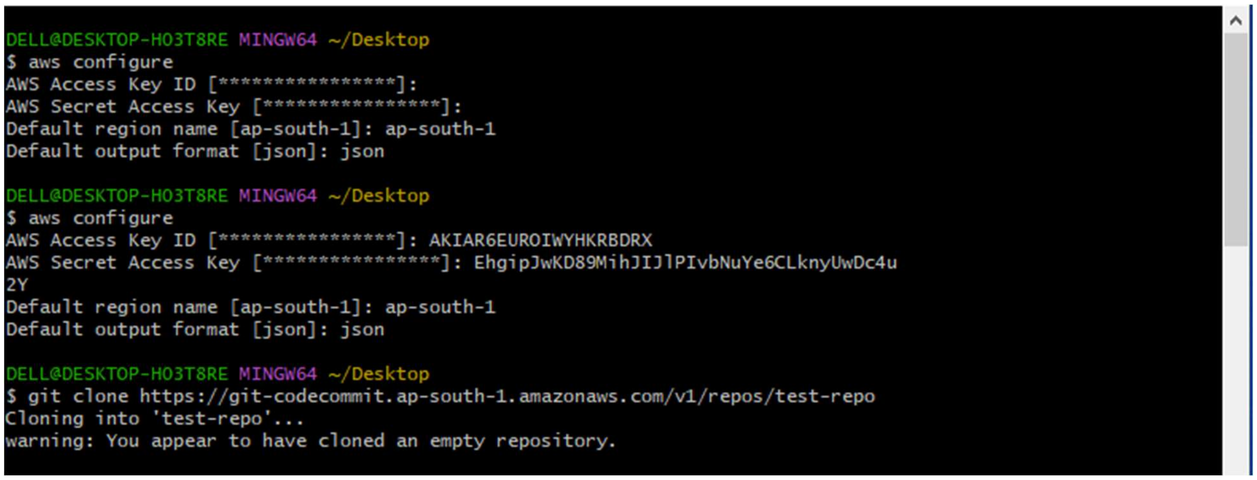
Creating a CI/CD pipeline with AWS EBS, Code commit & Code pipeline services

To perform this task we have some pre-requisites to fulfill:-

1. **AWS Config should be installed in your machine**
2. **There is already a IAM user with some necessary permissions like :**
   a. **Elastic Bean Stalk full access**
   b. **Code pipeline full access**
   c. **Code commit full access**
3. **To give a programmatic access you should have activated access key and secret key which can be takes from security credentials of that user.**

Now, after fulfilling the pre-requisites follow the below steps to perform the task.

1. Open your machine terminal, I am using Gitbash in my machine.
2. Use command “aws config” to connect to your aws account.
3. It will ask you to provide Access & secret ket as shown below:

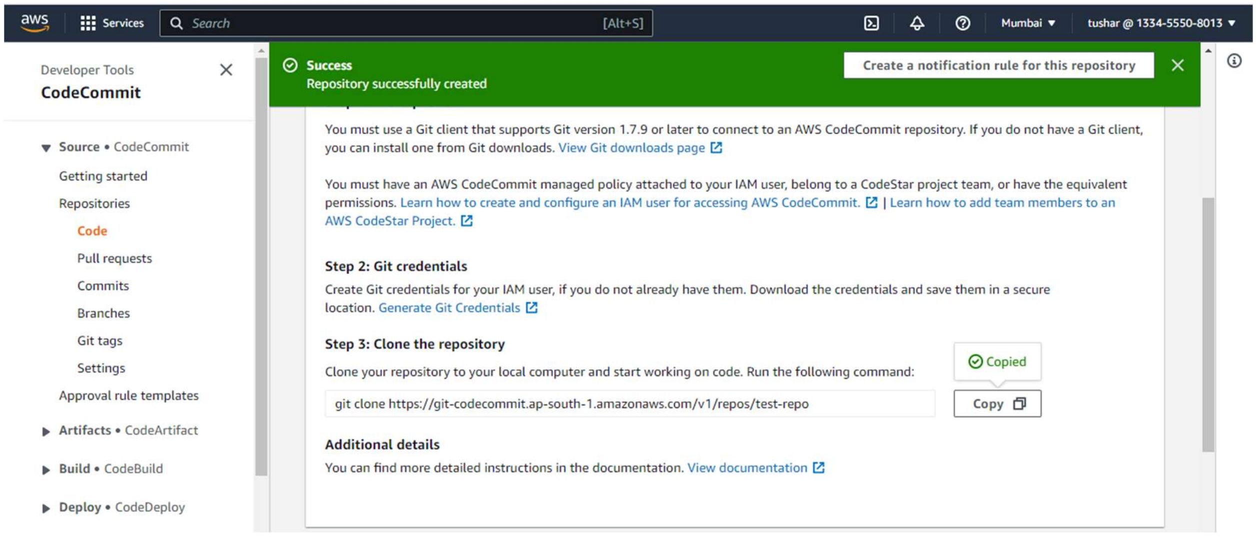


```
DELL@DESKTOP-HO3T8RE MINGW64 ~/Desktop
$ aws configure
AWS Access Key ID [****************]:
AWS Secret Access Key [****************]:
Default region name [ap-south-1]: ap-south-1
Default output format [json]: json

DELL@DESKTOP-HO3T8RE MINGW64 ~/Desktop
$ aws configure
AWS Access Key ID [****************]: AKIAR6EUROIWYHKRBDRX
AWS Secret Access Key [****************]: EhgipJwKD89MihJIJ1PIvbNuYe6CLknyUwDc4u
2Y
Default region name [ap-south-1]: ap-south-1
Default output format [json]: json

DELL@DESKTOP-HO3T8RE MINGW64 ~/Desktop
$ git clone https://git-codecommit.ap-south-1.amazonaws.com/v1/repos/test-repo
Cloning into 'test-repo'...
warning: You appear to have cloned an empty repository.
```

(Note : Access key & secret key should be confidential, in my case I have already deactivated and deleted my keys)

4. After providing keys provide the region in which you want or will work & then output format.

5. Now, go to your aws account then go to code commit & create a repository with a name you like.
6. Copy the link of that repo to create a local repo in your machine from where you can create and push the files in aws repo.



Success
Repository successfully created

You must use a Git client that supports Git version 1.7.9 or later to connect to an AWS CodeCommit repository. If you do not have a Git client, you can install one from Git downloads. View Git downloads page

You must have an AWS CodeCommit managed policy attached to your IAM user, belong to a CodeStar project team, or have the equivalent permissions. Learn how to create and configure an IAM user for accessing AWS CodeCommit. | Learn how to add team members to an AWS CodeStar Project.

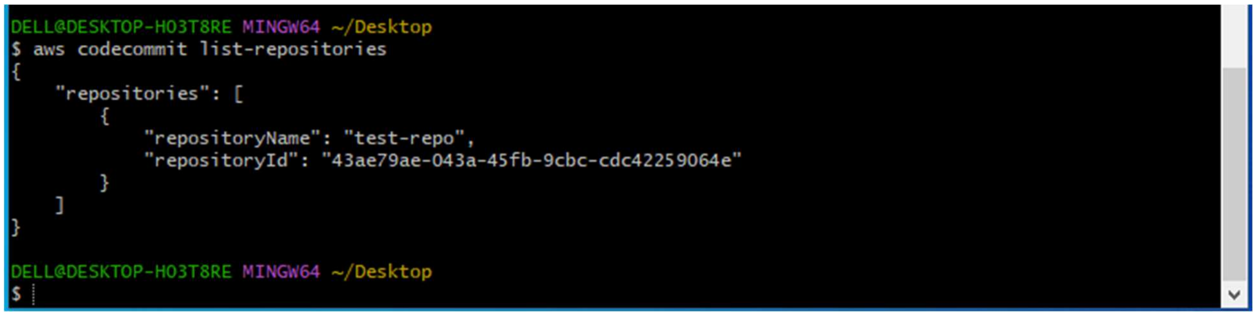
Step 2: Git credentials
Create Git credentials for your IAM user, if you do not already have them. Download the credentials and save them in a secure location. Generate Git Credentials

Step 3: Clone the repository
Clone your repository to your local computer and start working on code. Run the following command:

```
git clone https://git-codecommit.ap-south-1.amazonaws.com/v1/repos/test-repo
```

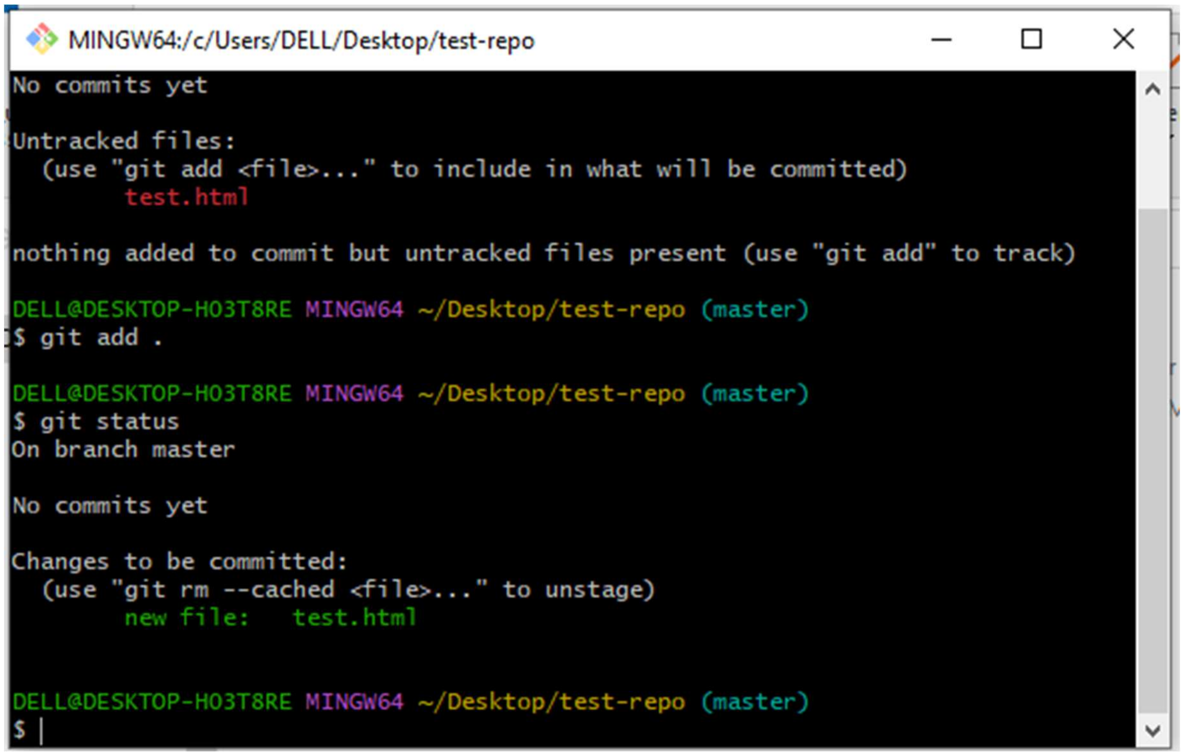
Additional details
You can find more detailed instructions in the documentation. View documentation

7. Put the code in your terminal and run the code.
8. After that you can check whether the repo is created or not by running this command “aws codecommit list-repositories”.



```
DELL@DESKTOP-HO3T8RE MINGW64 ~/Desktop
$ aws codecommit list-repositories
{
    "repositories": [
        {
            "repositoryName": "test-repo",
            "repositoryId": "43ae79ae-043a-45fb-9cbc-cdc42259064e"
        }
    ]
}

DELL@DESKTOP-HO3T8RE MINGW64 ~/Desktop
$
```

9. Create .html file in that local repo or you can take it from my github repo for sample https://github.com/TusharChauhan771/EBS-codepipeline.git

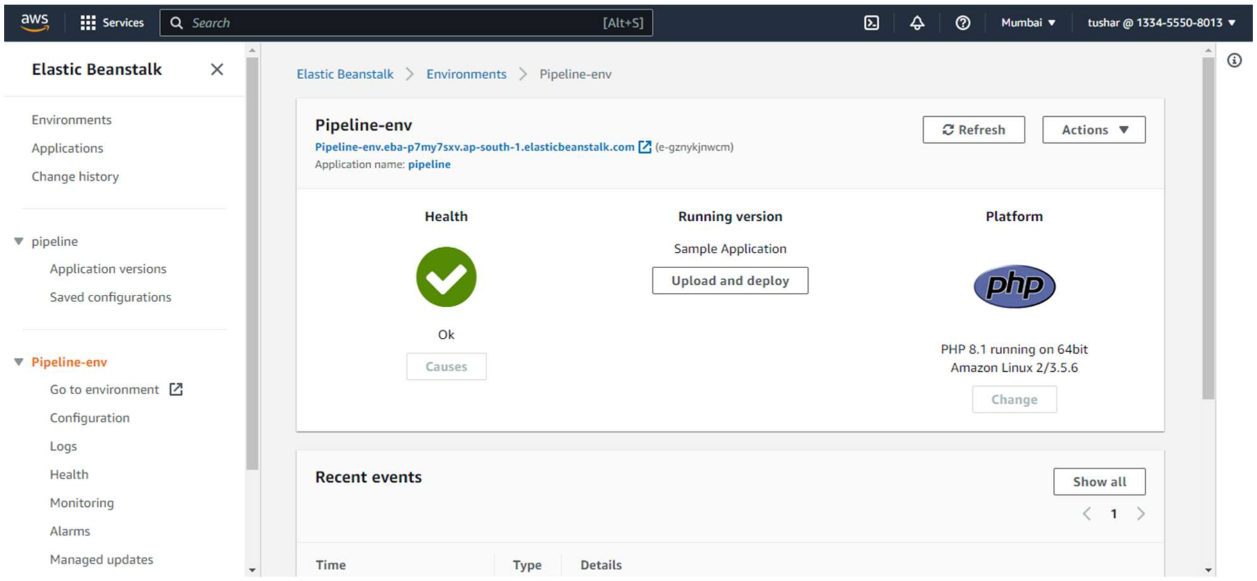


```
No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        test.html

nothing added to commit but untracked files present (use "git add" to track)

DELL@DESKTOP-H03T8RE MINGW64 ~/Desktop/test-repo (master)
$ git add .

DELL@DESKTOP-H03T8RE MINGW64 ~/Desktop/test-repo (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   test.html


DELL@DESKTOP-H03T8RE MINGW64 ~/Desktop/test-repo (master)
$ |
```

10.Add & commit the file with commands show in above picture.

11.Now push the code to AWS codecommit repo.

12.Go to EBS and create the environment with PHP platform.



Pipeline-env

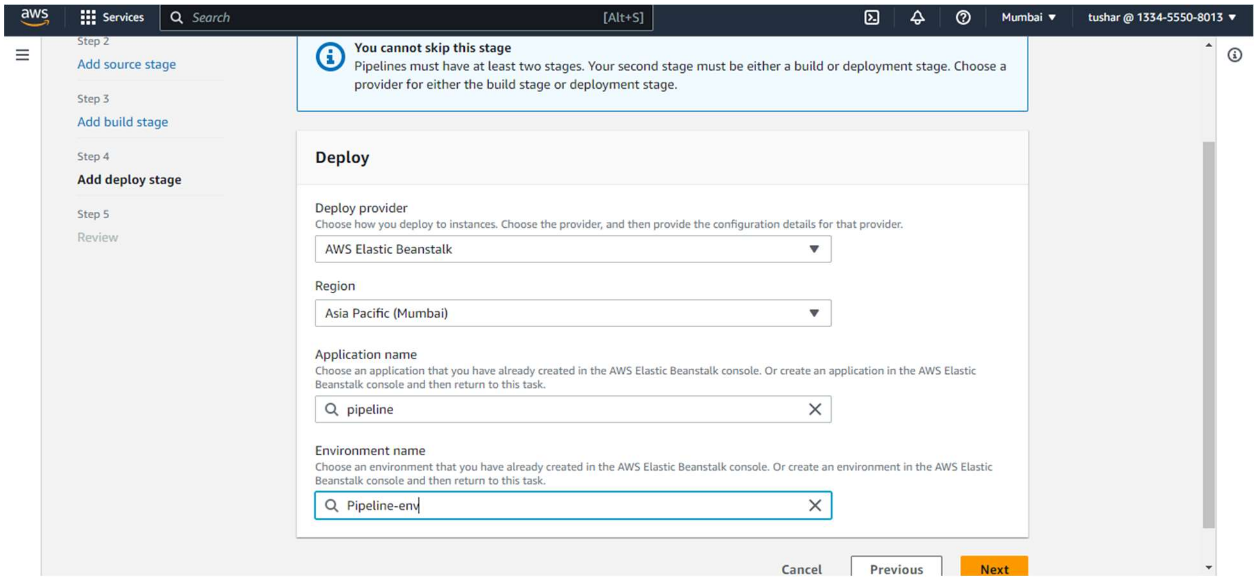
Pipeline-env.eba-p7my7sxv.ap-south-1.elasticbeanstalk.com (e-gznykjnwcm)

Application name: pipeline

Health	Running version	Platform
Ok	Sample Application	PHP 8.1 running on 64bit Amazon Linux 2/3.5.6

Recent events

13. When created, then go to code pipeline and provide the source and deployment platform.



You cannot skip this stage
Pipelines must have at least two stages. Your second stage must be either a build or deployment stage. Choose a provider for either the build stage or deployment stage.

Deploy

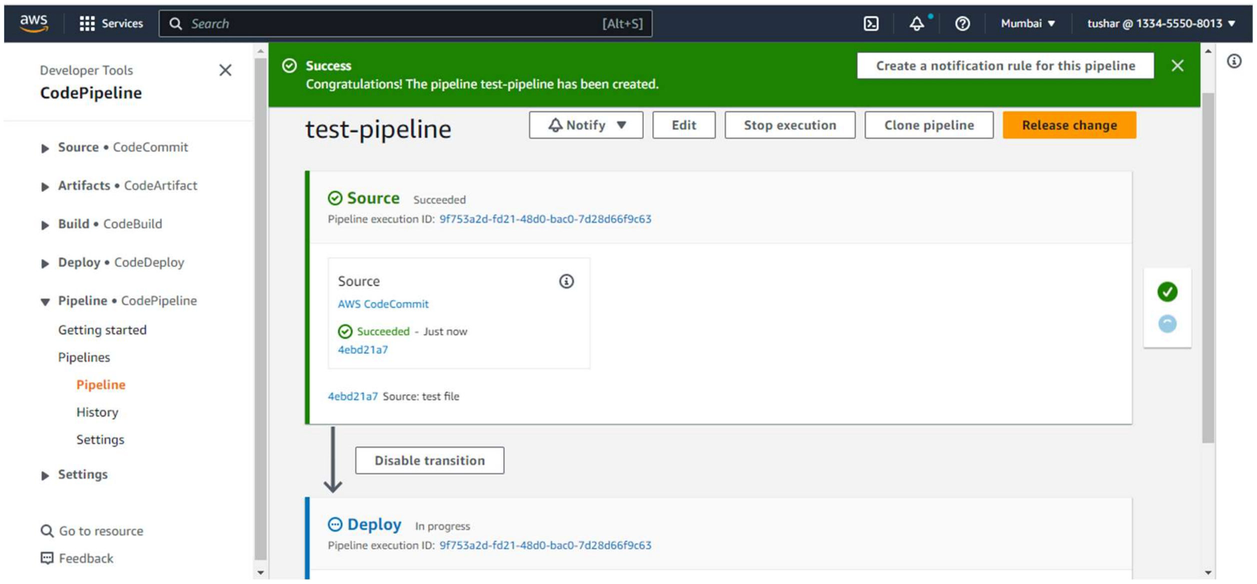
Deploy provider
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.
AWS Elastic Beanstalk

Region
Asia Pacific (Mumbai)

Application name
Choose an application that you have already created in the AWS Elastic Beanstalk console. Or create an application in the AWS Elastic Beanstalk console and then return to this task.
pipeline

Environment name
Choose an environment that you have already created in the AWS Elastic Beanstalk console. Or create an environment in the AWS Elastic Beanstalk console and then return to this task.
Pipeline-env

14. Your cod pipeline should be completed and it should look like below:



Success
Congratulations! The pipeline test-pipeline has been created.

test-pipeline

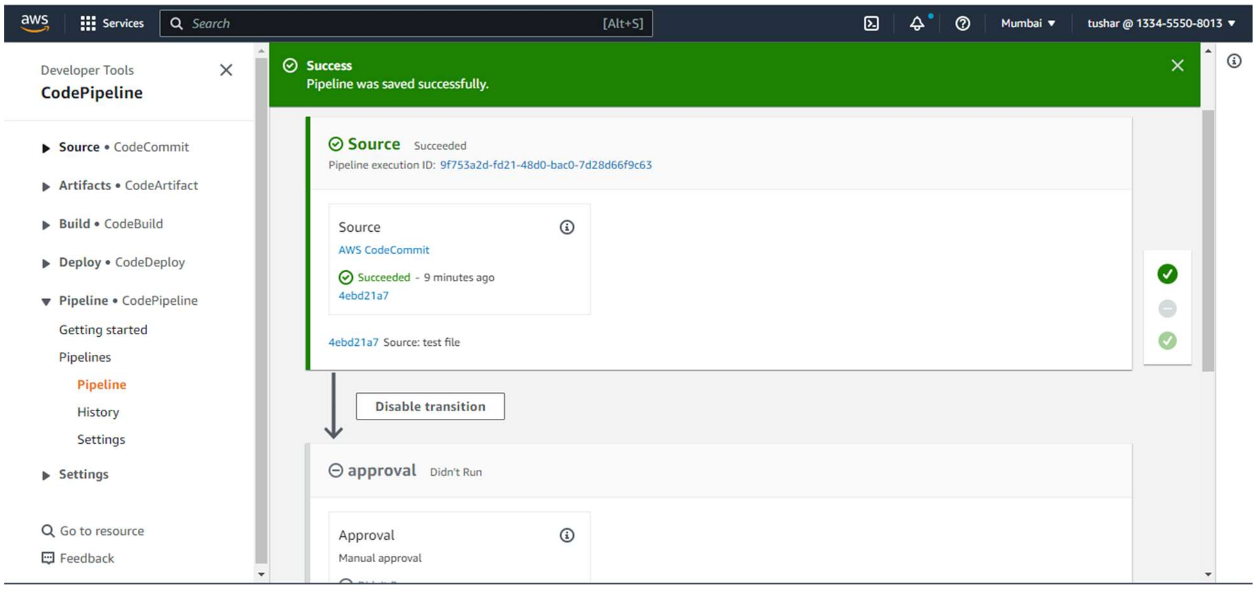
Source Succeeded
Pipeline execution ID: 9f753a2d-fd21-48d0-bac0-7d28d66f9c63

Source
AWS CodeCommit
Succeeded - Just now
4ebd21a7

4ebd21a7 Source: test file

Deploy In progress
Pipeline execution ID: 9f753a2d-fd21-48d0-bac0-7d28d66f9c63

15. If you want to add steps between the stages, click on EDIT button shown on top.
16. Then you can add more stages like approval.



Success
Pipeline was saved successfully.

Source Succeeded
Pipeline execution ID: 9f753a2d-fd21-48d0-bac0-7d28d66f9c63

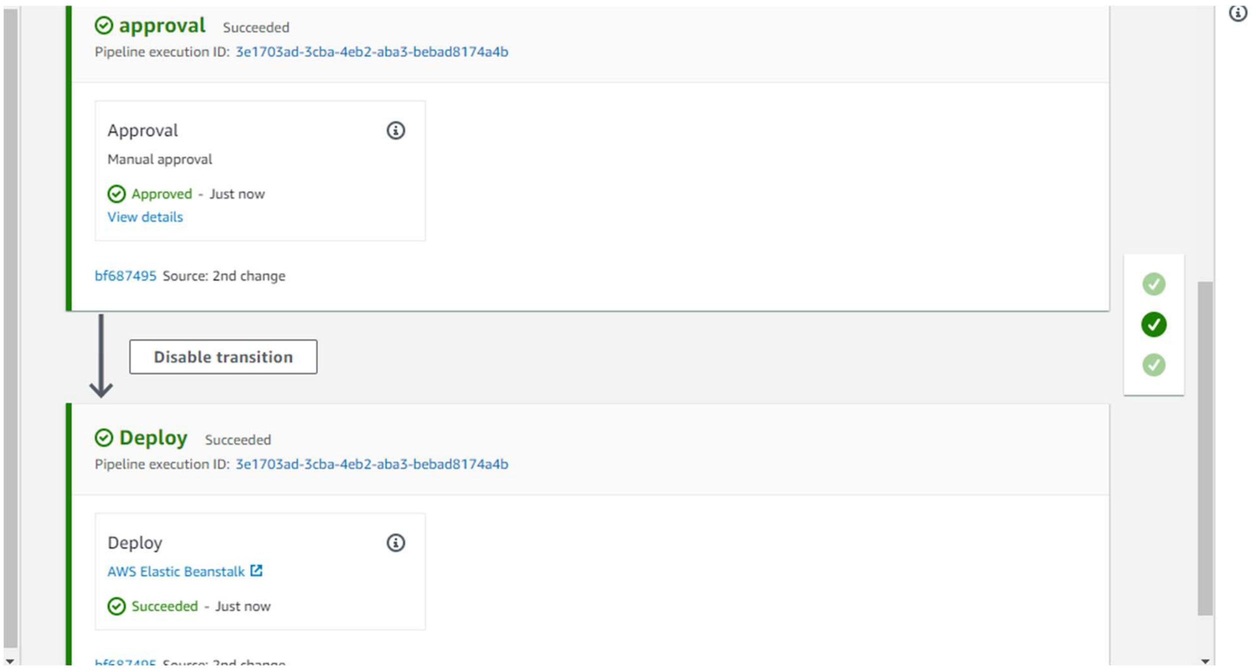
Source
AWS CodeCommit
Succeeded - 9 minutes ago
4ebd21a7

4ebd21a7 Source: test file

approval Didn't Run

Approval
Manual approval

17. Now, whenever user passes the approval then only the changes or code will be deployed.



approval Succeeded
Pipeline execution ID: 3e1703ad-3cba-4eb2-aba3-bebad8174a4b

Approval
Manual approval
Approved - Just now
View details

bf687495 Source: 2nd change

Deploy Succeeded
Pipeline execution ID: 3e1703ad-3cba-4eb2-aba3-bebad8174a4b

Deploy
AWS Elastic Beanstalk
Succeeded - Just now