

CloudFront

Amazon CloudFront is a **Content Delivery Network (CDN)** service provided by AWS. It helps deliver content (web pages, videos, images, APIs, etc.) with **low latency** and **high performance** by caching it at edge locations worldwide.

How CloudFront Works

1. User Requests Content

- When a user visits your website or accesses an API, CloudFront routes the request to the nearest **edge location**.

2. Checks Cache

- If the content is already cached at that edge location, CloudFront delivers it instantly.
- If not, CloudFront fetches it from the **origin server** (e.g., S3, EC2, or another server), caches it, and serves it to the user.

3. Delivers Fast & Secure Content

- CloudFront reduces latency by serving content from nearby locations.
- It improves security with **DDoS protection, HTTPS, and access control**.

Benefits of CloudFront

✓ **Faster Content Delivery** – Reduces loading time by serving content from the nearest edge location.

✓ **Lower Latency** – Uses global AWS infrastructure to optimize performance.

✓ **Security** – Supports **HTTPS, AWS Shield, and Web Application Firewall (WAF)** for protection.

✓ **Cost-Effective** – Reduces data transfer costs by caching content at edge locations.

✓ **Scalability** – Handles high traffic loads without impacting performance.

Common Use Cases

- **Website Acceleration** – Load static and dynamic content faster.
- **Streaming Media** – Deliver videos and live streams efficiently.
- **API Acceleration** – Optimize API response times.
- **Software Distribution** – Speed up downloads of large files.

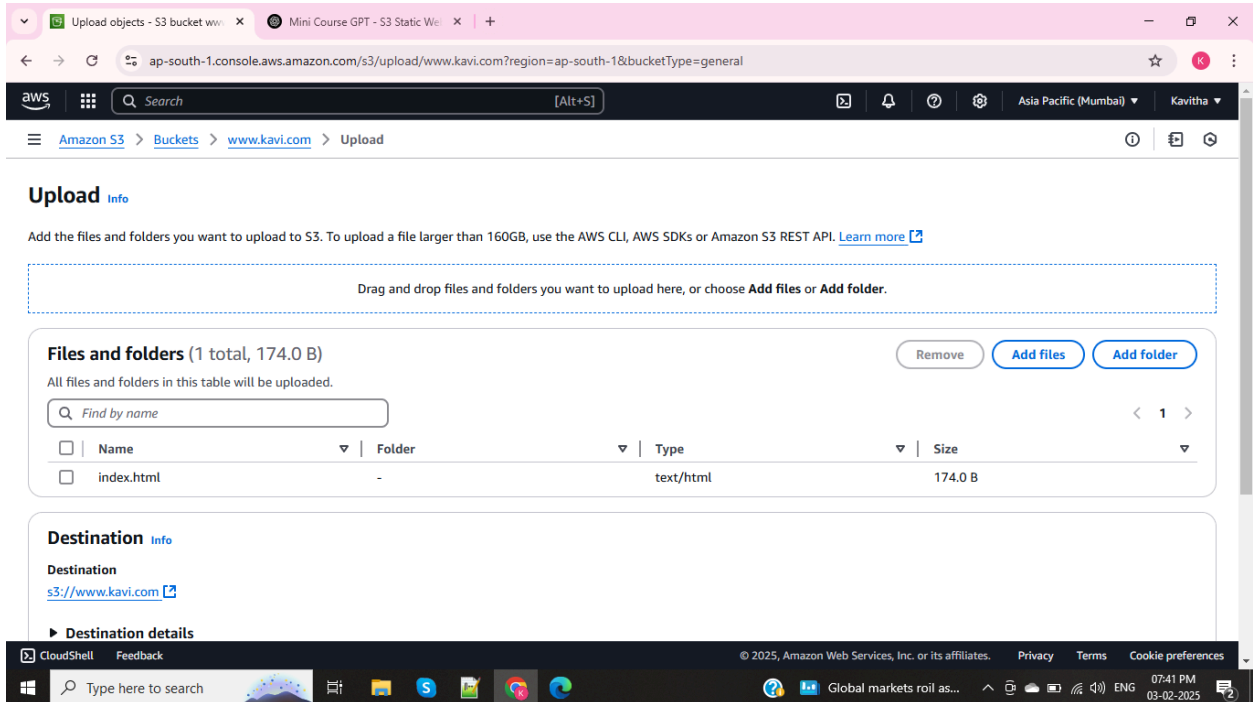
Have to perform Amazon CloudFront means have to create S3 bucket

Step1: Creating S3 bucket

The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'S3 buckets' page is active, displaying a table of general purpose buckets. The table has columns for Name, AWS Region, IAM Access Analyzer, and Creation date. One bucket is listed: 'www.kavi.com' in the 'Asia Pacific (Mumbai) ap-south-1' region, created on 'February 3, 2025, 19:37:38 (UTC+05:30)'. The page also includes a search bar, a 'Find buckets by name' input, and buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket'.

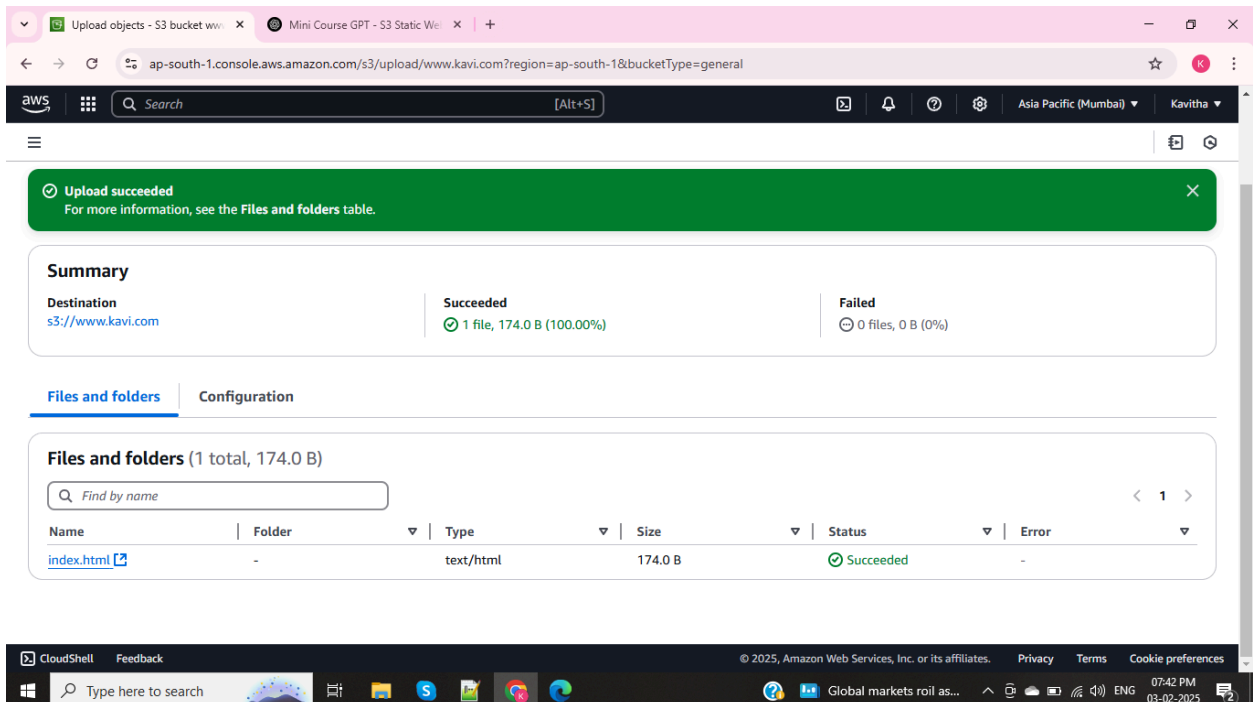
Name	AWS Region	IAM Access Analyzer	Creation date
www.kavi.com	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	February 3, 2025, 19:37:38 (UTC+05:30)

Step2: After creating bucket > upload an index.html file



The screenshot shows the AWS S3 console 'Upload' page. The browser address bar displays 'ap-south-1.console.aws.amazon.com/s3/upload/www.kavi.com?region=ap-south-1&bucketType=general'. The page header includes the AWS logo, a search bar, and navigation links for 'Amazon S3', 'Buckets', and 'www.kavi.com'. The main heading is 'Upload' with an 'Info' link. Below this, 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 is a section titled 'Files and folders (1 total, 174.0 B)' with a sub-message: 'All files and folders in this table will be uploaded.' It includes a search bar 'Find by name' and a table with columns: Name, Folder, Type, and Size. The table contains one entry: 'index.html' with a folder of '-', type of 'text/html', and size of '174.0 B'. To the right of the table are buttons for 'Remove', 'Add files', and 'Add folder'. Below the table is a 'Destination' section with an 'Info' link, showing the destination as 's3://www.kavi.com' and a 'Destination details' link. The bottom of the page shows a Windows taskbar with the date '03-02-2025' and time '07:41 PM'.

File uploaded successfully



The screenshot shows the AWS S3 console 'Upload' page after a successful upload. The browser address bar is the same as in the previous screenshot. A green banner at the top of the main content area says 'Upload succeeded' with a close button and the text 'For more information, see the Files and folders table.' Below this is a 'Summary' section with three columns: 'Destination' (s3://www.kavi.com), 'Succeeded' (1 file, 174.0 B (100.00%)), and 'Failed' (0 files, 0 B (0%)). Below the summary are two tabs: 'Files and folders' (selected) and 'Configuration'. The 'Files and folders' tab shows a section titled 'Files and folders (1 total, 174.0 B)' with a search bar 'Find by name' and a table with columns: Name, Folder, Type, Size, Status, and Error. The table contains one entry: 'index.html' with a folder of '-', type of 'text/html', size of '174.0 B', status of 'Succeeded', and an empty error column. The bottom of the page shows a Windows taskbar with the date '03-02-2025' and time '07:42 PM'.

Step3: After upload a file, Go to Cloudfront > create distribution

CloudFront | Global x Mini Course GPT - S3 Static Web x +

us-east-1.console.aws.amazon.com/cloudfront/v4/home?region=ap-south-1#/distributions/create

aws CloudFront > Distributions > Create

Create distribution

Origin

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

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

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

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.kavi.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.

In origin name choose s3 bucket > origin access select legacy access identity (for allow only created user) and create new OAI > Bucket policy-select yes

CloudFront | Global x +

us-east-1.console.aws.amazon.com/cloudfront/v4/home?region=ap-south-1#/distributions/create

aws CloudFront > Distributions > Create

Name
Enter a name for this origin.

www.kavi.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.

☒ **Legacy access identities**
Use a CloudFront origin access identity (OAI) to access the S3 bucket.

Origin access identity
Select an existing origin access identity (recommended) or create a new identity.

www.kavi.com.s3.ap-south-1.amazonaws.com [Create new OAI](#)

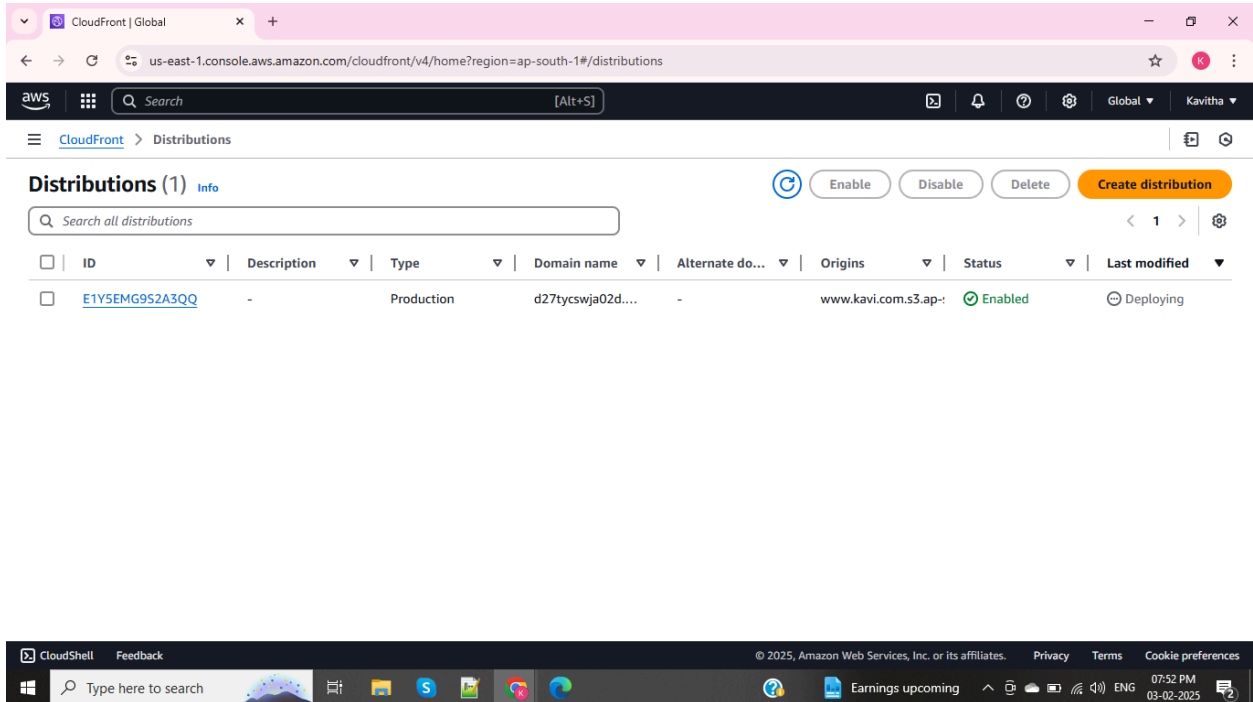
Bucket policy
Update the S3 bucket policy to allow read access to the OAI.

☐ No, I will update the bucket policy

☒ Yes, update the bucket policy

Add custom header - optional
CloudFront includes this header in all requests that it sends to your origin.

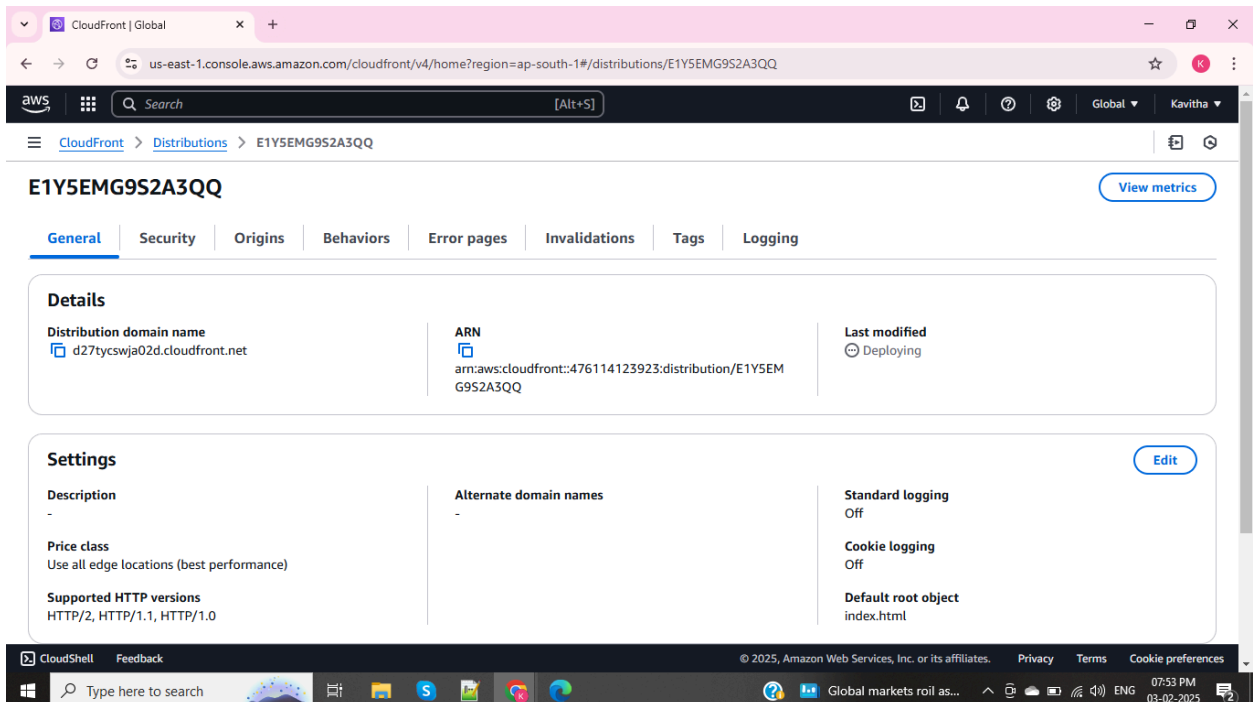
Distributions created successfully



The screenshot shows the AWS CloudFront console in the 'Distributions' section. The breadcrumb navigation is 'CloudFront > Distributions'. The page title is 'Distributions (1) Info'. There is a search bar and a table with one distribution. The distribution is named 'E1Y5EMG9S2A3QQ', has a description of '-', is of type 'Production', has a domain name 'd27tycswja02d...', and is in an 'Enabled' status with a 'Deploying' icon. The 'Origins' column shows 'www.kavi.com.s3.ap-'. At the top right, there are buttons for 'Enable', 'Disable', 'Delete', and 'Create distribution'.

ID	Description	Type	Domain name	Alternate do...	Origins	Status	Last modified
E1Y5EMG9S2A3QQ	-	Production	d27tycswja02d...	-	www.kavi.com.s3.ap-	Enabled	Deploying

Click the created Distributions > In General copy the distribution domain name & paste in browser

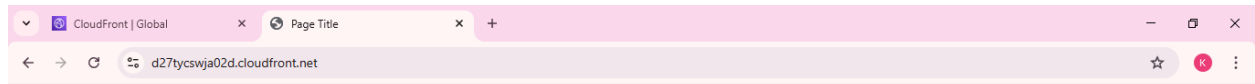


The screenshot shows the details page for the distribution 'E1Y5EMG9S2A3QQ'. The breadcrumb navigation is 'CloudFront > Distributions > E1Y5EMG9S2A3QQ'. The page title is 'E1Y5EMG9S2A3QQ'. There is a 'View metrics' button. The 'General' tab is selected, showing 'Details' and 'Settings'. The 'Details' section shows the 'Distribution domain name' as 'd27tycswja02d.cloudfront.net', the 'ARN' as 'arn:aws:cloudfront::476114123923:distribution/E1Y5EMG9S2A3QQ', and the 'Last modified' status as 'Deploying'. The 'Settings' section shows the 'Description' as '-', 'Price class' as 'Use all edge locations (best performance)', 'Supported HTTP versions' as 'HTTP/2, HTTP/1.1, HTTP/1.0', 'Alternate domain names' as '-', 'Standard logging' as 'Off', 'Cookie logging' as 'Off', and 'Default root object' as 'index.html'. There is an 'Edit' button for the settings.

Details		
Distribution domain name d27tycswja02d.cloudfront.net	ARN arn:aws:cloudfront::476114123923:distribution/E1Y5EMG9S2A3QQ	Last modified Deploying

Settings		
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

OUTPUT



AWS STATIC WEBSITE HOSTING 3

This is created by kavitha.

