

Setup static website hosting on s3 bucket and setup CDN as frontend

To host a static website and serve it only through Amazon CloudFront with the content originating from an S3 bucket, follow these updated steps:

Step 1: Create an S3 Bucket (Content Source)

Log in to the AWS Management Console.

Navigate to S3 and click on Create bucket.

Name the bucket uniquely (e.g., your-website-name) and choose a Region.

In the Block Public Access settings:

Keep Block all public access enabled.

Create the bucket.

Note: Since the website will be accessed only through CloudFront, direct public access to the bucket is not required.

Step 2: Upload Website Files to the S3 Bucket

Select your newly created bucket.

Go to the Objects section and click Upload.

Add your static website files (HTML, CSS, JS, images, etc.).

Upload the files.

Step 3: Set Up a CloudFront Distribution to Serve the Content

Navigate to CloudFront in the AWS Management Console.

Create Distribution and select Web.

Configure the Origin:

Origin Domain Name: Select your S3 bucket from the dropdown (it will show up as your-website-name.s3.amazonaws.com).

Origin Access Identity (OAI): Choose Create a new OAI.

Bucket Policy: Allow CloudFront to update your bucket policy by selecting Yes, Update Bucket Policy.

Cache Behavior Settings:

Viewer Protocol Policy: Choose Redirect HTTP to HTTPS to ensure secure connections.

Allowed HTTP Methods: Select GET, HEAD.

Distribution Settings:

Default Root Object: Enter index.html (or your homepage filename).

Price Class: Select based on your audience location.

Optionally, configure Alternate Domain Names (CNAMEs) if using a custom domain and configure SSL with AWS Certificate Manager (ACM).

Create Distribution. It will take a few minutes for CloudFront to deploy the distribution.

Step 4: Update S3 Bucket Policy for CloudFront Access Only

After creating the CloudFront distribution with OAI, review the bucket policy added by CloudFront under Permissions > Bucket Policy.

This policy should restrict public access and only allow access from CloudFront.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::your-website-name/*"
```

```
}  
]  
}
```

Replace your-website-name with your actual bucket name.

Click Save.

Step 5: Update DNS Settings for Custom Domain (Optional)

If you plan to use a custom domain (e.g., www.yourdomain.com):

In your domain registrar (or Route 53 if managing DNS with AWS), create a CNAME record pointing your custom domain to your CloudFront distribution domain (provided in the CloudFront Console).

In CloudFront settings, add this custom domain in Alternate Domain Names (CNAMEs) and select an SSL/TLS certificate from ACM for secure access.

Step 6: Test Your Website

Access your CloudFront distribution URL (or your custom domain if configured) to ensure the website loads correctly.

Monitor CloudFront for performance and caching behavior as needed.