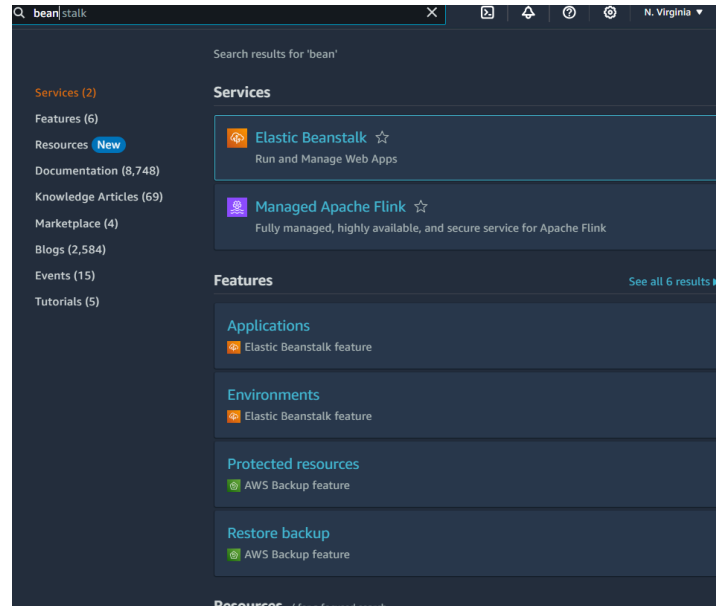


Exp 2

Aim: To Build Your Application using AWS CodeBuild and Deploy on S3 / SEBS using AWS CodePipeline, deploy Sample Application on EC2 instance using AWS CodeDeploy

1) Login to your account and search for Elastic Beanstalk



2) Click on it and select create application

Compute

Amazon Elastic Beanstalk

End-to-end web application management.

Amazon Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.

Get started

Easily deploy your web application in minutes.

[Create application](#)

Pricing

There's no additional charge for Elastic Beanstalk. You pay for Amazon Web Services resources that we create to store and run your web application, like Amazon S3 buckets and Amazon EC2 instances.

Get started

You simply upload your code and Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, and automatic scaling to web application health monitoring, with ongoing fully managed patch and security updates. [Learn more](#)

Getting started

3) Give an appropriate name to your application

Configure environment [Info](#)

Environment tier [Info](#)

Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.

☒ **Web server environment**
Run a website, web application, or web API that serves HTTP requests. [Learn more](#)

☐ **Worker environment**
Run a worker application that processes long-running workloads on demand or performs tasks on a schedule. [Learn more](#)

Application information [Info](#)

Application name

Maximum length of 100 characters.

► **Application tags (optional)**

Environment information [Info](#)

Choose the name, subdomain and description for your environment. These cannot be changed later.

Environment name

4) Select php and other will automatically get filled

Platform [Info](#)

Platform type

☒ Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. [Learn more](#)

☐ Custom platform
Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform

PHP

Platform branch

PHP 8.3 running on 64bit Amazon Linux 2023

Platform version

4.3.2 (Recommended)

5) Now, while creating the environment, we are asked to provide an IAM role with the necessary EC2 permissions. We are supposed to make sure that we have made an existing IAM role with the following set of permissions:

1. AWSElasticBeanStalkWebTier
2. AWSElasticBeanStalkWorkerTier
3. AWSElasticBeanStalkMulticontainerDocker

Select iam and then create role

[IAM](#) > [Roles](#) > Create role

Step 1
Select trusted entity

Step 2
Add permissions

Step 3
Name, review, and create

Select trusted entity [Info](#)

Trusted entity type

☒ **AWS service**
Allow AWS services like EC2, Lambda, or others to perform actions in this account.

☐ **AWS account**
Allow entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.

☐ **Web identity**
Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.

☐ **SAML 2.0 federation**
Allow users federated with SAML 2.0 from a corporate directory to perform actions in this account.

☐ **Custom trust policy**
Create a custom trust policy to enable others to perform actions in this account.

5)give a name and then select ec2

Name, review, and create

Role details

Role name

Enter a meaningful name to identify this role.

atharv36

Maximum 64 characters. Use alphanumeric and '+=, @-_' characters.

Description

Add a short explanation for this role.

Allows EC2 instances to call AWS services on your behalf.

Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: _+=, @-/\[\]!#\$%^*()~:;'"`

Step 1: Select trusted entities

Edit

Use case

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

Service or use case

EC2

Choose a use case for the specified service.

Use case

☒ EC2

Allows EC2 instances to call AWS services on your behalf.

☐ EC2 Role for AWS Systems Manager

Allows EC2 instances to call AWS services like CloudWatch and Systems Manager on your behalf.

☐ EC2 Spot Fleet Role

Allows EC2 Spot Fleet to request and terminate Spot Instances on your behalf.

☐ EC2 - Spot Fleet Auto Scaling

Allows Auto Scaling to access and update EC2 spot fleets on your behalf.

☐ EC2 - Spot Fleet Tagging

Allows EC2 to launch spot instances and attach tags to the launched instances on your behalf.

Add roles

Add permissions Info

Permissions policies (3/949) Info

Choose one or more policies to attach to your new role.

workertier

X

Filter by Type

All types



2 matches

<

1

>

⚙

<div><div></div></div>	Policy name <a>🔗	Type	Description
<input type="checkbox"/>	<div><div>+</div><div> AWSElasticBeanstalkRoleWorkerTier</div></div>	AWS managed	(Elastic Beanstalk op
<input checked="" type="checkbox"/>	<div><div>+</div><div> AWSElasticBeanstalkWorkerTier</div></div>	AWS managed	Provide the instance

▶

 Set permissions boundary - *optional*

These 3 roles should be added

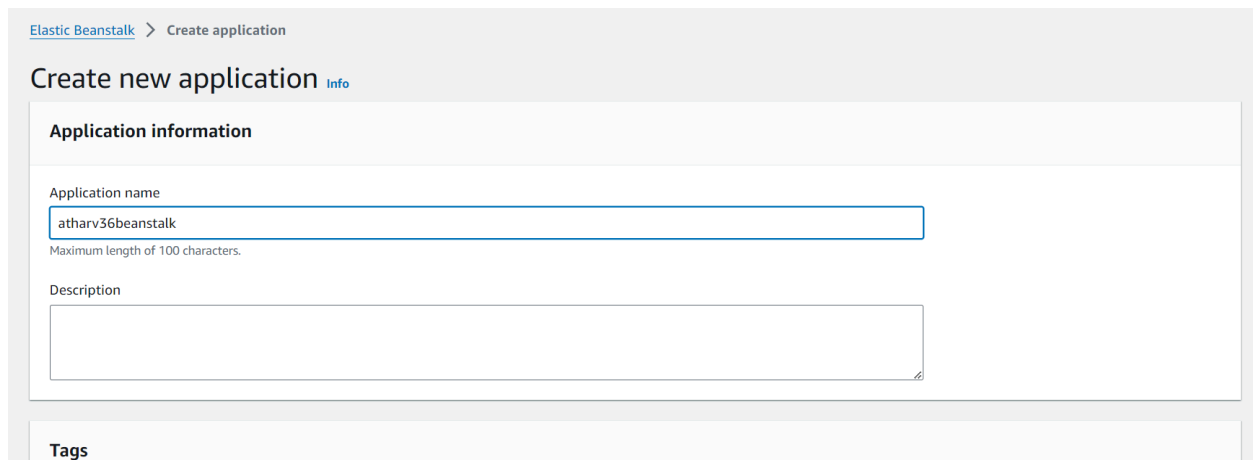
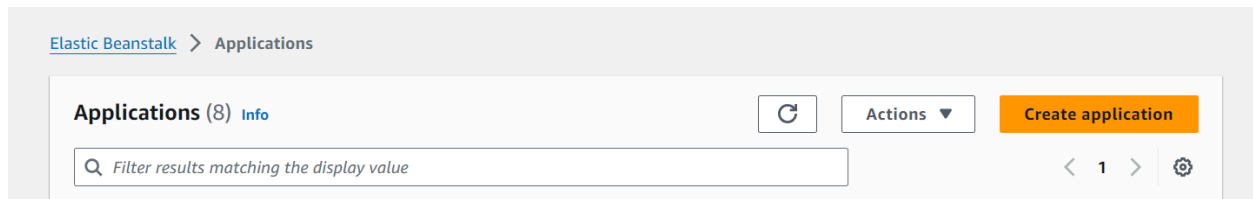
Step 2: Add permissions Edit

Permissions policy summary

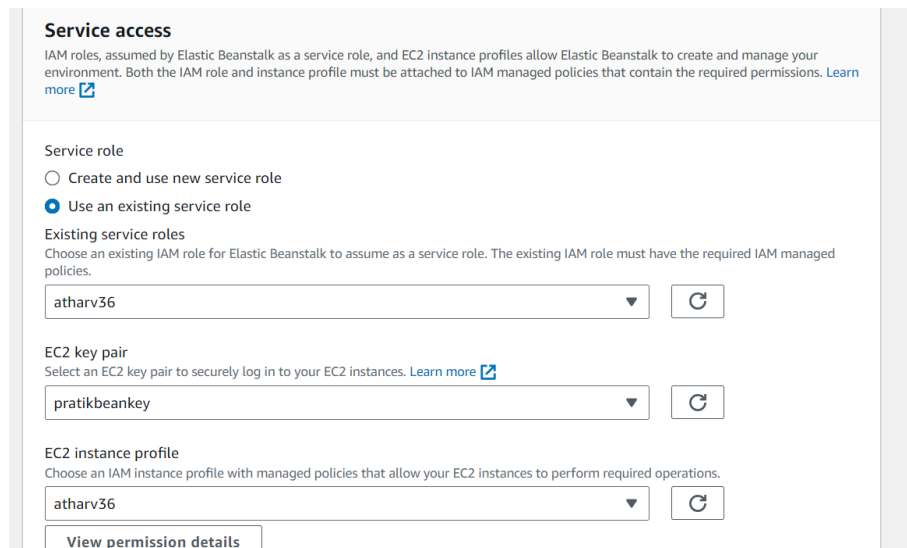
Policy name <a>🔗	Type	Attached as
AWSElasticBeanstalkMulticontainerDocker	AWS managed	Permissions policy
AWSElasticBeanstalkWebTier	AWS managed	Permissions policy
AWSElasticBeanstalkWorkerTier	AWS managed	Permissions policy

6) Now create an Application

Click on create application



7) In services access give the role we just created



8) See the summary and click on create application

Step 1: Configure environment

Edit

Environment information

Environment tier	Application name
Web server environment	atharv36beanstalk
Environment name	Application code
Atharv36beanstalk-env	Sample application
Platform	
arn:aws:elasticbeanstalk:us-east-1::platform/PHP 8.3 running on 64bit Amazon Linux 2023/4.3.2	

9)then you will get a message that you environment is created

✓ Environment successfully launched.

Elastic Beanstalk > Environments > Atharv36beanstalk-env-1

Atharv36beanstalk-env-1 Info

⌂

Actions ▾

Upload and deploy

Environment overview

Health

⚠ Warning

Domain

Atharv36beanstalk-env-1.eba-4ivtm3rr.us-east-1.elasticbeanstalk.com

Environment ID

e-f2sk336vqk

Application name

atharv36beanstalk

Platform

Change version

Platform

PHP 8.3 running on 64bit Amazon Linux 2023/4.3.2

Running version

-

Platform state

✓ Supported

Events

Health

Logs

Monitoring

Alarms

Managed updates

Tags

10) Create a pipeline


Pipeline settings

Pipeline name

Enter the pipeline name. You cannot edit the pipeline name after it is created.

No more than 100 characters

Pipeline type

-  You can no longer create V1 pipelines through the console. We recommend you use the V2 pipeline type with improved release safety, pipeline triggers, parameterized pipelines, and a new billing model.

Execution mode

Choose the execution mode for your pipeline. This determines how the pipeline is run.

- ☐ **Superseded**
A more recent execution can overtake an older one. This is the default.
- ☒ **Queued (Pipeline type V2 required)**
Executions are processed one by one in the order that they are queued.
- ☐ **Parallel (Pipeline type V2 required)**
Executions don't wait for other runs to complete before starting or finishing.

Service role

- ☒ **New service role**
Create a service role in your account
- ☐ **Existing service role**
Choose an existing service role from your account

11) select source and select Github version 2

Source

Source provider

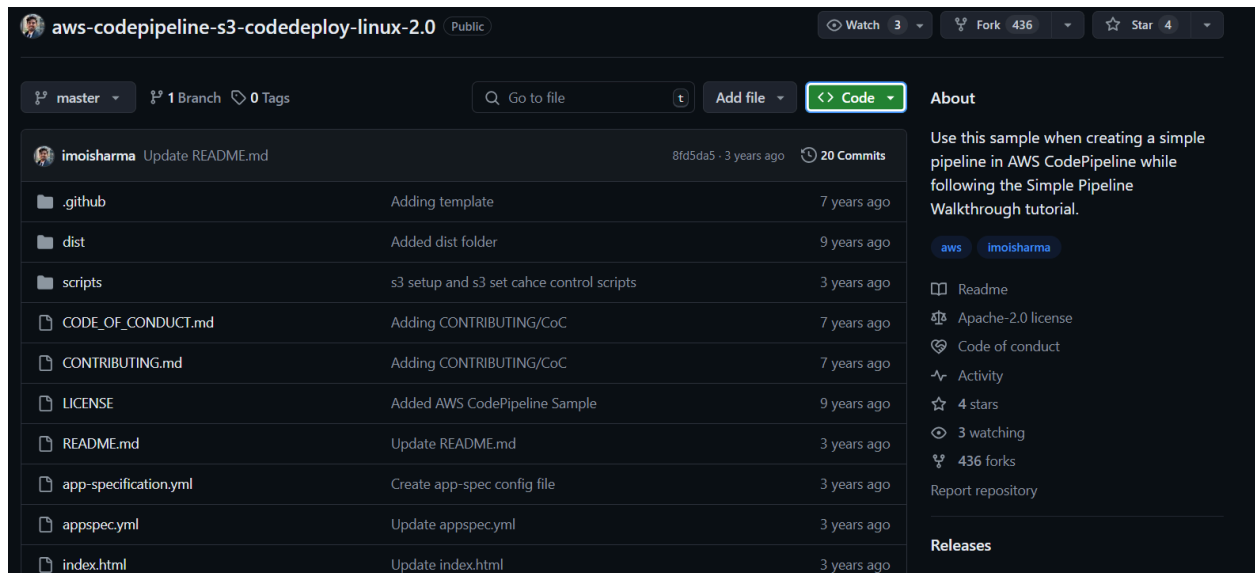
This is where you stored your input artifacts for your pipeline. Choose the provider and then provide the connection details.



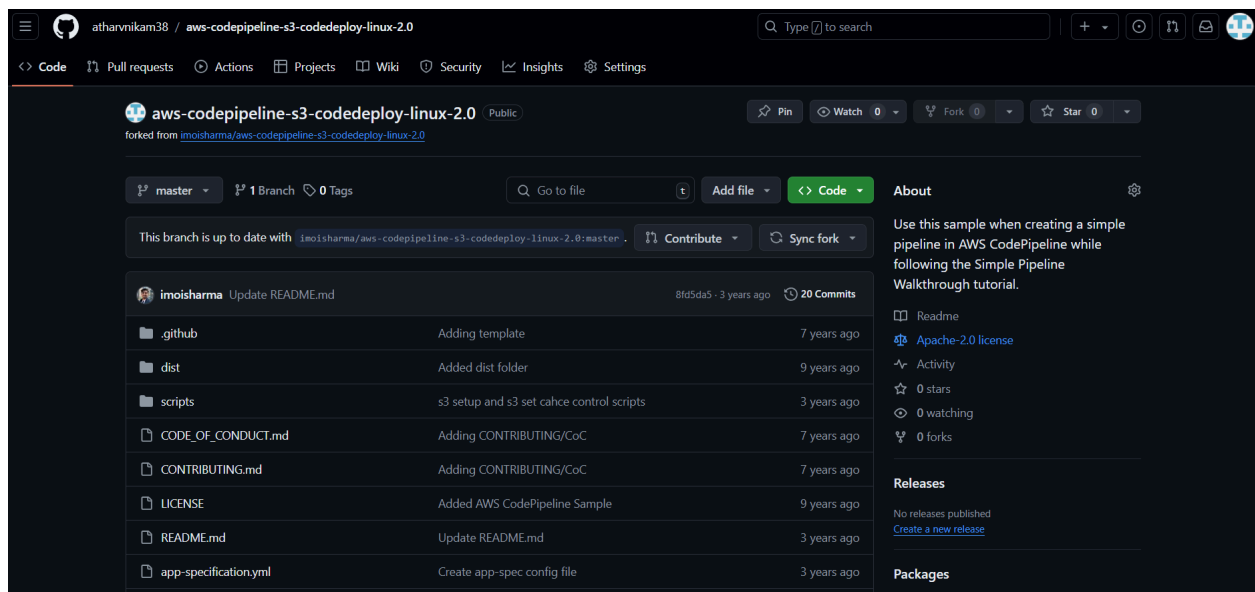
New GitHub version 2 (app-based) action

To add a GitHub version 2 action in CodePipeline, you create a connection, which uses GitHub Apps to access your repository. Use the options below to choose an existing connection or create a new one. [Learn more](#)

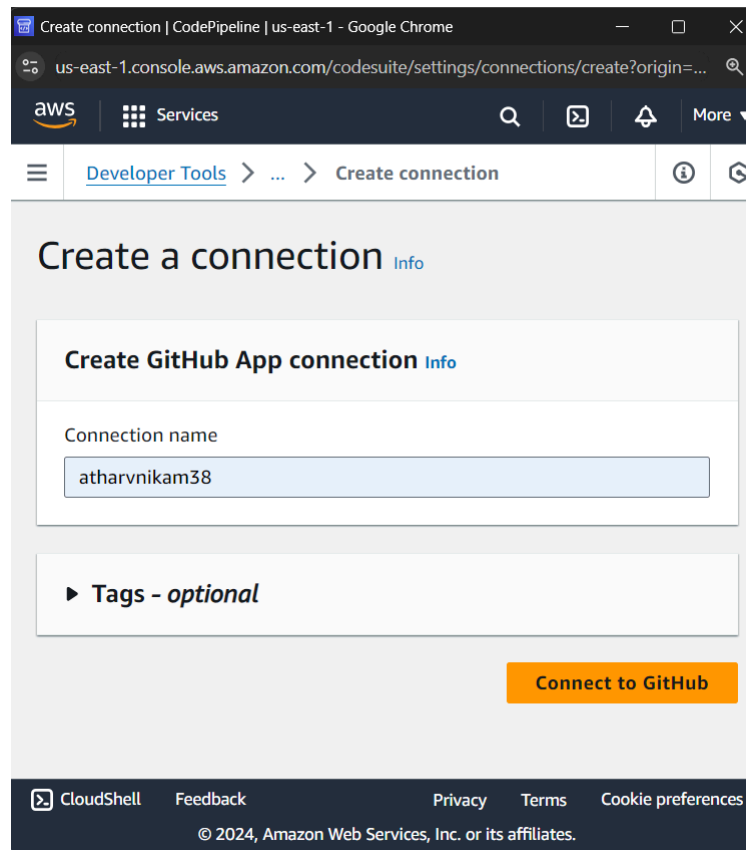
12) First you have to fork a github repo



13) forked this image on the your account

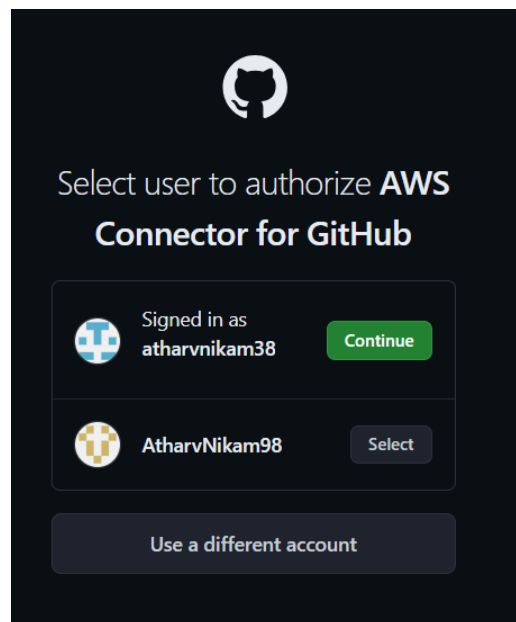


14) Now connect your github repo here

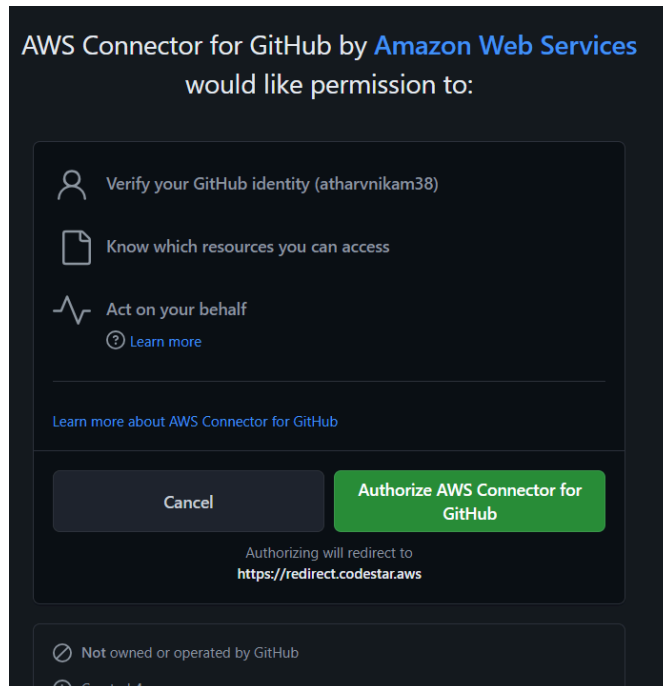


The screenshot shows the AWS CodePipeline console in a Google Chrome browser. The page title is 'Create connection | CodePipeline | us-east-1'. The URL is 'us-east-1.console.aws.amazon.com/codesuite/settings/connections/create?origin=...'. The breadcrumb navigation shows 'Developer Tools > ... > Create connection'. The main heading is 'Create a connection' with an 'Info' link. Below this is a section titled 'Create GitHub App connection' with an 'Info' link. It contains a 'Connection name' input field with the value 'atharvnikam38'. There is a 'Tags - optional' section with a right-pointing triangle icon. At the bottom right of this section is an orange button labeled 'Connect to GitHub'. The footer includes links for 'CloudShell', 'Feedback', 'Privacy', 'Terms', and 'Cookie preferences', and a copyright notice: '© 2024, Amazon Web Services, Inc. or its affiliates.'

15) Authorize it



The screenshot shows the GitHub authorization screen for the 'AWS Connector for GitHub'. It features the GitHub logo at the top. The text 'Select user to authorize AWS Connector for GitHub' is displayed. Below this, there are two user selection options. The first option shows a profile picture, the text 'Signed in as atharvnikam38', and a green 'Continue' button. The second option shows a profile picture, the text 'AtharvNikam98', and a grey 'Select' button. At the bottom, there is a button labeled 'Use a different account'.



Connect to GitHub

GitHub connection settings [Info](#)

Connection name

atharvnikam38

GitHub Apps

GitHub Apps create a link for your connection with GitHub. Install a new app and save this connection.



or

[Install a new app](#)

► **Tags - optional**

[Connect](#)

16)now you have connect the repo

Source provider

This is where you stored your input artifacts for your pipeline. Choose the provider and then provide the connection details.

GitHub (Version 2) ▼



New GitHub version 2 (app-based) action

To add a GitHub version 2 action in CodePipeline, you create a connection, which uses GitHub Apps to access your repository. Use the options below to choose an existing connection or create a new one. [Learn more](#)

Connection

Choose an existing connection that you have already configured, or create a new one and then return to this task.

🔍 arn:aws:codeconnections:us-east-1:069450516824:connection/135ebd03-0a ✕

or

Connect to GitHub



Ready to connect

Your GitHub connection is ready for use.

Repository name

Choose a repository in your GitHub account.

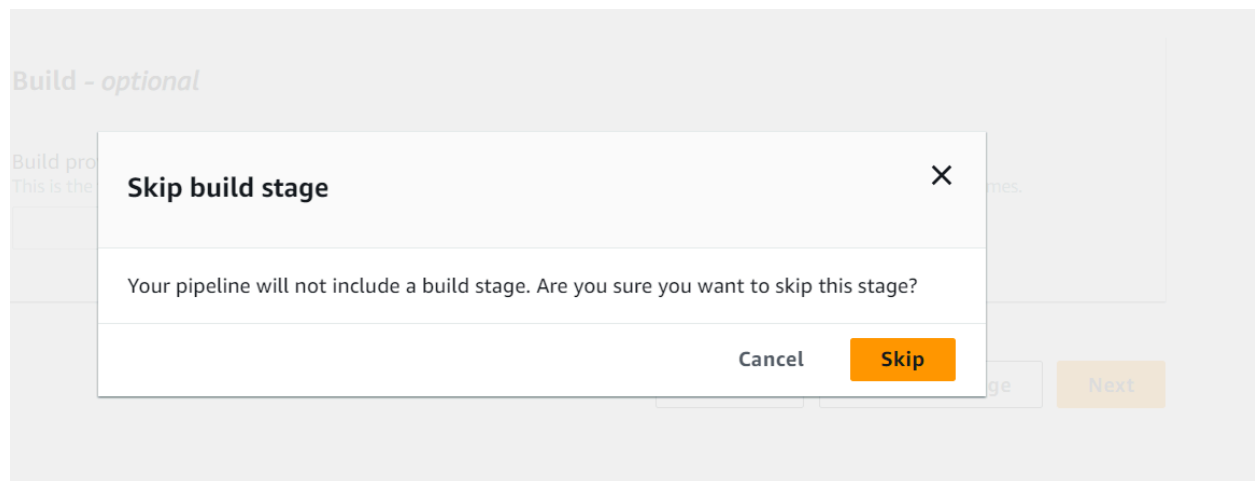
🔍 atharvnikam38/aws-codepipeline-s3-codedeploy-linux-2.0 ✕

You can type or paste the group path to any project that the provided credentials can access. Use the format 'group/subgroup/project'.

Default branch

Default branch will be used only when pipeline execution starts from a different source or manually started.

17)click next and click skip build test



18)enter final info

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
US East (N. Virginia)

Input artifacts
Choose an input artifact for this action. [Learn more](#)

No more than 100 characters

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.

Q atharvbeanstalk

Environment name
Choose an environment in the AWS Elastic Beanstalk console and then return to this task.

AtharvBeanstalk-env

Q AtharvBeanstalk-env

☐ Configure automatic rollback on stage failure

19)you have successfully created the pipeline

Success

Congratulations! The pipeline atharvpipeline has been created.

Create a notification rule for this pipeline

Developer Tools > CodePipeline > Pipelines > atharvpipeline

atharvpipeline

Notify

Edit

Stop execution

Clone pipeline

Release change

Pipeline type: V2 Execution mode: QUEUED

Source

Succeeded

Pipeline execution ID: 2ae6f2da-083a-48b0-8c79-5a4aa7f2db88

Source

[GitHub \(Version 2\)](#)

Succeeded - 1 minute ago

[cded2323](#)

View details

[cded2323](#) Source: Update index.html

Disable transition

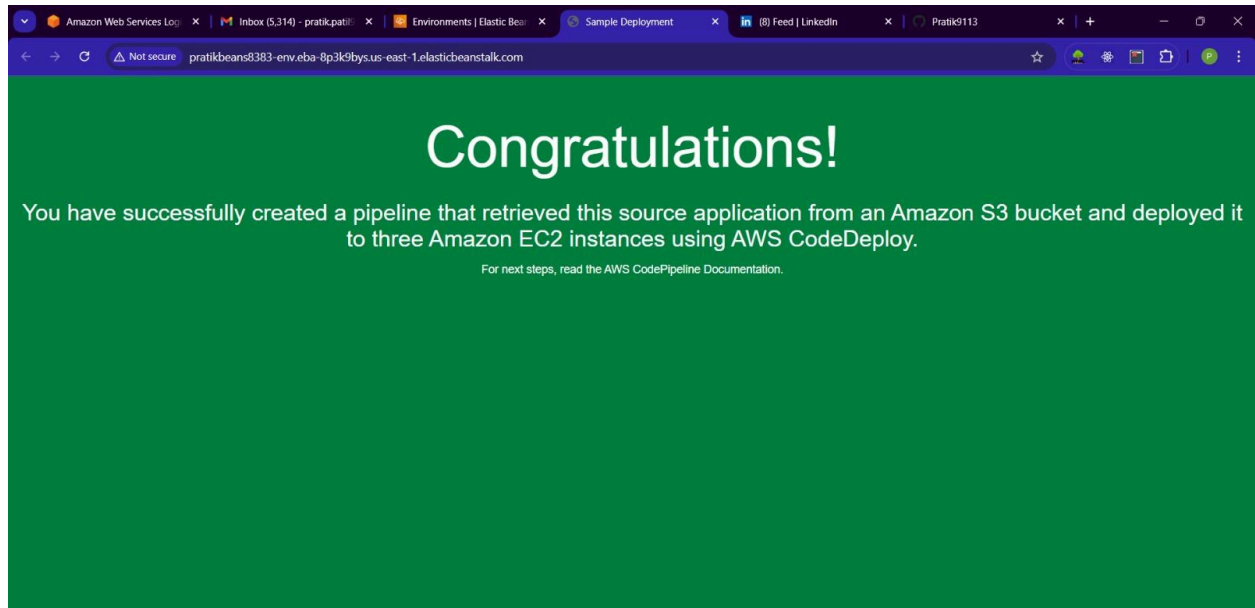
Deploy

Succeeded

Pipeline execution ID: 2ae6f2da-083a-48b0-8c79-5a4aa7f2db88

Start rollback

20)you will get this message



21)make changes to your repo and rerun the pipeline

