

**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.**

Code and Output:-

Elastic beanstalk—

The screenshot shows the AWS Elastic Beanstalk console. On the left, a sidebar lists steps: 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). The main content area is titled 'Environment tier' and includes a description: 'Amazon Elastic Beanstalk has two types of environment tiers to support different types of web applications.' There are two radio button options: 'Web server environment' (selected) and 'Worker environment'. Below this is the 'Application information' section, which contains a text input field for 'Application name' with the value 'arnav-application' and a note 'Maximum length of 100 characters.' There is also a link for 'Application tags (optional)'. The bottom of the console shows a footer with 'CloudShell', 'Feedback', and copyright information for Amazon Web Services, Inc.

The screenshot shows the 'Platform' section of the AWS Elastic Beanstalk console. It is titled 'Platform' with an 'Info' link. Under 'Platform type', there are two radio button options: 'Managed platform' (selected) and 'Custom platform'. Below this, there are three dropdown menus: 'Platform' (set to 'Python'), 'Platform branch' (set to 'Python 3.11 running on 64bit Amazon Linux 2023'), and 'Platform version' (set to '4.1.3 (Recommended)').

Elastic Beanstalk is launching your environment. This will take a few minutes.

[Elastic Beanstalk](#) > [Environments](#) > Arnav-application-env

# Arnav-application-env

Info

⌂

Actions ▼

Upload and deploy

Environment overview

Health

⊖ Unknown

Domain

-

Environment ID

📄 e-hyb6h9hk2k

Application name

[arnav-application](#)

Platform

Change version

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[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

⌂

🔔 Notify ▼

View history

Release change

Delete pipeline

Create pipeline

🔍

< 1 > ⚙️

Name	Latest execution status	Latest source revisions	Latest execution started	Most recent executions
No results There are no results to display.				

aws

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N. Virginia

arnavsawant

Step 3  
Add build stage

Step 4  
Add deploy stage

Step 5  
Review

Pipeline name

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

pipeline1

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

aws

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Developer Tools

Create connection

# Create a connection [Info](#)

Create GitHub App connection [Info](#)

Connection name

arnav-connection

Tags - optional

Connect to GitHub


CloudShell




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[Developer Tools](#) > ... > Create connection



# Connect to GitHub


## GitHub connection settings [Info](#)


Connection name

arnav-connection

App installation - *optional*

Install GitHub App to connect as a bot. Alternatively, leave it blank to connect as a GitHub user, which can be used in AWS CodeBuild projects.

 53939163




 or 

Install a new app

► Tags - *optional*

Connect

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### 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-1:010928222269:connection/313d5a21-76 X

or

Connect to GitHub



#### Ready to connect

Your GitHub connection is ready for use.

### Repository name

Choose a repository in your GitHub account.

arnavsawant9/aws-codepipeline-s3-codedeploy-linux-2.0 X

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 X

### Output artifact format

Choose the output artifact format.

☒ CodePipeline default

☐ Full clone



#### 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

US East (N. Virginia) ▼

### Input artifacts

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

No more than 100 characters

Success

Conratulations! The pipeline pipeline1 has been created.

Create a notification rule for this pipeline

Developer Tools > CodePipeline > Pipelines > pipeline1

pipeline1

Pipeline type: V2 Execution mode: QUEUED

Source Succeeded

Pipeline execution ID: 250da1e1-a4c9-48a6-b1c2-396aa25fc160

Source

GitHub (Version 2) [View details](#)

Succeeded - 9 minutes ago

[8f45da54](#) [View details](#)

Source: Update README.md

Disable transition

Deploy Succeeded

Pipeline execution ID: 250da1e1-a4c9-48a6-b1c2-396aa25fc160

Deploy

AWS Elastic Beanstalk [View details](#)

Succeeded - 9 minutes ago

Start rollback

# Congratulations!

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

Hosting Static Website on S3 bucket:-

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Storage

# Amazon S3

## Store and retrieve any amount of data from anywhere

Amazon S3 is an object storage service that offers industry-leading scalability, data availability, security, and performance.

### Create a bucket

Every object in S3 is stored in a bucket. To upload files and folders to S3, you'll need to create a bucket where the objects will be stored.

Create bucket

### Pricing

With S3, there are no minimum fees. You only pay

### How it works

CloudShell

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AWS Region

US East (N. Virginia) us-east-1

Bucket type

Info

☒ 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

Info

myawsbucket

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

Object Ownership

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- ☐ **Block all public access**

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

  - ☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.
  - ☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**

S3 will ignore all ACLs that grant public access to buckets and objects.
  - ☐ **Block public access to buckets and objects granted through new public bucket or access point policies**

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.
  - ☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

☰

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☑️ Successfully created bucket "arnavbucket"

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

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

General purpose buckets

Directory buckets

General purpose buckets (1) [Info](#) All AWS Regions

Buckets are containers for data stored in S3.

< 1 >

⚙️

Name	AWS Region	IAM Access Analyzer	Creation date
<input type="radio"/> <a href="#">arnavbucket</a>	US East (N. Virginia) us-east-1	<a href="#">View analyzer for us-east-1</a>	August 12, 2024, 20:32:03 (UTC+05:30)

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Amazon S3 > Buckets > arnavbucket > 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, 3.5 KB)

All files and folders in this table will be uploaded.

< 1 >

⚙️

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

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☰

☑️ Upload succeeded

View details below.

s3://arnavbucket

☑️ 1 file, 3.5 KB (100.00%)

🔄 0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (1 Total, 3.5 KB)

< 1 >

⚙️

Name	Folder	Type	Size	Status	Error
<a href="#">index.html</a>	-	text/html	3.5 KB	☑️ Succeeded	-

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Objects

Properties

Permissions

Metrics

Management

Access Points

Bucket overview

AWS Region  
US East (N. Virginia) us-east-1

Amazon Resource Name (ARN)  
arn:aws:s3:::arnavbucket

Creation date  
August 12, 2024, 20:32:03 (UTC+05:30)

Bucket Versioning

Versioning is a means of keeping multiple variants of an object in the same bucket. You can use versioning to preserve, retrieve, and restore every version of every object stored in your Amazon S3 bucket. With versioning, you can easily recover from both unintended user actions and application failures. [Learn more](#)

Bucket Versioning  
Disabled

Multi-factor authentication (MFA) delete  
An additional layer of security that requires multi-factor authentication for changing Bucket Versioning settings and permanently deleting object versions. To modify MFA delete settings, use the

Edit

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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  
Disabled

Edit

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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://arnavbucket.s3-website-us-east-1.amazonaws.com>

Edit

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[Amazon S3](#) > [Buckets](#) > [arnavbucket](#) > index.html

# index.html

Info

Copy S3 URI

Download

Open

Object actions

Properties

Permissions

Versions

## Access control list (ACL)

Edit

Grant basic read/write permissions to AWS accounts. [Learn more](#)

This bucket has the bucket owner enforced setting applied for Object Ownership

When [bucket owner enforced](#) is applied, use bucket policies to control access. [Learn more](#)

Grantee	Object	Object ACL
---------	--------	------------

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[Amazon S3](#) > [Buckets](#) > [arnavbucket](#) > Edit bucket policy

# Edit bucket policy

Info

## Bucket policy

Policy examples

Policy generator

The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. [Learn more](#)

Bucket ARN

arn:aws:s3:::arnavbucket

Policy

1

Edit statement

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### Policy JSON Document

Click below to edit. To save the policy, copy the text below to a text editor.  
Changes made below will not be reflected in the policy generator tool.

```
{
  "Id": "Policy1723475894970",
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "Stmt1723475890592",
      "Action": "s3:*",
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::arnavbucket",
      "Principal": "*"
    }
  ]
}
```

This AWS Policy Generator is provided for informational purposes only, you are still responsible for your use of Amazon Web Services technologies and ensuring that your use is in compliance with all applicable terms and conditions. This AWS Policy Generator is provided as is without warranty of any kind, whether express, implied, or statutory. This AWS Policy Generator does not modify the applicable terms and conditions governing your use of Amazon Web Services technologies.

Close

Bucket ARN

arn:aws:s3:::arnavbucket

Policy

```
1 {
2   "Id": "Policy1723475894970",
3   "Version": "2012-10-17",
4   "Statement": [
5     {
6       "Sid": "Stmt1723475890592",
7       "Action": "s3:*",
8       "Effect": "Allow",
9       "Resource": "arn:aws:s3:::arnavbucket/*",
10      "Principal": "*"
11    }
12  ]
13 }
```

Edit statement

Select a statement

Select an existing statement in the policy or  
add a new statement.

+ Add new statement



Get discounts upto 50% on your next purchase by downloading and making purchase by our app

## Customize the T-shirt in your own way!!

Order Details

Tagline on the Shirt:-  Color:- Red Size:- XS Quantity:-  Date of delivery:- dd-mm-yyyy

Delivery Details

Recipient's Name:-  Address:-  Email:-  Phone Number:-

Additional details

Additional Comments:-



Get discounts upto 50% on your next purchase by downloading and making purchase by our app

## Customize the T-shirt in your own way!!

Order Details

Tagline on the Shirt:-  Color:- Red Size:- XS Quantity:-  Date of delivery:- dd-mm-yyyy

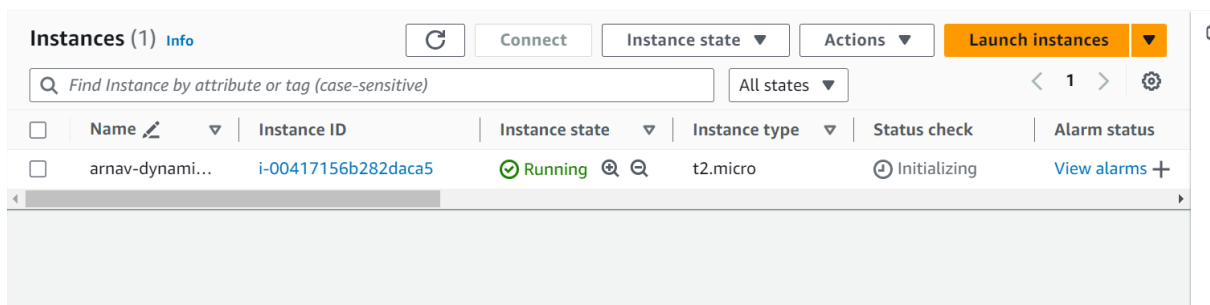
Delivery Details

Recipient's Name:-  Address:-  Email:-  Phone Number:-

Additional details

Additional Comments:-

## Hosting Dynamic Website on EC2 instance:-



Select an instance

**Note:** In most cases, the default username, ubuntu, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.



**You have insufficient IAM permissions to connect to an instance using EC2 Instance Connect**

To connect to an instance via EC2 Instance Connect, you must have an attached IAM policy that grants the following permissions:

- ec2-instance-connect:SendSSHPublicKey
- ec2:DescribeInstances

Consider restricting access to specific EC2 instances using `ec2:osuser` condition, or specific resource tag.

Visit [IAM Console](#) to verify if you have above permissions.

For more information about IAM policy examples, see [Grant IAM permissions for EC2 Instance Connect](#).

Cancel

Connect

```
aws Services Search [Alt+S] N. Virginia voclabs/user3387492=SAWANT_ARNAV_SANTOSH @ 8389-5987-95
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-81-110:~/arnav/Dynamic-website-hosting-sample$ npm i
added 93 packages, and audited 94 packages in 4s
16 packages are looking for funding
  run `npm fund` for details
found 0 vulnerabilities
ubuntu@ip-172-31-81-110:~/arnav/Dynamic-website-hosting-sample$ npm start
> hosting-dynamic-website@1.0.0 start
> nodemon index.js

[nodemon] 3.1.4
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,cjs,json
[nodemon] starting 'node index.js'

i-00417156b282daca5 (arnav-dynamic-server)
PublicIPs: 3.82.153.70 PrivateIPs: 172.31.81.110
```

