

AWS–Cloud Front Practical

Static Website Hosting with CloudFront and S3

Steps:

1. So let's create the bucket first and the name of bucket should be same as the domain name

aws [Search] [Alt+S]

Amazon S3 > Buckets > Create bucket

General configuration

AWS Region
Asia Pacific (Mumbai) ap-south-1

Bucket type [Info](#)

☒ **General purpose**
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

☐ **Directory**
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name [Info](#)
www.vipul.com
Bucket names must be 3 to 63 characters and unique within the global namespace. Bucket names must also begin and end with a letter or number. Valid characters are a-z, 0-9, periods (.), and hyphens (-). [Learn More](#)

Copy settings from existing bucket - optional
Only the bucket settings in the following configuration are copied.
[Choose bucket](#)
Format: s3://bucket/prefix

Object Ownership [Info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

☒ **ACLs disabled (recommended)**
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ **ACLs enabled**
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

2. Enable Bucket versioning so that we can recover the object if any deleted.

aws [Search] [Alt+S]

Amazon S3 > Buckets > Create bucket

☒ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.

☒ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

☒ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning

☐ Disable

☒ **Enable**

Tags - optional (0)

You can use bucket tags to track storage costs and organize buckets. [Learn more](#)

No tags associated with this bucket.

[Add tag](#)

Default encryption

3. Bucket got created now click on properties and go down to the section called static website hosting.

Account snapshot - updated every 24 hours [View Storage Lens dashboard](#)

Storage lens provides visibility into storage usage and activity trends. Metrics don't include directory buckets. [Learn more](#)

General purpose buckets | Directory buckets

General purpose buckets (1) [Info](#) [All AWS Regions](#)

Buckets are containers for data stored in S3.

Name	AWS Region	IAM Access Analyzer	Creation date
www.vipul.com	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	June 15, 2025, 22:09:41 (UTC+05:30)

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](#)

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](#)

Index document

Specify the home or default page of the website.

Error document - optional

This is returned when an error occurs.

4. Enable the static hosting and add the index.html page and error.html page.

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](#)

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](#)

Index document

Specify the home or default page of the website.

Error document - optional

This is returned when an error occurs.

5. Now upload the index.html file to the S3 bucket

The screenshot shows the AWS S3 'Upload' page. At the top, there's a search bar and navigation links for 'Amazon S3', 'Buckets', and 'www.vipul.com'. Below this, the 'Upload' section has a header with an 'info' link. A message states: 'Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDKs or Amazon S3 REST API. [Learn more](#)'. A dashed box contains the instruction: 'Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.' Below this, a section titled 'Files and folders (1 total, 286.0 B)' shows a table of files to be uploaded. The table has columns for 'Name', 'Folder', 'Type', and 'Size'. One file, 'index.html', is listed with a type of 'text/html' and a size of '286.0 B'. To the right of the table are buttons for 'Remove', 'Add files', and 'Add folder'. Below the table, a 'Destination' section shows the destination as 's3://www.vipul.com' and includes a 'Destination details' link.

Upload [info](#)

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDKs or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose **Add files** or **Add folder**.

Files and folders (1 total, 286.0 B)

All files and folders in this table will be uploaded.

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	index.html	-	text/html	286.0 B

Destination [info](#)

Destination

[s3://www.vipul.com](#)

Destination details

Bucket settings that impact new objects stored in the specified destination.

6. So now if try to access the S3 bucket we would not be able to access it as we have block the all the access

The screenshot shows a web browser displaying an XML error response. The message at the top says: 'This XML file does not appear to have any style information associated with it. The document tree is shown below.' The XML content is as follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>09927MWVSMDZDEP</RequestId>
  <HostId>DD4h3hwk3KwPpUoh6TF6VV8Hq+Hyqwsn5D+Okghd0bemEPuPXMeNZX/v+XI8/Zfonf6cDUBf3A</HostId>
</Error>
```

7. Now let's create a cloud front. Create a cloud front distribution. Now here origin domain the domain from where your data will be rendered

Origin

Origin domain
Choose an AWS origin, or enter your origin's domain name. [Learn more](#)

Choose origin

Amazon S3
www.vipul.com.s3.amazonaws.com

Elastic Load Balancer
No origins available.

API Gateway
No origins available.

Mediastore container
No origins available.

Mediapackage container

Enable Origin Shield
Origin shield is an additional caching layer that can help reduce the load on your origin and help protect its availability.
☒ No
☐ Yes

You can see it is showing our S3 bucket.

Origin

Origin domain
Choose an AWS origin, or enter your origin's domain name. [Learn more](#)

www.vipul.com.s3.ap-south-1.amazonaws.com

Enter a valid DNS domain name, such as an S3 bucket, HTTP server, or VPC origin ID.

Warning: This S3 bucket has static web hosting enabled. If you plan to use this distribution as a website, we recommend using the S3 website endpoint rather than the bucket endpoint. [Use website endpoint](#)

Origin path - optional
Enter a URL path to append to the origin domain name for origin requests.
Enter the origin path

Name
Enter a name for this origin.
www.vipul.com.s3.ap-south-1.amazonaws.com

Origin access [Info](#)
☒ Public
Bucket must allow public access.
☐ Origin access control settings (recommended)
Bucket can restrict access to only CloudFront.

8. Origin access here will be legacy access identities its like we will be creating a user who will be having access to the S3 bucket. It will be a cloud front user.

The screenshot shows the AWS CloudFront console's 'Create distribution' page. The 'Legacy access identities' tab is selected. The 'Origin access identity' section has a dropdown menu with the text 'Select an origin access identity' and a 'Create new OAI' button. The 'Bucket policy' section has two radio buttons: 'No, I will update the bucket policy' (selected) and 'Yes, update the bucket policy'. The 'Add custom header - optional' section has an 'Add header' button. The 'Enable Origin Shield' section has two radio buttons: 'No' (selected) and 'Yes'.

9. Create a new OAI identity which will be having access to your S3 bucket.

This screenshot is identical to the previous one, but the 'Origin access identity' dropdown menu now displays the text 'www.vipul.com.s3.ap-south-1.amazonaws.com'. The 'Create new OAI' button remains visible next to the dropdown.

10. Provide the root default object like your landing page.

CloudFront > **Distributions** > Create distribution

[Request certificate](#)

Supported HTTP versions
Add support for additional HTTP versions. HTTP/1.0 and HTTP/1.1 are supported by default.

☒ HTTP/2
☐ HTTP/3

Default root object - optional
The object (file name) to return when a viewer requests the root URL (/) instead of a specific object.

IPv6
☐ Off
☒ On

Description - optional

Standard logging [Info](#)
Additional charges may apply. See Info for more details.

Log delivery
Get logs of viewer requests to CloudWatch, Amazon S3 or Firehose

☒ Off
☐ On

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

11. Created the distribution.

aws > **CloudFront** > **Distributions** > EQCTJQMR5477M

Successfully created new distribution.
To get in-depth monitoring information for your distribution's internet traffic, [create an Internet Monitor](#)

Notifications 0 0 1 1 0

Details

Distribution domain name d8y6fh9hkp6us.cloudfront.net	ARN arn:aws:cloudfront:010928201805:distribution/EQCTJQMR5477M	Last modified Deploying
---------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------

Settings [Edit](#)

Description -	Alternate domain names -	Standard logging Off
Price class Use all edge locations (best performance)		Cookie logging Off
Supported HTTP versions HTTP/2, HTTP/1.1, HTTP/1.0		Default root object index.html

Continuous deployment [Info](#)

[Create staging distribution](#)

CloudShell Feedback © 2025, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

12. Need to create a bucket policy where only these OAI can access the bucket

The screenshot shows the AWS IAM console interface for a bucket named 'vipul.com'. The 'Bucket policy' section is active, displaying a JSON policy that grants 's3:GetObject' permissions to a CloudFront Origin Access Identity (OAI). A warning message indicates that public access is blocked due to 'Block Public Access' settings. The policy JSON is as follows:

```
{
  "Version": "2008-10-17",
  "Id": "PolicyForCloudFrontPrivateContent",
  "Statement": [
    {
      "Sid": "1",
      "Effect": "Allow",
      "Principal": {
        "AWS": "arn:aws:iam::cloudfront:user/CloudFront Origin Access Identity E1B3R6YTP63ZU"
      },
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::vipul.com/*"
    }
  ]
}
```

The interface includes buttons for 'Edit' and 'Delete' at the top right, and a 'Copy' button next to the policy JSON. The bottom of the console shows the 'CloudShell' and 'Feedback' links, along with the copyright notice for Amazon Web Services, Inc. or its affiliates.

We created the distribution.

Now we can check whether we can access the S3 bucket or using CloudFront.

The screenshot shows a web browser window with the address bar displaying the URL 'd8y6fth9hkp6us.cloudfront.net'. The browser's address bar and tabs are visible, showing various open pages like 'Home - Canva', 'In memory of the vi...', 'Stock Analysis & Be...', 'ChatGPT', 'IPO GMP Today, Lat...', 'Investing.com - Sto...', 'Home - Chess.com', 'Watch Anime Onlin...', 'Prime Video | Watch...', and 'All Book'. The main content area of the browser is blank, with the text 'Hi Vipul' visible at the top left.

EQCTJQMR5477M Standard View metrics

General | Security | Origins | Behaviors | Error pages | Invalidations | Tags | Logging

Details

Distribution domain name d8y6fh9hkp6us.cloudfront.net	ARN arn:aws:cloudfront::010928201805:distribution/EQCTJQMR5477M	Last modified June 17, 2025 at 8:06:51 AM UTC
-----------------------------------------------------------------	---------------------------------------------------------------------------	---------------------------------------------------------

Settings Edit

Description -	Alternate domain names -	Standard logging Off
Price class Use all edge locations (best performance)		Cookie logging Off
Supported HTTP versions HTTP/2, HTTP/1.1, HTTP/1.0		Default root object index.html

Continuous deployment [Info](#)

keycdn Tools

Features | Solutions | Network | Pricing | [Support](#) | [Login](#) | [Sign Up](#)

Web

- Website Speed Test
- Performance Test**
- HTTP Header Checker
- HTTP/2 Test
- Brotili Test

Network

Security

Other

URL: Test

LOCATION	STATUS	DNS	CONNECT	TLS	TTFB
Frankfurt	200	20.27 ms	0.57 ms	15.67 ms	443.28 ms
Amsterdam	200	36.49 ms	2.41 ms	17.55 ms	30.15 ms
London	200	17.43 ms	2 ms	14.05 ms	397 ms
New York	200	20.54 ms	3.52 ms	16.36 ms	662.82 ms
San Francisco	200	18.2 ms	1.07 ms	11.96 ms	729.35 ms
Singapore	200	12.77 ms	2.34 ms	14.92 ms	237.81 ms
Bangalore	200	29.55 ms	14.78 ms	26.47 ms	84.87 ms

[Performance Test FAQ](#)

You can test your reachability using this tool.

<https://tools.keycdn.com/performance>

Hence, we successfully accessed an access the website (S3 Object) using CloudFront.

Conclusion: The outcome of this project is a globally fast, secure, and low-cost website using AWS services (S3 + CloudFront), and the knowledge of deploying production-grade static sites in the cloud.