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Host a Website on Amazon S3



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Introducing Today's Project!

What is Amazon S3

Amazon S3 is a scalable cloud storage service for storing and retrieving data. It's useful for its flexibility, low cost, high durability, and easy integration with AWS services, making it ideal for backups, hosting, and data archiving.

How I used Amazon S3 in this project

I used Amazon S3 in today's project to store and host a static website. I uploaded an `index.html` file and image assets to an S3 bucket, configured the bucket for public access, and enabled static website hosting to make the site accessible online.

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

One thing I didn't expect in this project was encountering a "403 Forbidden" error due to incorrect bucket permissions, requiring me to adjust the ACL settings to make the files publicly accessible.

This project took me...

This project took me less an hour to complete, including setting up the S3 bucket, uploading files, configuring permissions, enabling website hosting, and troubleshooting the access issues.

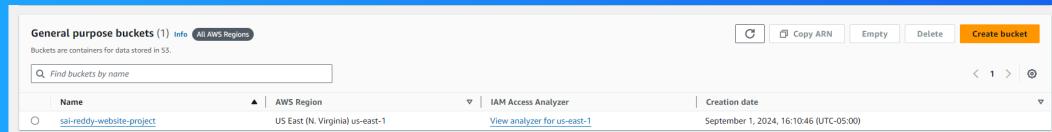


How I Set Up an S3 Bucket

Creating an S3 bucket took me just a few minutes, as the process is straightforward in the AWS Management Console. You typically need to choose a unique bucket name, select a region, and configure settings such as permissions and versioning.

The Region I picked for my S3 bucket was N. Virginia because it's close to my location in Texas, offering lower latency and faster access to data.

S3 bucket names are globally unique! This means that each bucket name must be distinct across all AWS regions and accounts. No two buckets can have the same name, ensuring that the URL and resources associated with a bucket are specific to its owner.





Upload Website Files to S3

index.html and image assets

I uploaded two files to my S3 bucket - they were an index.html file and a folder with image assets.

Both files are necessary for this project as the index.html file serves as the main webpage, while the folder with image assets provides the visual content needed for the page to display correctly.

The screenshot shows the Amazon S3 'Objects' list interface. At the top, there are buttons for 'Copy', 'Copy S3 URI', 'Copy URL', 'Download', 'Open', 'Delete', 'Actions', 'Create folder', and 'Upload'. Below this is a search bar labeled 'Find objects by prefix' and a 'Show versions' button. The main area displays a table of objects:

Name	Type	Last modified	Size	Storage class
index.html	HTML	September 1, 2024, 16:27:32 (UTC-05:00)	58.8 KB	Standard
love_Ries/	Folder	-	-	-



Static Website Hosting on S3

Website hosting means storing a website's files, such as HTML, images, and scripts, on a server that is accessible via the internet, allowing users to view and interact with the site online.

To enable website hosting with my S3 bucket, I configured the bucket settings to allow static website hosting, uploaded the necessary files, set the bucket policy to allow public access, and specified the `index.html` file as the entry point.

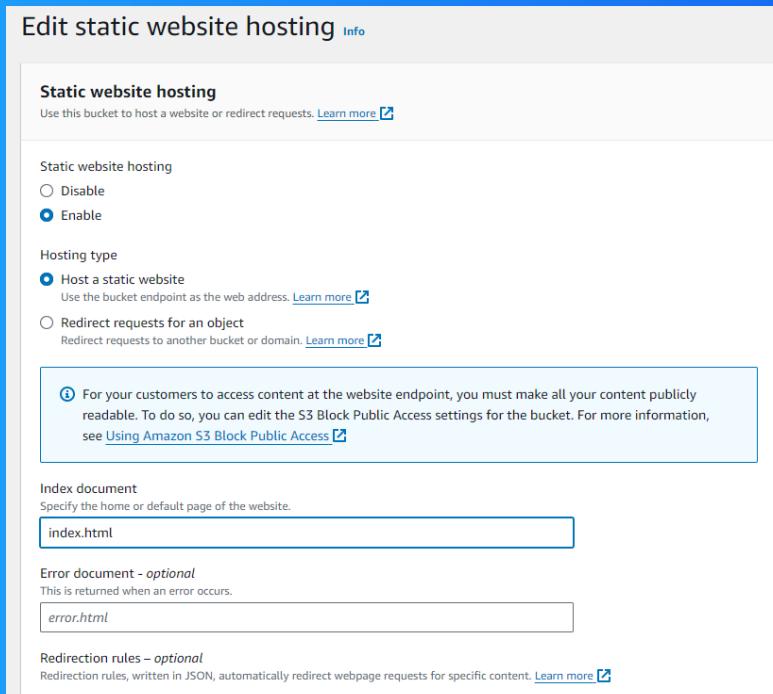
Access Control Lists (ACL)

An ACL is an Access Control List that defines who can access specific resources and what actions they can perform. I enabled ACLs to manage access permissions for different users and groups in my S3 bucket.



Bucket Endpoints

Once static website hosting is enabled, S3 produces a bucket endpoint URL, which is a web address that allows users to access the hosted files directly from the S3 bucket, making the website accessible over the internet.





An error!

When I first visited the bucket endpoint URL, I saw a "403 Forbidden" error with the code "AccessDenied," indicating that access to the bucket was denied due to insufficient permissions or incorrect bucket policy settings.

The reason for this error was that the bucket permissions or policies weren't set correctly to allow public access to the files, preventing the browser from accessing the content.

403 Forbidden
• Code: AccessDenied
• Message: Access Denied
• RequestId: 8V7FRC8353EXIMTT
• HostId: kIP98dYZVSClyzNB2sD8oUj0+nn45icTdZHUkzJWbfrvALB42e157Z1M/mrBKY9kM4X9XBjC=

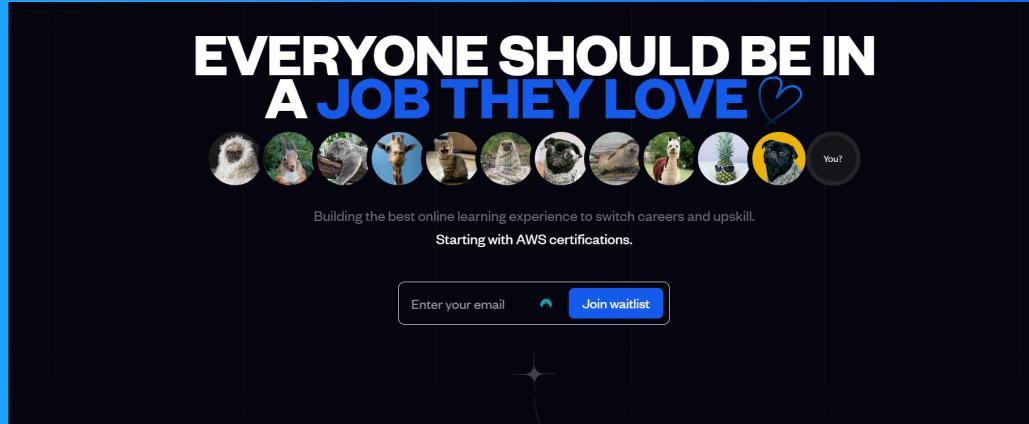


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Success!

To resolve this connection error, I went to the objects tab, selected the two objects in the bucket, and in actions, chose 'Make public using ACL'. I confirmed the action by clicking on 'Make Public', which allowed public access to the files.





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