CLOUD TRAIN
ACCELERATE YOUR GROWTH

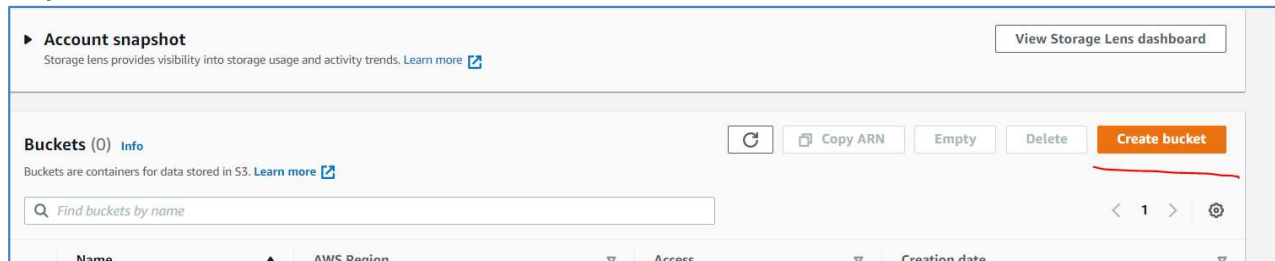# MODULE 5
STORAGE & DATA MANAGEMENT

AWS Workshop

Contact us

Creating Bucket on Amazon S3

To create a bucket

Step 1. Sign in to the AWS Management Console and open the Amazon S3 console at https://console.aws.amazon.com/s3/.

Step 2. Choose **Create bucket**.

The **Create bucket** page opens.

Step 3. In **Bucket name**, enter a DNS-compliant name for your bucket, say **bucket1**.

The bucket name must:

- Be unique across all of Amazon S3.
- Be between 3 and 63 characters long.
- Not contain uppercase characters.
- Start with a lowercase letter or number.

After you create the bucket, you can't change its name.

Important: Avoid including sensitive information, such as account numbers, in the bucket name. The bucket name is visible in the URLs that point to the objects in the bucket.

Step 4. In **Region**, choose the AWS Region where you want the bucket to reside.

Choose a Region that is close to you geographically to minimize latency and costs and to address regulatory requirements. Objects stored in a Region never leave that Region unless you explicitly transfer them to another Region.

Step 5. Keep the remaining settings set to the defaults.

Step 6. Choose **Create bucket**.
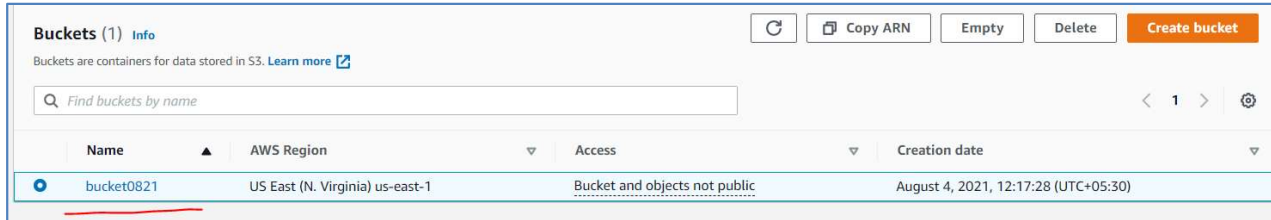
Uploading and downloading data from Amazon S3

To upload an object to a bucket
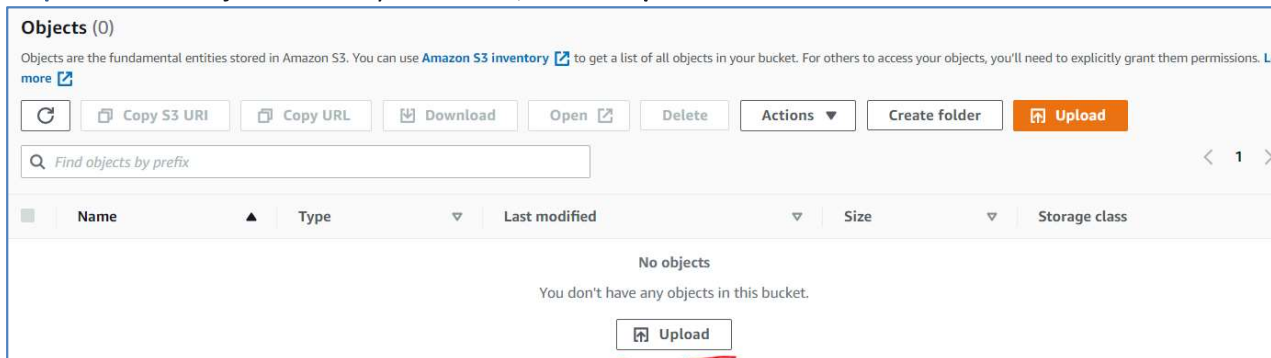
Step 1. Open the Amazon S3 console at https://console.aws.amazon.com/s3/.

Step 2. In the **Buckets** list, choose the name of the bucket that you want to upload your object to.
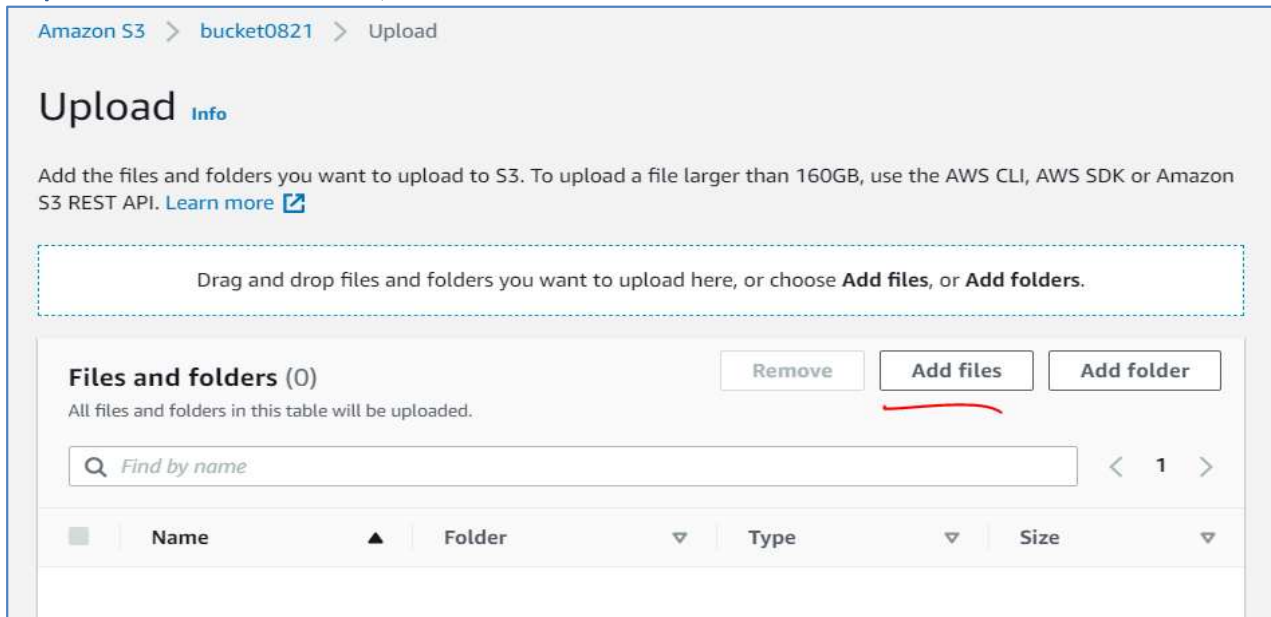
Step 3. On the **Objects** tab for your bucket, choose **Upload**.

Step 4. Under **Files and folders**, choose **Add files**.

Step 5. Choose a file to upload, and then choose **Open.**
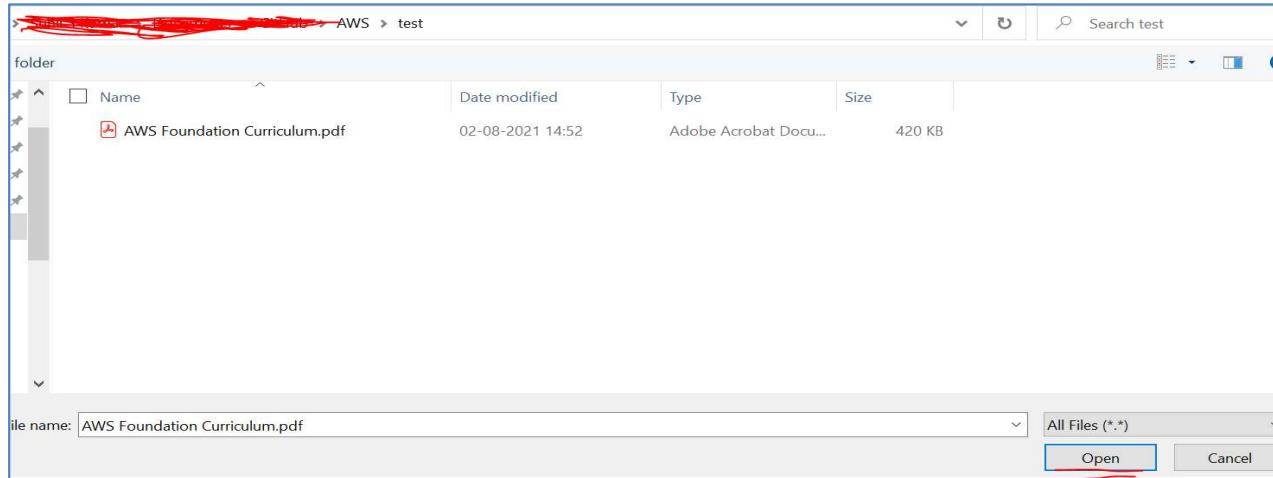
Step 6. Choose **Upload.**
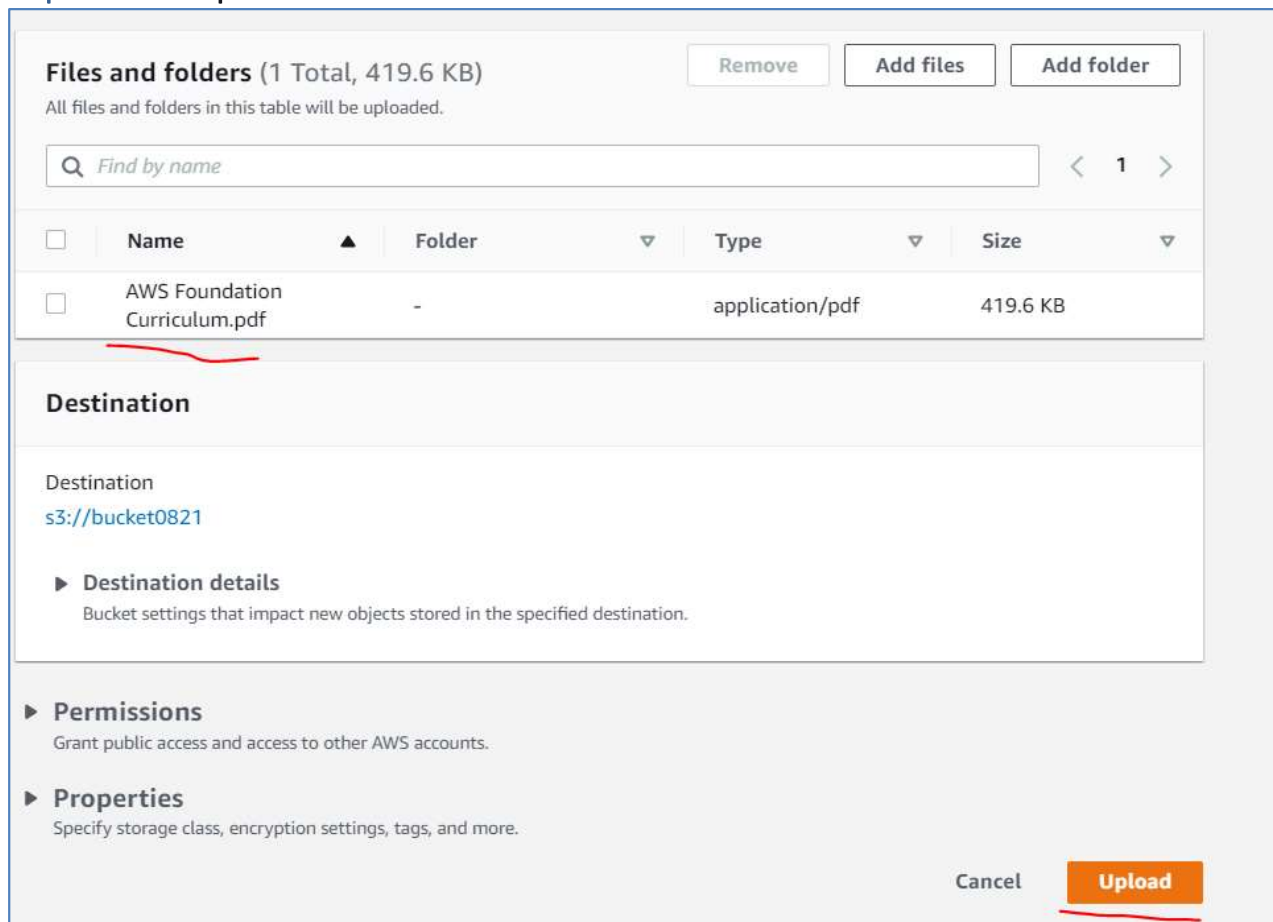
You've successfully uploaded an object to your bucket.

To download an object from an S3 bucket

Step 1. Sign into the AWS Management Console and open the Amazon S3 console
at https://console.aws.amazon.com/s3/.

Step 2. In the **Buckets** list, choose the name of the bucket that you want to download an object from.

Step 3. You can download an object from an S3 bucket in any of the following ways:

- Choose the name of the object that you want to download.

  On the **Overview** page, select the object and from the **Actions** menu
  choose **Download** or **Download as** if you want to download the object to a specific
  folder.

- Choose the object that you want to download and then from the **Object actions** menu
  choose **Download** or **Download as** if you want to download the object to a specific folder.

- If you want to download a specific version of the object, choose the name of the object that
  you want to download. Choose the **Versions** tab and then from the **Actions** menu
  choose **Download** or **Download as** if you want to download the object to a specific folder.

You've successfully downloaded your object.

Hosting a Static Website on Amazon S3

To enable static website hosting

Step 1. Sign in to the AWS Management Console and open the Amazon S3 console
at https://console.aws.amazon.com/s3/.

Step 2. In the **Buckets** list, choose the name of the bucket that you want to enable static website hosting
for.
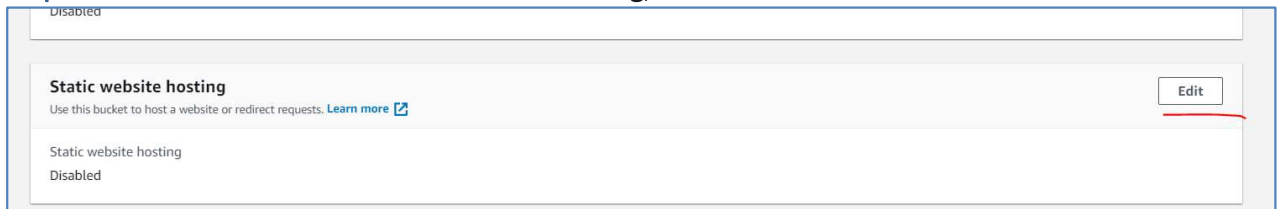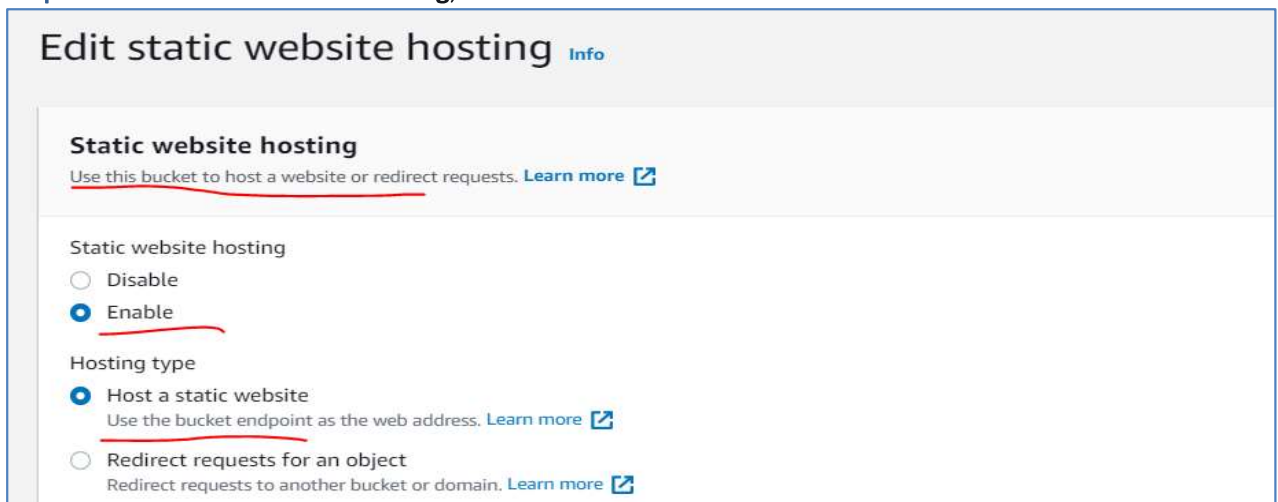
Step 3. Choose **Properties**.

Step 4. Scroll down and under **Static website hosting**, choose **Edit**.

Step 5. Choose **Use this bucket to host a website**.

Step 6. Under **Static website hosting**, choose **Enable**.

Step 7. In **Index document**, enter the file name of the index document, typically index.html.

> **Note:** The index document name is case sensitive and must exactly match the file name of the HTML index document that you plan to upload to your S3 bucket. When you configure a bucket for website hosting, you must specify an index document. Amazon S3 returns this index document when requests are made to the root domain or any of the subfolders.

Step 8. To provide your own custom error document for 4XX class errors, in **Error document**, enter the custom error document file name.
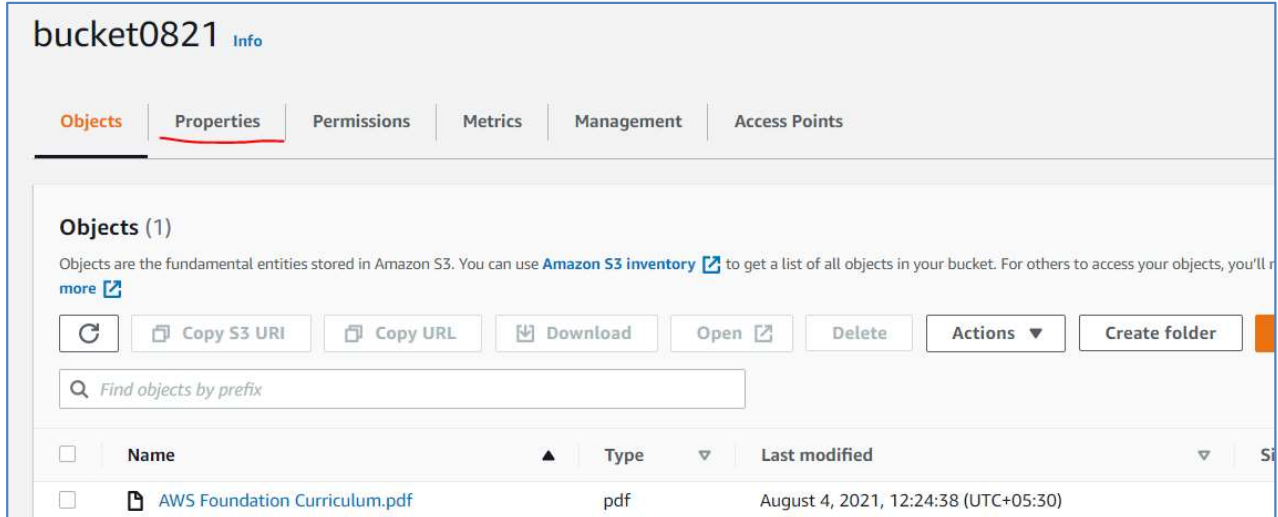
> **Note:** The error document name is case sensitive and must exactly match the file name of the HTML error document that you plan to upload to your S3 bucket. If you don't specify a custom error document and an error occurs, Amazon S3 returns a default HTML error document.
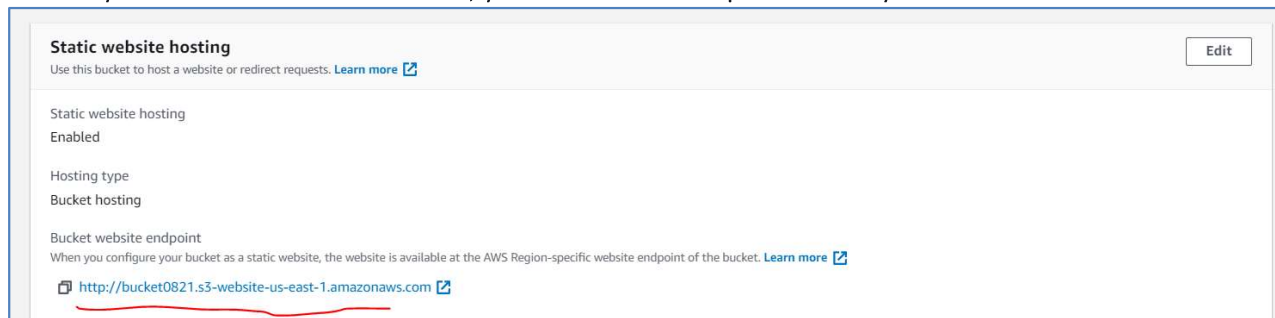
Index document
Specify the home or default page of the website.

index.html

Error document - *optional*
This is returned when an error occurs.

error.html

Step 9. Choose **Save changes**.

> Amazon S3 enables static website hosting for your bucket. At the bottom of the page, under **Static website hosting**, you see the website endpoint for your bucket.

Step 10. Under **Static website hosting**, note the **Endpoint**.

> The **Endpoint** is the Amazon S3 website endpoint for your bucket. After you finish configuring your bucket as a static website, you can use this endpoint to test your website.

Static website hosting
Use this bucket to host a website or redirect requests. Learn more

Static website hosting
Enabled

Hosting type
Bucket hosting

Bucket website endpoint
When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. Learn more

http://bucket0821.s3-website-us-east-1.amazonaws.com

Edit

To configure the index and error document

Step 1. Create an index.html and error.html file in your local system or laptop.

If you don't have an index.html and error.html file, you can use the following HTML files to create both:

index.html

```
<html xmlns="http://www.w3.org/1999/xhtml" >
<head>
    <title>My Website Home Page</title>
</head>
<body>
   <h1>Welcome to my website</h1>
   <p>Now hosted on Amazon S3!</p>
</body>
</html>
```

error.html

```
<html xmlns="http://www.w3.org/1999/xhtml" >
<head>
    <title>Page Not Found</title>
</head>
<body>
   <h1>Requested page not found</h1>
   <p>Please check the page you have entered!!</p>
</body>
</html>
```

Step 2. Save the index and error file locally.

Note: The index and error document file name must exactly match the index and error document name that you enter in the **Static website hosting** dialog box. The index document name is case sensitive.

Step 3. Sign in to the AWS Management Console and open the Amazon S3 console
at https://console.aws.amazon.com/s3/.

Step 4. In the **Buckets** list, choose the name of the bucket that you want to use to host a static website.

Step 5. To upload the index document to your bucket, do one of the following:

- Drag and drop the index file into the console bucket listing or follow the steps to upload files to bucket.
- Choose **Upload**, and follow the prompts to choose and upload the index file.

Step 6. Try accessing the website now using the endpoint:

Step 7. You will see the below permission error while accessing because we have blocked public access on the bucket.

Step 8. Let's fix it by editing the permission on bucket:

Edit S3 Block Public Access settings

Step 1. Open the Amazon S3 console at https://console.aws.amazon.com/s3/.

Step 2. Choose the name of the bucket that you have configured as a static website.

Step 3. Choose **Permissions**.

bucket0821 Info

Objects	Properties	Permissions	Metrics	Management	Access Points

Permissions overview

Access
Bucket and objects not public

Step 4. Under **Block public access (bucket settings)**, choose **Edit**.

Block public access (bucket settings)

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 acc
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 application
within, you can customize the individual settings below to suit your specific storage use cases. **Learn more** ⤢

    Edit

Block *all* public access
⊘ On

— Block public access to buckets and objects granted through *new* access control lists (ACLs)
  ⊘ On

Step 5. Clear **Block *all* public access**, and choose **Save changes**.

Block public access (bucket settings)

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**
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

  ☐ **Block public access to buckets and objects granted through *new* access control lists (ACLs)**
  S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

  Block public access to buckets and objects granted through *any* access control lists (ACLs)

Add a bucket policy

To make the objects in your bucket publicly readable, you must write a bucket policy that grants everyone s3:GetObject permission.
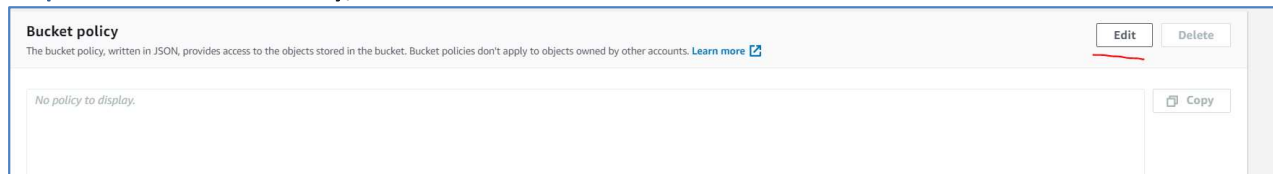
After you edit S3 Block Public Access settings, you can add a bucket policy to grant public read access to your bucket. When you grant public read access, anyone on the internet can access your bucket.

Step 1. Under **Buckets**, choose the name of your bucket.

Step 2. Choose **Permissions**.
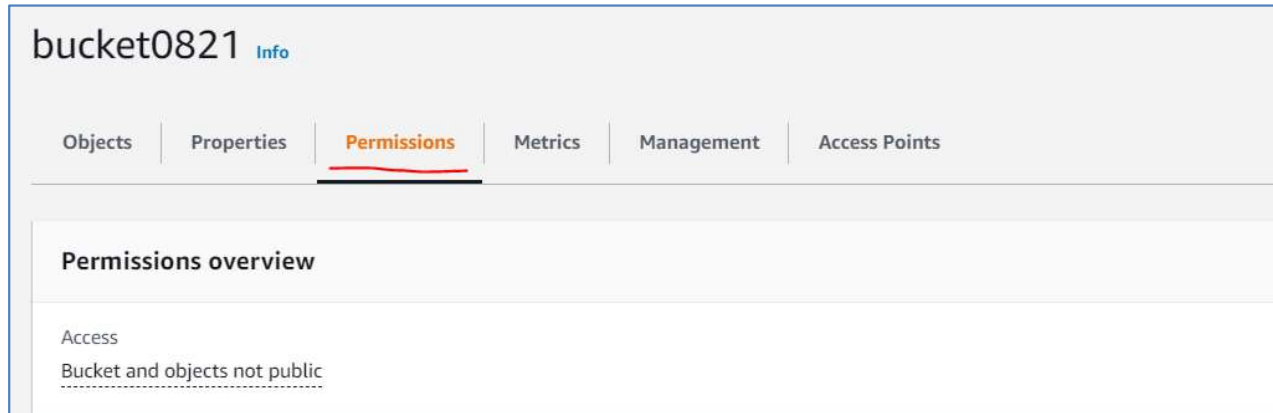
Step 3. Under **Bucket Policy**, choose **Edit**.

Step 4. To grant public read access for your website, copy the following bucket policy, and paste it in the **Bucket policy editor**.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "PublicReadGetObject",
            "Effect": "Allow",
            "Principal": "*",
            "Action": [
                "s3:GetObject"
            ],
            "Resource": [
                "arn:aws:s3:::bucket0821/*"
            ]
        }
    ]
}
```

Step 5. Update the Resource to your bucket name.

In the preceding example bucket policy, *Bucket-Name* is a placeholder for the bucket name. To use this bucket policy with your own bucket, you must update this name to match your bucket name.

Step 6. Choose **Save changes**.

Step 7. Try accessing the website now. It should be accessible now, if you have executed all steps correctly.

Step 8. Try giving some incorrect path and it will take you to error.html:

You have successfully deployed a static website on S3 bucket!!