

Hosting a Static Website on AWS S3 Storage:

Hosting a static website on **AWS S3** is simple and cost-effective. Follow these steps to host and configure your static HTML/CSS site so that typical internet users can access it via a browser.

1. Prepare Your Website Files

Ensure you have:

- Your **HTML**, **CSS**, **JavaScript**, and any other static assets ready.
 - An `index.html` file (homepage) and optionally an `error.html` file (for error handling).
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2. Create an S3 Bucket

1. **Log in to the AWS Management Console.**
 2. Navigate to **S3**.
 3. Click **Create Bucket**:
 - **Bucket Name**: Choose a globally unique name (e.g., `my-website-bucket`).
 - **Region**: Choose a region close to your audience.
 - **Object Ownership**: Set to **ACLs disabled (bucket owner enforced)**.
 - **Block Public Access**: Uncheck the "Block all public access" option, and acknowledge the warning (you'll make it public intentionally later).
 4. Click **Create Bucket**.
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3. Upload Your Website Files

1. Select your bucket from the list.
 2. Click **Upload** > **Add Files** or **Add Folder** and select your website files.
 3. Leave the permissions as default (bucket policies will handle public access).
 4. Click **Upload**.
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4. Enable Static Website Hosting

1. Inside your bucket, go to the **Properties** tab.
2. Scroll down to **Static Website Hosting** and click **Edit**.
3. Choose **Enable** and specify:
 - **Index document**: `index.html`
 - **Error document**: `error.html` (optional)
4. Click **Save changes**.

5. Configure Bucket Policy for Public Access

To allow internet users to view your website, you need to make the bucket objects publicly readable:

1. Go to the **Permissions** tab in your bucket.
2. Scroll to **Bucket Policy** and click **Edit**.
3. Add the following policy (replace `your-bucket-name` with your bucket's name):

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

4. Save the changes.
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6. Test Your Website

1. Go back to the **Properties** tab > **Static Website Hosting**.
 2. Copy the **Bucket Website Endpoint** (e.g., `http://your-bucket-name.s3-website-region.amazonaws.com`).
 3. Paste the endpoint URL in your browser to see your website live.
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7. Optional: Use a Custom Domain

If you want to serve your site using a custom domain (e.g., `www.example.com`):

1. **Buy a Domain** (if you don't already have one) via **Route 53** or another domain registrar.
 2. Configure an **Amazon CloudFront Distribution** for HTTPS and better caching:
 - Use the S3 bucket as the origin.
 - Attach an SSL certificate via **AWS Certificate Manager (ACM)**.
 3. Update the DNS records of your domain to point to the CloudFront distribution.
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That's it! Your static website is now hosted on AWS S3 and accessible to internet users.