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# Host a Website on Amazon S3

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# Introducing Today's Project!

In this project, I will demonstrate how to use S3 to host a static website. We are doing this project to learn about AWS and cloud services and how they can be used to store objects in the cloud AND even host website.

## Tools and concepts

Services I used were Amazon S3. Key concepts I learnt include bucket policies, uploading static website files, index.htm, bucket endpoints URLs and ACLs and how they control access to our bucket's objects

## Project reflection

This project took me approximately 1 hour including demo time and quiz time. The most challenging part was resolving the 403 Forbidden Error. It was most rewarding to see my webpage load live and public to the world!

# How I Set Up an S3 Bucket

Creating an S3 bucket took me less than 5 minutes-we need to learn a few new concepts like block public access and ACLs. But once the learning is done, we can create buckets in even shorter time in the future.

The Region I picked for my S3 bucket was Singapore because it's the region closest to me. It is the best practice to pick the closest region to us because it lowers time to retrieve things (aka latency), and costs.

S3 bucket names are globally unique! This means no two Amazon S3 buckets in the entire world can have the same name. They have to be completely unique, regardless of the region or the account.

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The screenshot shows the AWS S3 Buckets page. At the top, there is a green success message: "Successfully created bucket \"nextwork-website-project-amirhamzah\" To upload files and folders, or to configure additional bucket settings, choose View details." Below this, there are two tabs: "General purpose buckets" (selected) and "Directory buckets". Under the "General purpose buckets" tab, there is a table with one row. The table columns are: Name, AWS Region, IAM Access Analyzer, and Creation date. The single entry is: "nextwork-website-project-amirhamzah", "Asia Pacific (Singapore) ap-southeast-1", "View analyzer for ap-southeast-1", and "July 6, 2025, 17:00:56 (UTC+08:00)".

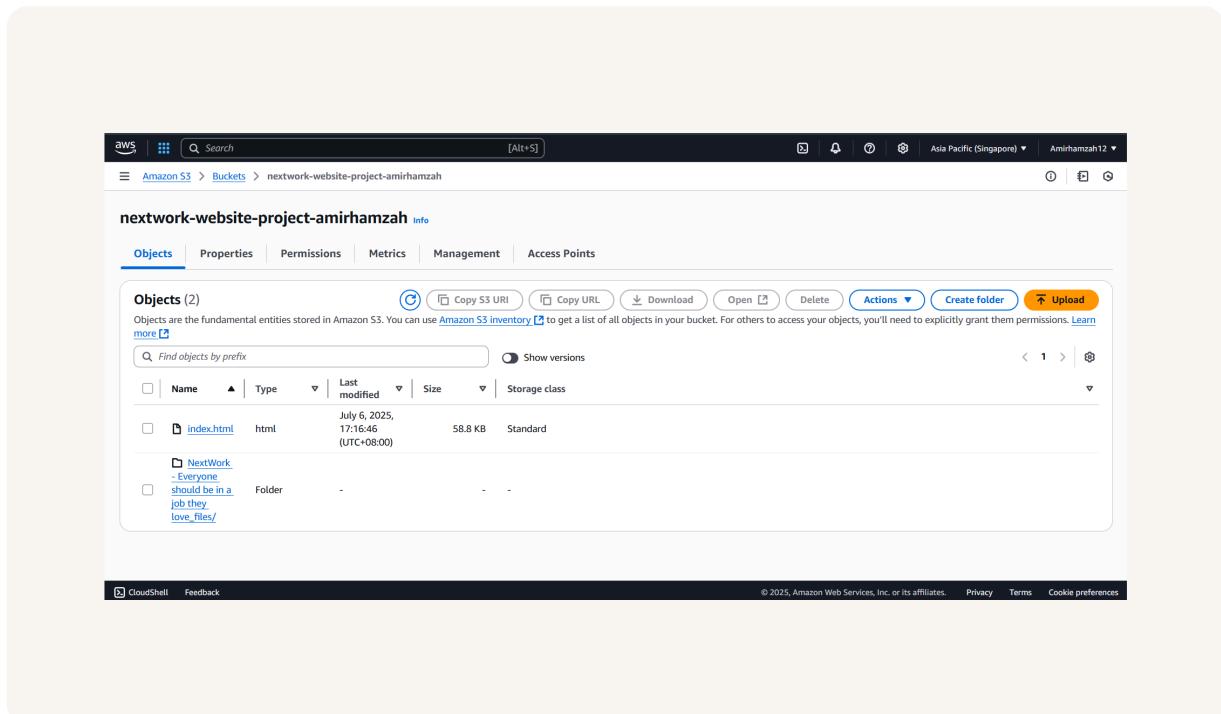
Name	AWS Region	IAM Access Analyzer	Creation date
nextwork-website-project-amirhamzah	Asia Pacific (Singapore) ap-southeast-1	<a href="#">View analyzer for ap-southeast-1</a>	July 6, 2025, 17:00:56 (UTC+08:00)

# Upload Website Files to S3

## index.html and image assets

I uploaded two files to my S3 bucket - they were an index.html(this determines the structure i.e. what goes inside your website) and folder of images and assets(this will fill in the website with images and things and things look at)

Both files are necessary for this project as index.html act as the main file or determines as the structure, but the structure alone does not illustrates the content of websites.Hence, we need to supply assets(image in this case) seperately.

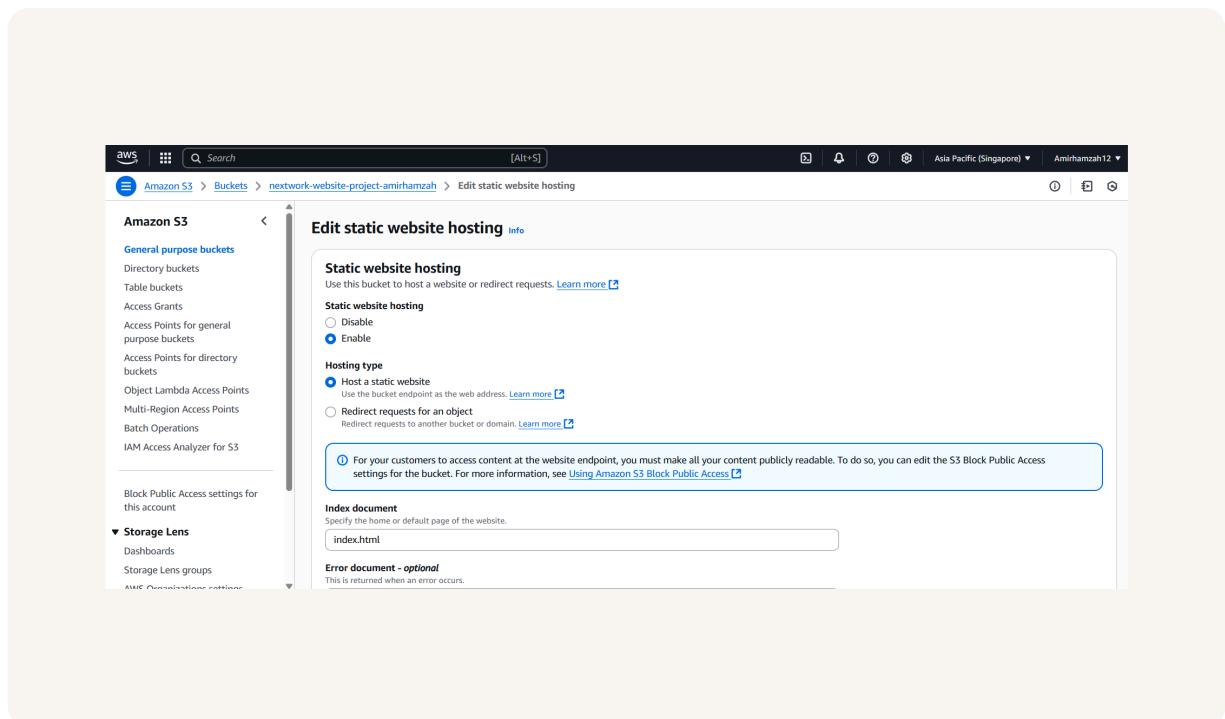


# Static Website Hosting on S3

Website hosting means putting my website files on a web server, which is a special computer designed to turn the files into a website page that people can visit!

To enable website hosting with my S3 bucket, I went to properties tab of our bucket, enable static website hosting and I also labelled "index.html" as my index document i.e. this is the document that we're trying to host.

An ACL is Access Control Lists is a way to configure permissions settings inside a bucket. We enables ACLs so that we can control account our websites files later.



# Bucket Endpoints

Once static website is enabled, S3 produces a bucket endpoint URL, which is a URL that takes you (and anyone on the internet) to the website that you've hosting.

When I first visited the bucket endpoint URL, I saw a 403 Forbidden Error! The reason for this error was that objects in a bucket are public by default—even though we've switched off "Block all Public Access".

## 403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: C0ZB6G67GW8YCV3X
- HostId:  
SMfFGQJ78bmOsH2Z7oW+kPCtocMOEIBIxDOcSsSkDvVO8nsI+63Kxq8zcCkBncbvVt6dzovLyuI=

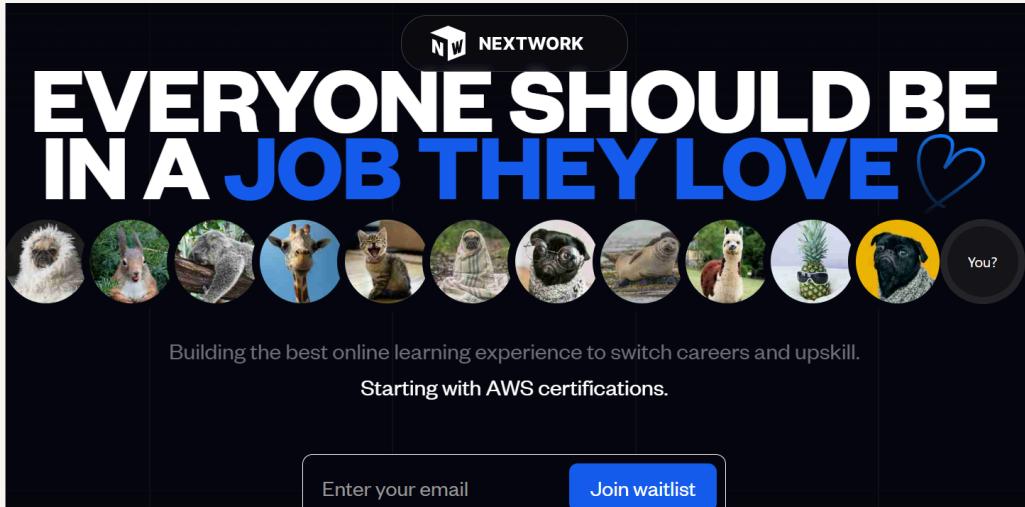
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# Success!

To resolve this 403 Forbidden error, I updated the access settings of the files inside our bucket too. Using ACLs, I made my bucket's files public! Once we checked our S3 bucket endpoint we can see a webpage all loaded up.





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