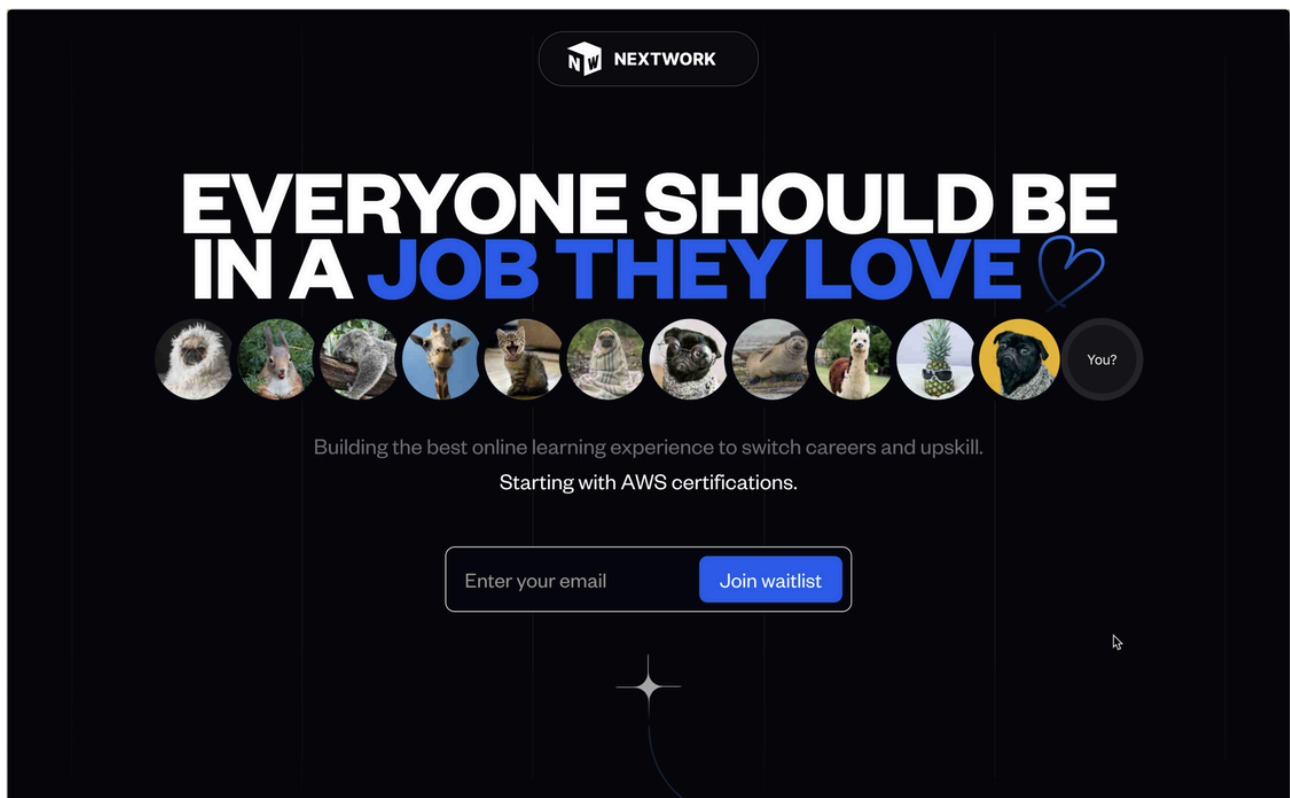


Host a Static Website on Amazon S3



 **Karen Wong**
[linkedin.com/in/wongkayankaren](https://www.linkedin.com/in/wongkayankaren)

Powered by NextWork.org

Introducing Today's Project!

What is Amazon S3?

Amazon S3 (Amazon Simple Storage Service) is a cloud storage service that enables storing and retrieving any amount of data at any time from anywhere on the web. It is scalable, secure, and user-friendly.

How I used Amazon S3 in this project?

I created an S3 bucket with ACLs enabled and allowed public access. Then, I uploaded webpage files to the bucket, configured static website hosting, and made the bucket objects public with ACLs.

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

I didn't expect that I would have to write so much to review my knowledge and reflect on what I have done for the project. Also, the fantastic website provided by NextWork! Everyone should be in a job they love!

This project took me...

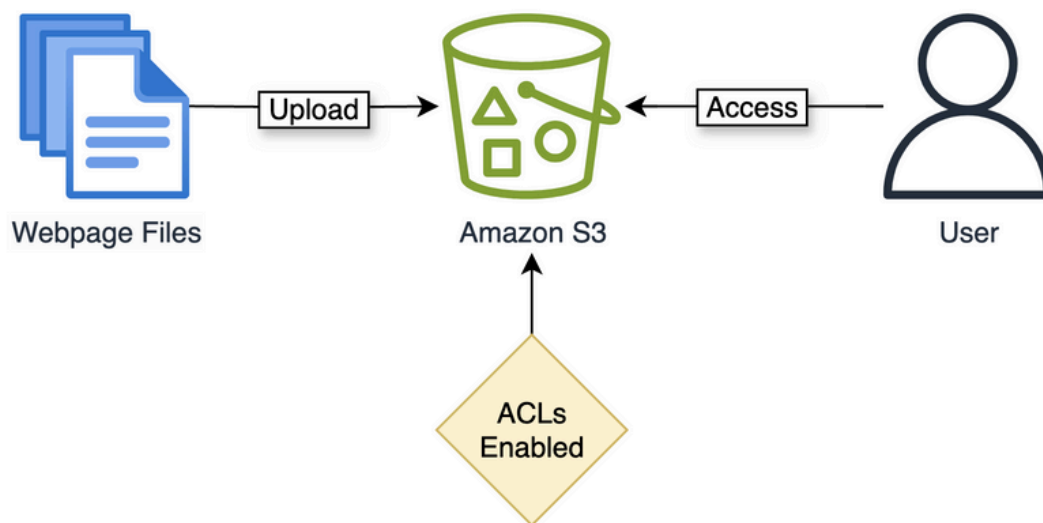
I spent about an hour on this project, primarily refining sentences in the documentation. The whole process on AWS Management Console was smooth and felt like a flash.



 **Karen Wong**
[linkedin.com/in/wongkayankaren](https://www.linkedin.com/in/wongkayankaren)

Architecture Overview

Host a Static Website on Amazon S3



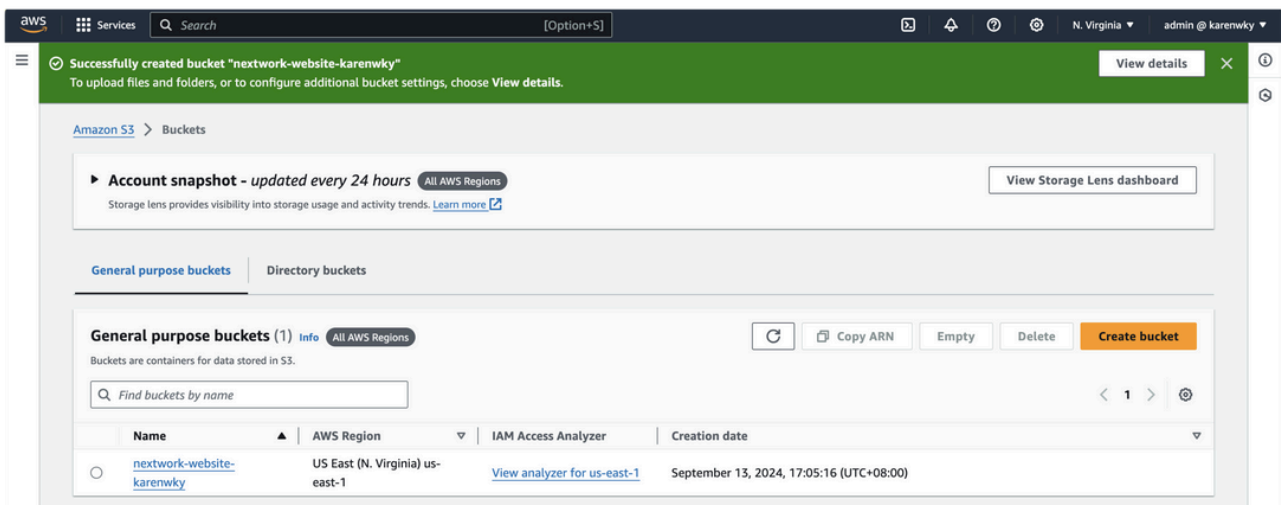
Webpage files are uploaded to an S3 bucket, with ACLs enabled for public access to both the bucket and its objects. The webpage is accessible publicly via the internet.

How I Set Up an S3 Bucket

It took me just a few clicks to create an S3 bucket, but I was very curious about how ACLs work, and I wanted to understand the different options for blocking public access, so I spent some extra time studying these details.

I chose US East (N. Virginia) for my S3 bucket because us-east-1 has the most available services and is used in Cloud Quest hands-on exercises. Since this is just an exploratory project and not for production, I didn't opt for the nearest region.

An S3 bucket name must be globally unique, as all AWS accounts share the same namespace. Once a bucket is created, no other AWS account can use that name anywhere in the world until the original bucket is deleted.



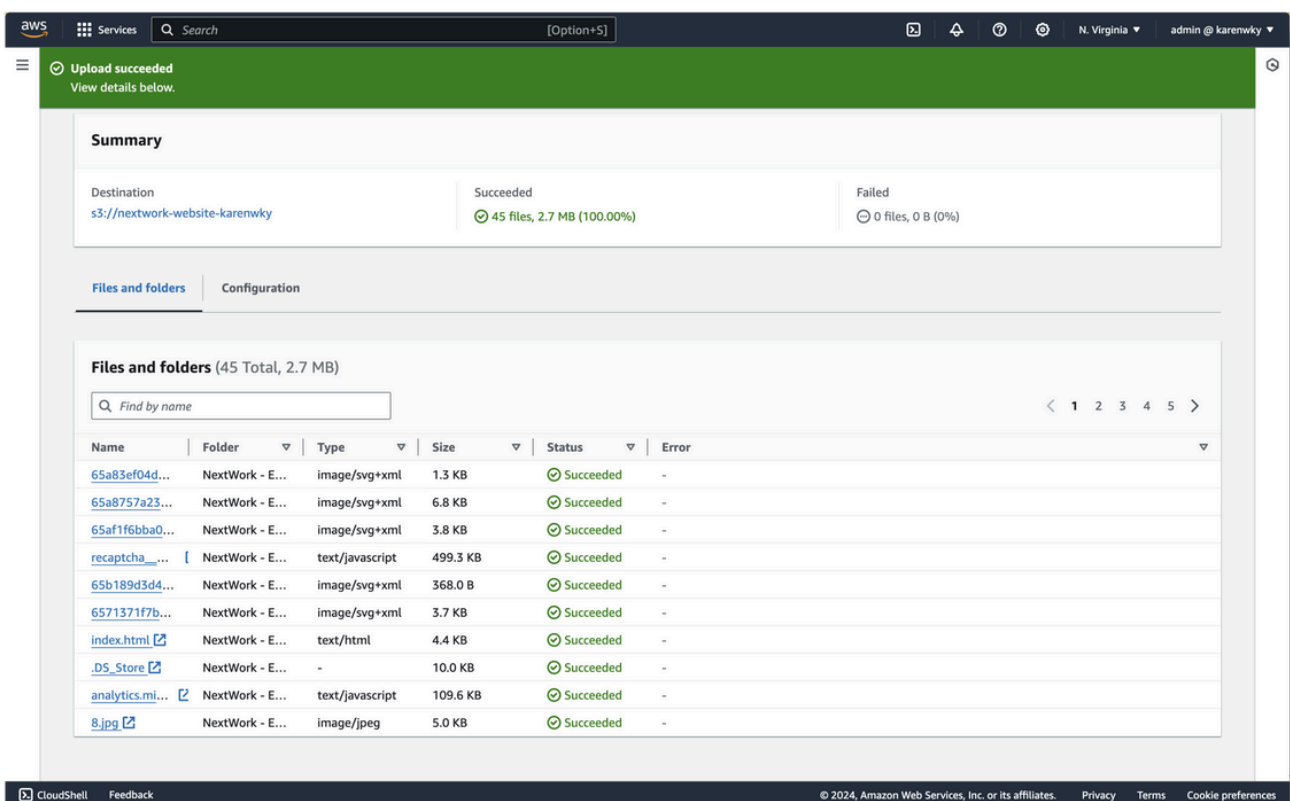
 **Karen Wong**
linkedin.com/in/wongkayankaren

Upload Website Files to S3

index.html and image assets

I uploaded an "index.html" file and a folder named "NextWork - Everyone should be in a job they love_files" to my S3 bucket. The folder contains HTML, CSS, JavaScript, and image files for a webpage.

Both files are necessary for this project because the "index.html" file references the files in "NextWork - Everyone should be in a job they love_files" folder, such as the user thumbnail images displayed on the webpage.



The screenshot shows the AWS S3 console interface. At the top, a green banner indicates "Upload succeeded" with a link to "View details below." Below this, a "Summary" section displays the destination "s3://nextwork-website-karenwky" and the upload results: "Succeeded" (45 files, 2.7 MB, 100.00%) and "Failed" (0 files, 0 B, 0%).

The "Files and folders" tab is selected, showing a list of 45 files and folders. The table below details the upload results:

Name	Folder	Type	Size	Status	Error
65a83ef04d...	NextWork - E...	image/svg+xml	1.3 KB	Succeeded	-
65a8757a23...	NextWork - E...	image/svg+xml	6.8 KB	Succeeded	-
65af1f6bba0...	NextWork - E...	image/svg+xml	3.8 KB	Succeeded	-
recaptcha_...	NextWork - E...	text/javascript	499.3 KB	Succeeded	-
65b189d3d4...	NextWork - E...	image/svg+xml	368.0 B	Succeeded	-
6571371f7b...	NextWork - E...	image/svg+xml	3.7 KB	Succeeded	-
index.html	NextWork - E...	text/html	4.4 KB	Succeeded	-
.DS_Store	NextWork - E...	-	10.0 KB	Succeeded	-
analytics.mi...	NextWork - E...	text/javascript	109.6 KB	Succeeded	-
8.jpg	NextWork - E...	image/jpeg	5.0 KB	Succeeded	-

 **Karen Wong**
linkedin.com/in/wongkayankaren

Powered by NextWork.org

Static Website Hosting on S3

Website hosting makes a webpage accessible on the internet by storing its files on a server. This allows users to access the site via their browsers, making it viewable to the public.

To enable website hosting with S3 bucket, click the "Properties" tab of the bucket, scroll to the bottom and click "Edit" from "Static website hosting", then "Enable" static website hosting and select "Host a static website" as hosting type.

Access Control Lists (ACLs)

An ACL (Access Control List) is a set of rules that determines access to resources in Amazon S3. For a public static website hosted on S3, ACLs manage permissions for both the bucket and its objects, ensuring that the site is accessible with public visibility. They specify who can read from or write to the bucket and its contents.

There are five types of ACL permissions in Amazon S3: READ, WRITE, READ_ACP, WRITE_ACP, and FULL_CONTROL. These permissions vary depending on the context, whether the ACL is applied to a bucket or an object, resulting in different granted actions. For example:

- READ for a *bucket* allows the grantee to list the objects within the bucket.
- READ for an *object* allows the grantee to read the object data and its metadata.

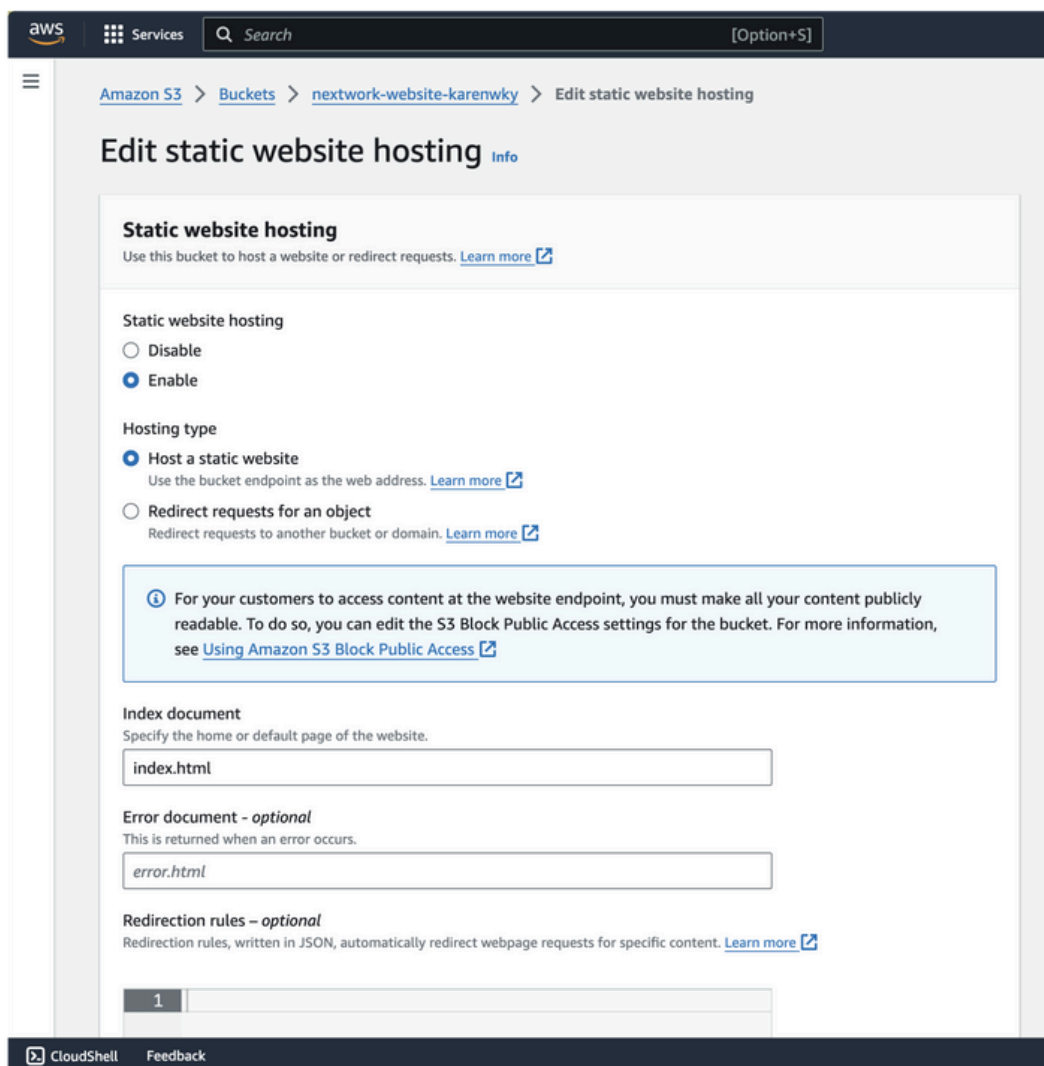


 **Karen Wong**
linkedin.com/in/wongkayankaren

Bucket Endpoints

Once static website is enabled, S3 produces a bucket endpoint URL. Depending on Region, the website endpoint follows one of these two formats.

- s3-website dash (-) Region:
`http://bucket-name.s3-website-Region.amazonaws.com`
- s3-website dot (.) Region:
`http://bucket-name.s3-website.Region.amazonaws.com`



 **Karen Wong**
linkedin.com/in/wongkayankaren

An error!

When I first visited the bucket endpoint URL, I encountered a "403 Forbidden" error along with "AccessDenied" code and message. It also showed a RequestId and HostId.

The reason for this error was only the S3 bucket was set to public, but the objects inside were not. Objects are private by default, so they cannot be accessed without configuring the appropriate permissions or ACLs.

403 Forbidden

- Code: AccessDenied
- Message: Access Denied
- RequestId: F879WJXSWSN5P7QE
- HostId: /1qidq6+AS2v1Uv3V2ZCaDbn47KDY3XBddtUUNhQYXFyl0YilijpAUd5I+eQXjuEcLw9aJlxQk=

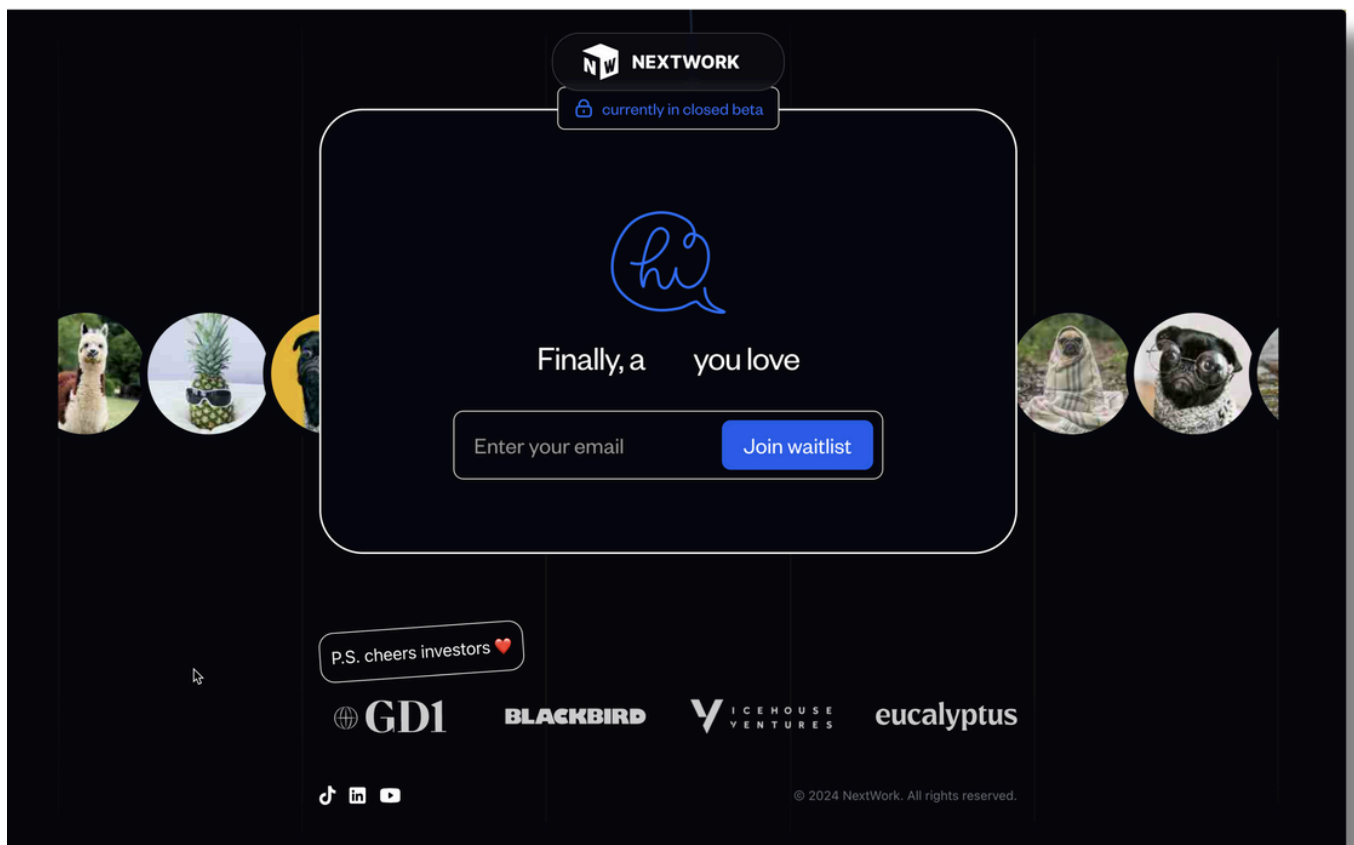


Karen Wong

[linkedin.com/in/wongkayankaren](https://www.linkedin.com/in/wongkayankaren)

Success!

To resolve this connection error, select all bucket objects, click "Actions", and then choose "Make public using ACL". The objects will then be set to public and can be accessed via the internet.



 **Karen Wong**
[linkedin.com/in/wongkayankaren](https://www.linkedin.com/in/wongkayankaren)

Powered by NextWork.org

References

- [Amazon S3 - Cloud Object Storage - AWS](#)
- [Access control list \(ACL\) overview - Amazon Simple Storage Service](#)
- [Website endpoints - Amazon Simple Storage Service](#)
- [Tutorial: Configuring a static website on Amazon S3 - Amazon Simple Storage Service](#)
- [Hosting a static website using Amazon S3 - Amazon Simple Storage Service](#)
- [NextWork - Host a Website on Amazon S3](#)



 **Karen Wong**
linkedin.com/in/wongkayankaren

Powered by NextWork.org

