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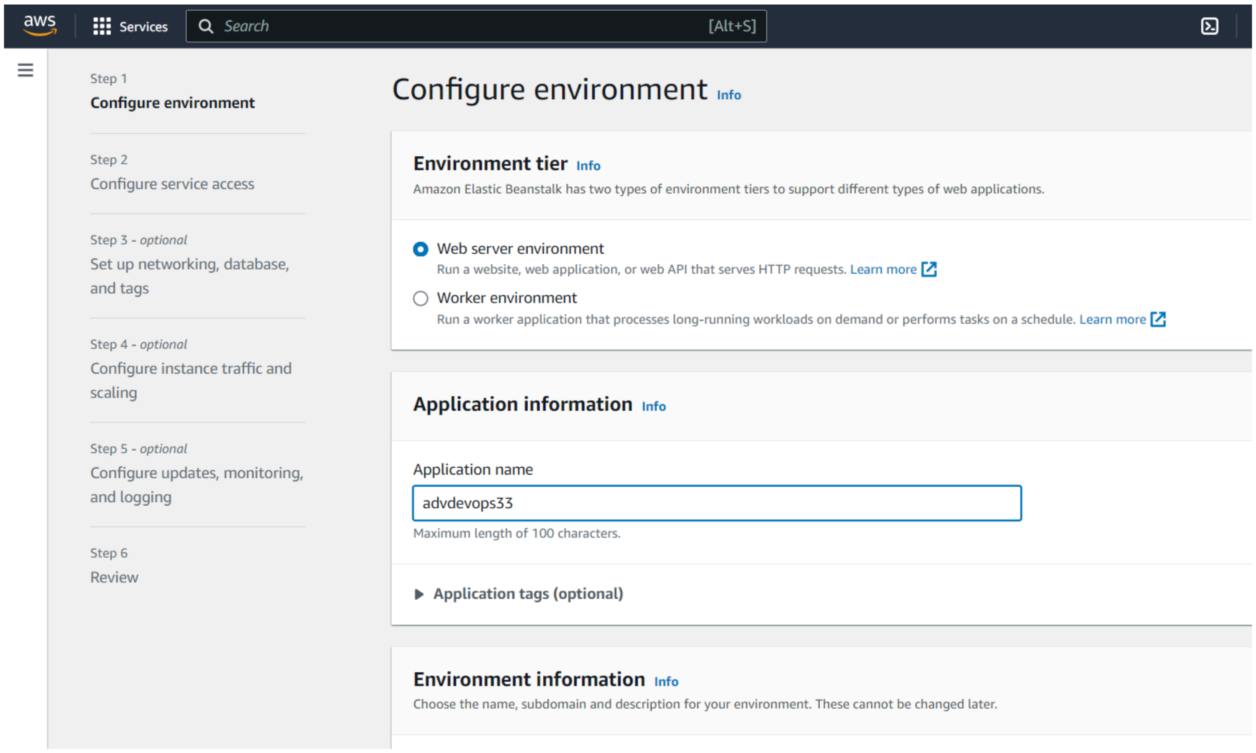
EXP 2

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. Create an Elastic Beanstalk environment. Give a suitable to your environment.



Step 1
Configure environment
Step 2
Configure service access
Step 3 - optional
Set up networking, database, and tags
Step 4 - optional
Configure instance traffic and scaling
Step 5 - optional
Configure updates, monitoring, and logging
Step 6
Review

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

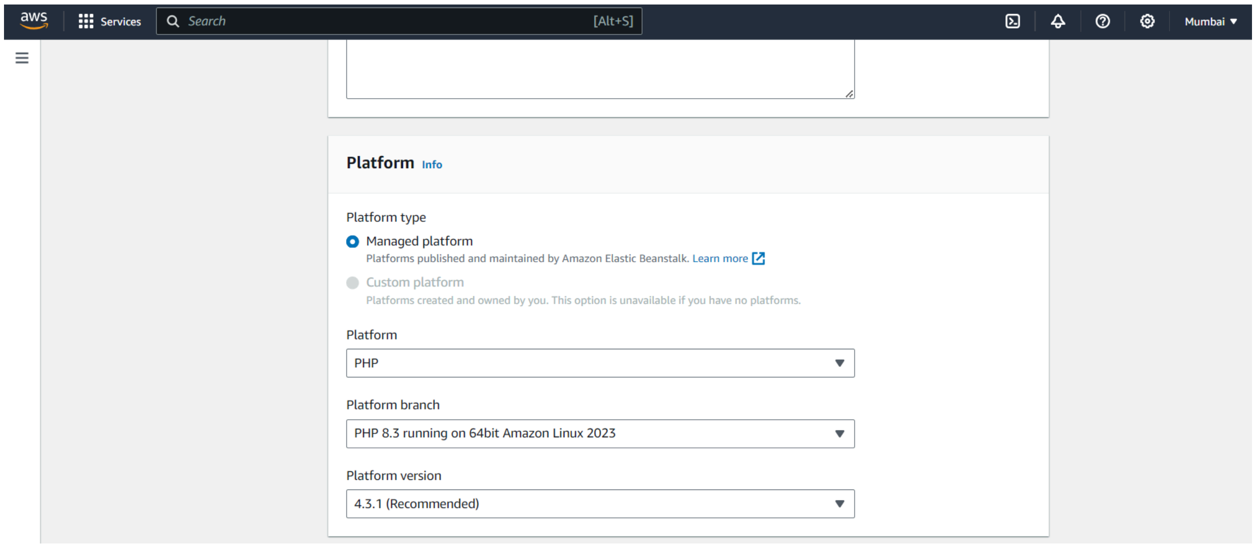
Application information Info

Application name
advdevops33
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.

2. Select a suitable platform for your Elastic beanstalk environment. Here, we will select PHP file.



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
4.3.1 (Recommended)

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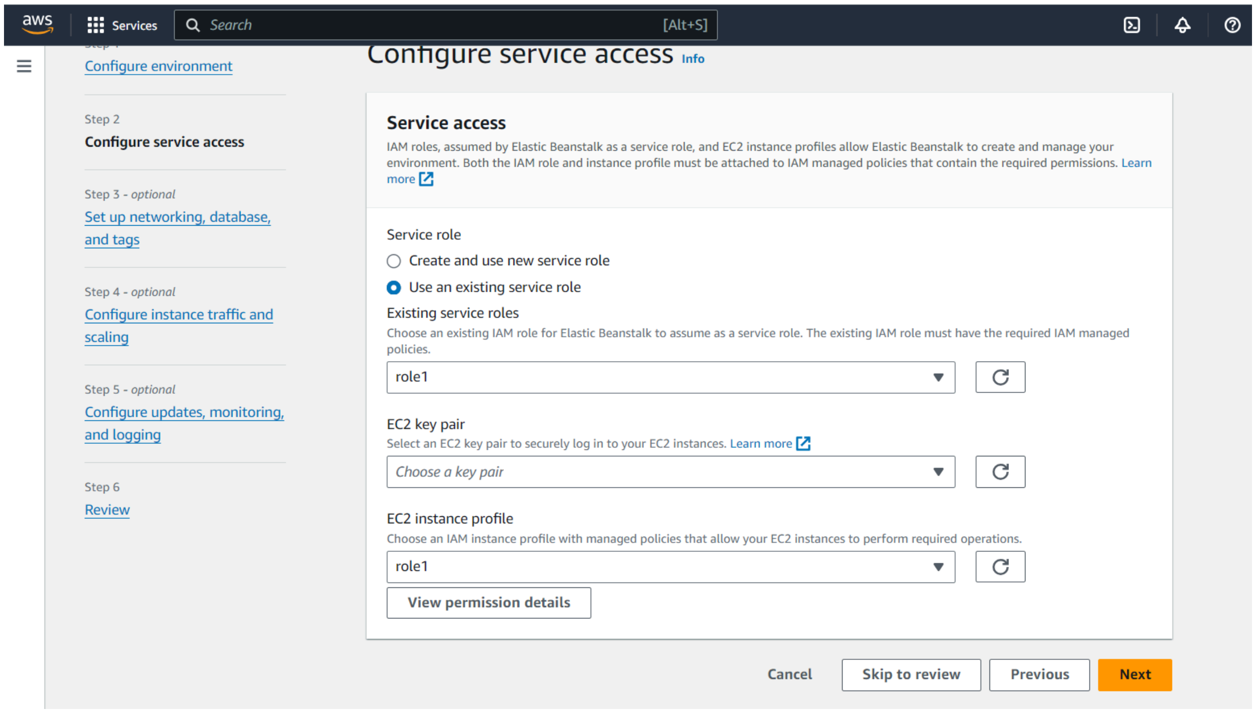
3. Next, we will have to give access to our Elastic beanstalk environment to carry out it's tasks. For this, we have to grant certain permissions to the role, component or the entity that we will create.
   Following our permissions that we are supposed to grant to our role.
   - AWSElasticBeanStalkWebTier
   - AWSElasticBeanStalkWorkerTier
   - AWSElasticBeanStalkMulticontainerDocker



Configure service access Info

Service access

IAM roles, assumed by Elastic Beanstalk as a service role, and EC2 instance profiles allow Elastic Beanstalk to create and manage your environment. Both the IAM role and instance profile must be attached to IAM managed policies that contain the required permissions. Learn more

Service role

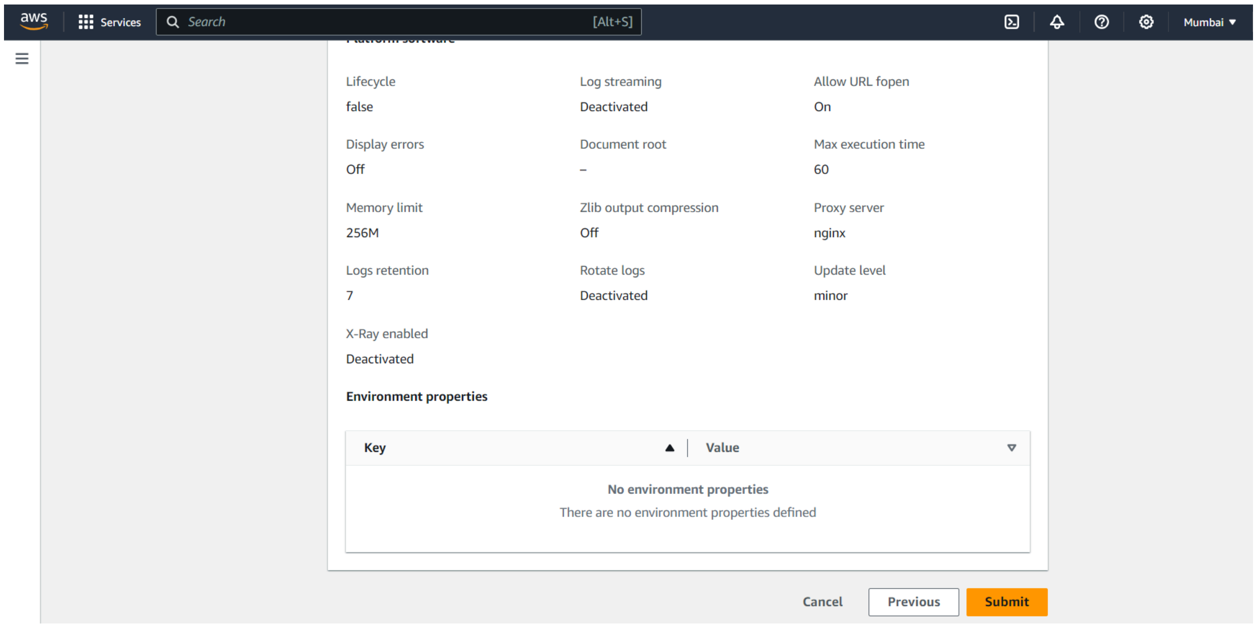
○ Create and use new service role
● Use an existing service role

Existing service roles
Choose an existing IAM role for Elastic Beanstalk to assume as a service role. The existing IAM role must have the required IAM managed policies.
role1

EC2 key pair
Select an EC2 key pair to securely log in to your EC2 instances. Learn more
Choose a key pair

EC2 instance profile
Choose an IAM instance profile with managed policies that allow your EC2 instances to perform required operations.
role1

4. Click submit to create our Elastic beanstalk environment.



Lifecycle	Log streaming	Allow URL fopen
false	Deactivated	On
Display errors	Document root	Max execution time
Off	–	60
Memory limit	Zlib output compression	Proxy server
256M	Off	nginx
Logs retention	Rotate logs	Update level
7	Deactivated	minor
X-Ray enabled		
Deactivated		

Environment properties

Key	Value

No environment properties
There are no environment properties defined

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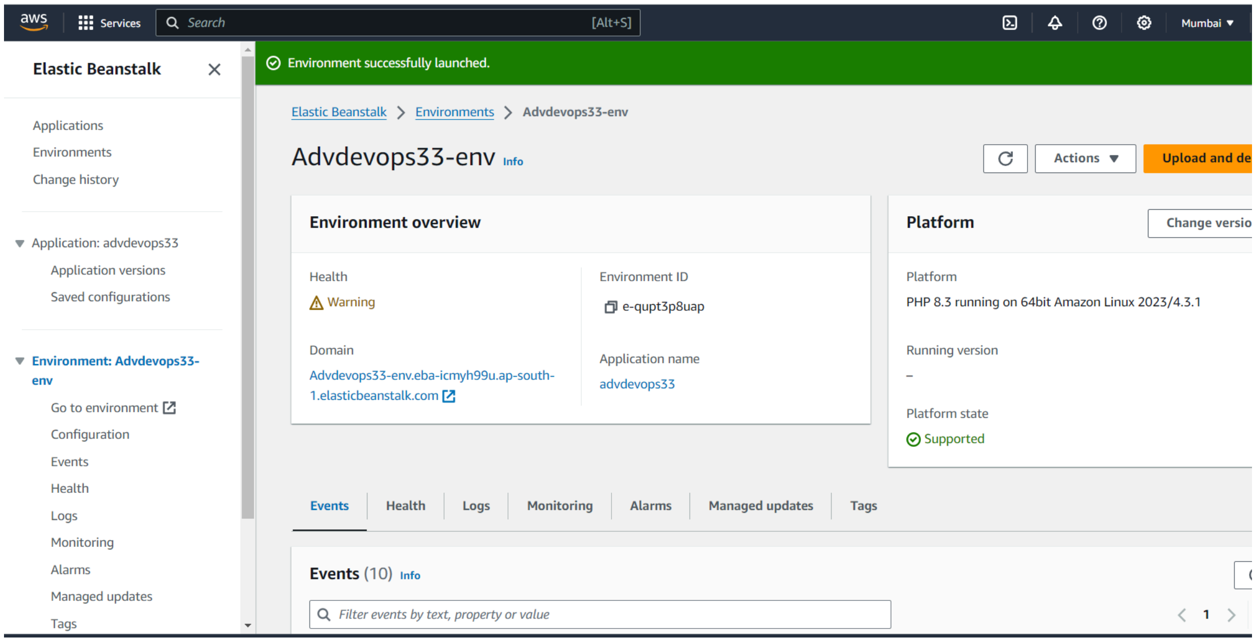
5. When the creation is successful, we will see a message like this.



Environment successfully launched.

Elastic Beanstalk > Environments > Advdevops33-env

Advdevops33-env Info

Environment overview

Health
Warning

Environment ID
e-qupt3p8uap

Domain
Advdevops33-env.eba-icmyh99u.ap-south-1.elasticbeanstalk.com

Application name
advdevops33

Platform

Platform
PHP 8.3 running on 64bit Amazon Linux 2023/4.3.1

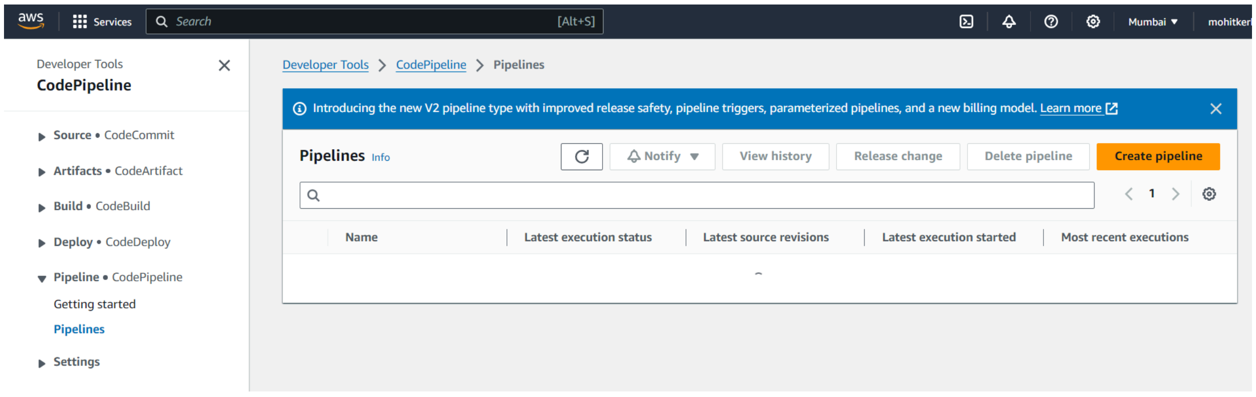
Running version
–

Platform state
Supported

Events (10) Info

Filter events by text, property or value

Now, We need to create a pipeline
6.To create a pipeline go to services →pipeline→create pipeline



Developer Tools > CodePipeline > Pipelines

Introducing the new V2 pipeline type with improved release safety, pipeline triggers, parameterized pipelines, and a new billing model. Learn more

Pipelines Info

Name	Latest execution status	Latest source revisions	Latest execution started	Most recent executions
		–		

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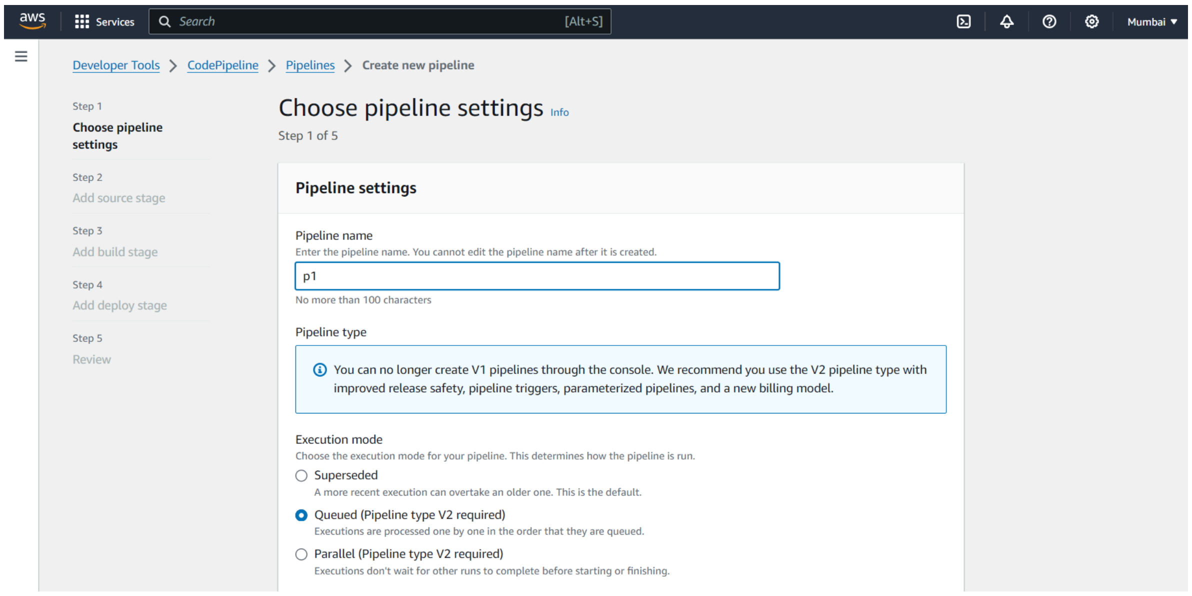
7. Give name to the pipline



Choose pipeline settings Info

Step 1 of 5

Pipeline settings

Pipeline name

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

p1

No more than 100 characters

Pipeline type

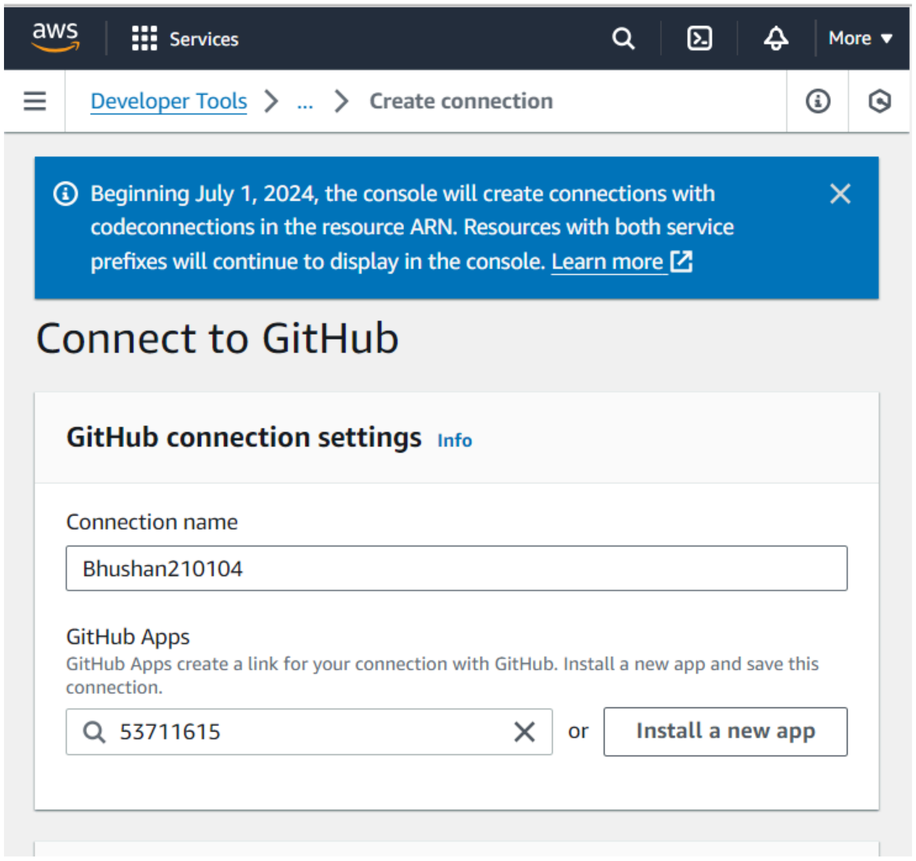
You can no longer create V1 pipelines through the console. We recommend you use the V2 pipeline type with improved release safety, pipeline triggers, parameterized pipelines, and a new billing model.

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.

8. Connect it to git hub



Beginning July 1, 2024, the console will create connections with codeconnections in the resource ARN. Resources with both service prefixes will continue to display in the console. Learn more

Connect to GitHub

GitHub connection settings Info

Connection name

Bhushan210104

GitHub Apps

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

53711615 or Install a new app

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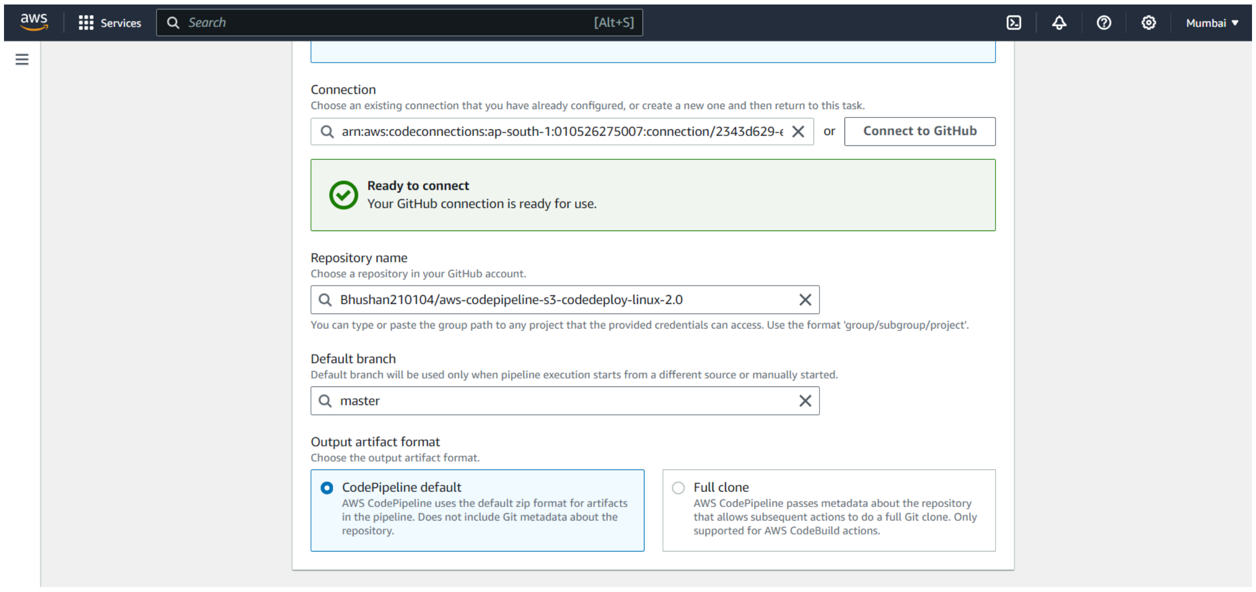
9. After connecting it to github select the repository and configure other settings



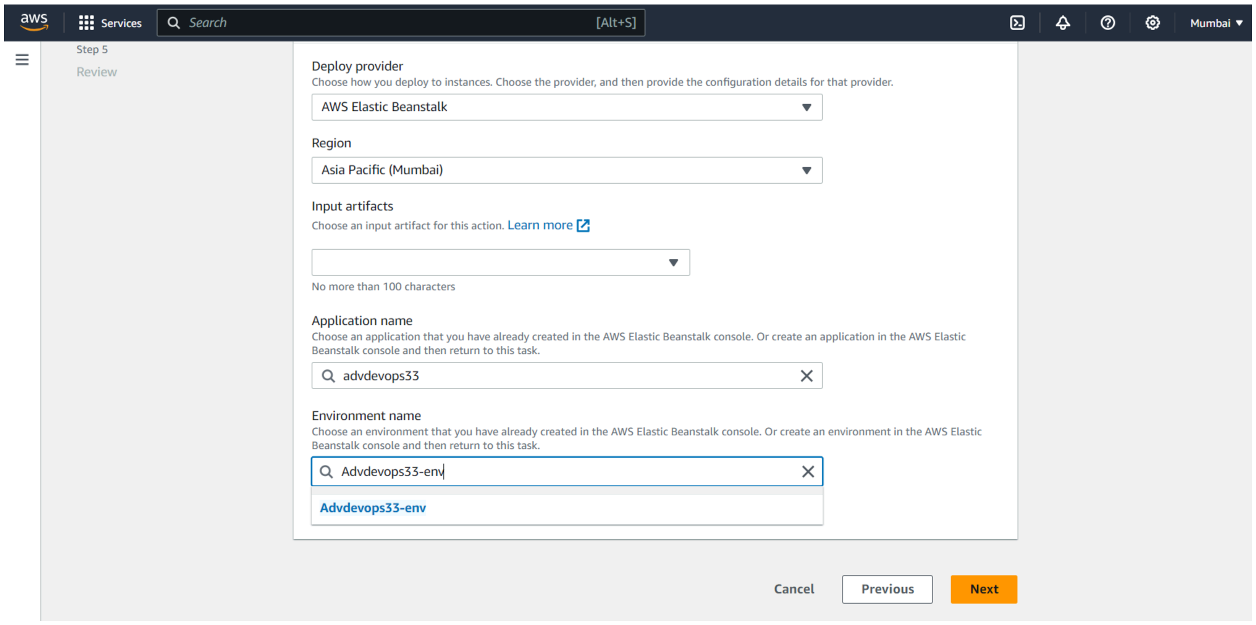
Connection
Choose an existing connection that you have already configured, or create a new one and then return to this task.
arn:aws:codeconnections:ap-south-1:010526275007:connection/2343d629-ε or Connect to GitHub

Ready to connect
Your GitHub connection is ready for use.

Repository name
Choose a repository in your GitHub account.
Bhushan210104/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.
master

Output artifact format
Choose the output artifact format.
[✓ CodePipeline default] AWS CodePipeline uses the default zip format for artifacts in the pipeline. Does not include Git metadata about the repository.
Full clone — AWS CodePipeline passes metadata about the repository that allows subsequent actions to do a full Git clone. Only supported for AWS CodeBuild actions.



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)

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.
advdevops33

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.
Advdevops33-env
Advdevops33-env

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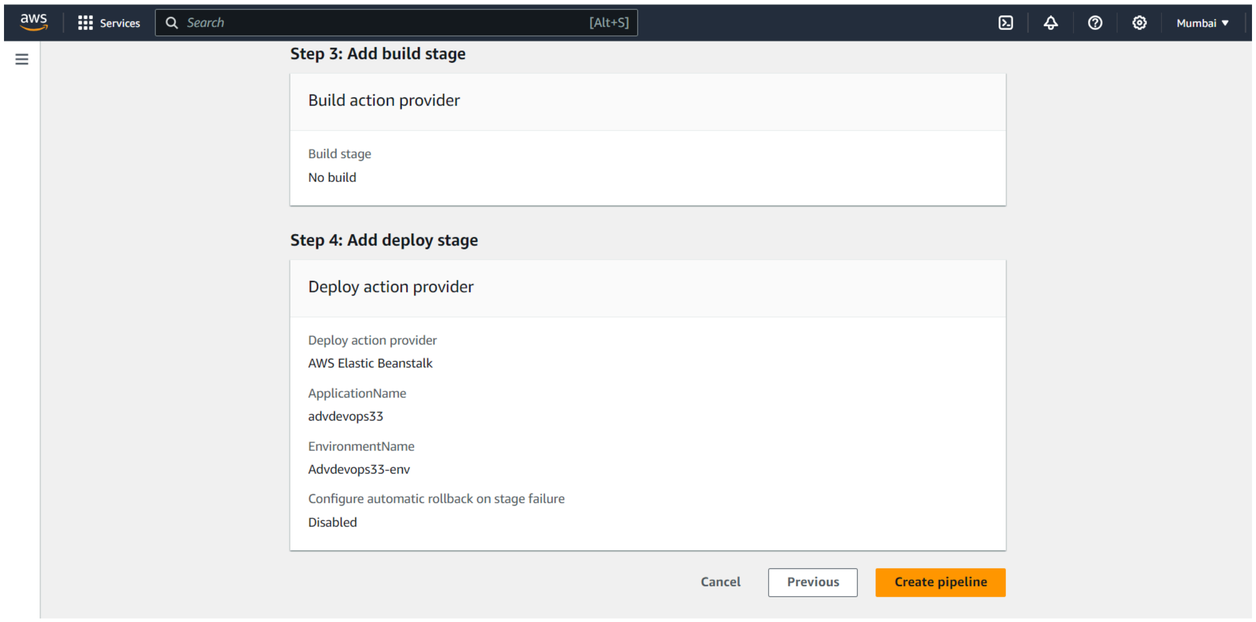
10.Click on create pipline



Step 3: Add build stage

Build action provider

Build stage
No build

Step 4: Add deploy stage

Deploy action provider

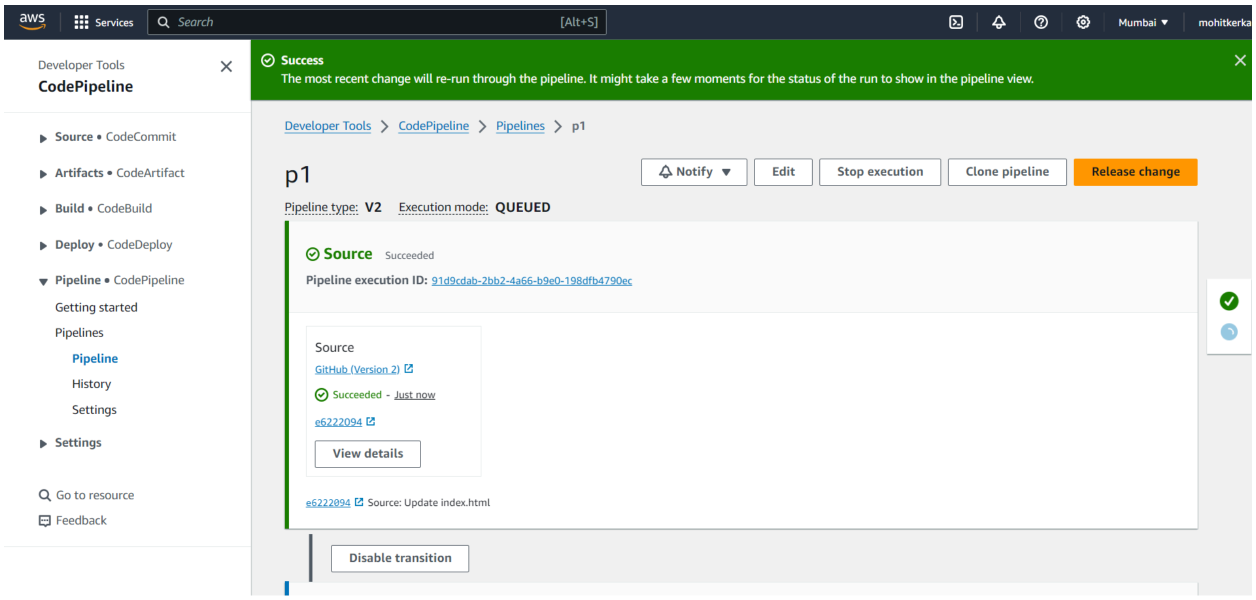
Deploy action provider
AWS Elastic Beanstalk

ApplicationName
advdevops33

EnvironmentName
Advdevops33-env

Configure automatic rollback on stage failure
Disabled

11.The pipeline will be created in few minutes



Success
The most recent change will re-run through the pipeline. It might take a few moments for the status of the run to show in the pipeline view.

p1

Pipeline type: V2 Execution mode: QUEUED

Source Succeeded
Pipeline execution ID: 91d9cdab-2bb2-4a66-b9e0-198dfb4790ec

Source
GitHub (Version 2)
Succeeded - Just now
e6222094

e6222094 Source: Update index.html

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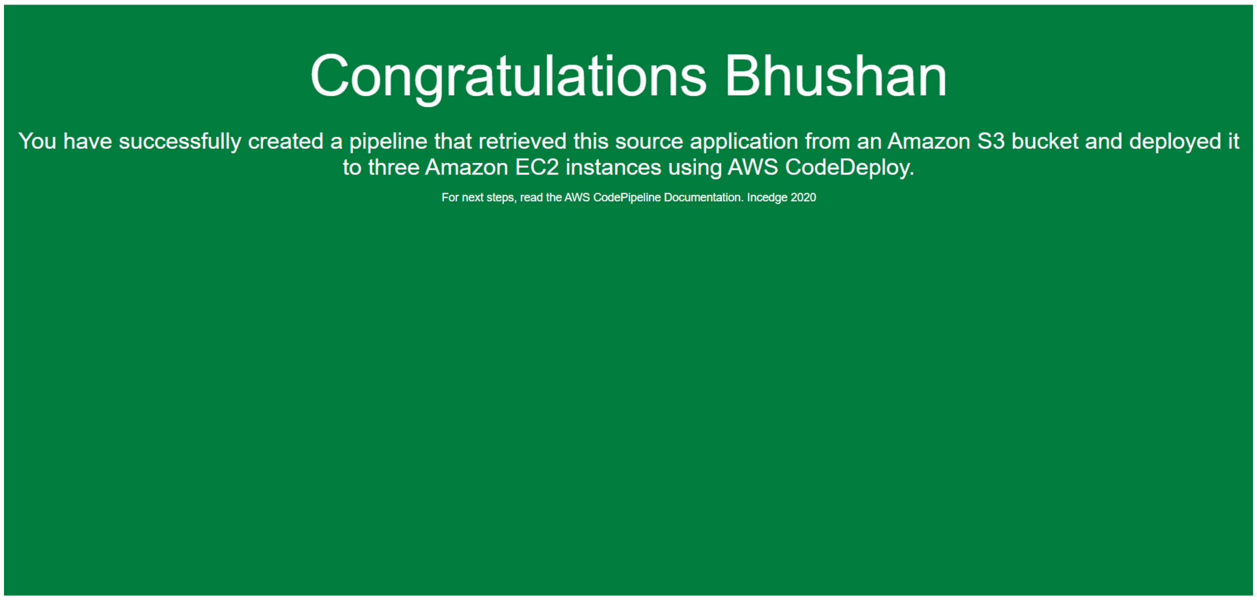
12.The output will show after successful deployment.



Congratulations Bhushan

You have successfully created a pipeline that retrieved this source application from an Amazon S3 bucket and deployed it to three Amazon EC2 instances using AWS CodeDeploy.

For next steps, read the AWS CodePipeline Documentation. Incedge 2020