

Here's a **step-by-step procedure** to host a static website using Amazon S3 and CloudFront, optimized for global delivery and performance:

🔧 Step 1: Prepare Your Static Website Files

- Make sure your site has an index.html (home page) and optionally an error.html.
- Folder structure example:

/my-website

```
└── index.html  
└── style.html  
└── error.html
```

☁️ Step 2: Create an S3 Bucket for Static Hosting

1. Go to the **AWS S3 Console**.
2. Click “**Create bucket**”.
3. Bucket name must be **globally unique** (e.g., my-static-site-pavan).
4. **Uncheck** "Block all public access" under permissions.
5. Acknowledge the warning and click **Create bucket**.

The screenshot shows the AWS S3 console interface. At the top, it says "General purpose buckets (1)" with a "Info" button and "All AWS Regions". Below that, a message says "Buckets are containers for data stored in S3." There is a search bar labeled "Find buckets by name". To the right are buttons for "Copy ARN", "Empty", "Delete", and "Create bucket". The main table lists one bucket:

Name	AWS Region	IAM Access Analyzer	Creation date
pa1awswebbucket	Asia Pacific (Mumbai) ap-south-1	View analyzer for ap-south-1	June 24, 2025, 12:51:44 (UTC+05:30)

🌐 Step 3: Upload Your Website Files

1. Open your bucket.
2. Click “**Upload** > **Add files**.
3. Upload index.html, error.html, etc.
4. Click **Upload**.

Objects Properties Permissions Metrics Management Access Points

Objects (2) [C](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

<input type="checkbox"/> Name	Type	Last modified	Size	Storage class
<input type="checkbox"/> index.html	html	June 24, 2025, 12:52:27 (UTC+05:30)	617.0 B	Standard
<input type="checkbox"/> style.css	css	June 24, 2025, 12:52:28 (UTC+05:30)	513.0 B	Standard

🔒 Step 4: Make Your Files Public (if not using OAC)

If you are **not using CloudFront Origin Access Control (OAC)**:

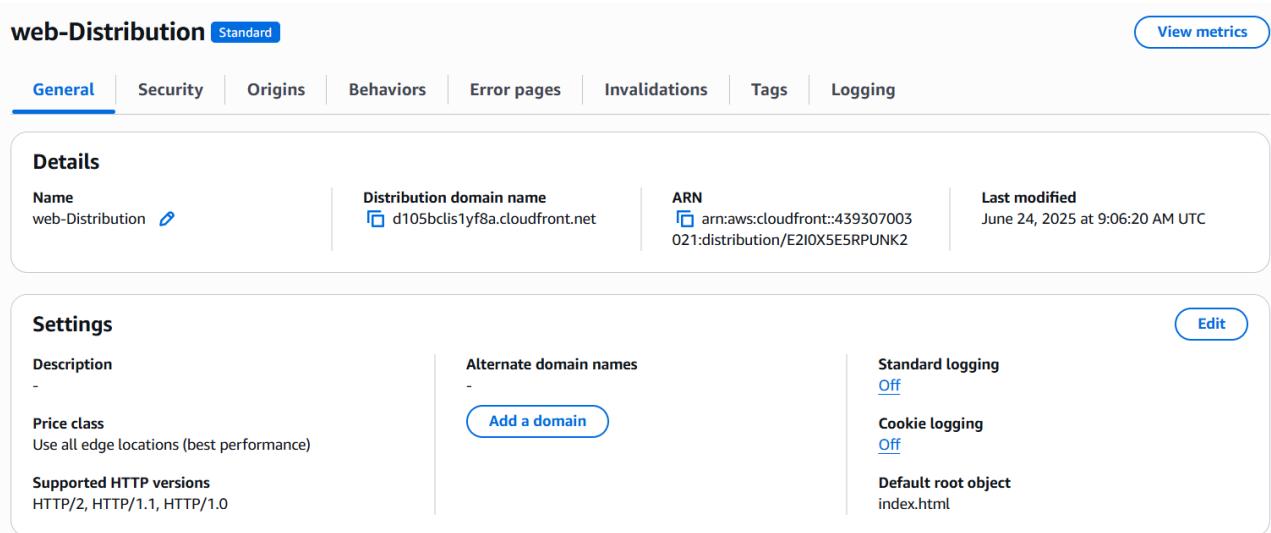
1. Go to **Permissions** tab of your bucket.
2. Add a **Bucket Policy** like this:

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::my-static-site-pavan/*"
    }
  ]
}
```

Replace my-static-site-pavan with your bucket name.

Step 5: Create a CloudFront Distribution

1. Go to the **CloudFront Console**.
2. Click “**Create Distribution**”.
3. Under **Origin Settings**:
 - **Origin domain**: Select your S3 bucket (choose the *static hosting endpoint* if public; otherwise, use the bucket itself with OAC).
 - Default root object - index.html
4. Click **Create Distribution**.



The screenshot shows the 'General' tab of a CloudFront distribution named 'web-Distribution'. The distribution domain name is 'd105bc1s1yf8a.cloudfront.net'. The ARN is 'arn:aws:cloudfront::439307003021:distribution/E2I0X5E5RPUNK2'. The last modified date is 'June 24, 2025 at 9:06:20 AM UTC'. In the 'Settings' section, the 'Description' is blank, 'Price class' is set to 'Use all edge locations (best performance)', and 'Supported HTTP versions' includes 'HTTP/2, HTTP/1.1, HTTP/1.0'. Logging is configured with 'Standard logging' off and 'Cookie logging' off. The 'Default root object' is set to 'index.html'.

Cache Issue (Old Error Cached)

CloudFront may be caching an error (like 403 or 404).

Fix: Invalidate the Cache

1. Go to **CloudFront → Invalidations**
2. Click **Create Invalidations**
3. Enter: `/*`

This forces CloudFront to re-fetch everything from S3.

Invalidation details

Date created
June 24, 2025 at 8:24:16 AM UTC

Status
 Completed

Object paths
/*

[Copy to new](#)

Step 6: (If Using OAC) Attach Bucket Policy for CloudFront

If using OAC, go to S3 Bucket > Permissions > Bucket Policy and use:

```
{  
  "Version": "2012-10-17",  
  "Statement": [  
    {  
      "Sid": "AllowCloudFrontReadAccess",  
      "Effect": "Allow",  
      "Principal": {  
        "Service": "cloudfront.amazonaws.com"  
      },  
      "Action": "s3:GetObject",  
      "Resource": "arn:aws:s3:::my-static-site-pavan/*",  
      "Condition": {  
        "StringEquals": {  
          "AWS:SourceArn":  
            "arn:aws:cloudfront::ACCOUNT_ID:distribution/DISTRIBUTION_ID"  
        }  
      }  
    }  
  ]  
}
```

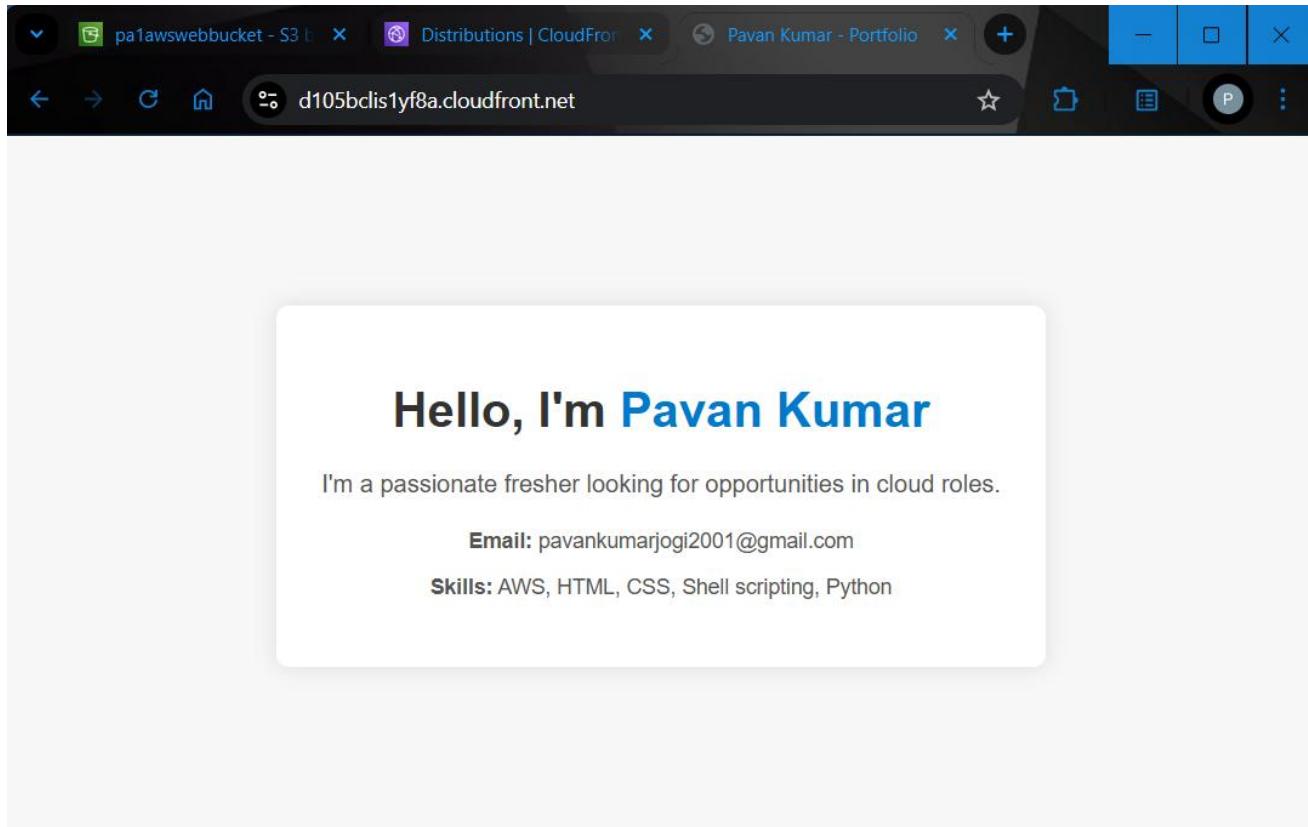
Replace ACCOUNT_ID and DISTRIBUTION_ID with your actual AWS account ID and CloudFront Distribution ID.

Step 7: Wait for CloudFront to Deploy

- This may take **5–15 minutes**.
 - Once status is “Deployed,” copy the **CloudFront domain name** (e.g., d1234abcd.cloudfront.net).
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Step 8: Test Your Website

- Visit the CloudFront URL: <https://d1234abcd.cloudfront.net>
- Your static site should load globally, fast, and via HTTPS.



Optional: Add Custom Domain + SSL

1. Register a domain (e.g., using Route 53 or other).

2. Use **ACM (AWS Certificate Manager)** to issue SSL certificate.
 3. Add custom domain to CloudFront (Settings > Alternate domain names).
 4. Point domain to CloudFront using **Route 53 Alias Record**.
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