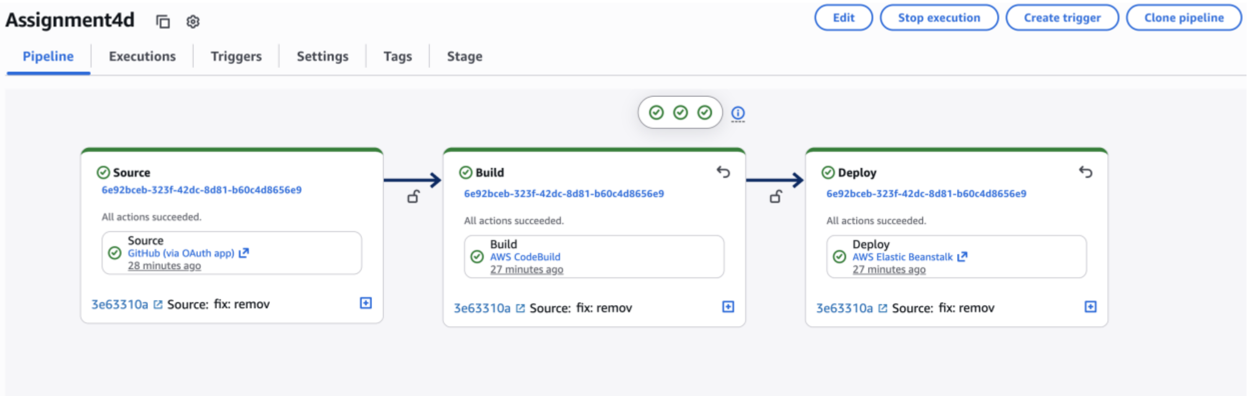
Pipeline Architecture Diagram

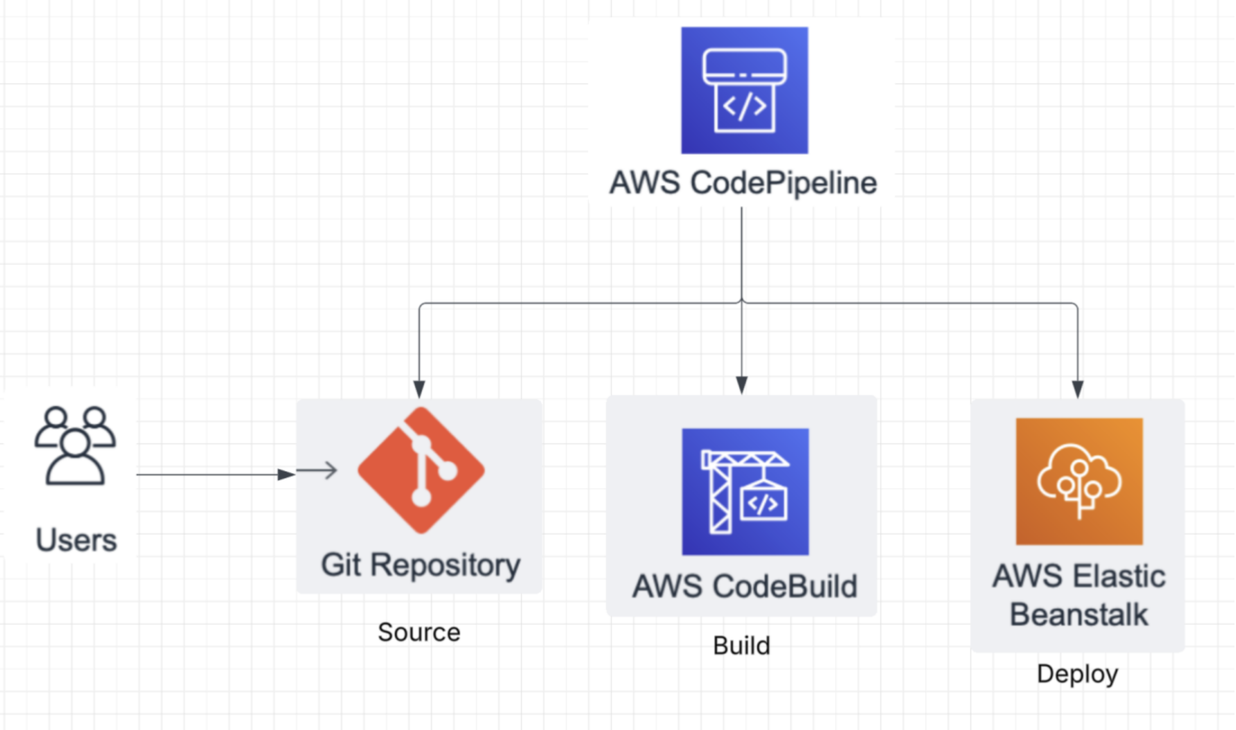


Assignment4d

✓ Source
6e92bceb-323f-42dc-8d81-b60c4d8656e9
All actions succeeded.
✓ Source
GitHub (via OAuth app)
28 minutes ago
3e63310a Source: fix: remov

✓ Build
6e92bceb-323f-42dc-8d81-b60c4d8656e9
All actions succeeded.
✓ Build
AWS CodeBuild
27 minutes ago
3e63310a Source: fix: remov

✓ Deploy
6e92bceb-323f-42dc-8d81-b60c4d8656e9
All actions succeeded.
✓ Deploy
AWS Elastic Beanstalk
27 minutes ago
3e63310a Source: fix: remov



Pipeline Architecture:

The application source code for this pipeline is from a Git repository. The AWS CodeBuild is used for the build state, it installs dependencies, monitor the version control source, and packages the website code. Finally the AWS Elastic beanstalk is used for deployment, hosting the web application and serves production traffic. AWS CodePipeline is used to orchestrate the entire workflow.

Flow:

1. A developer pushes code to Git Repo
2. CodePipeline detects the commit and trigger the pipeline
3. CodeBuild runs the build process
4. The artifact is deployed to elastic beanstalk

Steps for building pipeline

1. Set up GitHub repo
2. Create Elastic Beanstalk environment to deploy the web app to
3. Configure the build process using AWS CodeBuild

- Set source to Github
- Set the buildspec file to:

```
version: 0.2
phases:
  build:
    commands:
      - npm i --save
artifacts:
  files:
    - '**/*'
```

4. Create a pipeline to automatically build and deploy

- Create new pipeline
- Configure the source stage (link to GitHub)
- Configure the build stage (set CodeBuild as build provider)
- Configure the deploy stage (set elastic beanstalk as the deploy provider)

General instructions to build were based on instructions found in: https://docs.aws.amazon.com/hands-on/latest/create-continuous-delivery-pipeline/create-continuous-delivery-pipeline.html

Troubleshooting

- Make sure the package.json does not include node in the dependencies as it interferes with the elastic beanstalk config
- Example of my package.json

```
-    {
-      "main": "server.js",
-      "dependencies": {
-        "express": "^5.1.0"
-      },
-      "scripts": {
-        "start": "node server.js"
-      }
-    }
-
```

- Ensure that your CodePipeline has AdministratorAccess to AWSElasticBeanstalk in the permission polices so that it can deploy