Hosting a static website on Amazon S3

Amazon Simple Storage Service (Amazon S3) is a cloud-based object storage service offered by Amazon Web Services (AWS). It provides a scalable and reliable way to store and retrieve any amount of data from anywhere.

Common use cases for Amazon S3 include:

- **Data lakes:** Storing large datasets for analytics.
- **Websites:** Hosting static websites.
- **Mobile applications:** Storing application data.
- **Backups and restores:** Backing up data to the cloud.
- **Archives:** Storing long-term data.

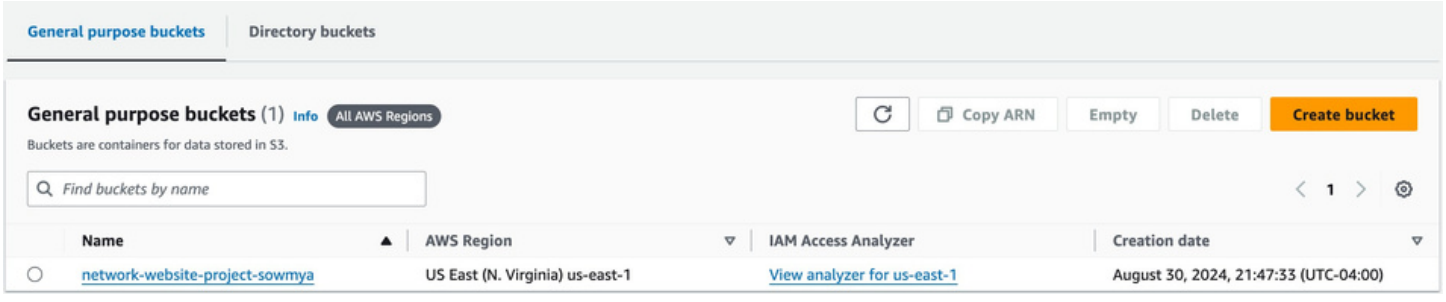
How Amazon S3 works

1. **Create a bucket:** A bucket is a container for objects.
2. **Upload objects:** Objects are files and metadata stored in buckets.
3. **Access objects:** Retrieve objects using their unique identifiers.

STEP 1

Create an S3 bucket:

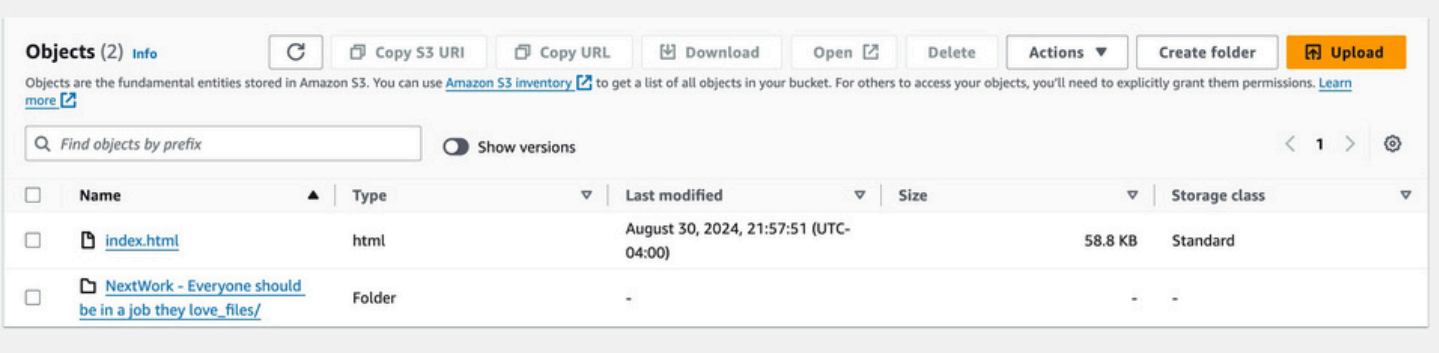
- Log in to your AWS Management Console.
- Navigate to the S3 service.
- Click "Create bucket".
- Choose a unique bucket name. *S3 bucket names are globally unique! This means no one in the world can share the same name for the S3 bucket until it gets deleted.*
- Select a region (consider your audience's location for latency). *The Region I picked for my S3 bucket was Northern Virginia because I live closest to that region.*
- Enable "Object Ownership" to grant ownership of uploaded objects to the bucket owner.
- Configure other settings as needed (e.g., versioning, encryption).
- Click "Create bucket".



STEP 2

Upload your website files:

- In your S3 bucket, click "Upload".
- Select your website files.
- Choose an upload folder (e.g., "website").
- Click "Upload".

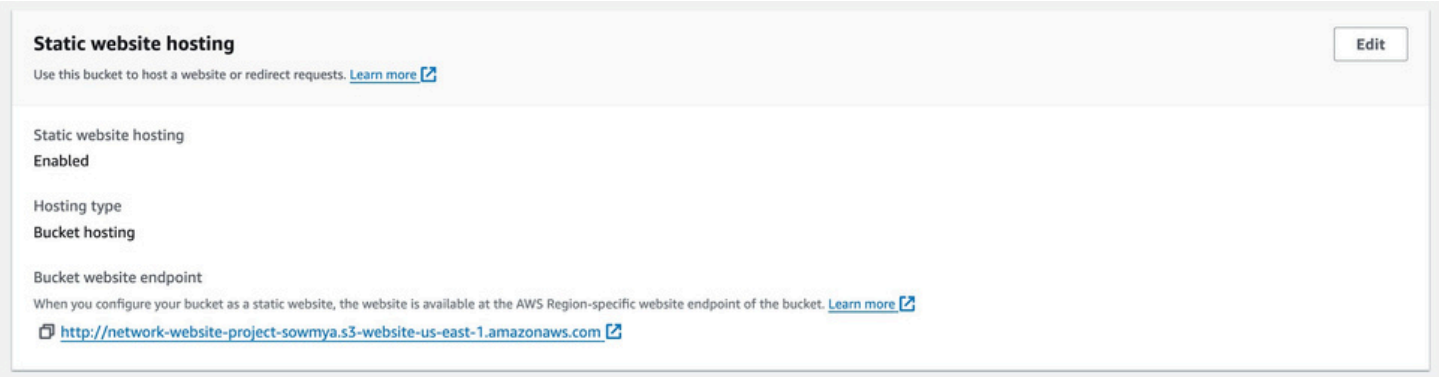


STEP 3

Configure bucket properties:

- Right-click on your bucket.
- Choose "Properties".
- In the "Static website hosting" section, enable it.
- Set the "Index Document" to the name of your index file (e.g., "index.html").
- Set the "Error Document" to the name of your error page (e.g., "404.html").
- Click "Save".

Once static website is enabled, S3 produces a bucket endpoint URL, which is our website URL.



If you see this error

403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: A5K7MJC4BJ92ZZV2
- HostId: WsXU8UIN/E03owOulhJP3yptuB7mlozPwzQ/AgL7XKynzSYoy0Di1FdraM8M0vZXLmeF39ORKtI=

When you encounter a "403 Access Denied" error while trying to access files in your S3 bucket, even though the website is publicly accessible, it often indicates that the specific files themselves are configured with private permissions. While the bucket might be public, individual objects within it can have their own access control lists (ACLs).

Check Individual Object Permissions:

- **Navigate to the S3 Console.**
- **Locate the bucket.**
- **Click on the specific file** you're trying to access.
- **Look for the "Permissions" tab.**
- **Verify the ACL settings.** If the ACL is set to "Private," that's preventing public access.

Grant Public Read Access:

- **Click on the "Permissions" tab.**
- **Under "Grant permissions," select "Everyone"** from the dropdown.
- **Choose "Read"** as the permission.
- **Click "Save changes."**