Host a Website on Amazon S3

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Introducing Today's Project!

What is Amazon S3

Amazon S3 is a simple storage service that allows users to store and retrieve data from the website at any time. It is especially useful because it allows users to host static websites and offers scalability and durability, and global accessbility.

How I used Amazon S3 in this project

In this project, I used Amazon S3 to host a static website and learned how to create a bucket and upload files to it. I also learned how to enable static website hosting from the properties tab and make the files publicly accessible using ACL.

One thing I didn't expect in this project was...

One thing I did not expect in this project was learning how to resolve the error with loading the website page. Additionally, I was surprised by the simplicity of the project, as implementing website hosting was overall very straightforward.

This project took me...

The project took me an hour and a half overall, including implementation, understanding the concepts, and writing the report.

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How I Set Up an S3 Bucket

Creating the S3 bucket was very qucik in a matter of click and it was pretty staright forward choosing few options such as naming the bucket, ACL, and block public access settings.

I chose Asia Pacific (Sydney) ap-southeast-2 as my S3 bucket area because it is the closest to my location. Choosing the closest region will help to reduce latency, increase cost efficiency, and optimize performance.

S3 bucket names are globally unique as it operates in single, shared namespace across all AWS accounts. This helps in avoiding the collisions with names between different users, and overwriting another user's data.

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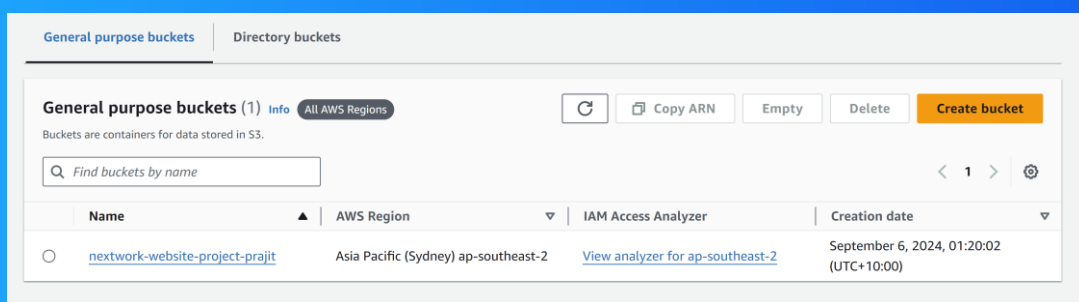
Upload Website Files to S3

index.html and image assets

I uploaded two items to my S3 bucket: an index file in HTML format and a folder containing 44 files necessary for designing and building the website. I also attached an image showing the uploaded files in the bucket.

Both files serve different purposes. The index.html file is the main entry point for the website's homepage which loads by default. It provides structure and styling to the website. The other files are supporting assets, such as images and resources.

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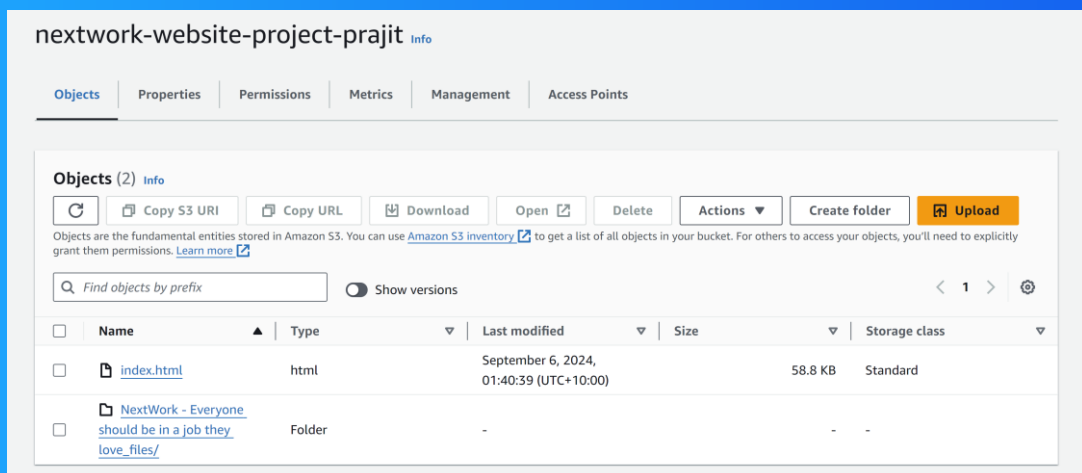
Static Website Hosting on S3

Webiste hosting in S3 means hosting the static contents like HTML, CSS and java script as website. It is mainly achieved by effeectively turning the S3 bucket into a simple web server, which can be accessed by public using the ACL.

To enable website hosting, First I created an S3 bucket and uploaded the requitred files into it, such as index.html and other supporting files. Next, I enabled the static website hosting from the properties tab and made it public using ACL.

Access Control Lists ACL

ACL is Access control list, which is defined as a set of rules that decides who can get access to which resource within the AWS organisation. ACL can give access to the entire public or only to certain group of users to access the webistes.

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Bucket Endpoints

The bucket website endpoint URL is generated by S3 once static website hosting is enabled from the properties tab. This URL allows access to the bucket's contents in the form of a website when public access is granted using ACL.
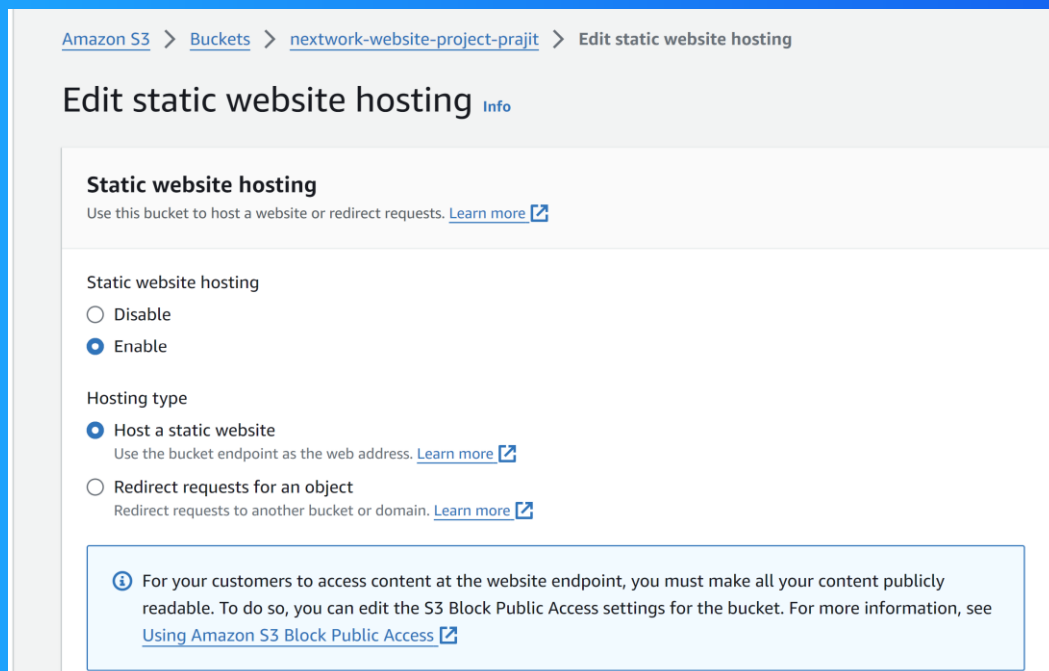
An error!

When I first visited the bucket endpoint ULR, I saw the 403 Forbidden error page, and the access was denied.

The reason for this error was that although the S3 bucket had public access, the objects (i.e., the files inside the bucket) were not accessible. This resulted in access being denied, which caused a connection error when trying to load the website.

403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: ND6V2J4G9C4B44HV
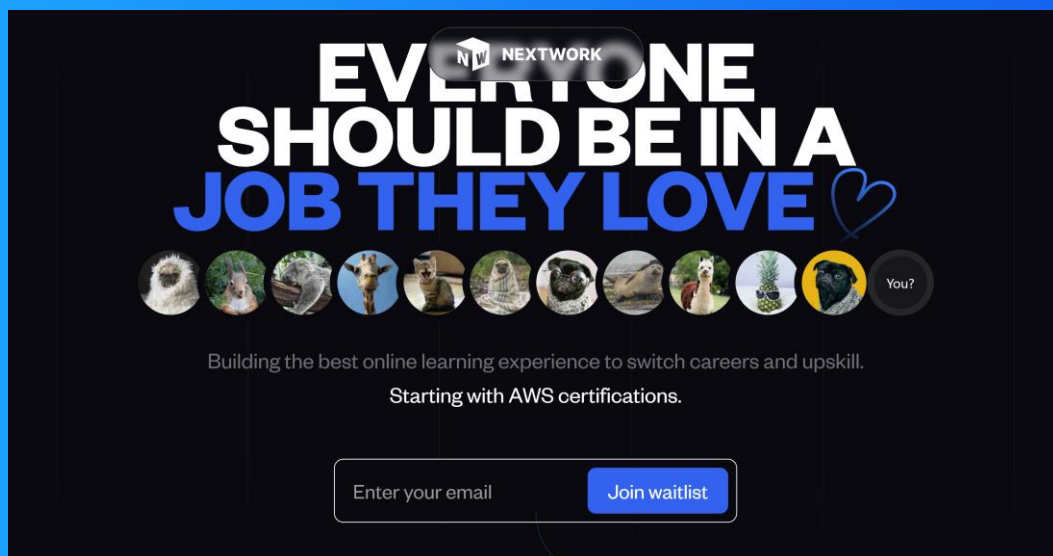- HostId: Iz6p0ZEt1t6ncHOxX7wlxdCqHk/AxO6BUErooBmykRH858RbTERTF3xMscO+bspdhhaAWSysPyU=

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Success!

To resolve the connection error, I went back to the objects tab, selected both the files to make it go public using ACL under the Action tab.

Everyone should be in a job they love.

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