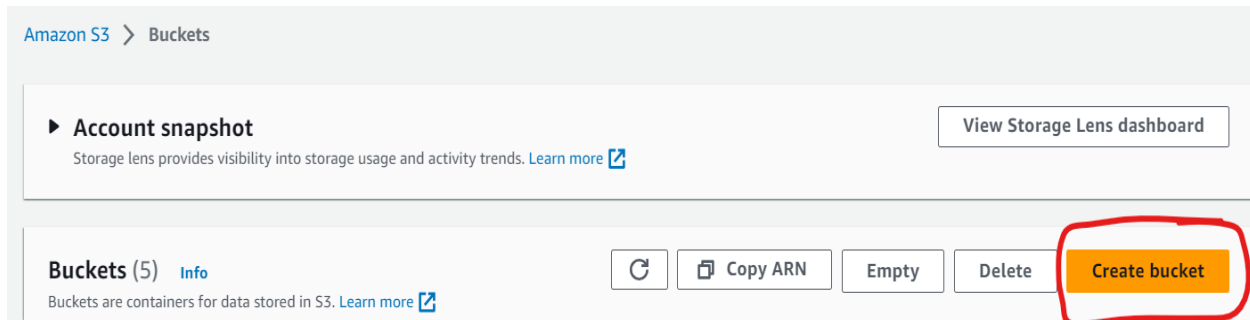


BUILDING A STATIC WEBSITE WITH AMAZON S3: FROM BUCKET CREATION TO HOSTING AND POLICIES

While dynamic websites often require complex infrastructure, hosting a static website can be achieved effortlessly using Amazon S3 (Simple Storage Service). Amazon S3 provides a reliable, scalable, and cost-effective solution for hosting static websites, allowing you to focus on your website's content and user experience.

- To create a bucket, search for the Amazon S3 Service and then click on create bucket.



- Provide a unique name for your bucket.
- Choose a region for your bucket that aligns with your target audience.

General configuration

Bucket name

staticwebsitehostingpractice

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

AWS Region

US East (Ohio) us-east-2

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Choose bucket

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

- Uncheck "Block all public access" and acknowledge the implications.

- If you intend to host a static website and make it accessible to the public, unchecking this option is essential. It enables the necessary permissions for public access to your website files.
- Unchecking this option allows Amazon S3 to serve your website files to users efficiently. When users access your website, the content can be delivered directly from S3 without any restrictions, ensuring optimal performance.
- If you want to share specific files or content stored in your S3 bucket publicly, unchecking this option is necessary. It allows you to generate URLs or provide direct access to the files for others to download or view.

Block Public Access settings for this bucket

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 this bucket and its 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 this bucket 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)**
 S3 will ignore all ACLs that grant public access to buckets and objects.
- ☐ **Block public access to buckets and objects granted through new public bucket or access point policies**
 S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
- ☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
 S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

- Choose the same default options during the rest of the bucket creation process.

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning
☒ Disable
☐ Enable

Tags (0) - optional

You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this bucket.

Add tag

- After choosing this, click on Create bucket option.

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 **Management & insights** 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

- After successfully creating the bucket, click on the properties tab of the bucket.

[Amazon S3](#) > [Buckets](#) > staticwebsitehostingpractice

staticwebsitehostingpractice [Info](#)

[Objects](#) **[Properties](#)** [Permissions](#) [Metrics](#) [Management](#) [Access Points](#)

Bucket overview

AWS Region	Amazon Resource Name (ARN)	Creation date
US East (Ohio) us-east-2	↗ arn:aws:s3:::staticwebsitehostingpractice	June 22, 2023, 19:49:09 (UTC-05:00)

- Here, click on edit to enable the static website hosting.
- Enabling static website hosting in your S3 bucket allows Amazon S3 to handle the necessary configurations and settings for hosting your static website.
- It simplifies the process by eliminating the need for additional infrastructure or complex server setups.
- Enabling static website hosting generates a unique website endpoint (e.g., bucketname.s3-website-region.amazonaws.com).
- This endpoint allows you to access your website directly from a browser using a friendly URL, without the need for complex routing configurations.


Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#) [↗](#)

[Edit](#)

Static website hosting
Disabled

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#) 

Static website hosting

☐ Disable


☒ Enable

Hosting type

☒ Host a static website

Use the bucket endpoint as the web address. [Learn more](#) 

☐ Redirect requests for an object

Redirect requests to another bucket or domain. [Learn more](#) 

Index document

Specify the home or default page of the website.


hi.html

Error document - optional

This is returned when an error occurs.


error.html

Redirection rules – optional

Redirection rules, written in JSON, automatically redirect webpage requests for specific content. [Learn more](#) 

- After choosing these, save the bucket configurations, then we can see that the bucket website endpoint is created.

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#) 

Edit


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://staticwebsitehostingpractice.s3-website.us-east-2.amazonaws.com> 

- In the S3 bucket, click on the “Upload” button under the Objects tab to add the HTML, CSS, JavaScript, and other files that would make up your website.
- Ensure that your main webpage file is named according to the "Index document" (hi.html) specified in the bucket settings.

Objects
Properties
Permissions
Metrics
Management
Access Points

Objects (0)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects you'll need to explicitly grant them permissions. [Learn more](#)

↻

📄 Copy S3 URI

📄 Copy URL

📄 Download

🔗 Open

Delete

📄 Upload

- Click on Add files, and select the files and click on Upload.

Files and folders (0)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

< 1 >

<input type="checkbox"/>	Name	Folder	Type	Size
--------------------------	------	--------	------	------

Files and folders (1 Total, 69.0 B)

Remove

Add files

Add folder

All files and folders in this table will be uploaded.

< 1 >

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	hi.html	-	text/html	69.0 B

- To complete the setup, it is essential to include a Bucket Policy for your S3 Bucket.
- To proceed, navigate to the Permissions Tab of your S3 bucket once more. This time, locate the Bucket policy section and select the edit option.


```

{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "AllowPublicAccessstoObjects",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "YOUR-BUCKET-ARN/*"
    }
  ]
}

```

- Replace “YOUR-BUCKET-ARN” with your Bucket ARN.
- This Bucket Policy allows any user or entity ("Principal": "") to perform the "s3:GetObject" action, which allows them to retrieve or download objects from the specified S3 bucket ("Resource": "YOUR-BUCKET-ARN/*"). This policy essentially grants public read access to the objects in the bucket for anyone who requests them.

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

 <http://staticwebsitehostingpractice.s3-website.us-east-2.amazonaws.com> 

- To view your static website, either click on the bucket's website endpoint URL or manually copy and paste the link into your web browser. By taking either of these actions, you can confirm that your static website is successfully deployed and accessible.
- The following is the outcome of hosting my sample web page on Amazon S3.

← → ↻ ⚠ Not secure | staticwebsitehostingpractice.s3-website.us-east-2.amazonaws.com

My Page Hiiiiiii