

Project: Static Website Deployment on AWS S3 with IAM Role Management and Access Control

This project involved deploying a static website on Amazon Web Services (AWS) using an S3 bucket. The website files, including HTML, CSS, and JavaScript, were hosted on an S3 bucket, leveraging S3's ability to serve static content directly over the web.

Key components of the project include:

1 - S3 Bucket Setup:

- Created an S3 bucket specifically for hosting the static website.
- Configured the bucket to enable static website hosting, setting the index document.
- Uploaded website files to the S3 bucket.

2 - IAM Roles and Permissions:

- Defined IAM roles and policies to manage access to the S3 bucket.
- Created a bucket policy to allow public read access to the website content while securing non-public resources.
- Configured IAM users and roles to control who can upload, modify, or delete content in the S3 bucket.

3 - Security Measures:

- Implemented best practices for securing the S3 bucket by enabling bucket versioning, logging, and encryption.
- Used IAM policies to restrict access to specific users and services, ensuring that only authorized personnel can make changes to the bucket contents.
- Integrated Authy for Multi-Factor Authentication (MFA) to add an extra layer of security for accessing AWS services.

4 - Automated Deployment:

- Utilized GitHub for version control and collaborative development.
- Employed AWS CodePipeline to automate the deployment process, ensuring continuous delivery of updates to the S3 bucket.

Outcome:

The project successfully demonstrated how to deploy a static website on AWS S3 with secure access management using IAM and automated deployment using GitHub and CodePipeline. This setup provides a scalable, cost-effective solution for hosting static web content, with built-in security, access control, and automation.