

## Experiment 02

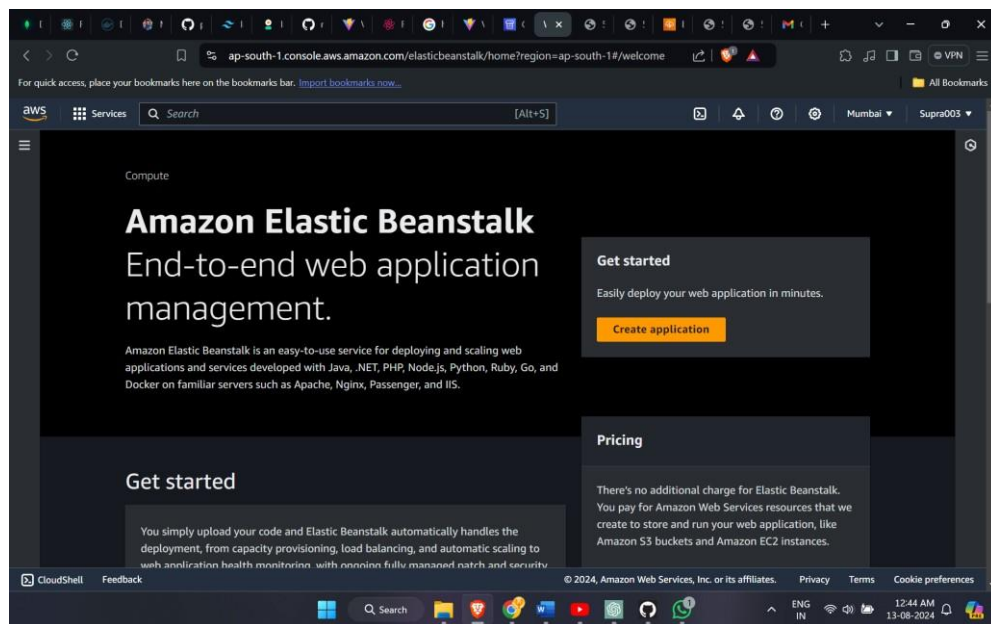
Name: Laksh Sodhai

Roll no: 59

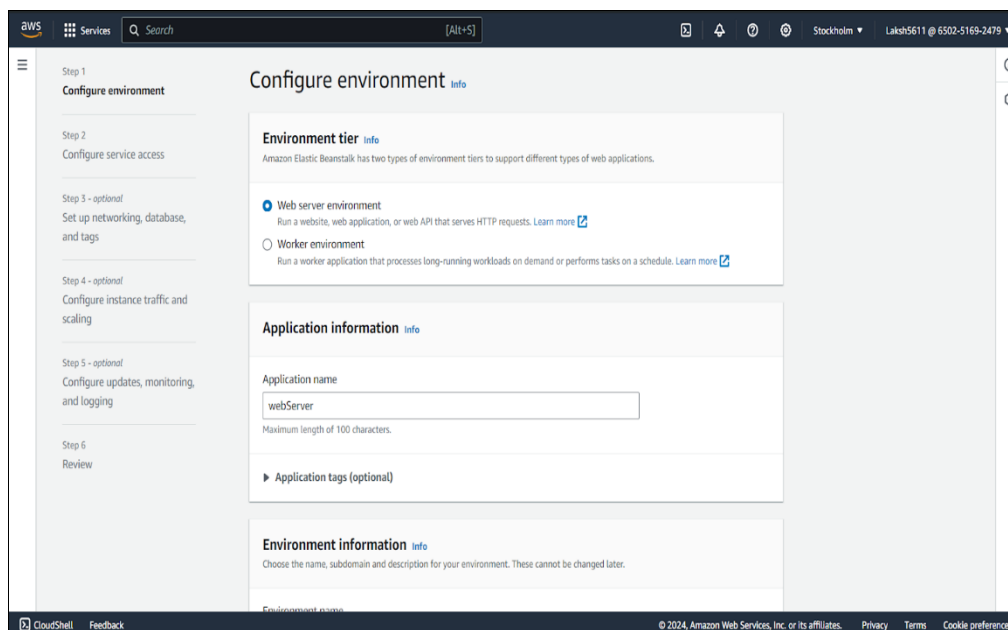
Aim: To Build Your Application using AWS CodeBuild and Deploy on S3 / SEBS using AWS CodePipeline, deploy Sample Application on EC2 instance using AWS CodeDeploy.

### Step-1: Beanstalk Deployment

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



2. Open up Elastic Beanstalk and name your web app.



### 3. Choose Python from the drop-down menu and then click Create Application.

The screenshot shows the 'Platform' configuration page in the AWS Elastic Beanstalk console. The 'Platform type' is set to 'Managed platform'. The 'Platform' dropdown is set to 'PHP'. The 'Platform branch' is set to 'PHP 8.3 running on 64bit Amazon Linux 2023'. The 'Platform version' is set to '4.3.2 (Recommended)'. The 'Application code' section is set to 'Sample application'.

**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)

**Application code Info**

- ☒ Sample application

### 4. Choose the proper options

The screenshot shows the 'Configure service access' page in the AWS Elastic Beanstalk console. The 'Service role' is set to 'Use an existing service role'. The 'Existing service roles' dropdown is set to 'aws-elasticbeanstalk-service-role'. The 'EC2 key pair' is set to 'supra-key'. The 'EC2 instance profile' is set to 'elasticbeanstalk\_myEc2role'.

**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](#)

supra-key

EC2 instance profile

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

elasticbeanstalk\_myEc2role

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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

Virtual Private Cloud (VPC)

VPC

Launch your environment in a custom VPC instead of the default VPC. You can create a VPC and subnets in the VPC management console. [Learn more](#)

vpc-0d87f2b8227ee1312 | (172.31.0.0/16)

Create custom VPC

Instance settings

Choose a subnet in each AZ for the instances that run your application. To avoid exposing your instances to the Internet, run your instances in private subnets and load balancer in public subnets. To run your load balancer and instances in the same public subnets, assign public IP addresses to the instances. [Learn more](#)

Public IP address

Assign a public IP address to the Amazon EC2 instances in your environment.

Activated

Instance subnets

Filter instance subnets

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With the current setting, the environment enables only IMDSv2.

Deactivated

EC2 security groups

Select security groups to control traffic.

EC2 security groups (7)

Filter security groups

	Group name	Group ID	Name
<input checked="" type="checkbox"/>	awseb-e-d9kh68ppqn-stack...	sg-0632048b6f88d4ddd	SupraApp-env-1
<input checked="" type="checkbox"/>	awseb-e-eczswppc8z-stack-...	sg-0de68df64bdfa855	WebApp02-env
<input checked="" type="checkbox"/>	default	sg-0a472ec49e7bb8a21	
<input type="checkbox"/>	launch-wizard-1	sg-01711621a355ca6a4	
<input type="checkbox"/>	launch-wizard-2	sg-048d55c094d22c63a	
<input type="checkbox"/>	launch-wizard-3	sg-0b5b28982c66cf258	
<input type="checkbox"/>	launch-wizard-4	sg-0d43e01a6548a50da	

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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

Review

Info

Step 1: Configure environment

Edit

Environment information

Environment tier

Web server environment

Application name

WebServer

Environment name

WebServer-env

Application code

Sample application

Platform

arn:aws:elasticbeanstalk:ap-south-1::platform/PHP 8.3 running on 64bit Amazon Linux 2023/4.3.2

Step 2: Configure service access

Edit

Service access

Info

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### Instance log streaming to CloudWatch logs

Configure the instances in your environment to stream logs to CloudWatch logs. You can set the retention to up to 10 years and configure Elastic Beanstalk to delete the logs when you terminate your environment. [Learn more](#)

**Log streaming**  
(standard CloudWatch charges apply.)

☐ Activated

**Retention**

7

**Lifecycle**

Keep logs after terminating envir...

**Environment properties**

The following properties are passed in the application as environment properties. [Learn more](#)

No environment properties have been configured.

Add environment property

CancelPreviousNext

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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 updates, monitoring, and logging - optional

Monitoring

Info

### Health reporting

Enhanced health reporting provides free real-time application and operating system monitoring of the instances and other resources in your environment. The **EnvironmentHealth** custom metric is provided free with enhanced health reporting. Additional charges apply for each custom metric. For more information, see [Amazon CloudWatch Pricing](#)

**System**

☒ Basic

☐ Enhanced

### Health event streaming to CloudWatch Logs

Configure Elastic Beanstalk to stream environment health events to CloudWatch Logs. You can set the retention up to a maximum of ten years and configure Elastic Beanstalk to delete the logs when you terminate your environment.

**Log streaming**

☐ Activated (standard CloudWatch charges apply.)

**Retention**

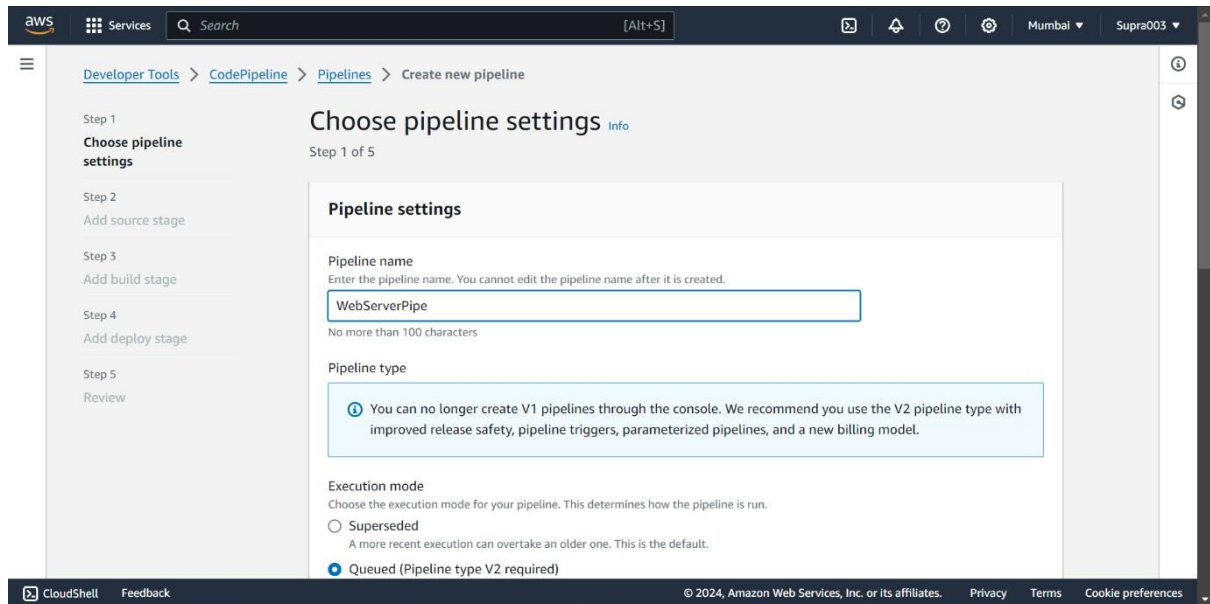
7

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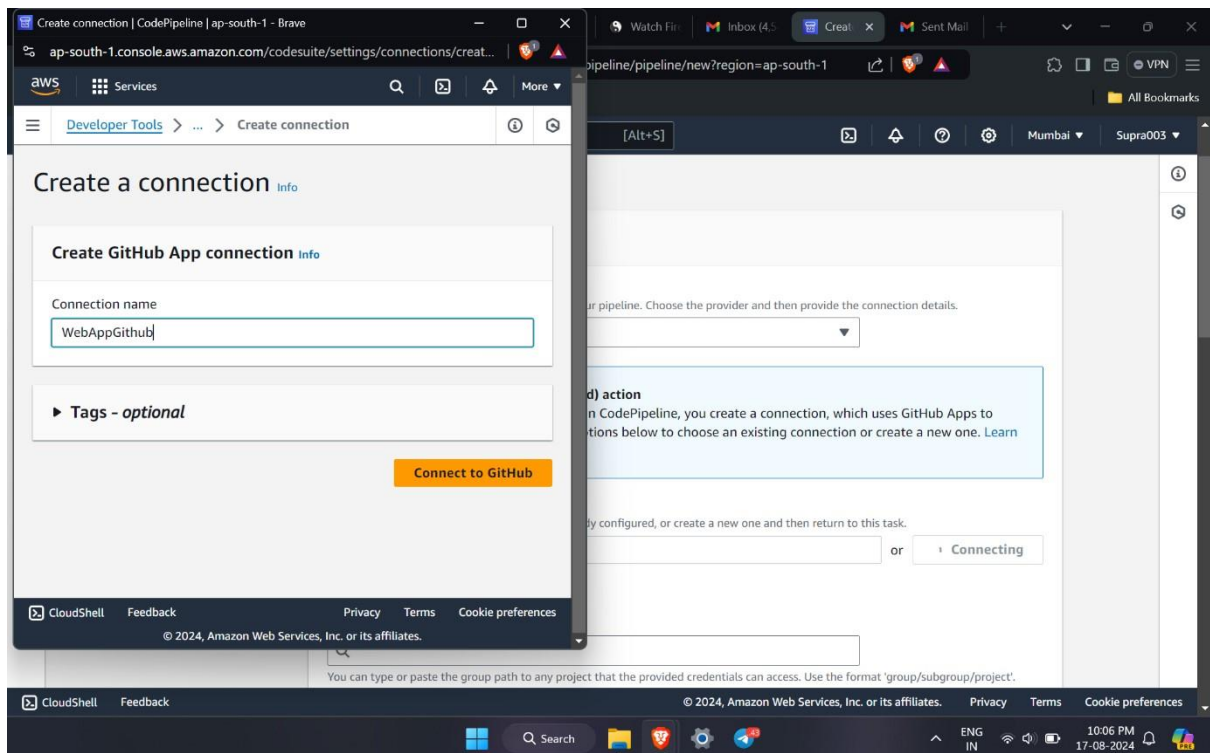
## Step-2: Creating CodePipeline

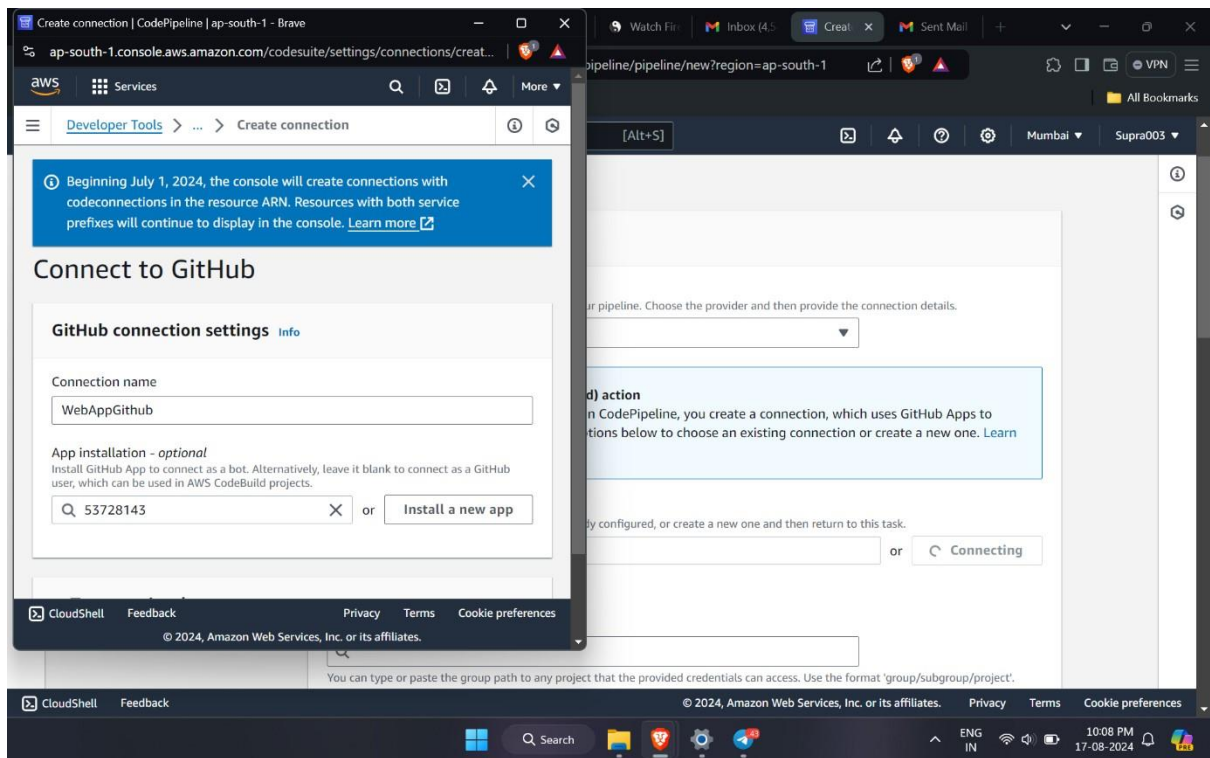
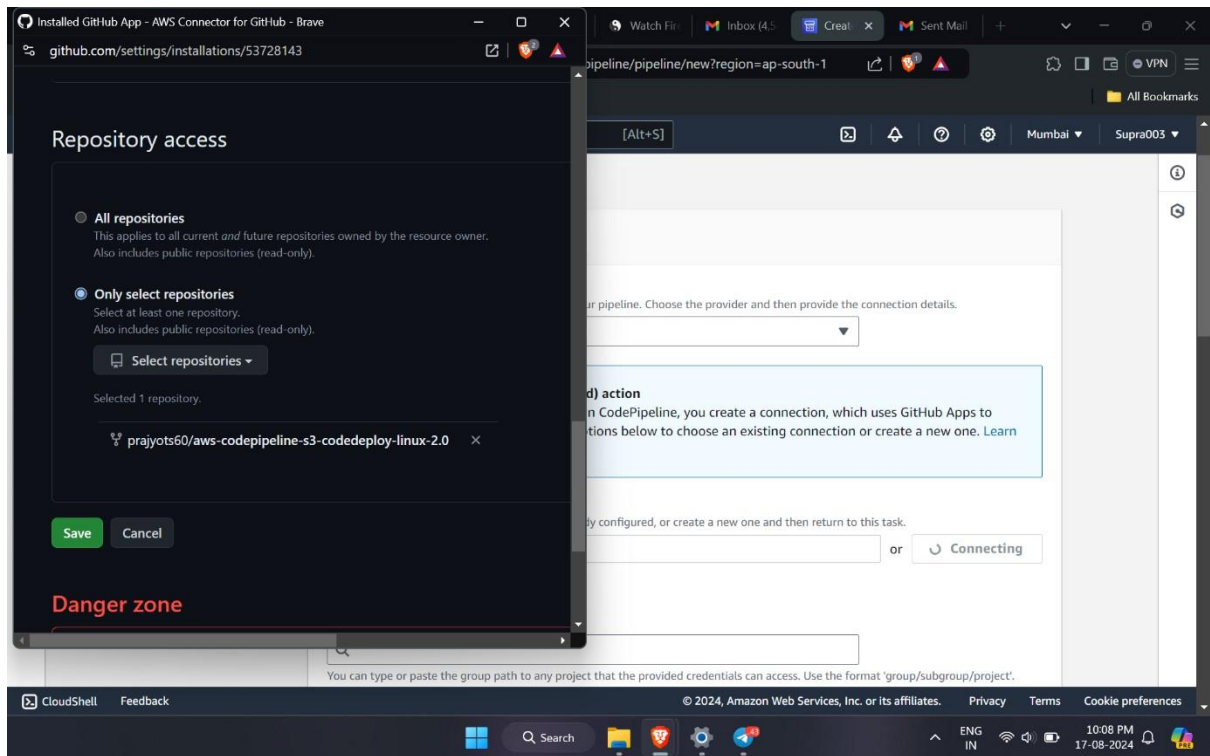
Beanstalk creates a sample environment for you to deploy your application. By default, it creates an EC2 instance, a security group, an Auto Scaling group, an Amazon S3 Bucket, Amazon CloudWatch alarms and a domain name for your Application.

Create a CodePipeline and give pipeline name



Create a Github connection







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Step 1  
Choose pipeline settings

Step 2  
Add source stage

Step 3  
Add build stage

Step 4  
Add deploy stage

Step 5  
Review

## Add source stage

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.

arn:aws:codeconnections:ap-south-1:010928222160:connection/38b1df1b-a

 or 

Connect to GitHub

Ready to connect

Your GitHub connection is ready for use.

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Repository name

Choose a repository in your GitHub account.

prajyots60/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

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## For deploy choose elastic beanstalk

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Step 1  
Choose pipeline settings

Step 2  
Add source stage

Step 3  
Add build stage

Step 4  
Add deploy stage

Step 5  
Review

Add deploy stage

Step 4 of 5

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 for 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](#)

SourceArtifact

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.

WebServer

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.

WebServer-env

☒ Configure automatic rollback on stage failure

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Build stage

No build

Step 4: Add deploy stage

Deploy action provider

Deploy action provider

AWS Elastic Beanstalk

ApplicationName

WebServer

EnvironmentName

WebServer-env

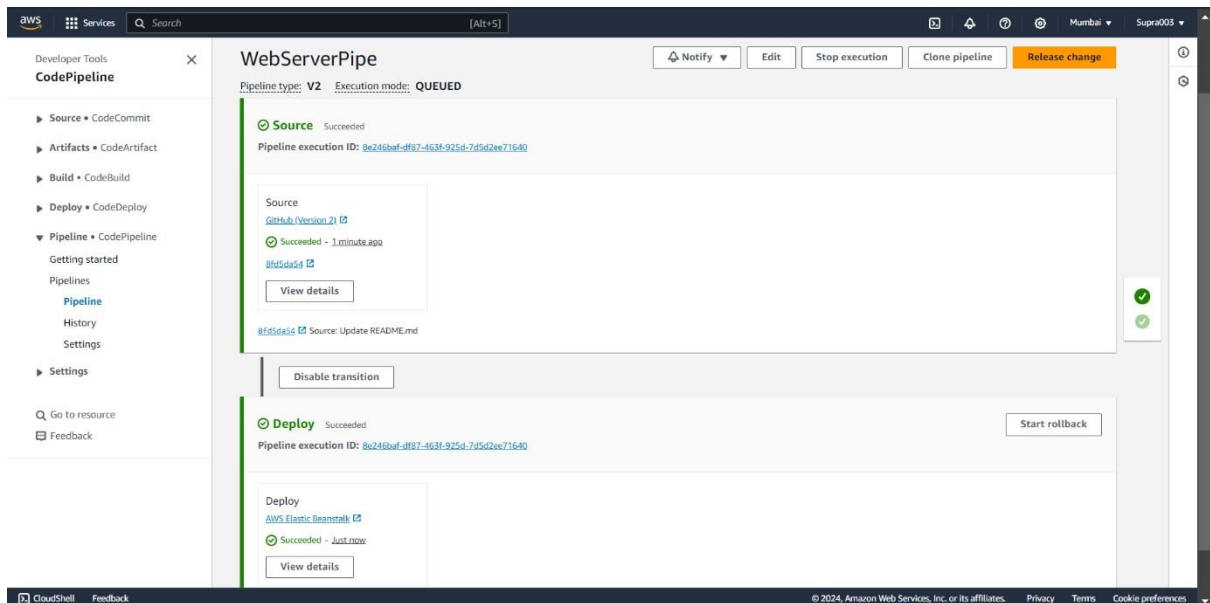
Configure automatic rollback on stage failure

Enabled

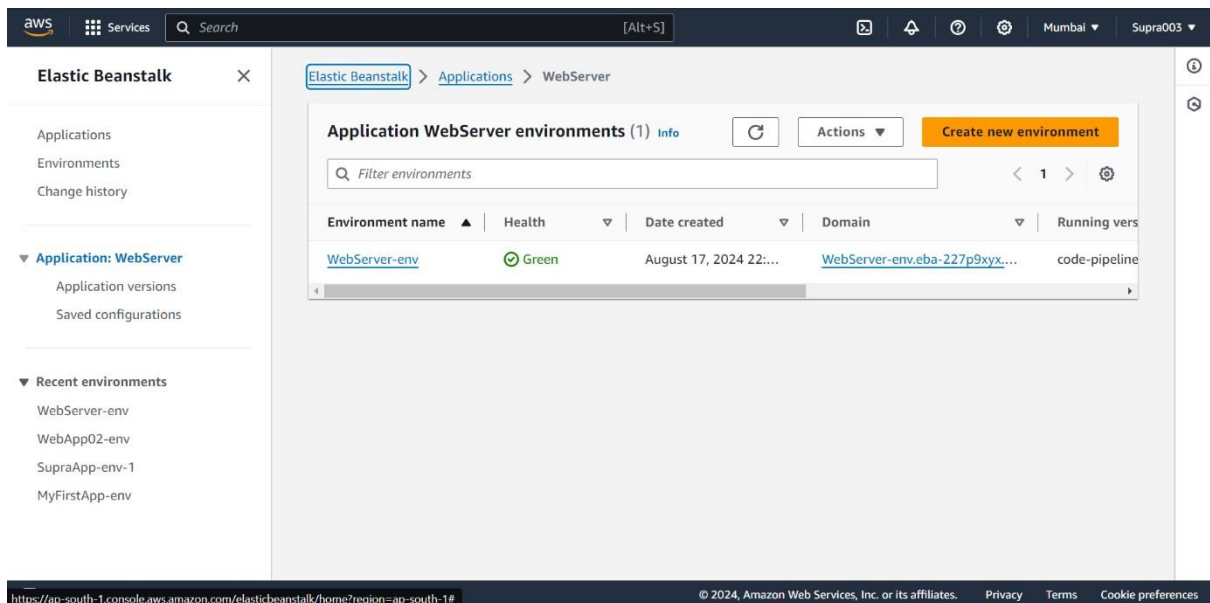
Cancel Previous Create pipeline

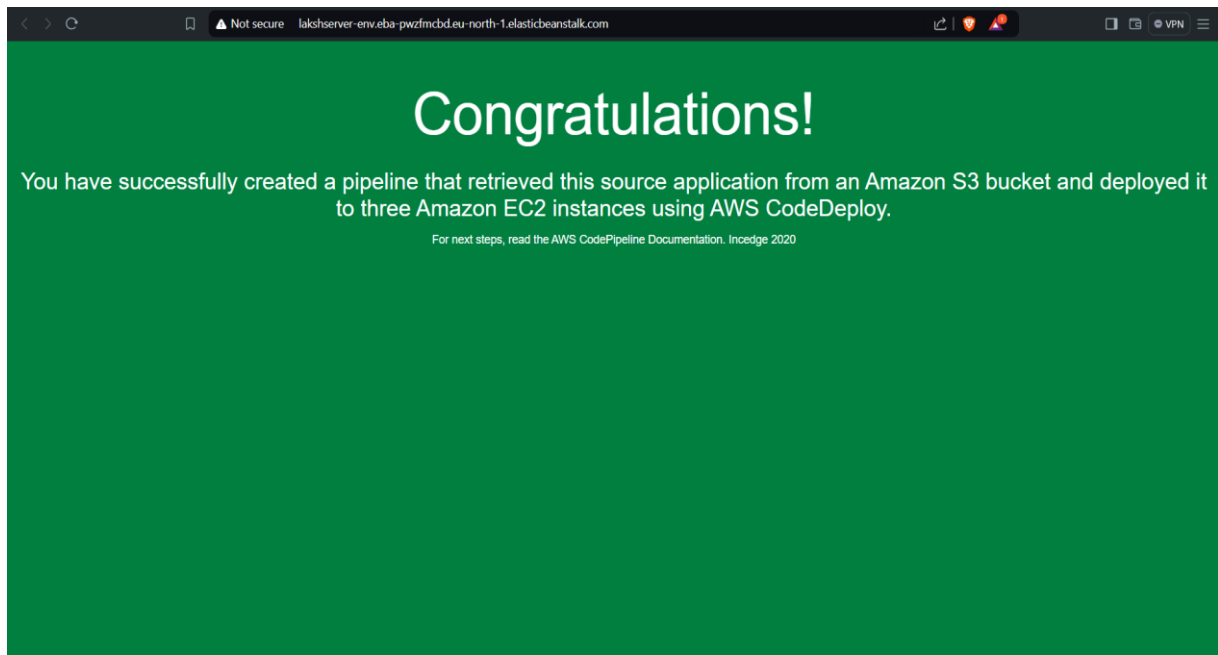


Make connection between code pipeline and beanstalk. And Green means successfully connected.



Click on domain to view you hosting site





# Hosting a static website on Amazon S3

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Amazon S3

Buckets

Create bucket

Create bucket [Info](#)

Buckets are containers for data stored in S3.

General configuration

AWS Region

Europe (Stockholm) eu-north-1

Bucket type

General purpose

Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

Directory - New

Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name

Laksh-S3

Bucket name must be unique within the global namespace and follow the bucket naming rules. [See rules for bucket naming](#)

Copy settings from existing bucket - optional

Only the bucket settings in the following configuration are copied.

Choose bucket

Format: s3://bucket/prefix

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Amazon S3

Buckets

laksh-s3

Edit static website hosting

Edit static website hosting [Info](#)

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

Disable

Enable

Hosting type

Host a static website

Use the bucket endpoint as the web address. [Learn more](#)

Redirect requests for an object

Redirect requests to another bucket or domain. [Learn more](#)

For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#)

Index document

Specify the home or default page of the website.

index.html

Enter document - optional

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Bucket ARN

arn:aws:s3::laksh-s3

Policy

1 {

2   "Version": "2012-10-17",

3   "Statement": [

4     {

5       "Effect": "Allow",

6       "Principal": "\*",

7       "Action": "s3:GetObject",

8       "Resource": "arn:aws:s3:::laksh-s3/\*"

9     }

10   ]

11   }

12 }

Edit statement

Remove

Add actions

Choose a service

Filter services

Included

S3

Available

AMP

API Gateway

API Gateway V2

ASC

Access Analyzer

Account

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Successfully created bucket "laksh-s3"

To upload files and folders, or to configure additional bucket settings, choose [View details](#).

Amazon S3 > Buckets

Account snapshot - updated every 24 hours

All AWS Regions

Storage lens provides visibility into storage usage and activity trends. [Learn more](#)

[View Storage Lens dashboard](#)

General purpose buckets

Directory buckets

General purpose buckets (3)

All AWS Regions

Buckets are containers for data stored in S3.

Find buckets by name

< 1 >

	Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/>	<a href="#">codepipeline-eu-north-1-959538756346</a>	Europe (Stockholm) eu-north-1	<a href="#">View analyzer for eu-north-1</a>	August 19, 2024, 18:48:15 (UTC+05:30)
<input type="radio"/>	<a href="#">elasticbeanstalk-eu-north-1-140023404138</a>	Europe (Stockholm) eu-north-1	<a href="#">View analyzer for eu-north-1</a>	August 19, 2024, 18:34:28 (UTC+05:30)
<input type="radio"/>	<a href="#">laksh-s3</a>	Europe (Stockholm) eu-north-1	<a href="#">View analyzer for eu-north-1</a>	August 19, 2024, 18:53:10 (UTC+05:30)

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Amazon S3

Buckets

laksh-s3

Upload

Upload

Info

Add the files and folders you want to upload to S3. To upload a file larger than 160GB, use the AWS CLI, AWS SDK or Amazon S3 REST API. [Learn more](#)

Drag and drop files and folders you want to upload here, or choose [Add files](#) or [Add folder](#).

Files and folders (1 Total, 2.8 KB)

All files and folders in this table will be uploaded.

Find by name

< 1 >

<input type="checkbox"/>	Name	Folder	Type
<input type="checkbox"/>	index.html	-	text/html

Destination

Info

Destination

s3://laksh-s3

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Upload succeeded

View details below.

Upload: status

Close

The information below will no longer be available after you navigate away from this page.

Summary

Destination s3://laksh-s3	Succeeded ✔ 1 file, 2.8 KB (100.00%)	Failed ✖ 0 files, 0 B (0%)
------------------------------	---	-------------------------------

Files and folders

Configuration

Files and folders (1 Total, 2.8 KB)

Find by name

< 1 >

Name	Folder	Type	Size	Status	Error
<a href="#">index.html</a>	-	text/html	2.8 KB	✔ Succeeded	-

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Amazon S3

Buckets

Access Grants

Access Points

Object Lambda Access Points

Multi-Region Access Points

Batch Operations

IAM Access Analyzer for S3

Block Public Access settings for this account

Storage Lens

Dashboards

Storage Lens groups

AWS Organizations settings

Feature spotlight

7

AWS Marketplace for S3

Object Lock

Disabled

Requester pays

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. [Learn more](#)

Requester pays

Disabled

Edit

Static website hosting

Use this bucket to host a website or redirect requests. [Learn more](#)

Static website hosting

Enabled

Hosting type

Bucket hosting

Bucket website endpoint

When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

<http://laksh-s3.s3-website.eu-north-1.amazonaws.com>

Edit

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⏏

⚠ Not secure

laksh-s3.s3-website.eu-north-1.amazonaws.com

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🔒

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📁

📄

🌐 VPN

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