AWS CodePipeline Web Application Deployment Guide:

Set up a fully automated deployment pipeline using AWS CodeCommit, CodeBuild, CodePipeline, and Amazon S3 for hosting a simple web application.

Step To be followed:

1. Developer pushes code to CodeCommit (Git repo).

2. CodePipeline detects the change and starts execution.

3. CodeBuild uses buildspec.yml to prepare deployment artifacts.

4. CodePipeline deploys those artifacts to the S3 bucket configured for static website hosting.

5. Application is accessible in the browser via the S3 website endpoint.

Create a Sample Web Application

1. Create a folder and initialize:

mkdir my-web-app && cd my-web-app

1. Add index.html with sample HTML content. 3. Add buildspec.yml for CodeBuild artifact preparation.
2. Create a CodeCommit Repository 1. Open AWS Console → CodeCommit → Create repository. 2. Configure Git on your system with AWS credential helper.

Push your code into the CodeCommit repository.

Create an S3 Bucket for Website Hosting

1. Create a unique S3 bucket.

2. Enable static website hosting.

3. Add bucket policy for public read access.

Create a CodeBuild Project :

1. Go to CodeBuild → Create project.

2. Select source as CodePipeline.

3. Use buildspec.yml from the repository.

4. Output artifacts to CodePipeline.

Create a CodePipeline :

1. Create pipeline with CodeCommit as source.

2. Add CodeBuild as build stage.

3. Add Amazon S3 as deploy stage.

4. Enable extract artifact option for deployment.

Verify the Deployment :

1. Check pipeline execution status.

2. Open the S3 static website endpoint in browser.

3. Confirm that the web app is displayed.

Automating Updates Push new changes to CodeCommit (main branch).

CodePipeline will automatically rebuild and redeploy the site to S3.