

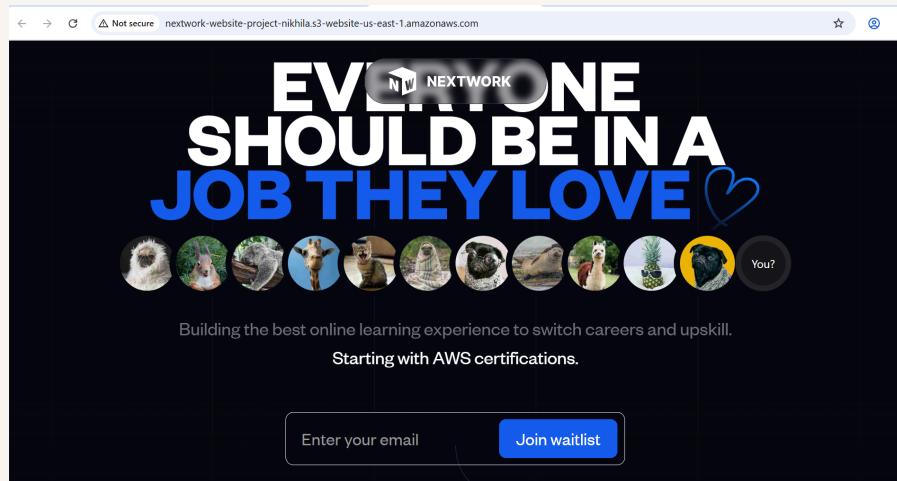


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Host a Website on Amazon S3



Nikhila Reddy



Introducing Today's Project!

In this project, I will learn how to use S3 to host a static website. I'm 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 websites. (How does that work?!)

Tools and concepts

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

Project reflection

This project took me approximately 1.5 hours including demo, quiz and secret mission. The most challenging part was resolving the 403 forbidden error. It was most rewarding to see my webpage load live and be public!

How I Set Up an S3 Bucket

Creating an S3 bucket took under 5 minutes. We had to understand a few new concepts like block public access and ACLs, but once those are clear, setting up buckets will be even quicker next time.

The Region I picked for my S3 bucket was N. Virginia (us-east-1). While best practice is to choose the closest region to reduce latency and cost, I chose this one for full Free Tier access and better service availability and learning ease.

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 ID.

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The screenshot shows the AWS S3 Buckets page. At the top, there is a success message: "Successfully created bucket 'nextwork-website-project-nikhila'". Below it, there is an "Account snapshot" section with a link to "View Storage Lens dashboard". The main table lists one "General purpose buckets" entry:

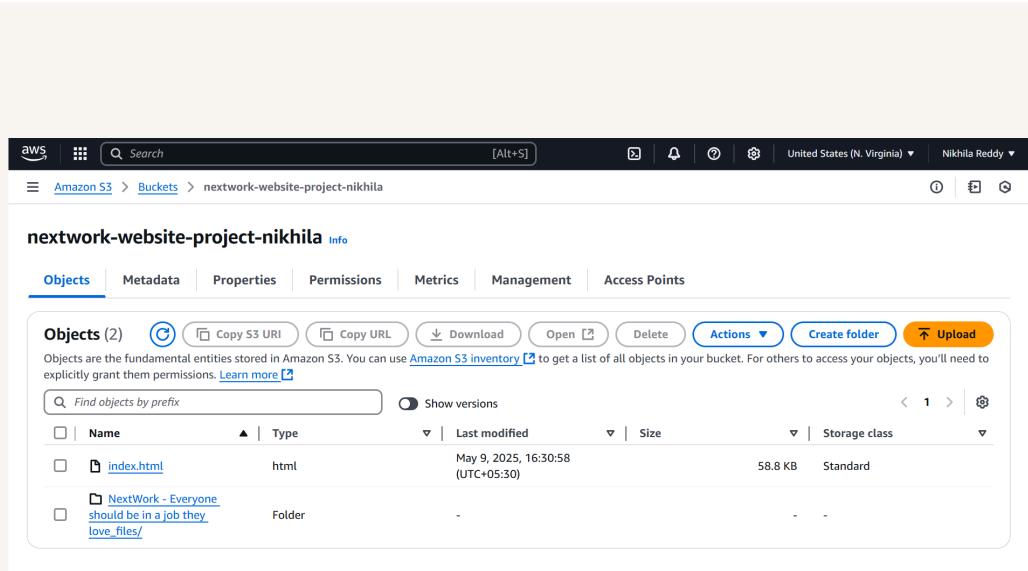
Name	AWS Region	IAM Access Analyzer	Creation date
nextwork-website-project-nikhila	US East (N. Virginia) us-east-1	View analyzer for us-east-1	May 9, 2025, 14:27:52 (UTC+05:30)

Upload Website Files to S3

index.html and image assets

I uploaded two files to my S3 bucket – an index.html file (this sets up the website's layout and content) and a folder with images and other assets (these add pictures and design to the site).

Both files are necessary for this project. The index.html sets the structure, but it doesn't show content like images. You need to upload those separately. That's why we have the index.html for layout and assets to fill in the content.



Static Website Hosting on S3

Website hosting means placing our website files on a web server, which is a special computer that turns those files into a webpage that people can visit.

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

An ACL is a way to configure permission settings inside a bucket. We enabled ACLs so that we can control access to our website files later. There was a popup mentioning that AWS recommends disabling ACLs and we'll keep it enabled to see how ACLs work.

The screenshot shows the 'Edit static website hosting' configuration for a bucket named 'nextwork-website-project-nikhila'. The 'Static website hosting' section is enabled. Under 'Hosting type', 'Host a static website' is selected, which is highlighted with a blue border. A note below explains that the bucket endpoint can be used as the web address. The 'Index document' field is set to 'index.html'. A callout box provides a tip about making content publicly readable.

Amazon S3 > Buckets > nextwork-website-project-nikhila > 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](#)

Index document
Specify the home or default page of the website.
index.html

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](#).

Bucket Endpoints

Once static website is enabled, S3 produces a bucket endpoint URL, which is an URL which takes us or anyone on the internet to the website we are hosting.

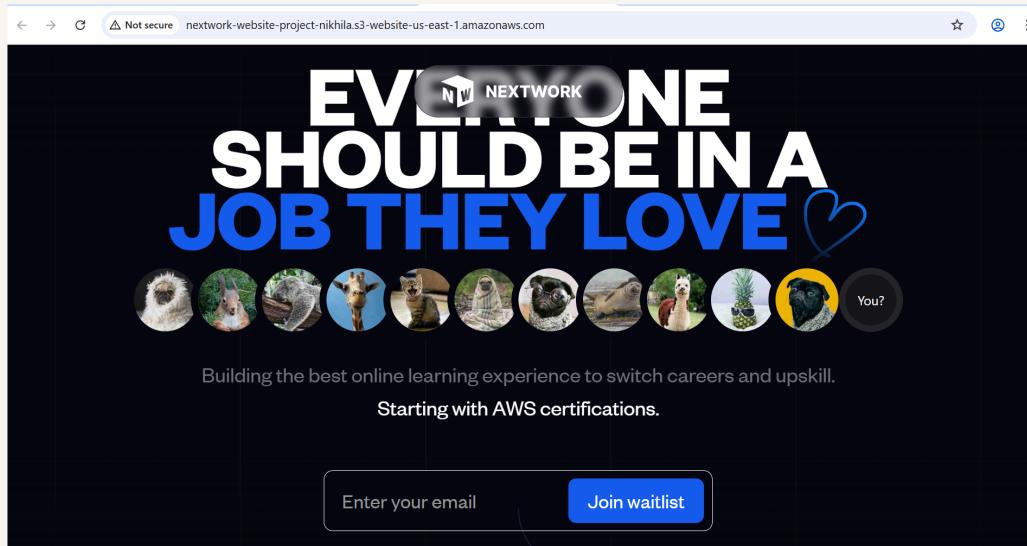
When I first visited the bucket endpoint URL, I saw a 403 forbidden error. This happened because, even though I turned off 'Block all Public Access', the files are still private. We need to set their permissions so the public can view the website.

403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: M1N6HZ2B44SEDC83
- HostId: mskfq2K3o1AurUCAbCKyffQOm/MILLYFD5ubfAavU4EudxNlbZkw656bQMcPoGspeJRDrl9He3U=

Success!

To resolve the 403 Forbidden error, I updated the file permissions using ACLs and made the bucket files public. After that, I checked the S3 bucket URL, and the website loaded up perfectly!





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