**React Project Deployment to AWS S3 using GitHub Actions**

This repository automates the deployment of a React project to an AWS S3 bucket using GitHub Actions. The CI/CD pipeline is triggered on every push to the main branch, ensuring that the latest changes are automatically built and deployed.

**Prerequisites**

Before setting up the CI/CD pipeline, ensure the following:

1. **AWS S3 Bucket**: Create an S3 bucket where the React project will be deployed.
2. **AWS Credentials**: Store your AWS credentials (AWS\_ACCESS\_KEY\_ID and AWS\_SECRET\_ACCESS\_KEY) as GitHub Secrets.
3. **React Project**: Your React project should be ready with a build script (e.g., npm run build).

**GitHub Secrets Setup**

You need to configure the following secrets in your GitHub repository:

1. **AWS\_ACCESS\_KEY\_ID**: Your AWS Access Key ID.
2. **AWS\_SECRET\_ACCESS\_KEY**: Your AWS Secret Access Key.
3. **S3\_BUCKET\_NAME**: The name of your S3 bucket (if needed).

To add these secrets:

* Go to your GitHub repository.
* Navigate to **Settings** > **Secrets and variables** > **Actions**.
* Click **New repository secret** and add your AWS credentials.

**Workflow Configuration**

The workflow is defined in the .github/workflows/main.yml file. Below is the content of the workflow:

# This is a basic workflow to help you get started with Actions

name: CI

# Controls when the workflow will run

on:

# Triggers the workflow on push or pull request events but only for the "main" branch

push:

branches: [ "main" ]

# A workflow run is made up of one or more jobs that can run sequentially or in parallel

jobs:

# This workflow contains a single job called "build"

build:

# The type of runner that the job will run on

runs-on: ubuntu-latest

# Steps represent a sequence of tasks that will be executed as part of the job

steps:

# Checks-out your repository under $GITHUB\_WORKSPACE, so your job can access it

- name: checkout

uses: actions/checkout@v4

# Install Node.js and dependencies

- name: Install Node.js

uses: actions/setup-node@v3

with:

node-version: '20'

- name: Install dependencies

run: npm install

# Build the React project

- name: Build React app

run: npm run build

- name: Configure AWS credentials

uses: aws-actions/configure-aws-credentials@v2

with:

aws-access-key-id: ${{ secrets.AWS\_ACCESS\_KEY\_ID }}

aws-secret-access-key: ${{ secrets.AWS\_SECRET\_ACCESS\_KEY }}

aws-region: eu-west-2

- name: Deploy static site to S3 bucket

run: aws s3 sync build/ s3://react-aws-s3-bucket --delete