# WHAT IS AMAZON S3?

What it does:

- Amazon S3 serves as a cloud storage service. It stores and retrieves data and objects securely.

Why it's useful:

- It offers highly scalable and durable storage infrastructure to store, manage, and distribute data efficiently.

How I'm using it in today's project:

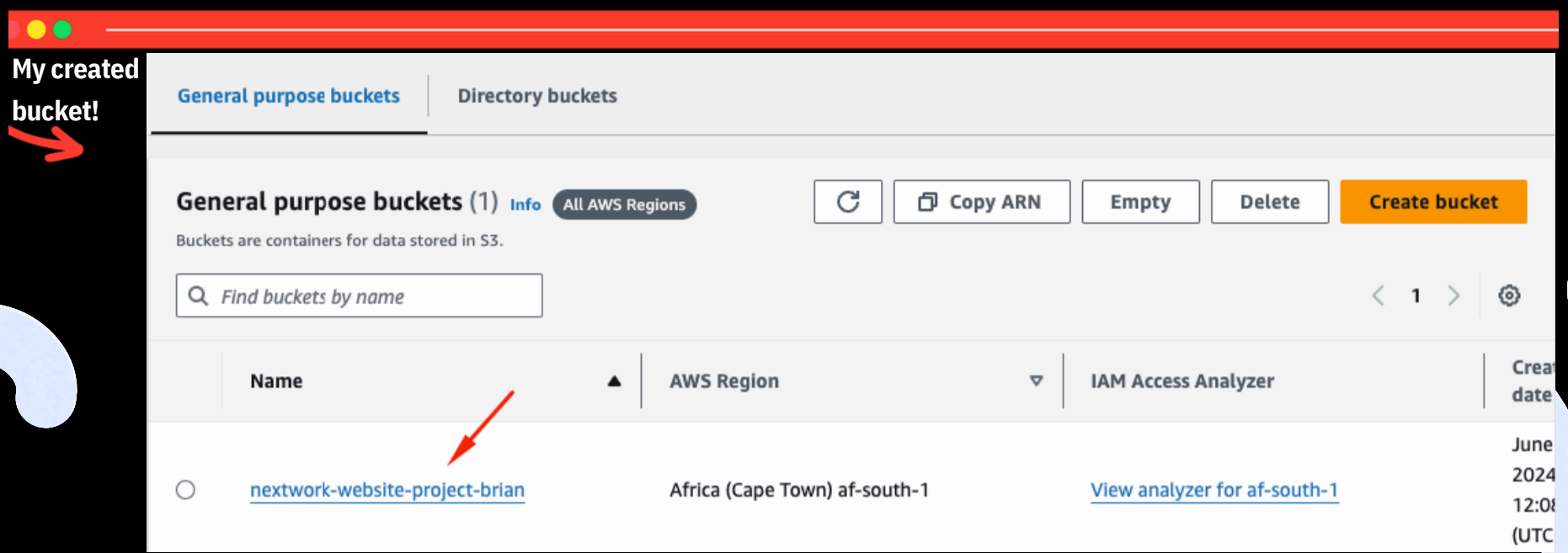- In this project, I'm using Amazon S3 to host a static website.

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# CREATE AN S3 BUCKET

- Creating an Amazon S3 bucket took me 3 minutes.

- Some of the configuration steps include:
  - Bucket's Region: The Region in AWS designates the location of your S3 bucket, chosen for its proximity to users or applications. I selected the Africa (Cape Town) af-south-1 Region for my S3 bucket, since I'm based in Kenya.
  - Access Control Lists: ACLs regulate access to objects in your S3 bucket by specifying permissions for AWS accounts or users. I configured ACLs for my S3 bucket to restrict access to authorized entities only.
  - Bucket Versioning: I enabled bucket versioning to keep multiple versions of an object in the same bucket.
  - Public Access: For Public Access settings, I cleared the checkbox for "Block all public access" in the Block Public Access settings for the bucket.

- S3 bucket names have to be globally unique, which means no other AWS accounts in the entire world can use your bucket's name unless you delete the bucket.

**My created bucket!**

| General purpose buckets | Directory buckets |
| --- | --- |

**General purpose buckets** (1) Info  All AWS Regions    Copy ARN  Empty  Delete  **Create bucket**
Buckets are containers for data stored in S3.

🔍 Find buckets by name                    ⟨ 1 ⟩ ⚙

| Name ▲ | AWS Region ▽ | IAM Access Analyzer | Crea date |
| --- | --- | --- | --- |
| ○ nextwork-website-project-brian | Africa (Cape Town) af-south-1 | View analyzer for af-south-1 | June 2024 12:08 (UTC |

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# UPLOAD WEBSITE CONTENT TO S3

- Next, I uploaded my websités files into my S3 bucket.

- There were two files to upload: "index.html" and unzipped folder with the website's assets to my S3 bucket. These files work together: "index.html" is the main webpage, while the zip holds all needed resources like CSS and JavaScript for the full site display.
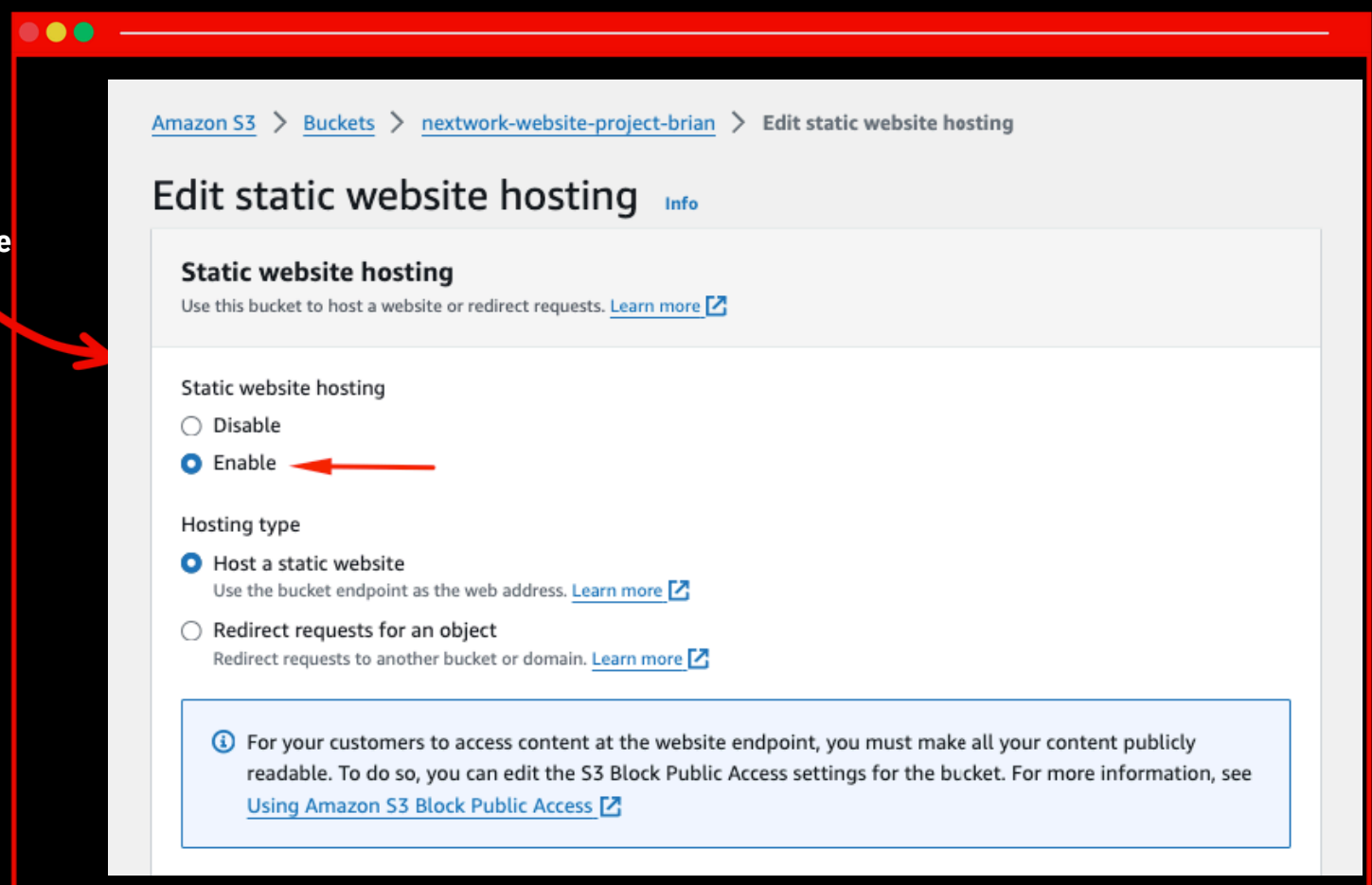
**Objects successfully uploaded!**



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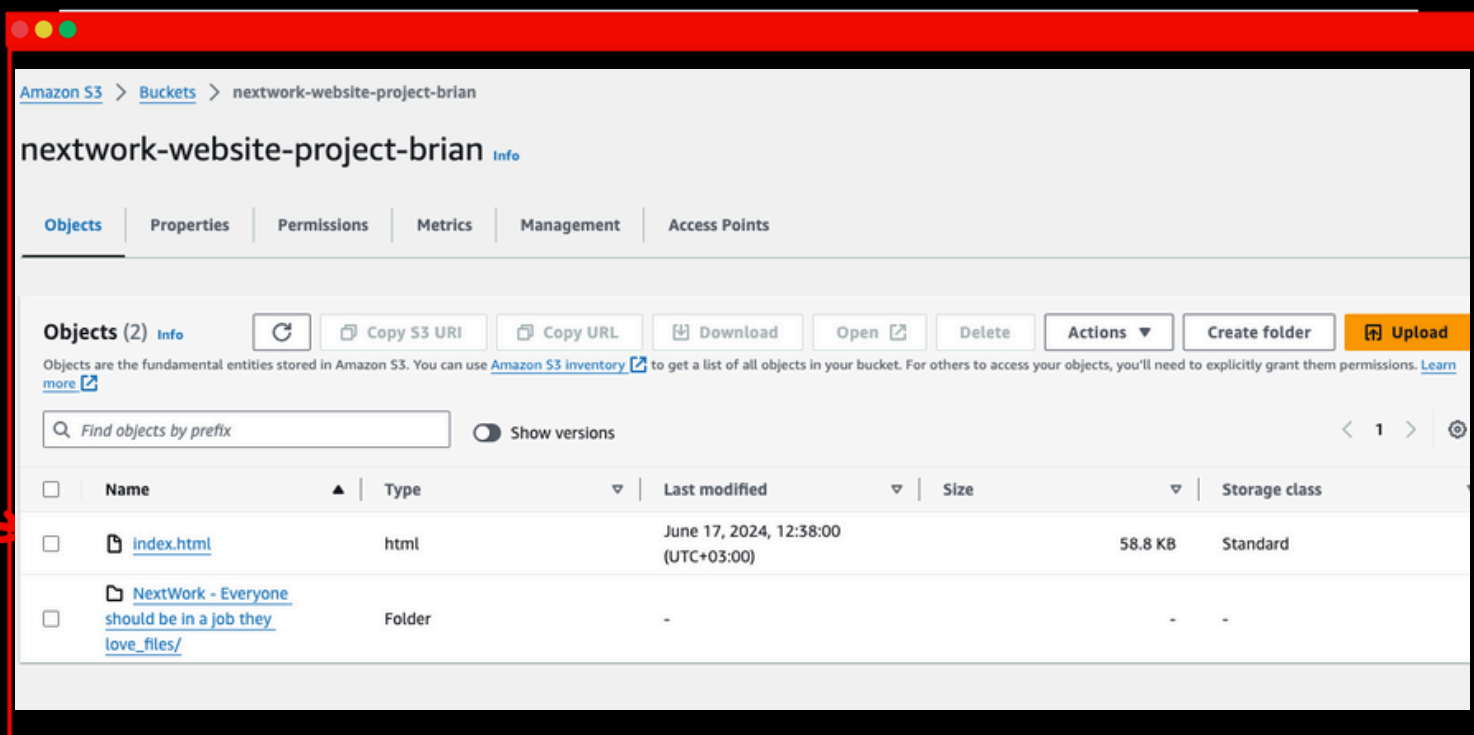
# CONFIGURE STATIC WEBSITE HOSTING ON AMAZON S3

- Website hosting means storing your HTML file (and other files for your website) on a web server, so it's accessible online.
  To enable website hosting, I chose Host a static website and entered
- index.html.

- Once static website is enabled, S3 produces a bucket endpoint URL. It serves as the address or pathway for accessing the content stored on the web server.
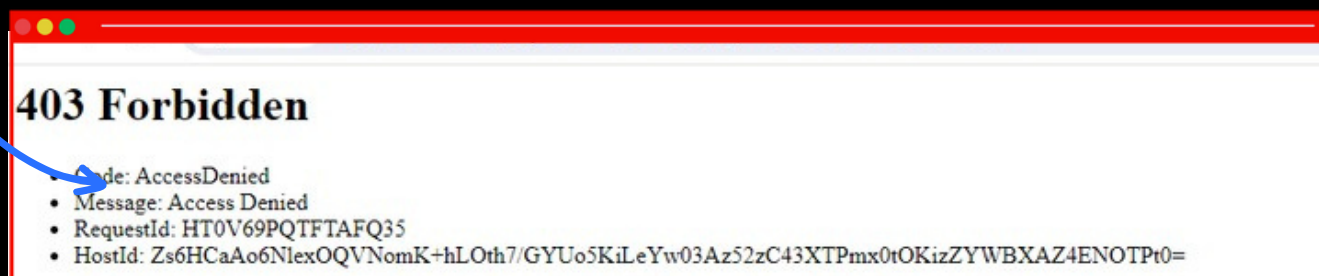
**Setting up static website hosting**



Amazon S3 > Buckets > nextwork-website-project-brian > Edit static website hosting

## Edit static website hosting  Info

### 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

ⓘ For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see Using Amazon S3 Block Public Access

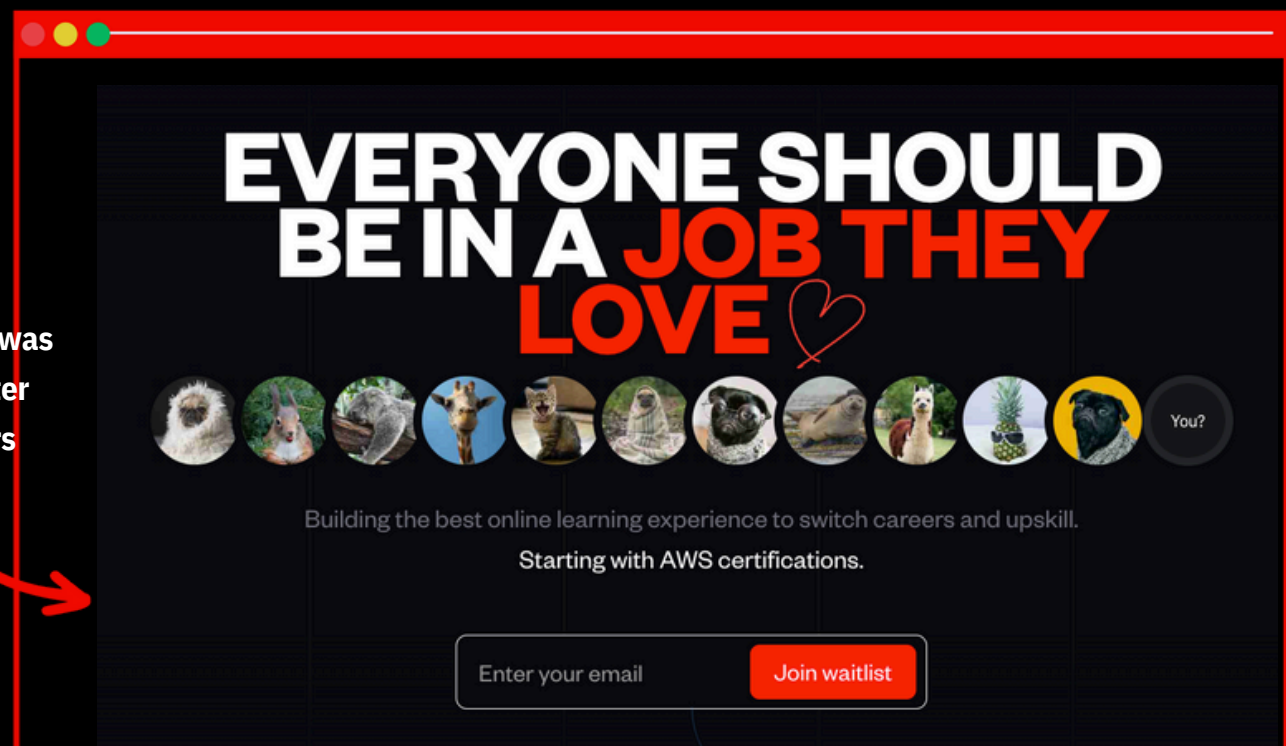**Brian Gathuita**
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# AN ERROR!

- When I visited the bucket endpoint URL, there was an Error.

- The reason for this error was because the objects (HTML and image files) uploaded to S3 are private by default for account security, resulting in the inability to access the static website hosted by S3.

**The error**

### 403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: HT0V69PQTFTAFQ35
- HostId: Zs6HCaAo6NlexOQVNomK+hLOth7/GYUo5KiLeYw03Az52zC43XTPmx0tOKizZYWBXAZ4ENOTPt0=

- To resolve this error, I set the permission of the objects to public.

**Voila! My website was up and running after resolving the errors**

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# MY KEY LEARNINGS

**01** What is Amazon S3?
A cloud storage service.

**02** What does static website hosting mean?
To make my website accessible to the public

**03** What were the settings you used to make your website available to the public? I adjusted access permissions to enable public access to the website's objects.

**04** Why did your bucket endpoint URL still return an error? What will you need to do next time? The bucket URL returned an error because S3 objects default to private, restricting access to website content. Next time, I'll ensure to configure object permissions as public to avoid this issue.

**05** Setting up website hosting on Amazon S3 makes deploying and managing websites easier because you don't need to deal with server setup and maintenance.

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# FINAL THOUGHTS...

- This project took me 45 minutes.

- Deleted EVERYTHING at the end! Aiming to keep this project free :)

- In the next phase of this project, I'm excited to deepen my understanding of static websites by integrating Amazon Route 53 for domain management. Additionally, I plan to utilize AWS CloudFormation to automate the deployment process, enabling me to recreate my setup in seconds.

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**Thanks NextWork for the free project guide!**

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