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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 cloud storage service that lets you store and access data from anywhere. It's useful because it's scalable, secure, and low-cost, making it great for backups, archiving, hosting websites, and managing large datasets efficiently.

## How I used Amazon S3 in this project

In today's project, I used Amazon S3 to host a static website. I uploaded HTML and image files to a bucket, enabled public access using ACLs, and configured the bucket for website hosting so users could view the site through the S3 bucket URL.

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

One thing I didn't expect in this project was encountering the "403 Forbidden" error due to the default privacy settings of the uploaded files. I had to adjust the object permissions to make the files publicly accessible for the website to work.

## This project took me...

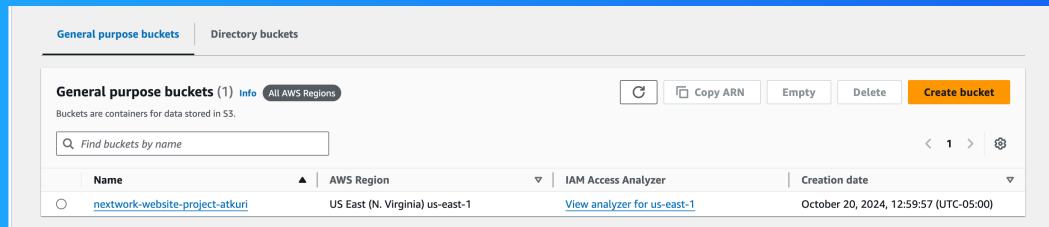
This project took me about an hour, including setting up the S3 bucket, uploading the files, enabling website hosting, troubleshooting the "403 Forbidden" error, and adjusting the permissions to make the website accessible.

# How I Set Up an S3 Bucket

Creating an S3 bucket took me only a few minutes. After logging into the AWS Console, I navigated to the S3 service, clicked "Create bucket," entered a unique name, selected a region, configured the settings, and clicked "Create."

The Region I picked for my S3 bucket was US East (N. Virginia) (us-east-1) because it offers lower latency, lower costs, and is widely used. It also has strong integration with other AWS services and is ideal for general-purpose storage.

S3 bucket names are globally unique! This means no two buckets can have the same name across all AWS accounts and regions, ensuring each bucket is uniquely identifiable for data storage and access worldwide.



# Upload Website Files to S3

## index.html and image assets

I uploaded two files to my S3 bucket - they were an index.html file, which is an HTML document, and a folder named NextWork - Everyone should be in a job they love\_files, containing additional resources related to the HTML file.

Both files are necessary for this project as the index.html file serves as the main webpage, while the folder NextWork - Everyone should be in a job they love\_files contains supporting resources, like images or stylesheets, required to display.

The screenshot shows the AWS S3 console interface. At the top, there's a toolbar with buttons for Copy S3 URI, Copy URL, Download, Open, Delete, Actions, and Create folder. Below the toolbar, a prominent orange button labeled "Upload" is visible. A message below it states: "Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)". There's also a search bar labeled "Find objects by prefix" and a "Show versions" checkbox. The main area displays a table of objects:

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	<a href="#">index.html</a>	html	October 20, 2024, 13:19:31 (UTC-05:00)	58.8 KB	Standard
<input type="checkbox"/>	<a href="#">NextWork - Everyone should be in a job they love_files/</a>	Folder	-	-	-



# Static Website Hosting on S3

Website hosting means storing your website's files, like HTML, images, and data, on a server so people can access it on the internet. The hosting provider ensures your site is available, secure, and fast for users when they visit your web address.

To enable website hosting with my S3 bucket, I went to the bucket's "Properties" tab, clicked on "Static website hosting," added index.html as the homepage, saved the changes, and made the bucket public so the website can be accessed by anyone online

## Access Control Lists (ACL)

An Access Control List (ACL) defines rules that manage access to your S3 bucket and its objects. It allows you to control who can read, write, or manage your data. I enabled ACLs to grant specific permissions to users.



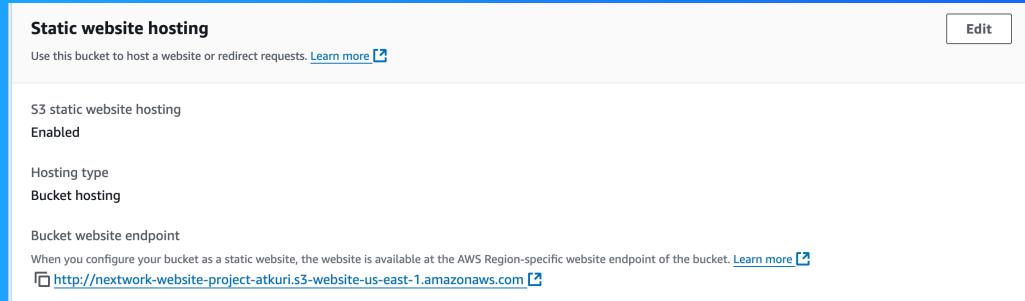
V

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# Bucket Endpoints

Once static website is enabled, S3 produces a bucket endpoint URL, which is a web address where users can access the hosted site. In this case, the URL is: <http://nextwork-website-project-atkuri.s3-website-us-east-1.amazonaws.com>.



# An error!

When I first visited the bucket endpoint URL, I saw a "403 Forbidden" error, meaning access was denied. This happened because the S3 bucket or its objects were not publicly accessible, and I needed to adjust the permissions to make the content public

The reason for this error was that the objects in the S3 bucket were private by default. Though the site was hosted, the files couldn't be accessed. I needed to set the objects' permissions to public, which was why ACLs were enabled.

## 403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: XPZPG3HGB2WT2E5B
- HostId: idm7VfT+jNL01eqMnQhaXPvFjaliystDl9jENpFWgbRsxiE2CRBHP+B7AxEKTa7/fDH5hUhqC0=

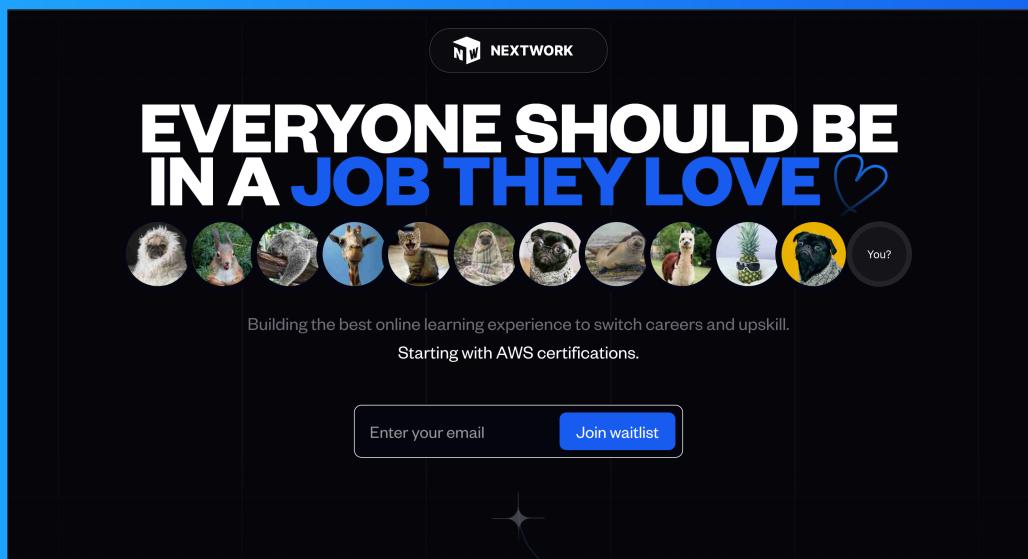
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# Success!

To resolve this connection error, I updated the S3 bucket's object permissions to public. I enabled ACLs and ensured that both the HTML and image files had the necessary public access so they could be viewed through the website endpoint.





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