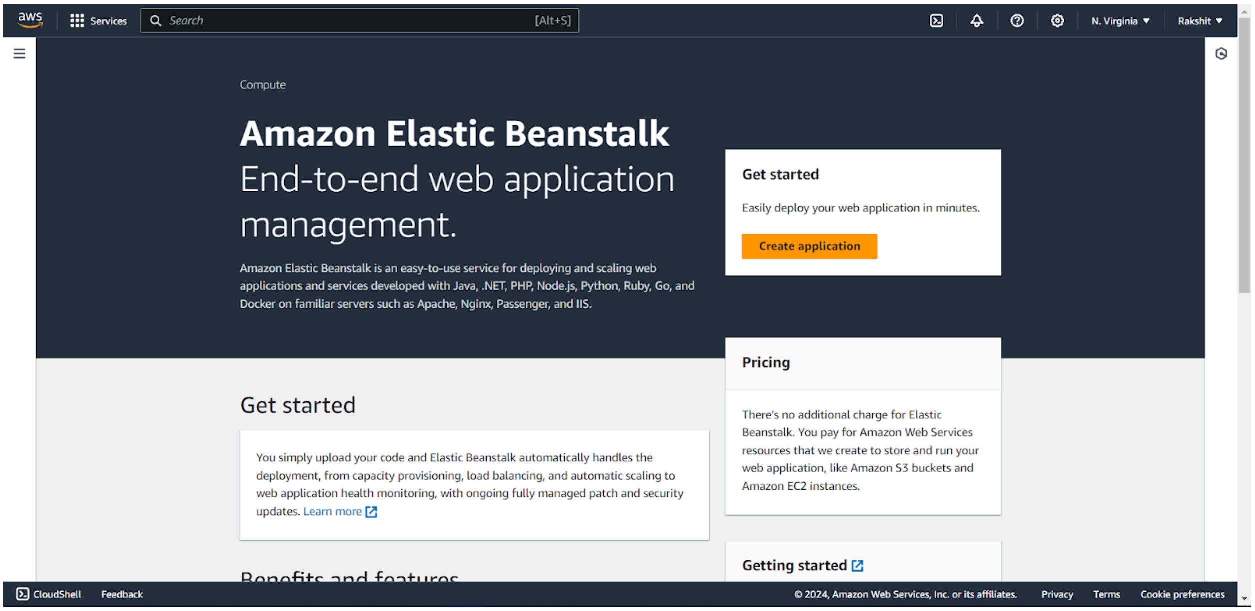
Aim: To Build Your Application using AWS CodeBuild and Deploy on S3 / SEBS using AWS CodePipeline, deploy Sample Application on EC2 instance using AWS CodeDeploy.

1. Login to your AWS account and search for Elastic Beanstalk.



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

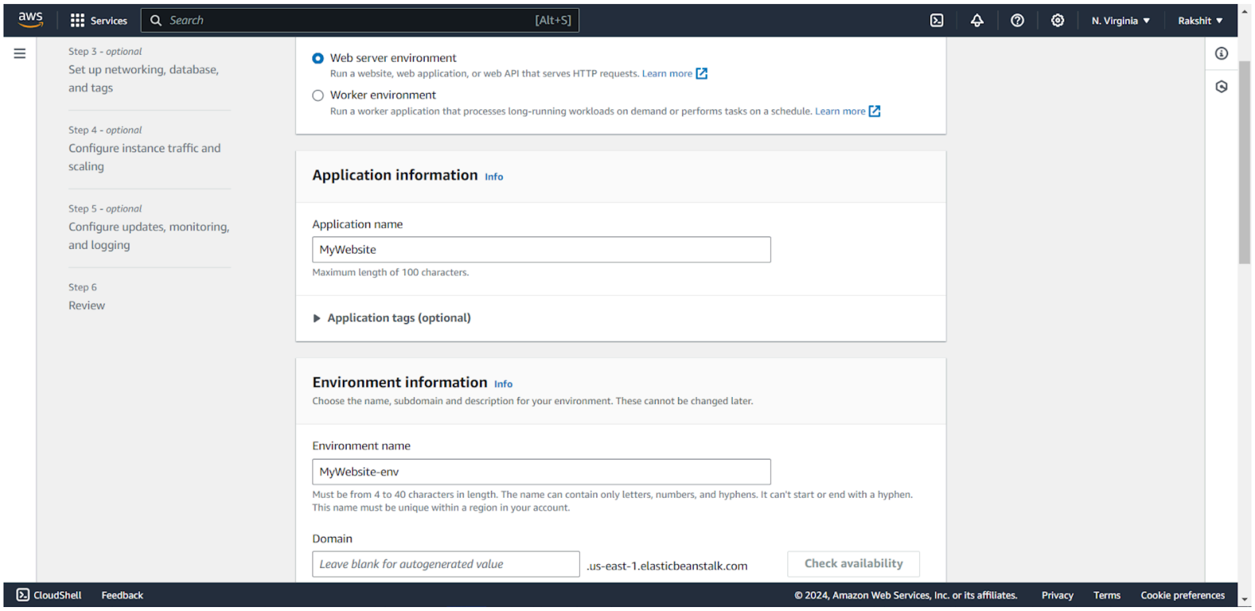
Pricing
There's no additional charge for Elastic Beanstalk. You pay for Amazon Web Services resources that we create to store and run your web application, like Amazon S3 buckets and Amazon EC2 instances.

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

Benefits and features

2. Click on create application. Enter your application names and other basic details.



aws
Services
Search [Alt+S]
N. Virginia ▼
Rakshit ▼
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

● 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
MyWebsite
Maximum length of 100 characters.

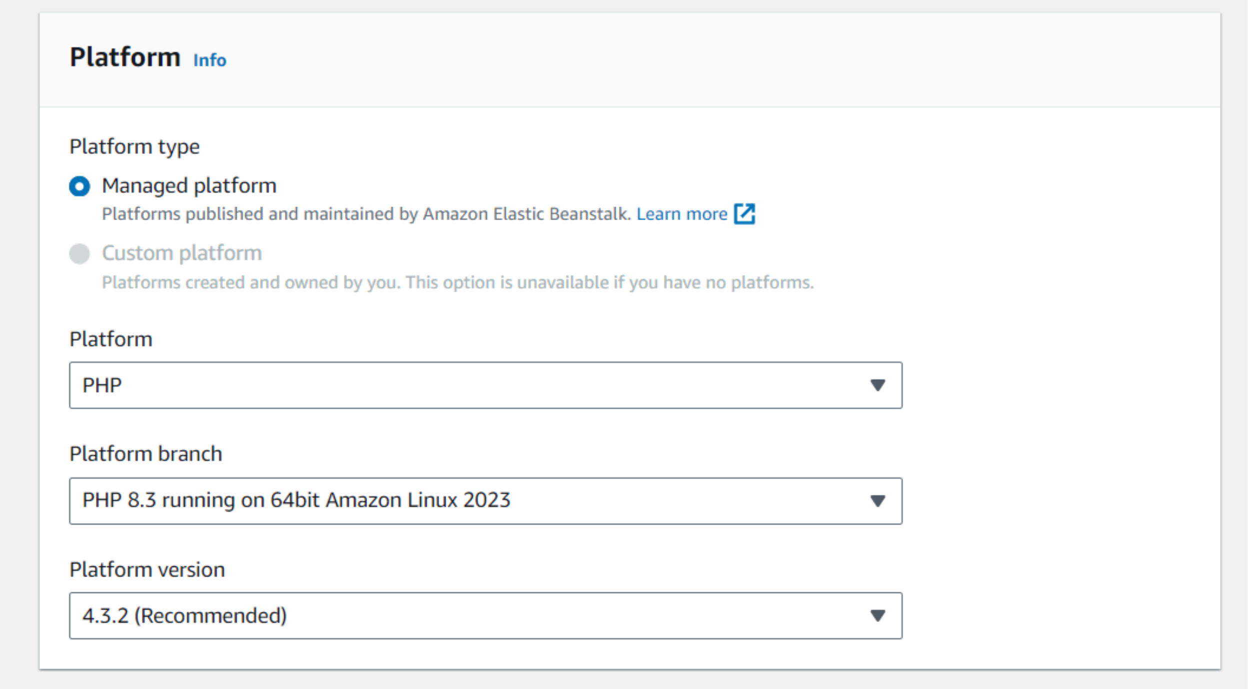
▶ Application tags (optional)

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

Environment name
MyWebsite-env
Must be from 4 to 40 characters in length. The name can contain only letters, numbers, and hyphens. It can't start or end with a hyphen. This name must be unique within a region in your account.

Domain
Leave blank for autogenerated value .us-east-1.elasticbeanstalk.com
Check availability

3. In the platform select PHP among other options. Platform branch and platform version will be entered automatically.



Platform Info

Platform type

● Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. Learn more

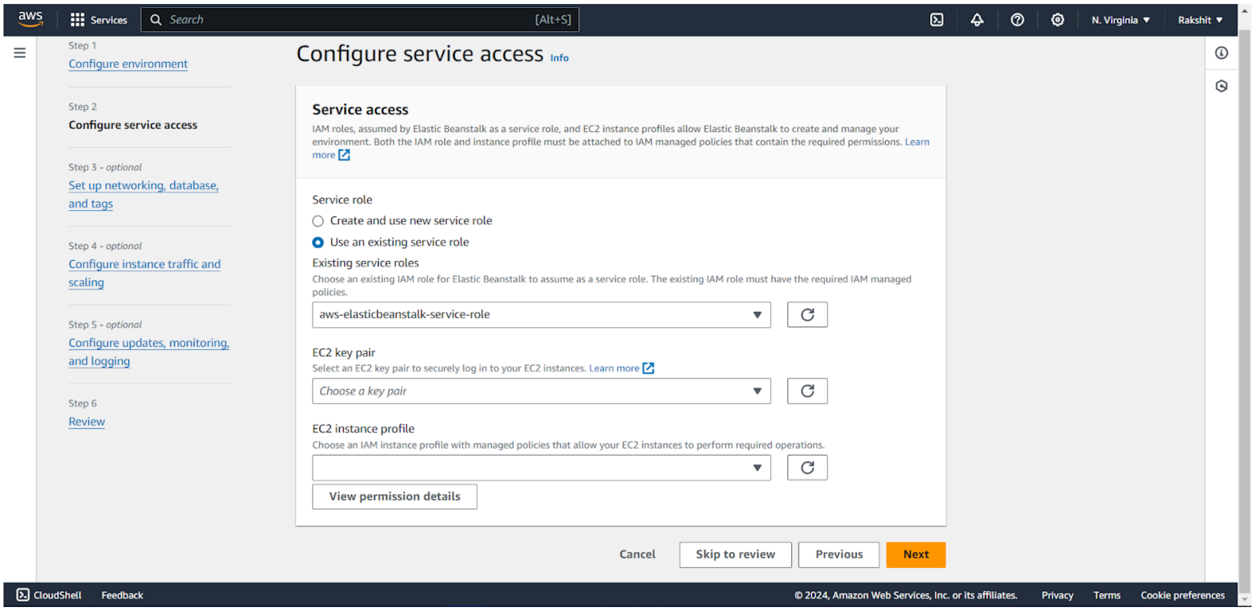
○ Custom platform
Platforms created and owned by you. This option is unavailable if you have no platforms.

Platform: PHP

Platform branch: PHP 8.3 running on 64bit Amazon Linux 2023

Platform version: 4.3.2 (Recommended)

4. Keep the other setting to default and click on next. In service access click on “Use an existing service role”.



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

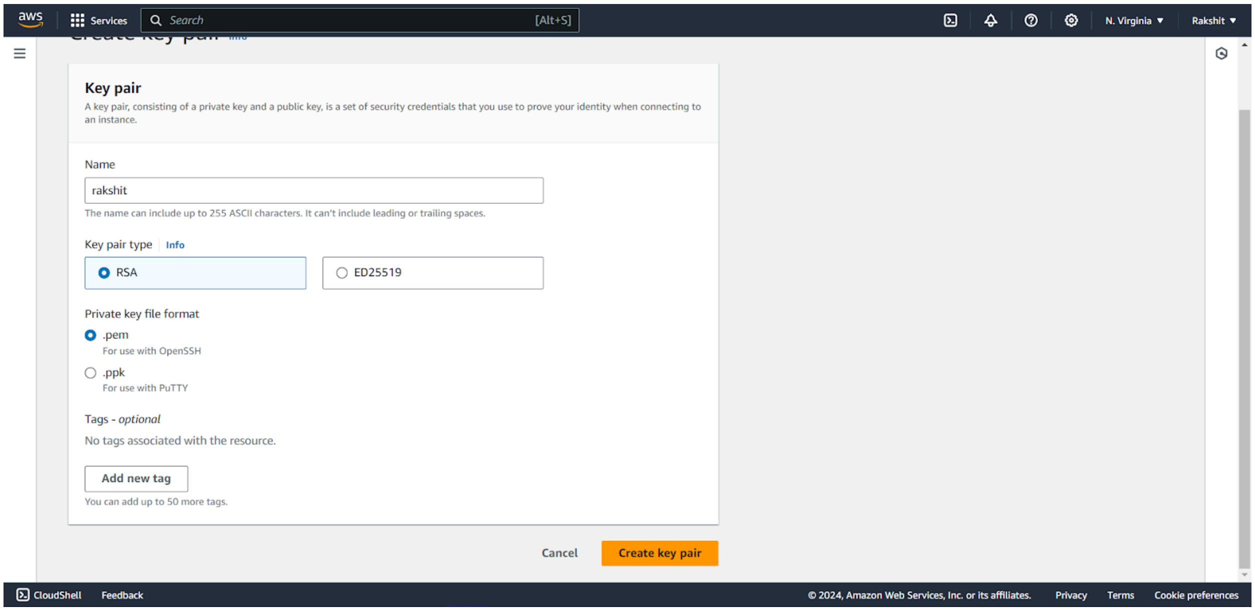
● Use an existing service role

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.
aws-elasticbeanstalk-service-role

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.

5. Go to EC2 service and click on Key pair to create a new key pair. Give the key pair a name and select the type as RSA. For private key file format select .pem.



Key pair

A key pair, consisting of a private key and a public key, is a set of security credentials that you use to prove your identity when connecting to an instance.

Name: rakshit

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type: ● RSA ○ ED25519

Private key file format

● .pem For use with OpenSSH

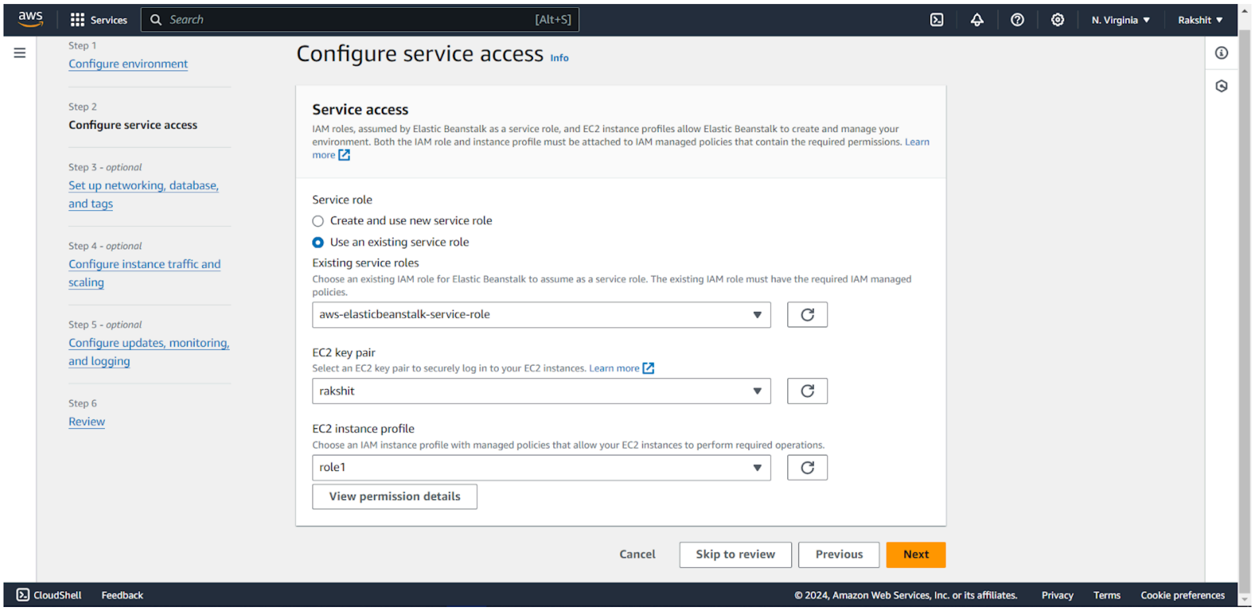
○ .ppk For use with PuTTY

Tags - *optional*

No tags associated with the resource.

You can add up to 50 more tags.

4. Come back to Elastic Beanstalk configuration. Select the newly created key pair from the dropdown menu. Also select the EC2 instance profile. Click on next.



Configure service access

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.

aws-elasticbeanstalk-service-role

EC2 key pair

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

rakshit

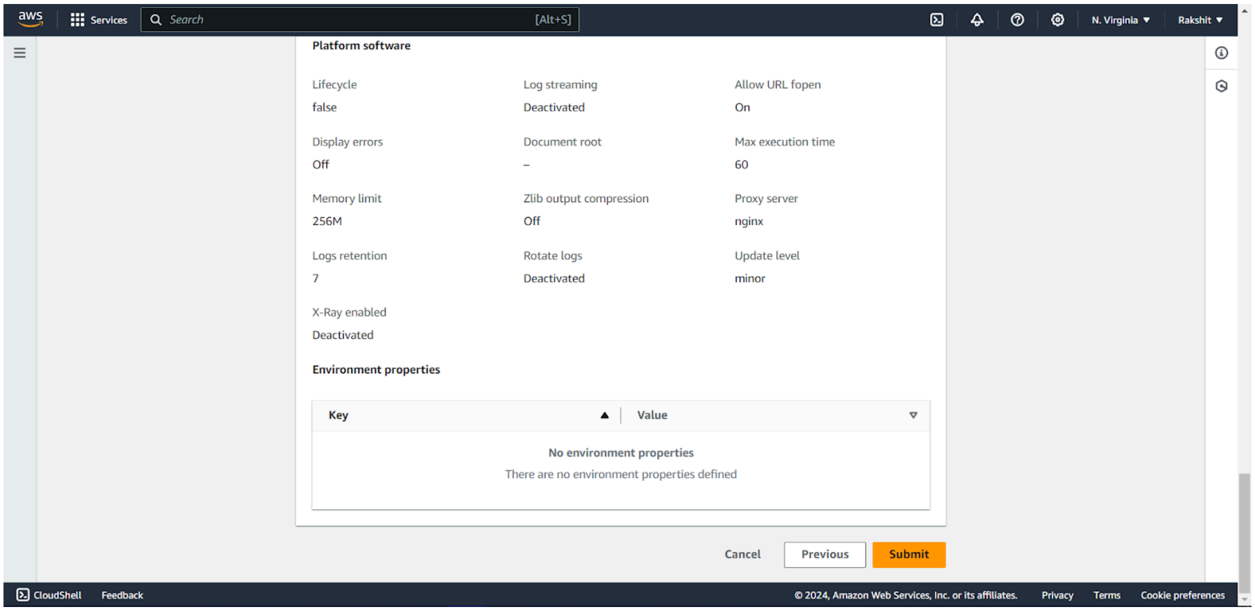
EC2 instance profile

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

role1

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
View permission details
Cancel
Skip to review
Previous
Next

5. Skip to review. Review all the configurations and click on submit.Wait for the “Environment successfully launched” message.



Platform software

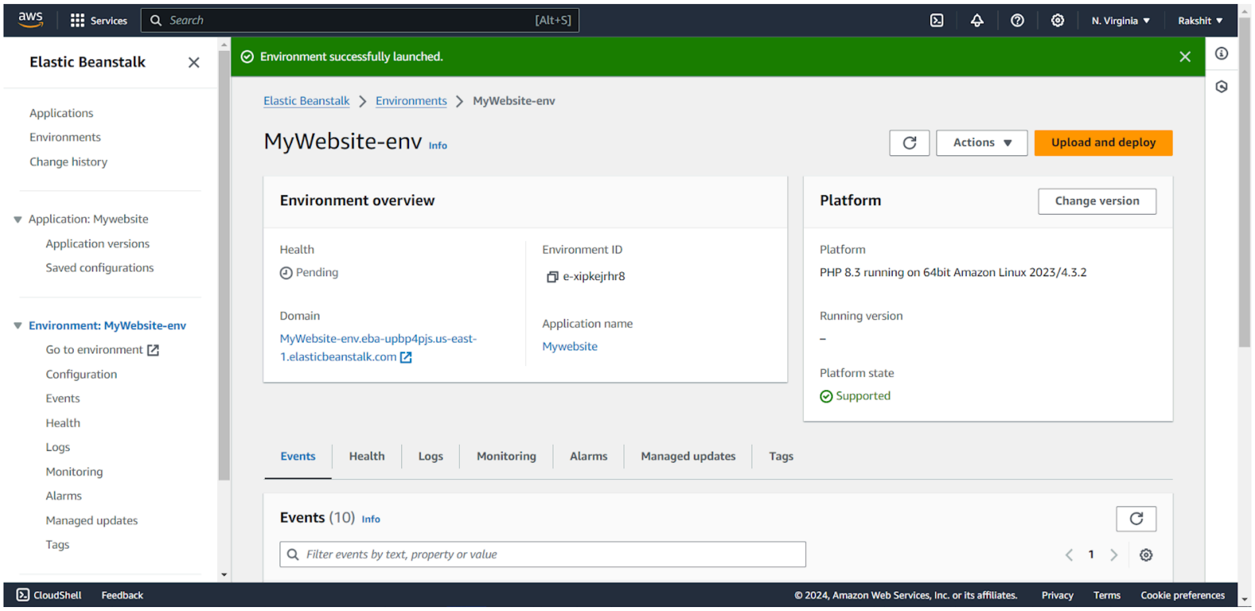
Lifecycle false	Log streaming Deactivated	Allow URL fopen On
Display errors Off	Document root –	Max execution time 60
Memory limit 256M	Zlib output compression Off	Proxy server nginx
Logs retention 7	Rotate logs Deactivated	Update level minor
X-Ray enabled Deactivated		

Environment properties

Key	Value

No environment properties

There are no environment properties defined



Environment successfully launched.

Elastic Beanstalk > Environments > MyWebsite-env

MyWebsite-env Info

Environment overview

Health: Pending

Environment ID: e-xipkejrhr8

Domain: MyWebsite-env.eba-upbp4pjs.us-east-1.elasticbeanstalk.com

Application name: Mywebsite

Platform

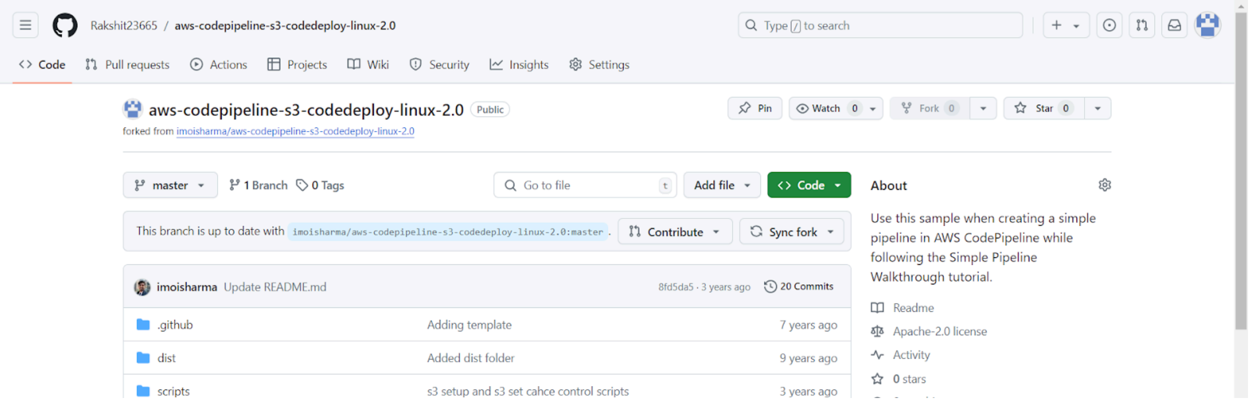
Platform: PHP 8.3 running on 64bit Amazon Linux 2023/4.3.2

Running version: –

Platform state: Supported

Events (10) Info

6. Create a github repository with the source code to be deployed. Here I have forked an existing repository.



aws-codepipeline-s3-codedeploy-linux-2.0 Public

forked from imoisharma/aws-codepipeline-s3-codedeploy-linux-2.0

This branch is up to date with imoisharma/aws-codepipeline-s3-codedeploy-linux-2.0:master .

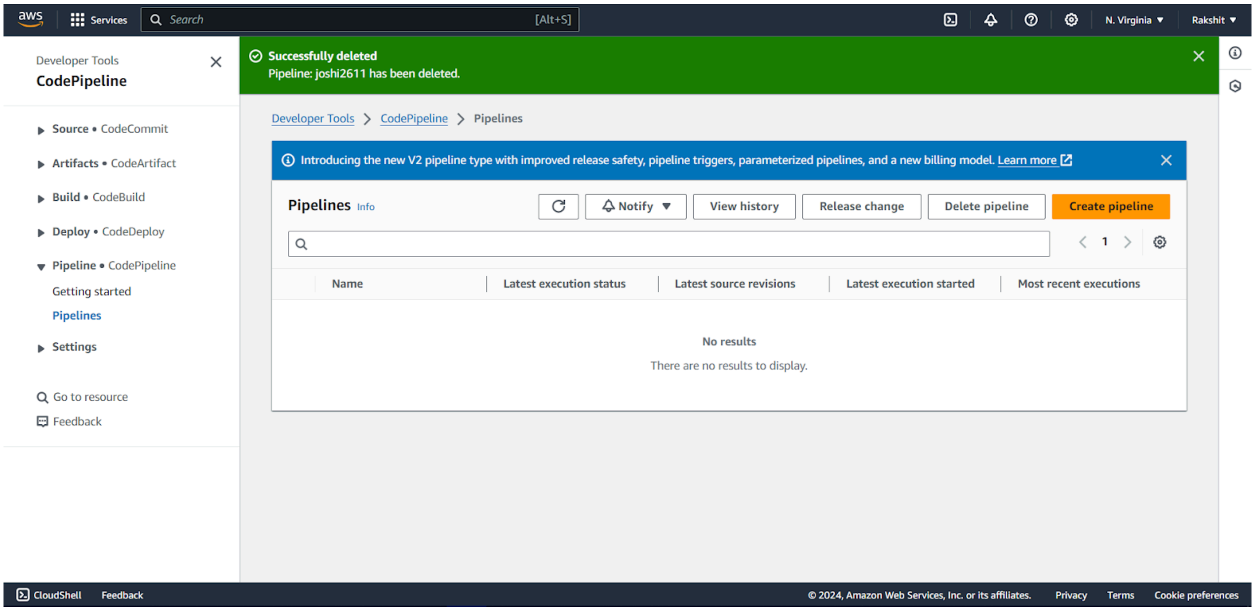
imoisharma Update README.md 8fd5da5 · 3 years ago

.github	Adding template	7 years ago
dist	Added dist folder	9 years ago
scripts	s3 setup and s3 set cahce control scripts	3 years ago

About

Use this sample when creating a simple pipeline in AWS CodePipeline while following the Simple Pipeline Walkthrough tutorial.

7. Go to CodePipeline service and click on create pipeline.



Successfully deleted
Pipeline: joshi2611 has been deleted.

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

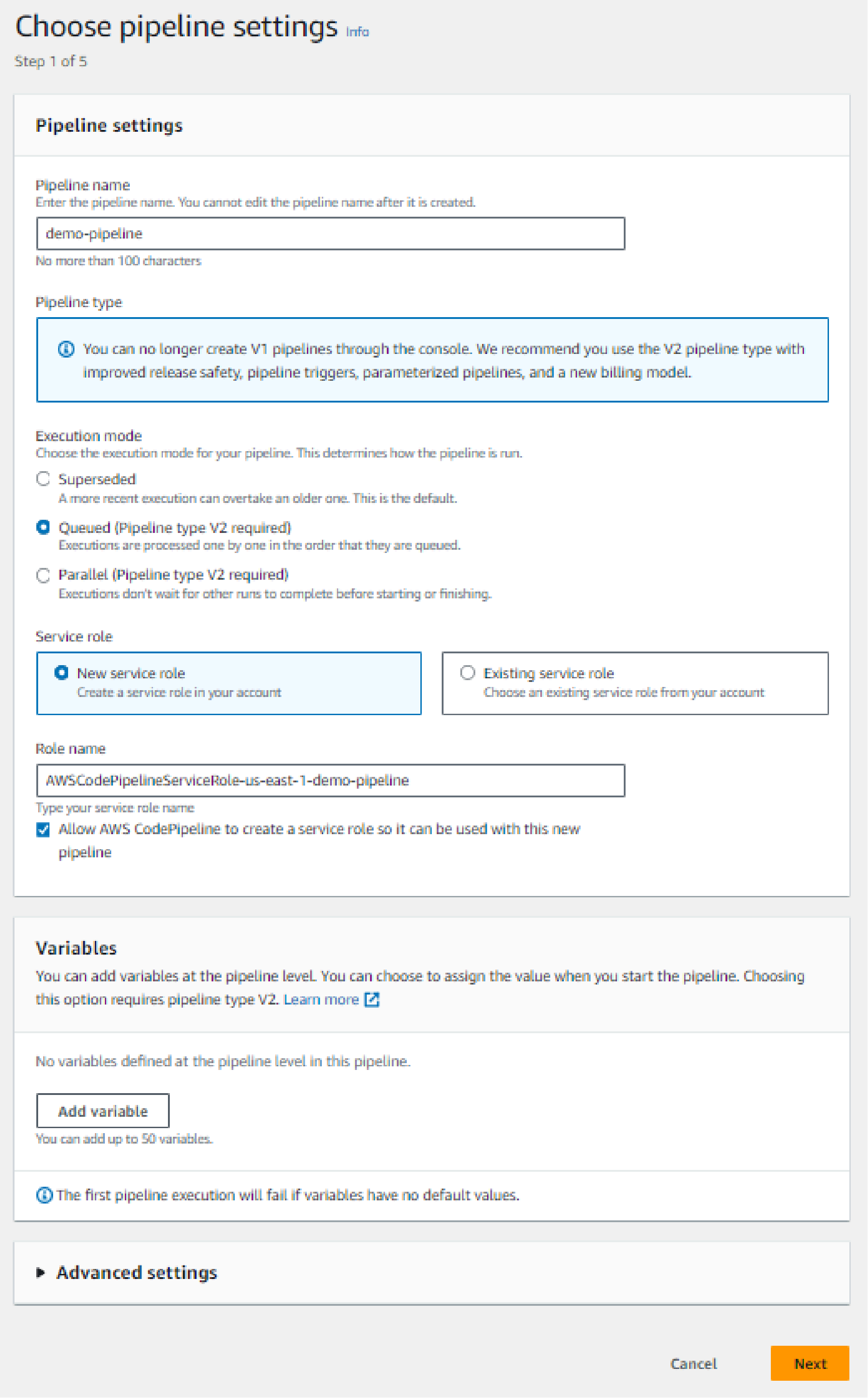
Pipelines

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

No results

There are no results to display.

8. Give the pipeline a name. Role name will be generated automatically based on pipeline name



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.
demo-pipeline
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

Role name
AWSCodePipelineServiceRole-us-east-1-demo-pipeline
Type your service role name

☑ Allow AWS CodePipeline to create a service role so it can be used with this new pipeline

Variables

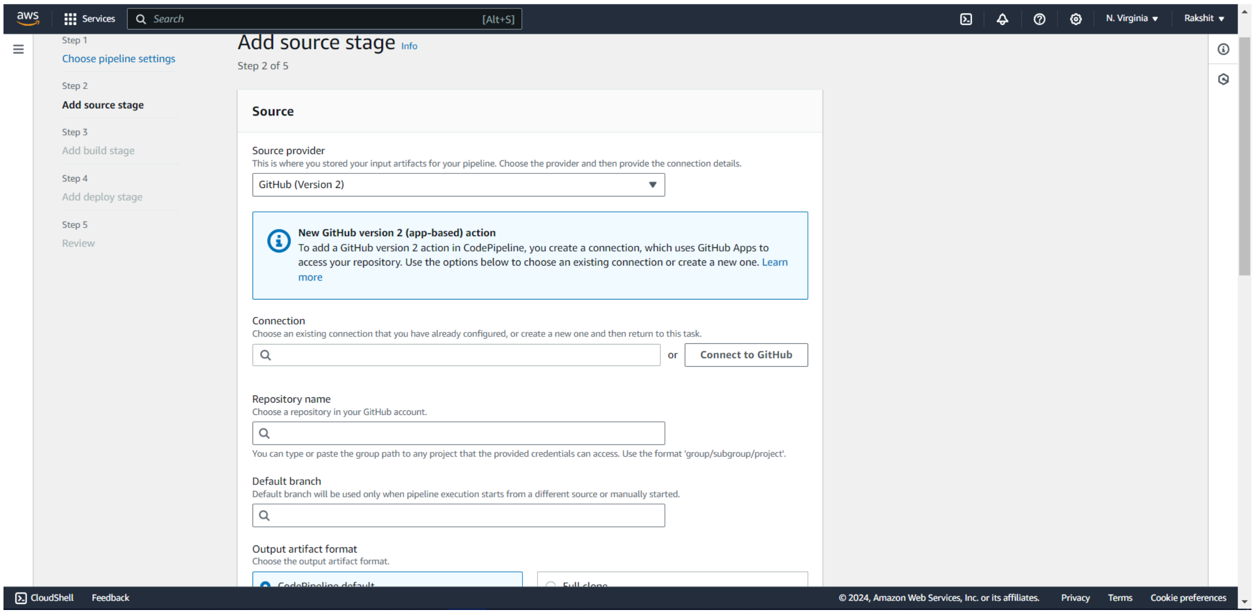
You can add variables at the pipeline level. You can choose to assign the value when you start the pipeline. Choosing this option requires pipeline type V2. Learn more

No variables defined at the pipeline level in this pipeline.

You can add up to 50 variables.

The first pipeline execution will fail if variables have no default values.

9. Select Github(Version 2) as a source provider. Click on connect to github to create a new connection if you don't have one.



Add source stage Info

Step 2 of 5

Source

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.

or Connect to GitHub

Repository name

Choose a repository in your GitHub account.

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

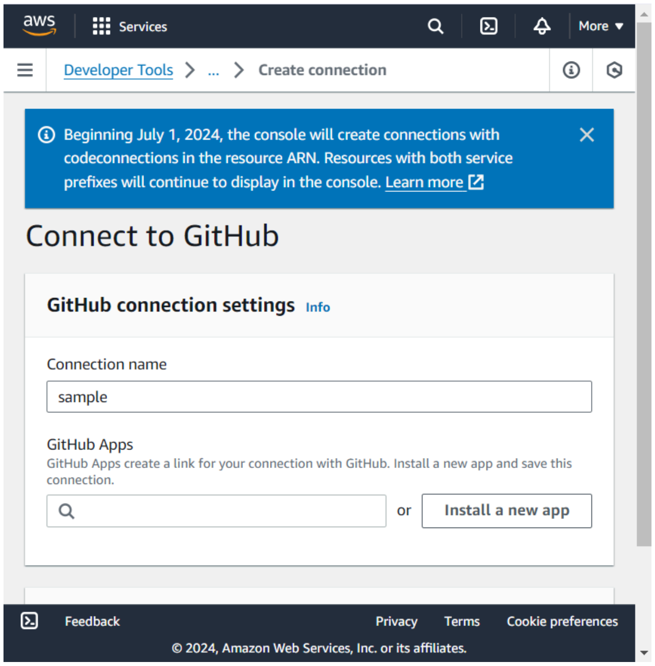
Default branch will be used only when pipeline execution starts from a different source or manually started.

Output artifact format

Choose the output artifact format.

● CodePipeline default ○ Full clone

10. Give the connection a name and click on Install a new app. After this click on install. Once installation is complete click on connect to establish a connection.



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

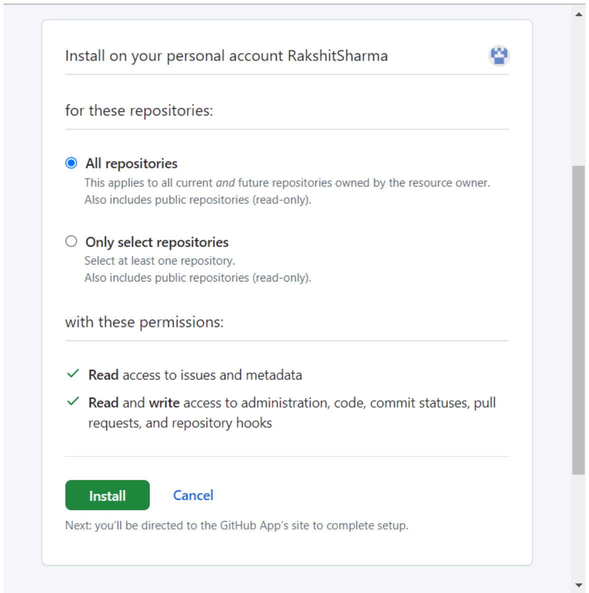
Connect to GitHub

GitHub connection settings

Connection name: sample

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

© 2024, Amazon Web Services, Inc. or its affiliates.



Install on your personal account RakshitSharma

for these repositories:

● All repositories
This applies to all current *and* future repositories owned by the resource owner.
Also includes public repositories (read-only).

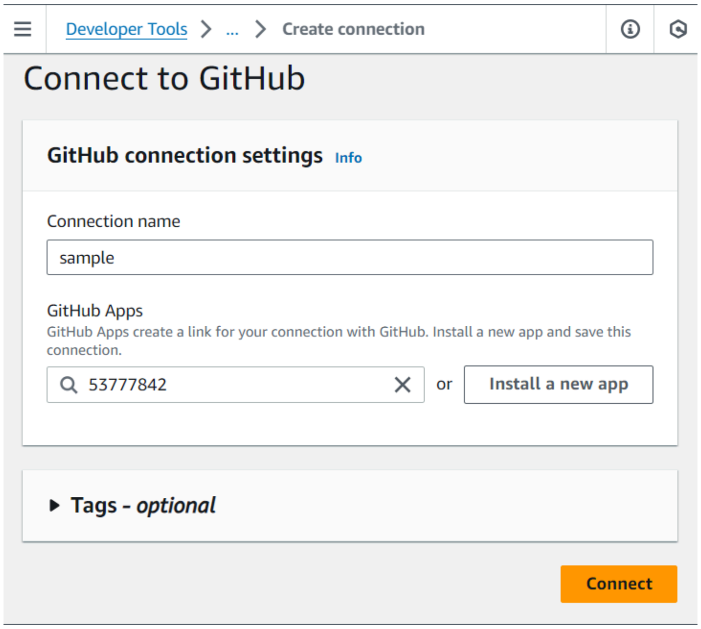
○ Only select repositories
Select at least one repository.
Also includes public repositories (read-only).

with these permissions:

✓ Read access to issues and metadata

✓ Read and write access to administration, code, commit statuses, pull requests, and repository hooks

Next: you'll be directed to the GitHub App's site to complete setup.



Connect to GitHub

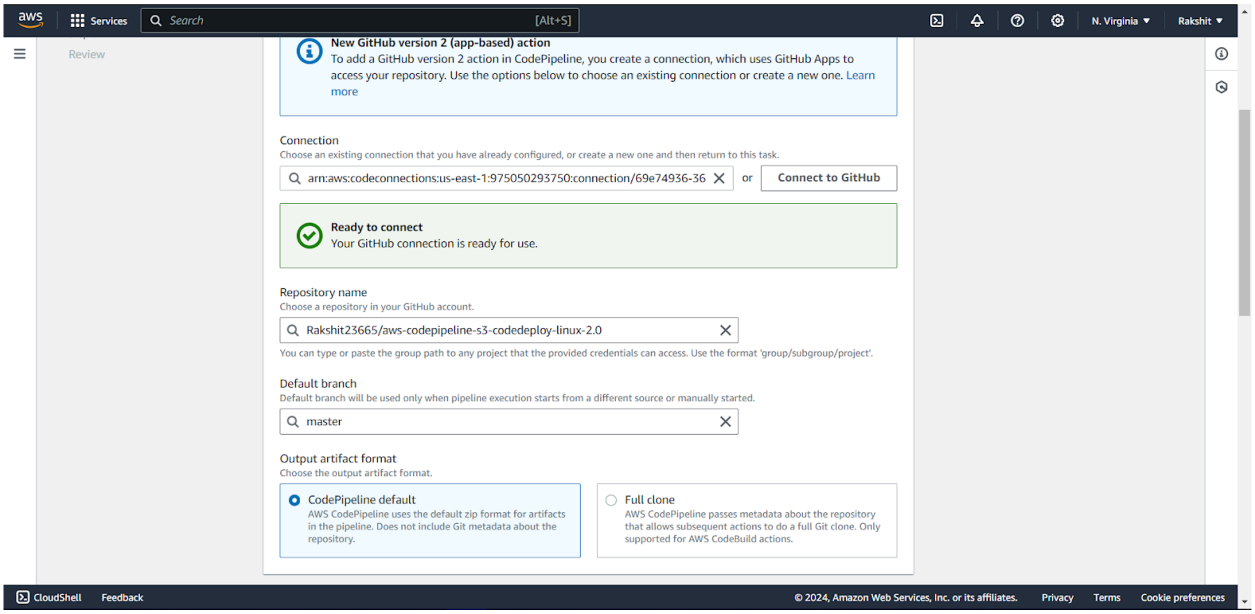
GitHub connection settings

Connection name: sample

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

53777842

11. Once the connection is established, you will get a success message. Select the repository containing the source code. Also select the branch(usually master). Be sure to select the no filter option in Trigger section. Click on next.



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-1:975050293750:connection/69e74936-36 or Connect to GitHub

Ready to connect
Your GitHub connection is ready for use.

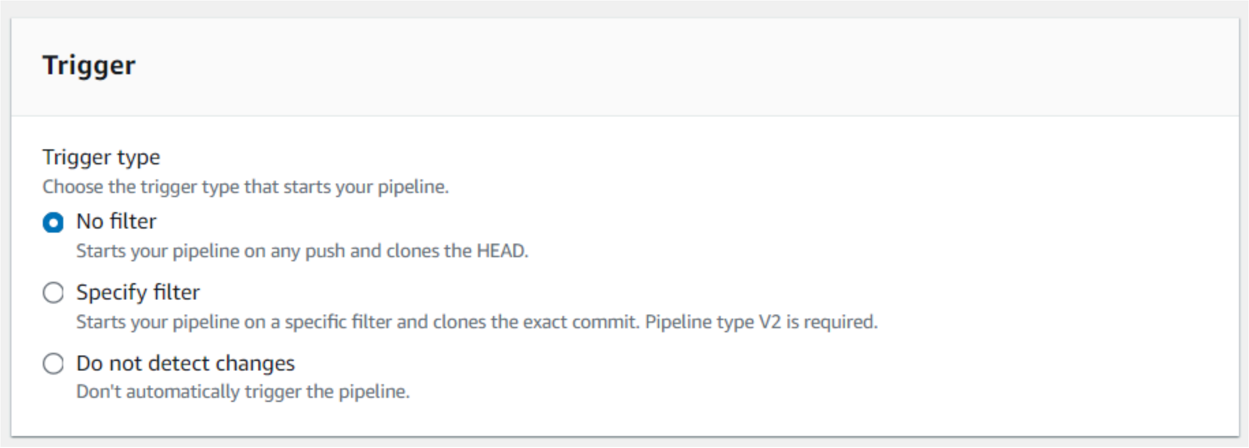
Repository name
Choose a repository in your GitHub account.
Rakshit23665/aws-codepipeline-s3-codedeploy-linux-2.0
You can type or paste the group path to any project that the provided credentials can access. Use the format 'group/subgroup/project'.

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.



Trigger

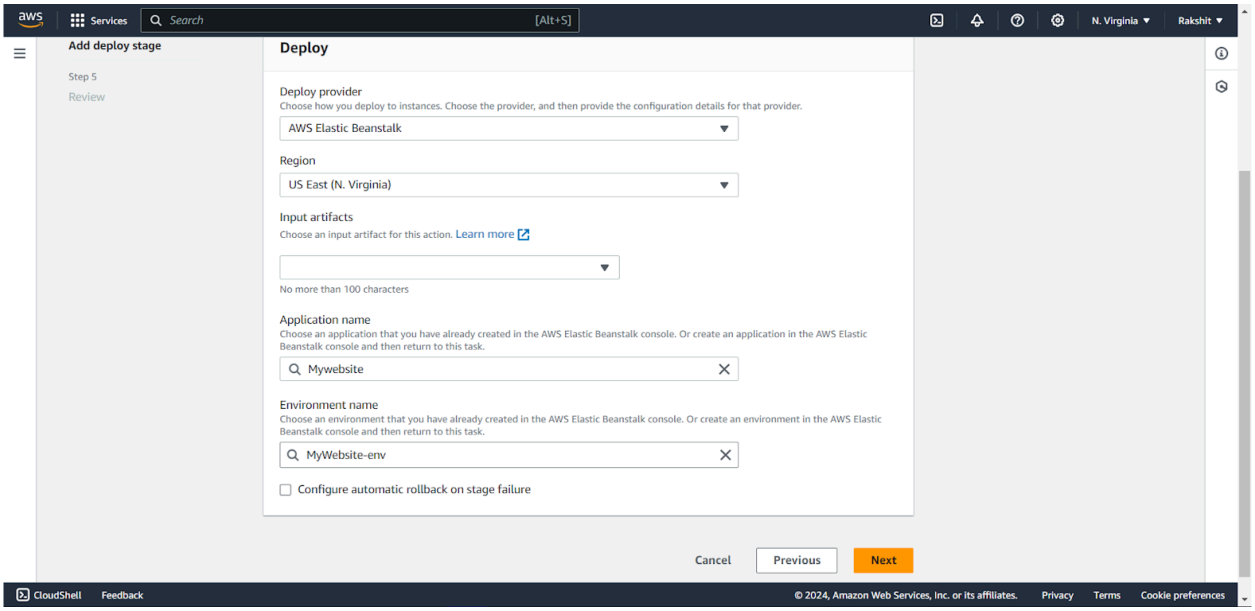
Trigger type
Choose the trigger type that starts your pipeline.

● No filter
Starts your pipeline on any push and clones the HEAD.

○ Specify filter
Starts your pipeline on a specific filter and clones the exact commit. Pipeline type V2 is required.

○ Do not detect changes
Don't automatically trigger the pipeline.

12. Skip the build stage and directly go to deploy stage. Select Elastic Beanstalk as Deploy provider. Select the Elastic Beanstalk application name that we created earlier. Click on next once done.



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

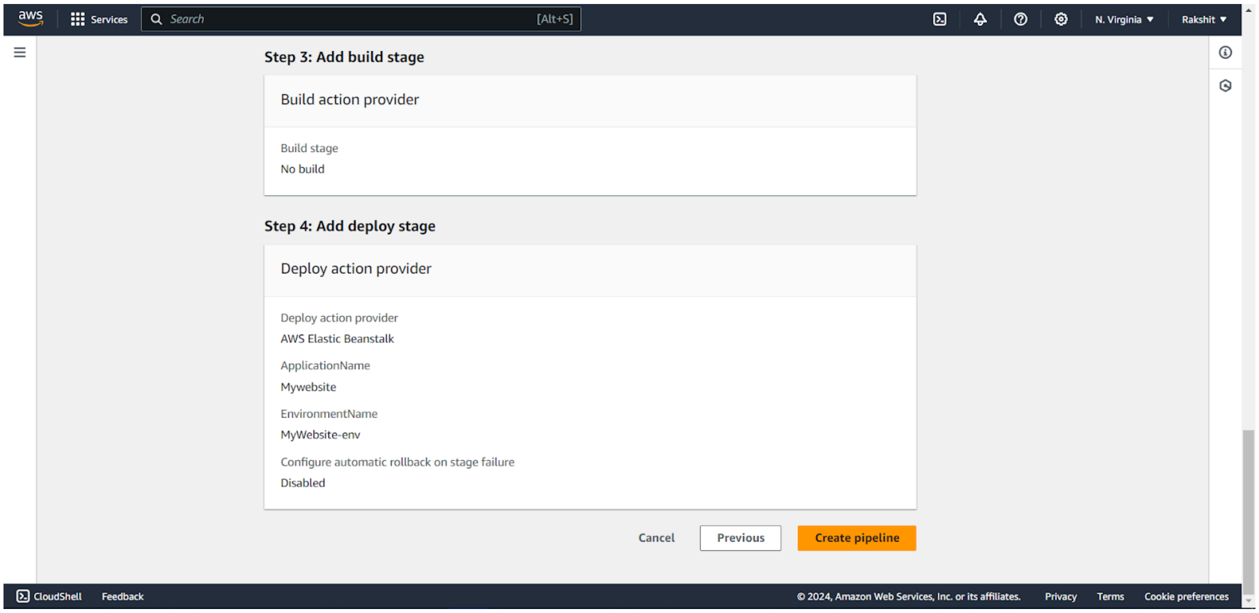
No more than 100 characters

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.
Mywebsite

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.
MyWebsite-env

□ Configure automatic rollback on stage failure

13. Review the configurations made and click on create pipeline.



Step 3: Add build stage

Build action provider

Build stage
No build

Step 4: Add deploy stage

Deploy action provider

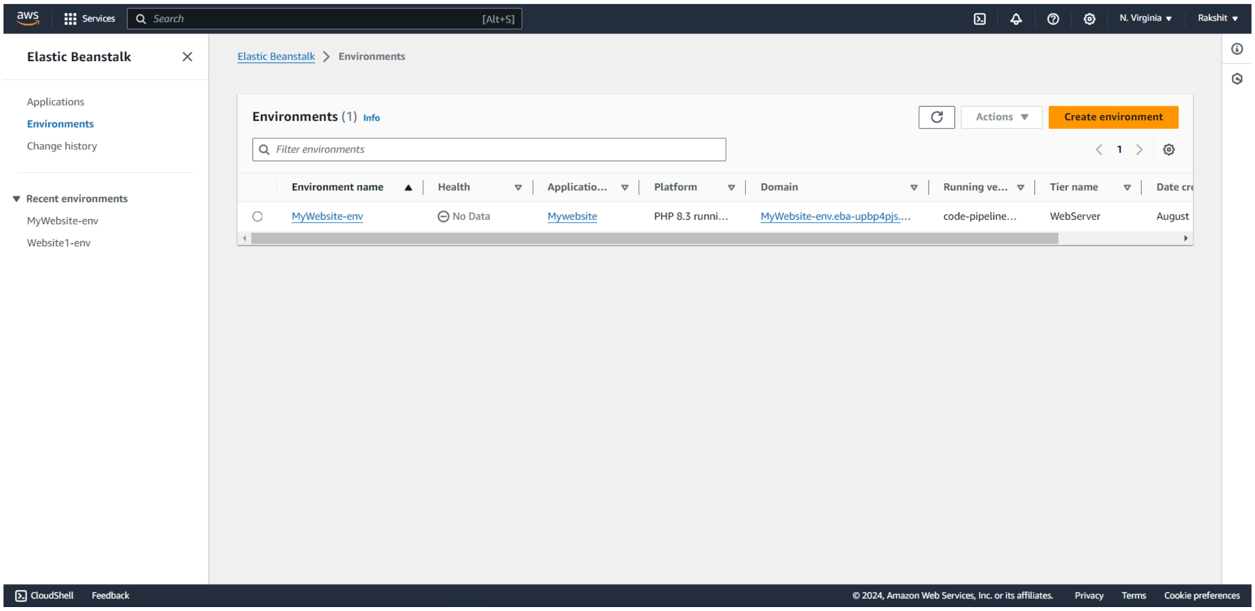
Deploy action provider
AWS Elastic Beanstalk

ApplicationName
Mywebsite

EnvironmentName
MyWebsite-env

Configure automatic rollback on stage failure
Disabled

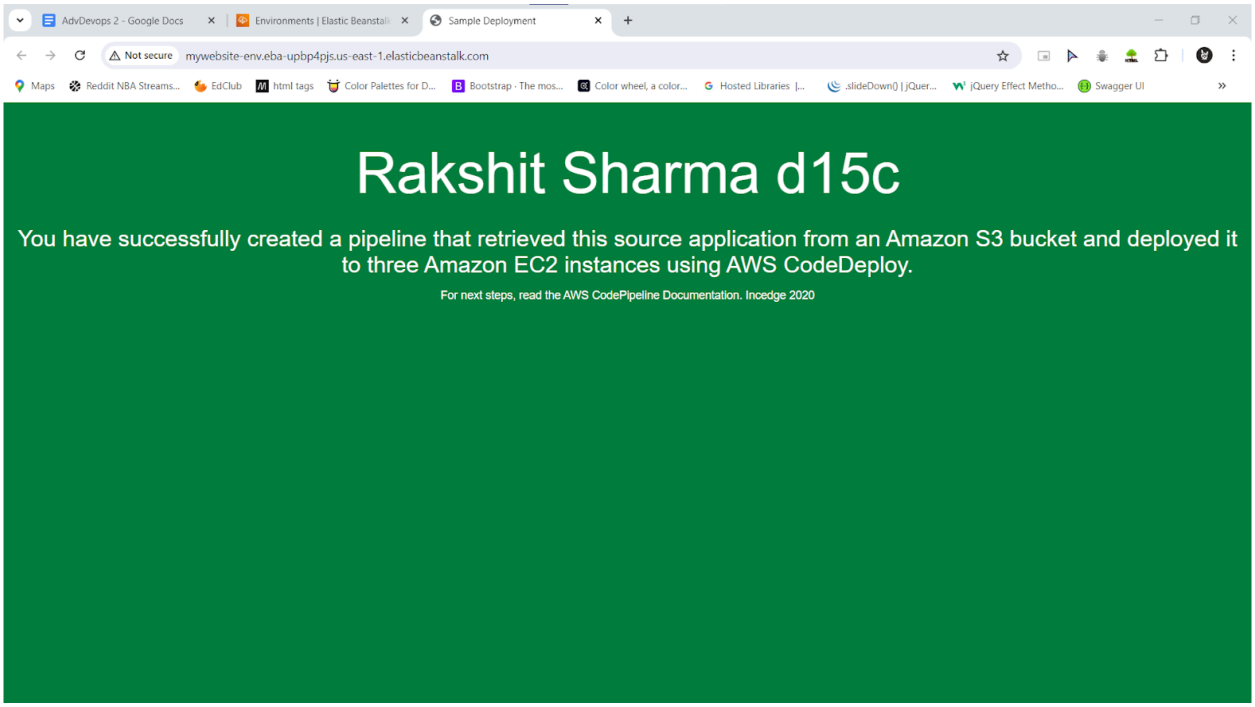
14. Once the pipeline is created you can go to the environments page(Elastic Beanstalk). The website is hosted on the link under domain column. Click on the link to go to the hosted website.



Environments (1) Info

Filter environments

	Environment name	Health	Applicatio...	Platform	Domain	Running ve...	Tier name	Date cr
○	MyWebsite-env	No Data	Mywebsite	PHP 8.3 runni...	MyWebsite-env.eba-upbp4pjs....	code-pipeline...	WebServer	August



mywebsite-env.eba-upbp4pjs.us-east-1.elasticbeanstalk.com

Rakshit Sharma d15c

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