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Host a Website on Amazon S3



Praveen Kambale

The screenshot shows a web browser window with a dark-themed website. The main header features the 'NEXTWORK' logo. Below it is a large, bold text banner that reads "EVERYONE SHOULD BE IN A JOB THEY LOVE" with a blue heart icon. Underneath the banner is a row of circular icons representing various animals: an owl, a squirrel, a porcupine, a giraffe, a cat, a pug, a seal, a llama, a pineapple, and a dog. To the right of the dog icon is a small circular placeholder with the text "You?". Below the banner, there is a subtitle: "Building the best online learning experience to switch careers and upskill." followed by "Starting with AWS certifications." At the bottom of the page is a form with a text input field labeled "Enter your email" and a blue "Join waitlist" button. The browser's address bar shows the URL "nextwork-website-project-praveen2003.s3-website-us-east-1.amazonaws.com". The taskbar at the bottom of the screen displays various system icons and the date/time "14-12-2025 09:18 PM".



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Introducing Today's Project!

Project overview

In this project, I demonstrate how to host a static website using an Amazon S3 bucket. The objective of this project is to gain hands-on experience with AWS S3 and enhance my cloud computing skills by implementing real-world website hosting.

Tools and concepts

In this project, I learned AWS S3 bucket creation, static website hosting, managing ACLs and permissions, troubleshooting 403 errors, handling files like `_MACOSX`, and deploying a website accessible to users via a public URL.

Time, challenges, and wins

This project took me approximately 4-5 hours. The most challenging part was fixing the 403 Forbidden error caused by object permissions and the extra `_MACOSX` folder. The most rewarding part was seeing the website live and fully accessible.



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How I Set Up an S3 Bucket

What I did in this step

In this step, I create an AWS S3 bucket to securely store and manage the files required for hosting my website.

How long it took to create the bucket

Creating an S3 bucket took me just 3 minutes

Region selection

The region I selected for my S3 bucket was US East (N. Virginia) because it is one of the default AWS regions, offering high availability, low latency, and wide service support.

Understanding bucket name uniqueness

S3 bucket names must be globally unique, meaning no other AWS account anywhere in the world can use the same bucket name until it is deleted.



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The screenshot shows the AWS S3 console with a message at the top stating "Successfully created bucket 'nextwork-website-project-praveen2003'". Below this, the "General purpose buckets" section lists one bucket: "nextwork-website-project-praveen2003" located in "US East (N. Virginia) us-east-1" with a creation date of "December 14, 2025, 20:44:42 (UTC+05:30)". To the right, there are sections for "Account snapshot" and "External access summary - new". The bottom of the screen shows a Windows taskbar with various icons and weather information.



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Upload Website Files to S3

What I did in this step

In this step, I download the website contents, including HTML files and image assets, so they can be uploaded to the S3 bucket for hosting.

Files I uploaded

I uploaded two items to my S3 bucket: the index.html file and a folder containing the website images.

How the files work together

Both files are necessary for this project, as the index.html file serves as the main webpage and the image folder contains the assets required for proper page display.



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The screenshot shows the AWS S3 console interface. The top navigation bar includes tabs for 'Objects', 'Metadata', 'Properties', 'Permissions', 'Metrics', 'Management', and 'Access Points'. The 'Actions' dropdown menu is open, showing options like 'Upload' (highlighted in orange). Below the navigation, there's a search bar and a 'Show versions' toggle. A table lists two objects:

Name	Type	Last modified	Size	Storage class
index.html	html	December 14, 2025, 20:53:11 (UTC+05:30)	58.8 KB	Standard
NextWork - Everyone should be in a job they love_files/	Folder			

At the bottom of the page, there's a footer with links for 'CloudShell', 'Feedback', 'Console Mobile App', and social media icons. The footer also displays the date and time: '© 2025, Amazon Web Services, Inc. or its affiliates.', 'Privacy', 'Terms', 'Cookie preferences', 'ENG IN 14:12 2025 7:53 PM'.



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Static Website Hosting on S3

What I did in this step

In this step, I configure my S3 bucket for static website hosting and verify the public website URL to access the website.

Understanding website hosting

Website hosting means storing your website's files (such as HTML, CSS, images, and scripts) on a server and making them accessible on the internet so that anyone can view your website using a web browser.

How I enabled website hosting

To enable website hosting for my S3 bucket, I navigated to the bucket properties, clicked on Edit, enabled Static website hosting, entered the index document name (such as index.html), and saved the changes.

Access Control Lists (ACLs)

An Access Control List (ACL) is a set of rules that defines who can access an S3 bucket and what actions they are allowed to perform. In this project, I have enabled ACLs for the bucket.



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The screenshot shows the AWS S3 console with the URL <https://us-east-1.console.aws.amazon.com/s3/bucket/nextwork-website-project-praveen2003/property/website/edit?region=us-east-1>. The page title is "Edit static website hosting".

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

Error document - optional
This is returned when an error occurs.

CloudShell Feedback Console Mobile App 20°C Mostly clear Search Privacy Terms Cookie preferences © 2025, Amazon Web Services, Inc. or its affiliates. 8:03 PM ENG IN 14-12-2025



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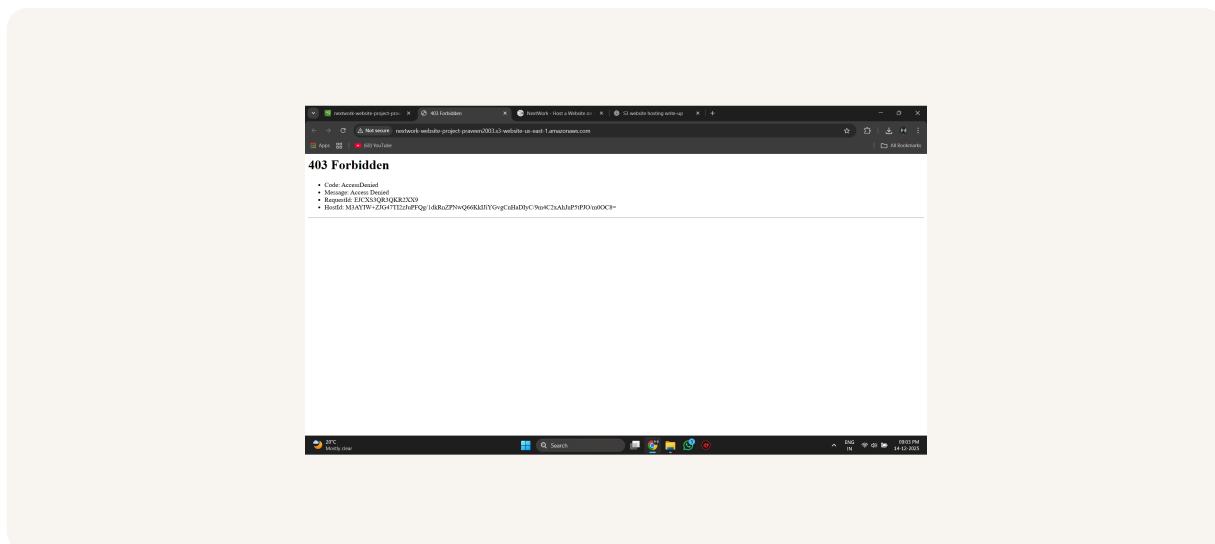
Bucket Endpoints

Understanding bucket endpoint URLs

Once static website hosting is enabled, Amazon S3 generates a bucket endpoint URL that allows users to access and view the objects as a website.

What I saw when I tested the endpoint

When I first visited the bucket endpoint URL, I encountered a 403 Forbidden error. This occurred because, although the bucket was public, the objects inside the bucket were still private.





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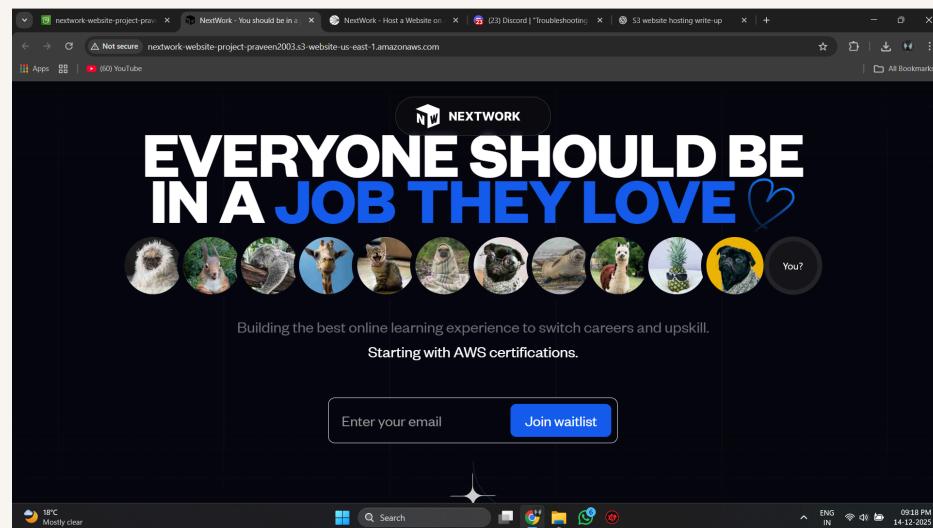
Success!

What I did in this step

In this step, I make my website files public so the website can be accessed live on the internet and users can view and interact with it.

How I resolved the 403 error

To fix the 403 error, I enabled ACLs to make objects public. Images didn't load due to an extra `_MACOSX` folder. I deleted it and re-uploaded only the required parent image folder, which resolved the issue and made the website fully accessible.





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