

Static Website Hosting on AWS with S3 + CloudFront

Goal: Host a static website using Amazon S3 and serve it globally using CloudFront.

1. Create an S3 Bucket

- Go to the S3 Console
- Click Create bucket
- Name your bucket (e.g., my-portfolio-site)
- Uncheck Block all public access
- Click Create

2. Upload Website Files

- Open your bucket
- Click Upload and add your index.html (and any other static files)
- Set permissions (optional if CloudFront will handle access)

3. Enable Static Website Hosting

- In the bucket, go to Properties
- Scroll to Static website hosting
- Enable it and set: Index document: index.html
- Save settings

4. Create a CloudFront Distribution

- Go to CloudFront Console
- Click Create Distribution
- Under Origin domain, choose your S3 bucket
- For Origin Access, choose Origin Access Control (OAC) and create one if needed
- Set Viewer protocol policy to Redirect HTTP to HTTPS
- Leave defaults or customize as needed
- Click Create Distribution

5. Set the Default Root Object

- After distribution is created, click on it
- In General settings, set Default root object to: index.html

6. Update the S3 Bucket Policy

- Go to your S3 bucket -> Permissions -> Bucket Policy
- Paste this policy (replace placeholders):

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Principal": {
        "Service": "cloudfront.amazonaws.com"
      },
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::YOUR-BUCKET-NAME/*",
      "Condition": {
        "StringEquals": {
          "AWS:SourceArn":
            "arn:aws:cloudfront::YOUR-AWS-ACCOUNT-ID:distribution/YOUR-DISTRIBUTION-ID"
        }
      }
    }
  ]
}
```

- Replace: YOUR-BUCKET-NAME, YOUR-AWS-ACCOUNT-ID, YOUR-DISTRIBUTION-ID

7. Test Your Website

- Visit your CloudFront URL (e.g., <https://dxxxx.cloudfront.net/>)
- Your website should load