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Host a Website on Amazon S3



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The screenshot shows a website with the following details:

- Header:** A teal bar at the top with the name "Paul" on the left and "About", "Skills", "Portfolio", and "Contact" on the right.
- Content Area:** The main content area has a white background.
 - A greeting: "Hi, I'm Paul Onyebuchi,"
 - A title: "Frontend Developer"
 - A skills section: "css | javascript | html & email"
 - A "Contact Me" button.
- Portrait:** A circular portrait of a man (Paul) wearing a striped shirt, enclosed in a dashed circle.



Introducing Today's Project!

In this project, I will demonstrate how to host a static website on Amazon S3. I intend to make this a robust approach.

Tools and concepts

Services I used were Amazon S3. Key concepts: How to create an S3 bucket and host a static website with it. Other concepts include how to control access to S3 buckets using ACLs and bucket policies.

Project reflection

This project took me approximately 30 minutes to complete. The most challenging part was... It was most rewarding to...



How I Set Up an S3 Bucket

It took me about 2 minutes to create this bucket which goes to show how convenient and effective cloud solutions can be.

I picked the Northern California region to for my S3 bucket because it is the closest to me, since i live in California. When working with AWS services, it is important to provision your services in regions that are closest to your intended users ...

S3 bucket names are globally unique! This means that because all AWS accounts share the same namespace, no two buckets can share the same name. Our bucket names must be as unique as possible.



The screenshot shows the AWS S3 Buckets page. At the top, there's a success message: "Successfully created bucket 'www.paulonyebuchi.xyz'. To upload files and folders, or to configure additional bucket settings, choose View details." Below this, there are two tabs: "General purpose buckets" (selected) and "Directory buckets". Under "General purpose buckets", there's a table with one row:

Name	AWS Region	Creation date
www.paulonyebuchi.xyz	US West (N. California) us-west-1	August 7, 2025, 01:07:52 (UTC+01:00)

On the right side of the page, there are two cards: "Account snapshot" (updated daily) and "External access summary - new" (updated daily). The "Account snapshot" card says "Storage Lens provides visibility into storage usage and activity trends." The "External access summary" card says "External access findings help you identify bucket permissions that allow public access or access from other AWS accounts." At the bottom of the page, there are links for "CloudShell", "Feedback", and copyright information: "© 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".



Upload Website Files to S3

index.html and image assets

I uploaded a bunch of files and folders that hold my css, javascript files and images to my bucket. I also ensured that the index page of the website is actually named index.html.

Index.html is the index page for the website i.e the html document to the home page. It contains links to the other web pages of our website, as well as the CSS, javascript and image files.

The screenshot shows the AWS S3 console interface. At the top, there's a navigation bar with the AWS logo, a search bar, and account information. Below the navigation bar, a green success message box displays "Upload succeeded" and "For more information, see the Files and folders table." The main area is titled "Files and folders (18 total, 403.3 KB)". A table lists the uploaded files and folders:

Name	Folder	Type	Size	Status	Error
index.html	-	text/html	9.7 KB	Successed	-
header.js	js/	application/x-javascript	797.0 B	Successed	-
settings.json	.vscode/	application/json	42.0 B	Successed	-
global.css	css/	text/css	3.5 KB	Successed	-
home.css	css/	text/css	3.4 KB	Successed	-
Paul_onyebuchi-web_developer...	img/	image/jpeg	54.5 KB	Successed	-
me.jpg	img/hero/	image/jpeg	53.4 KB	Successed	-
admin-dashboard.png	img/portfolio/	image/png	14.4 KB	Successed	-
phonobnk.jpg	img/portfolio/	image/png	34.4 KB	Successed	-
product_page.jpg	img/portfolio/	image/png	75.8 KB	Successed	-

At the bottom of the page, there are links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences.



Static Website Hosting on S3

Website hosting is what makes your website available on the internet for anyone who has the domain address to be able to access your files. Without hosting, our web contents are just mere documents sitting on our computers and no one can see them.

To enable website hosting with my S3 bucket, on the properties tab of our website, scroll down to the section that says website hosting and click on the edit button. On the next page, turn on website hosting. AWS will generate an endpoint URL for ou.

ACL stands for Access Control List. It is essentially a set of rules that determines who can access resource in the cloud. ACL is a legacy approach, meaning it is the old method. AWS recommends using pulic policies instead to control bucket access.



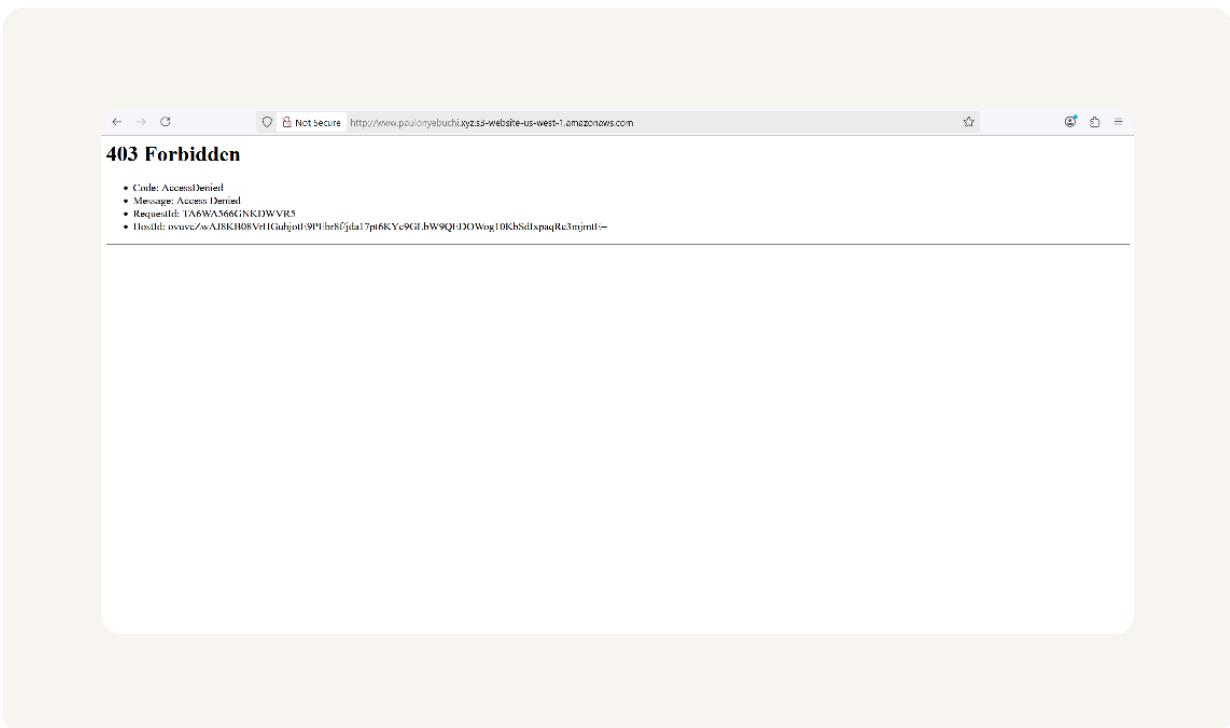
The screenshot shows the 'Edit static website hosting' configuration page for a bucket named 'www.paulonyebuchi.xyz'. The left sidebar lists various AWS services under 'Amazon S3' and 'Storage Lens'. The main panel is titled 'Edit static website hosting' and contains two sections: 'Static website hosting' and 'Hosting type'. Under 'Static website hosting', it says 'Use this bucket to host a website or redirect requests.' with a 'Learn more' link. It includes a radio button for 'Enable' which is selected. Under 'Hosting type', it says 'Host a static website' with a 'Learn more' link, which is also selected. Below these sections is a note: '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.' At the bottom, there are fields for 'Index document' (set to 'index.html') and 'Error document - optional' (set to 'error.html'). The footer includes links for CloudShell, Feedback, Privacy, Terms, and Cookie preferences.



Bucket Endpoints

Once static website is enabled, S3 generates a bucket endpoint URL. This URL is basically a way for people to view the index page (index.html document) of our website.

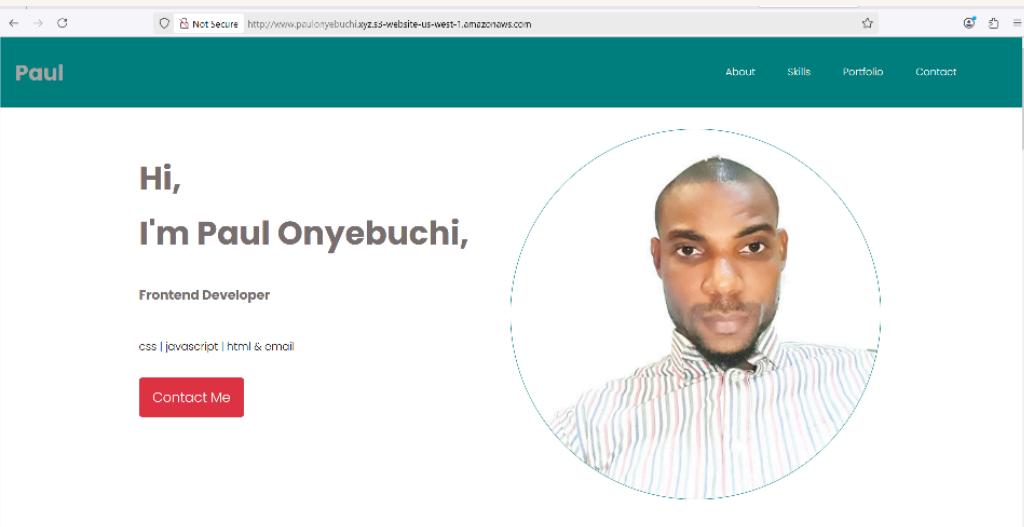
The 403 forbidden error on our website is just AWS telling we do not have permission to view the contents of the S3 bucket because these files are not yet publicly available.





Success!

Add the following json text to the bucket policy and save:





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