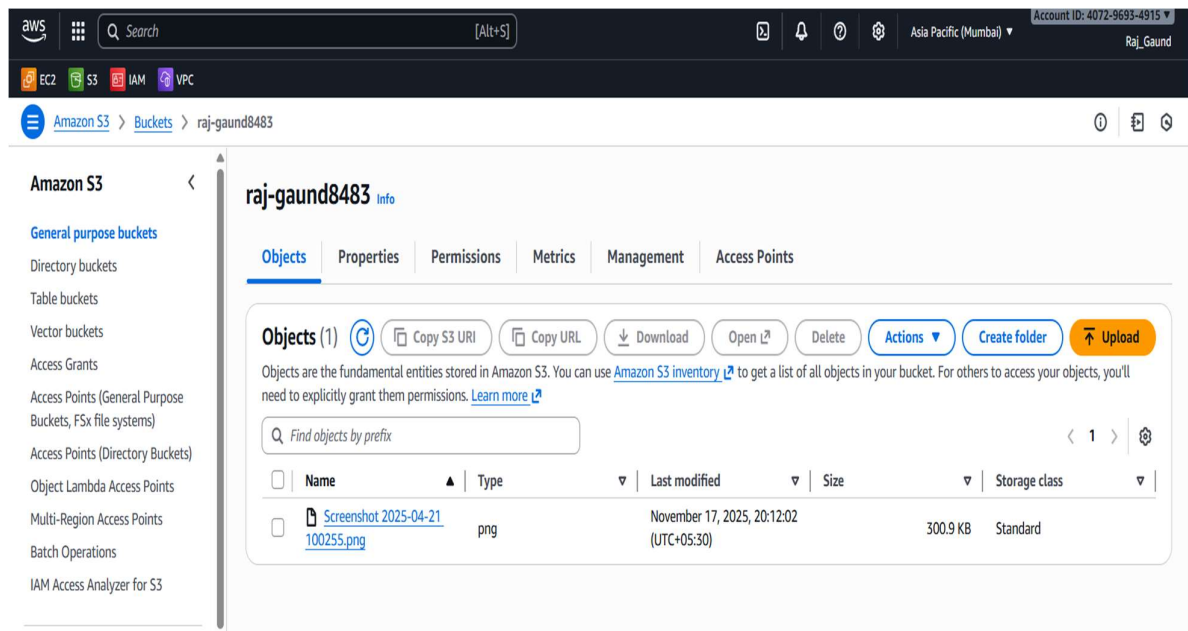
### Step 1 : Create a Bucket

1. Console → **S3** → Buckets → Create Bucket
2. Bucket Type : General Purpose Bucket
3. Bucket Name : Type a Unique Name (eg : raj-bucket001)
4. Under Object Ownerships : Keep ACLs Disabled
5. Block all Public access → **ON**
6. Versioning : Disabled
7. No Tags
8. Default Encryption : **SSE-S3** Default
9. Click Create Bucket



## Step 2 : Uploads Files in our Bucket

1. Click our **Bucket**
2. Uploads → Add Files → Select Image → Uploads
3. Click object → Permission → Edit → **Turn Off** Public access
4. Click Save → Confirm Changes



### Step 3 : Create a public Bucket Policy using Policy Generator

1. Bucket → Permission → Bucket policy → Edit
2. Policy Generator
3. Types of policy : **S3 Bucket Policy**
4. Types of policy : **S3 Bucket Policy**
5. Add Statement
6. Effect : **Allow**
7. Principal : **\*** (makes object readable by everyone)
8. Action : Pick **GetObject**
9. Amazon Resource Name (ARN) : **arn:aws:s3:::raj-gaund002/\***

10. Add Statement → Generate Policy → Copy **JSON**

11. S3 → Bucket → **Permission** → Edit

## Turn Off Public Access

### Block public access (bucket settings)

Edit

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

#### Block all public access

Off

► [Individual Block Public Access settings for this bucket](#)

## JSON Form Bucket Policy

## Bucket policy

[Edit](#)[Delete](#)

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

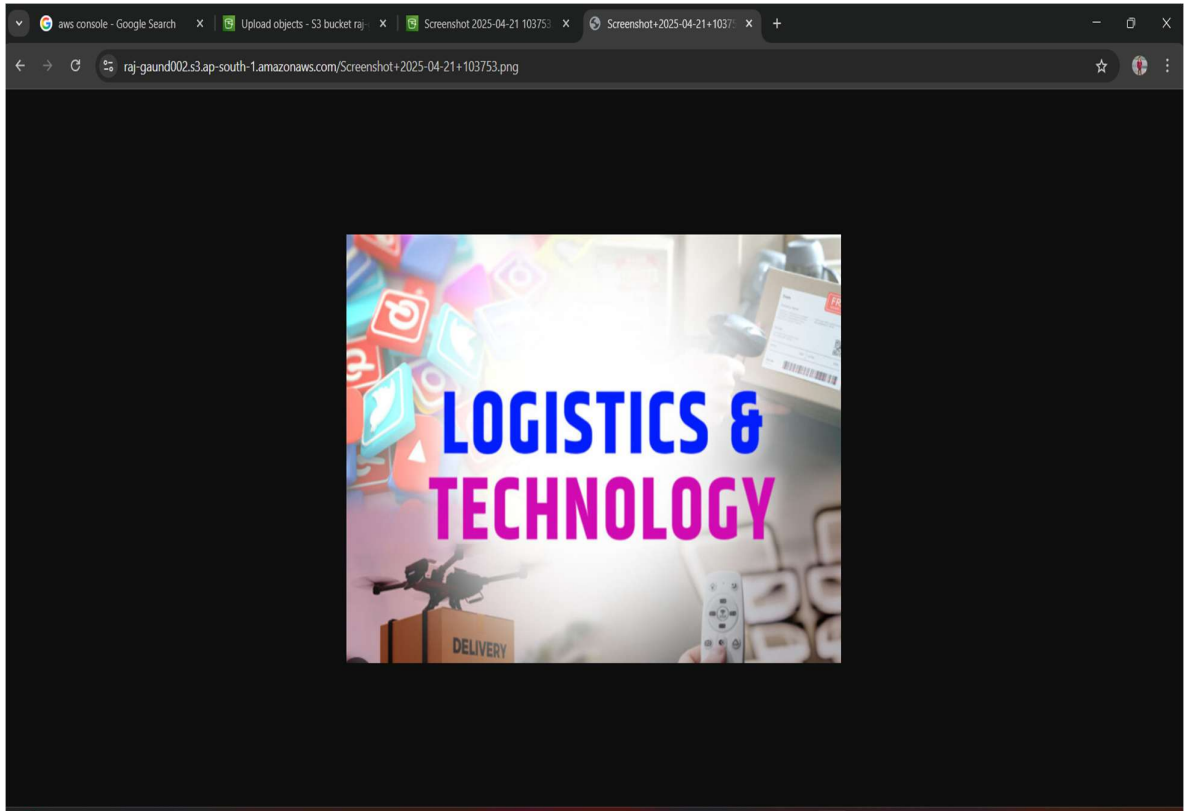
```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Statement1",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::raj-gaund002/*"
    }
  ]
}
```

[Copy](#)

## Step 4 : See Results

1. Bucket → Object → Copy Object URL
2. Search URL in Web Browser

## Final Results



### **Purpose of Projects**

The purpose of the “Image Hosting and Website Setup with AWS S3” project is to store and deliver images in a fast, secure, and cost-effective way using Amazon S3. Instead of keeping images on a local server, S3 provides unlimited cloud storage where files are safely stored and quickly accessible.

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