Choosing an AWS storage service:

- AWS offers a broad portfolio of reliable, scalable, and secure storage services for storing, accessing, protecting, and analyzing your data.
- This makes it easier to match your storage methods with your needs, and provides storage options that are not easily achievable with on-premises infrastructure.
- When selecting a storage service, ensuring that it aligns with your access patterns will be critical to achieving the performance you want.
- You can select from block, file, and object storage services as well as cloud data migration options for your workload.
- Choosing the right storage service for your workload requires you to make a series of decisions based on your business needs.

Purpose	Help determine which AWS storage service is the best fit for your organization.
Last updated	June 26, 2024
Covered services	• Amazon S3 • Amazon EBS • Amazon EFS • Amazon FSx • Amazon File Cache • AWS Backup • AWS DataSync • AWS Snow Family • AWS Storage Gateway • AWS Transfer Family

Storage type	What is it optimized for?	Storage services or tools
Object	Read-heavy workloads such as content distribution, web hosting, big data analytics, and ML workflows. Well-suited for scenarios where data needs to be stored, accessed, and distributed globally over the internet.	Amazon S3

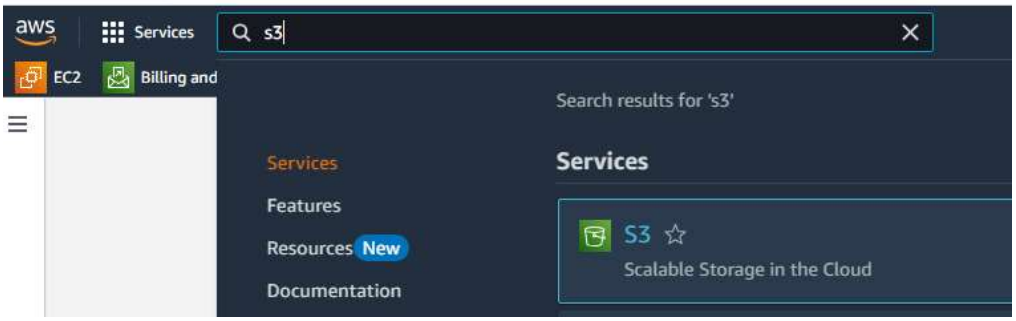
Amazon S3

- You can get started with Amazon S3 by working with buckets and objects.
- A bucket is a container for objects. An object is a file and any metadata that describes that file.
- To store an object in Amazon S3, you create a bucket and then upload the object to the bucket.
- When the object is in the bucket, you can open it, download it, and move it.
- When you no longer need an object or a bucket, you can clean up your resources.
- With Amazon S3, you pay only for what you use.
- When you sign up for AWS, your AWS account is automatically signed up for all services in AWS, including Amazon S3. You are charged only for the services that you use.

Creating S3 bucket:

- Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

1. Search for S3 under Services, and click on S3.



2. Click on Create Bucket.

3. Give a name to the Bucket. Bucket name must be unique within the global namespace and follow the bucket naming rules.

General purpose buckets naming rules:

The following naming rules apply for general purpose buckets.

- Bucket names must be between 3 (min) and 63 (max) characters long.
- Bucket names can consist only of lowercase letters, numbers, dots (.), and hyphens (-).
- Bucket names must begin and end with a letter or number.
- Bucket names must not contain two adjacent periods.
- Bucket names must not be formatted as an IP address (for example, 192.168.5.4).
- Bucket names must not start with the prefix xn--.
- Bucket names must not start with the prefix sthree-.
- Bucket names must not start with the prefix sthree-configurator.
- Bucket names must not start with the prefix amzn-s3-demo-.
- Bucket names must not end with the suffix -s3alias. This suffix is reserved for access point alias names.
- Bucket names must not end with the suffix --ol-s3. This suffix is reserved for Object Lambda Access Point alias names.
- Bucket names must not end with the suffix .mrap. This suffix is reserved for Multi-Region Access Point names.
- Bucket names must not end with the suffix --x-s3. This suffix is reserved for directory buckets.
- Bucket names must be unique across all AWS accounts in all the AWS Regions within a partition. A partition is a grouping of Regions. AWS currently has three partitions: aws (Standard Regions), aws-cn (China Regions), and aws-us-gov (AWS GovCloud (US)).
- A bucket name cannot be used by another AWS account in the same partition until the bucket is deleted.
- Buckets used with Amazon S3 Transfer Acceleration can't have dots (.) in their names.

Go with the default configuration and create the bucket.

Amazon S3 > Buckets > Create bucket

Create bucket Info

Buckets are containers for data stored in S3.

General configuration

AWS Region

Asia Pacific (Mumbai) ap-south-1

Bucket name Info

bucket-idream-100

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

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

- ACLs disabled (recommended)
  All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.
- ACLs enabled
  Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

Bucket owner enforced

EC2 Billing and Cost Management IAM

Successfully created bucket "bucket-idream-100"
To upload files and folders, or to configure additional bucket settings, choose View details.

View details

Amazon S3 > Buckets

Account snapshot - *updated every 24 hours* All AWS Regions

Storage lens provides visibility into storage usage and activity trends. Learn more

View Storage Lens dashboard

General purpose buckets | Directory buckets

General purpose buckets (1) Info All AWS Regions

Buckets are containers for data stored in S3.

Copy ARN | Empty | Delete | Create bucket

Find buckets by name

Name	AWS Region	IAM Access Analyzer	Creation date
bucket-idream-100	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	November 10, 2024, 21:55:39 (UTC+05:30)

Amazon S3 > Buckets > bucket-idream-100

bucket-idream-100 Info

Objects | Properties | Permissions | Metrics | Management | Access Points

Objects (0) Info

Objects are the fundamental entities stored in Amazon S3. You can use Amazon S3 inventory to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. Learn more

Copy S3 URI | Copy URL | Download | Open | Delete | Actions | Create folder | Upload

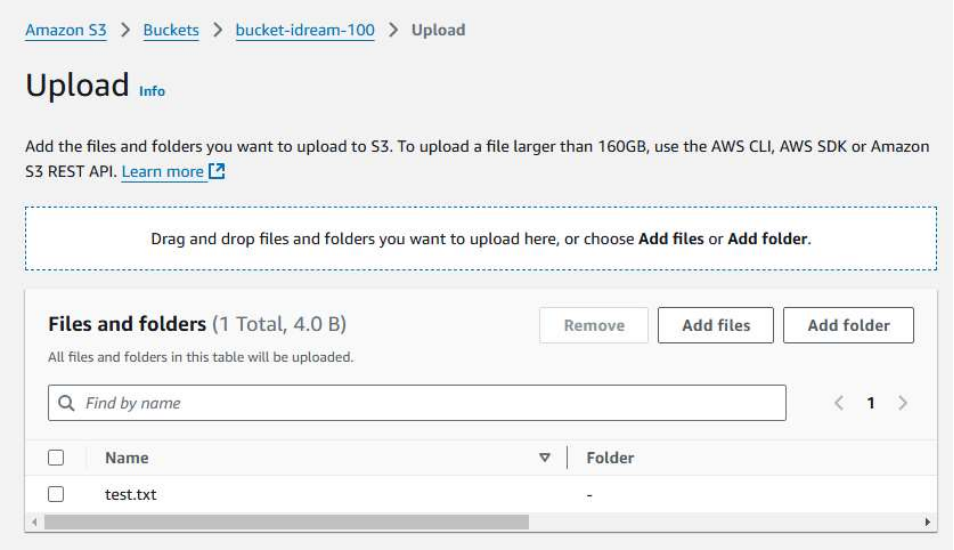
Find objects by prefix

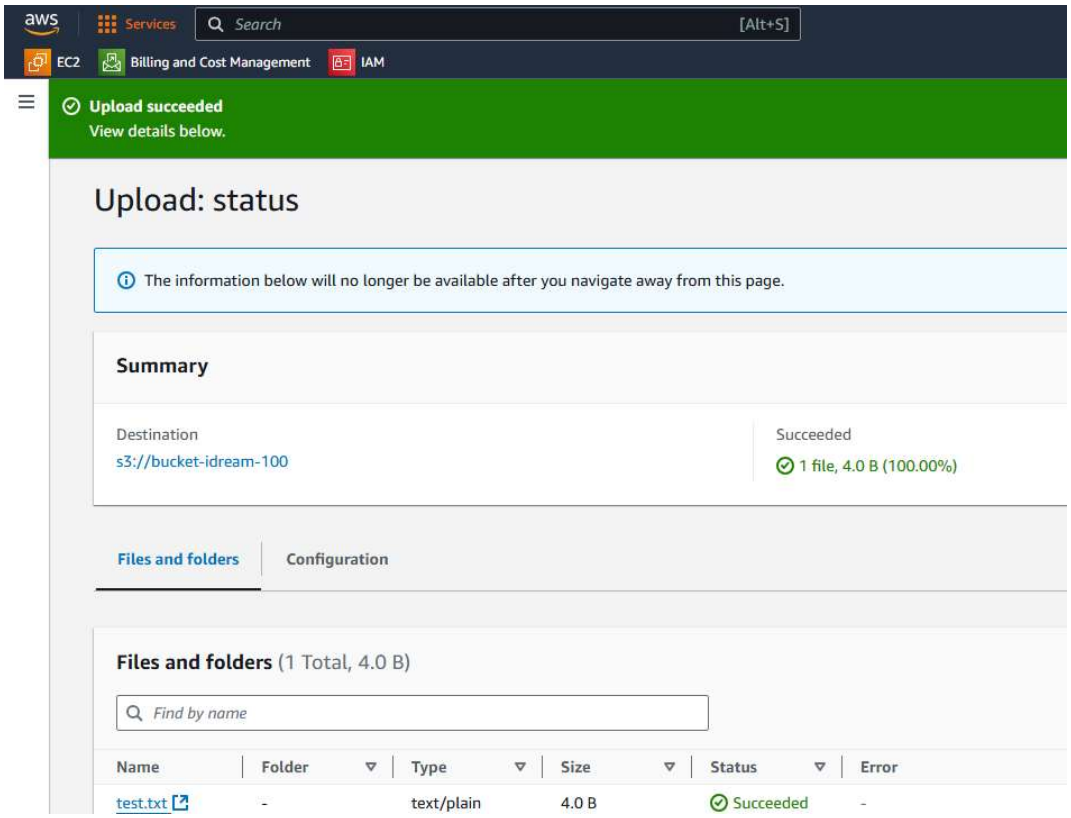
Name	Type	Last modified	Size	Storage class

No objects

You don't have any objects in this bucket.

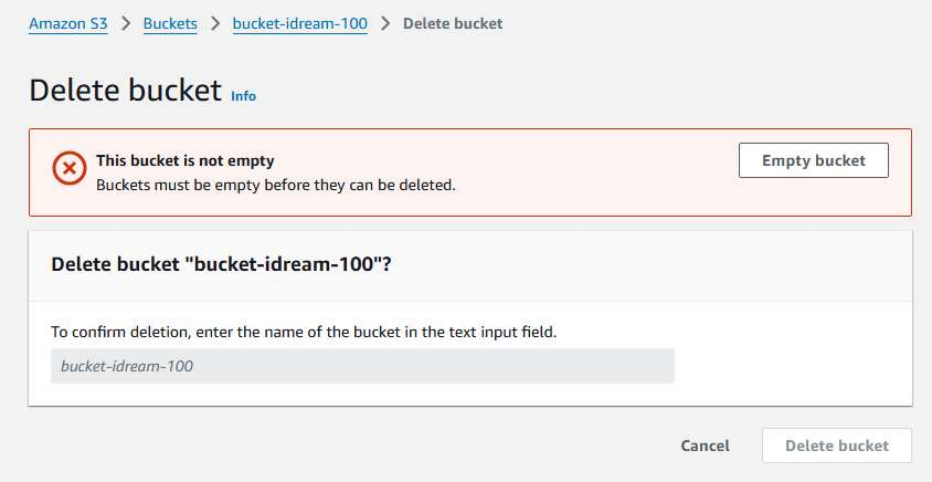
Upload

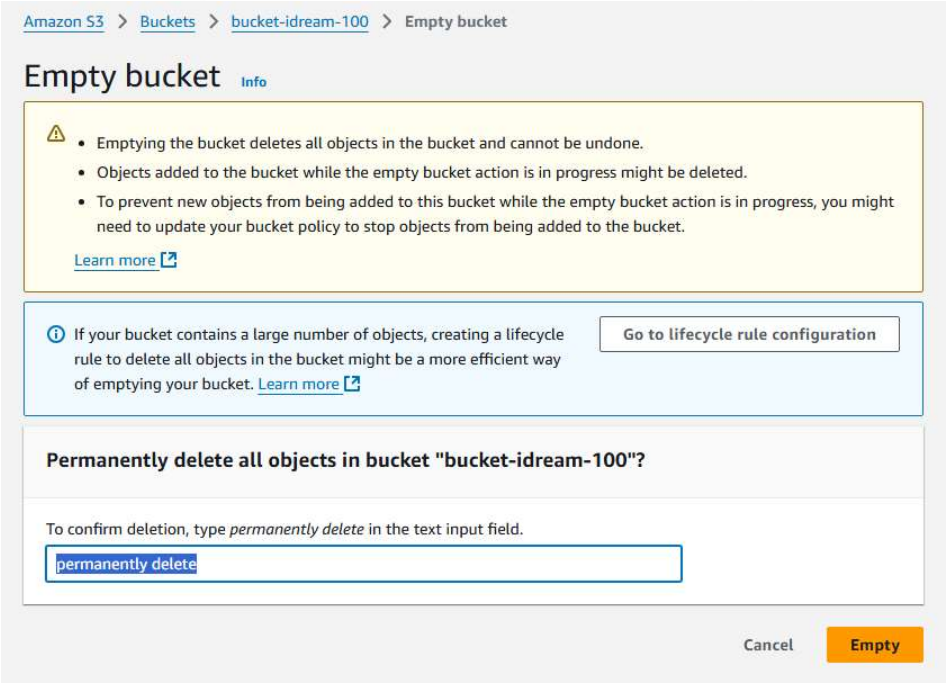

Amazon S3 > Buckets > bucket-idream-100 > Upload
Upload Info
Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. Learn more
Drag and drop files and folders you want to upload here, or choose Add files or Add folder.
Files and folders (1 Total, 4.0 B)
Remove
Add files
Add folder
All files and folders in this table will be uploaded.
Find by name
1
Name
Folder
test.txt
-


aws
Services
Search
[Alt+S]
EC2
Billing and Cost Management
IAM
Upload succeeded
View details below.
Upload: status
The information below will no longer be available after you navigate away from this page.
Summary
Destination
s3://bucket-idream-100
Succeeded
1 file, 4.0 B (100.00%)
Files and folders
Configuration
Files and folders (1 Total, 4.0 B)
Find by name
Name
Folder
Type
Size
Status
Error
test.txt
-
text/plain
4.0 B
Succeeded
-

Deleting the Bucket:

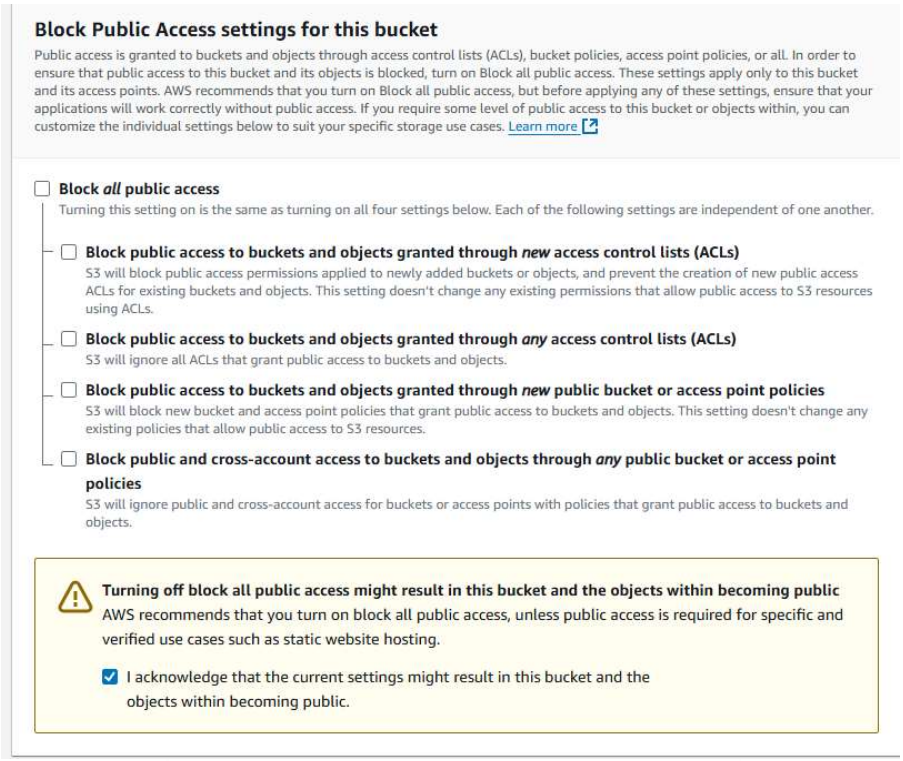
We cannot delete the bucket directly, we should clear the contents and then proceed for deletion.





Deploy static website on AWS using S3:

1. Create a Bucket, and untick the “Block all public access” check box while creating the AWS S3 Bucket.
2. Upload one html file to it. If we will try to access the html file, it will through the error as Access Denied.



Refer:
https://docs.aws.amazon.com/AmazonS3/latest/userguide/WebsiteAccessPermissionsReqd.html

Add a bucket policy:
Go to:
https://docs.aws.amazon.com/AmazonS3/latest/userguide/WebsiteAccessPermissionsReqd.html#bucket-policy-static-site

Copy the bucket policy.

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

Replace the Bucket-name with your bucket name.
Select your bucket and select Permissions tab.

Edit the Bucket Policy and paste the content.
Save the changes and now open your website.