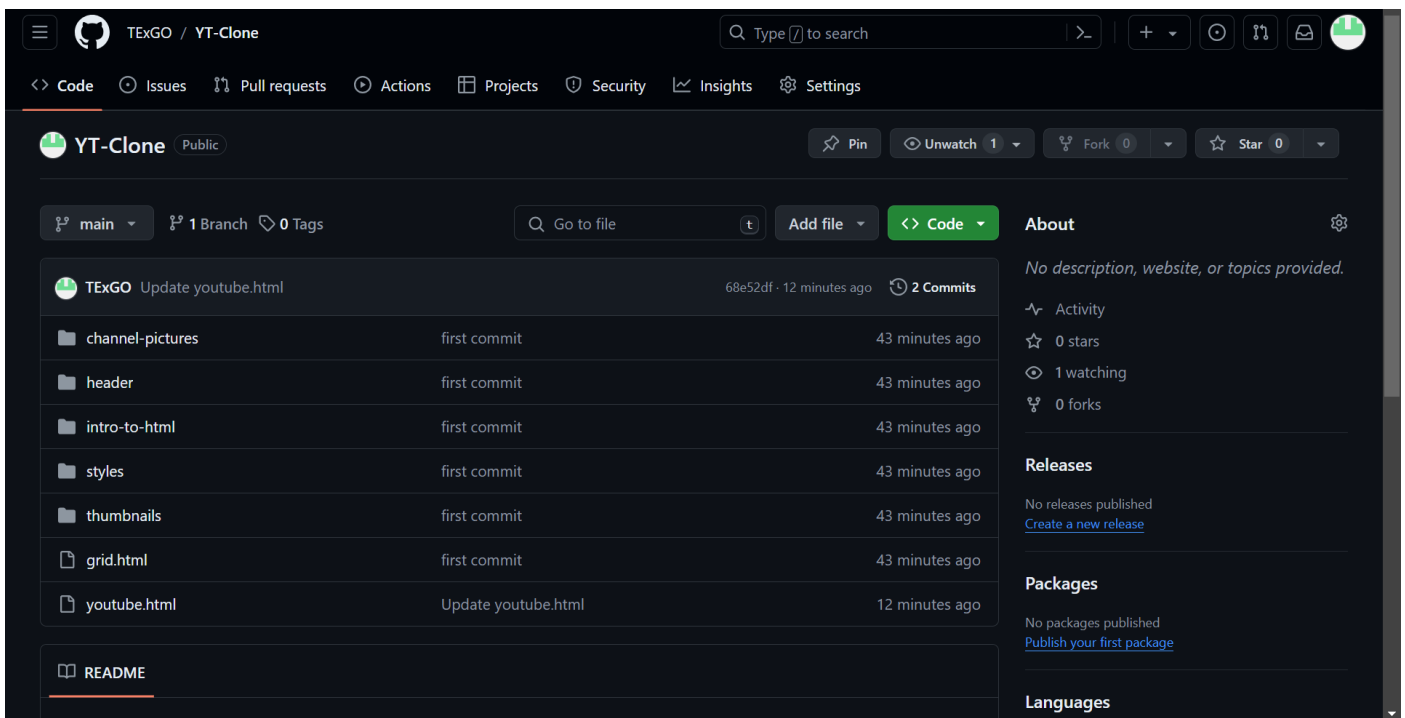
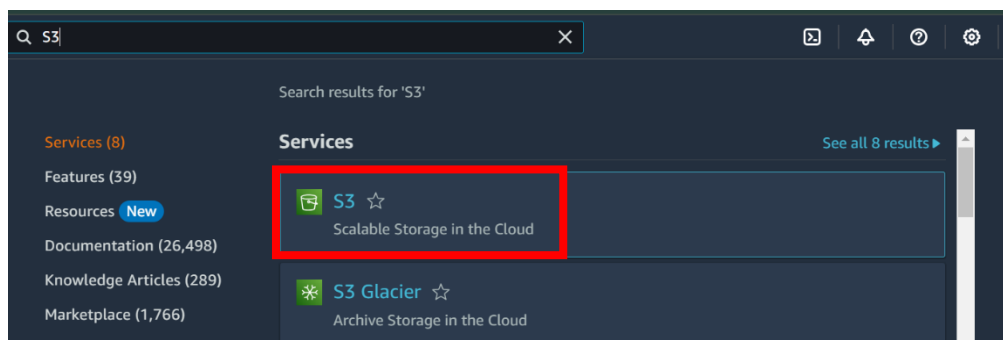


# Continuous Deployment Using CodePipeline

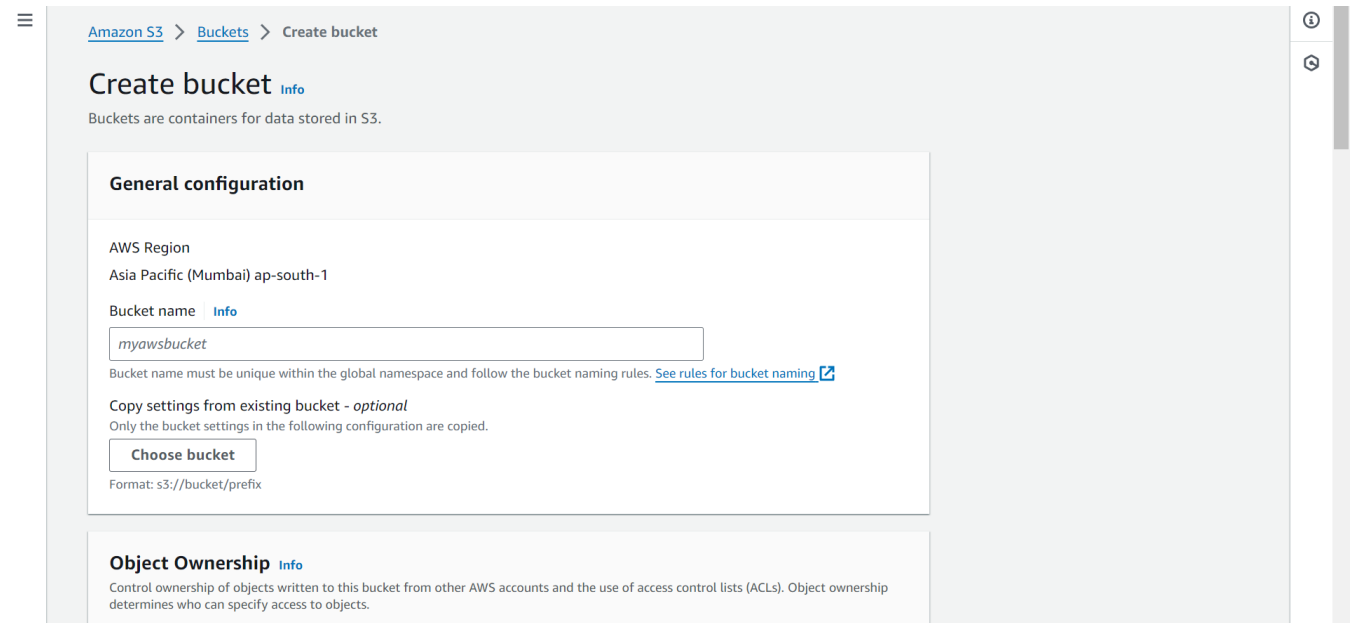
In this we will deploy a YouTube clone, for that we will upload all the code and the related files in the GitHub. I have uploaded it in the 'YT-clone' repository.



We will sign up on the AWS console. First we will create a S3 bucket to store our files and as a static website. Go to S3



We will create a new bucket. Click on create bucket following page will appear, name your bucket. **Note bucket name should be unique or it will give an error.**



Amazon S3 > Buckets > Create bucket

## Create bucket [Info](#)

Buckets are containers for data stored in S3.

### General configuration

AWS Region  
Asia Pacific (Mumbai) ap-south-1

Bucket name [Info](#)

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 [Info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

After naming your bucket, we will allow the public access to your bucket so other can access the files in it. For that scroll down until you see 'Block Public Access...' just unselect/deselect the first option.

#### Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

##### ☒ 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.

#### Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

##### ☐ Block all public access

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- ☐ **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.



**Turning off block all public access might result in this bucket and the objects within becoming public**  
AWS recommends that you turn on block all public access, unless public access is required for specific and

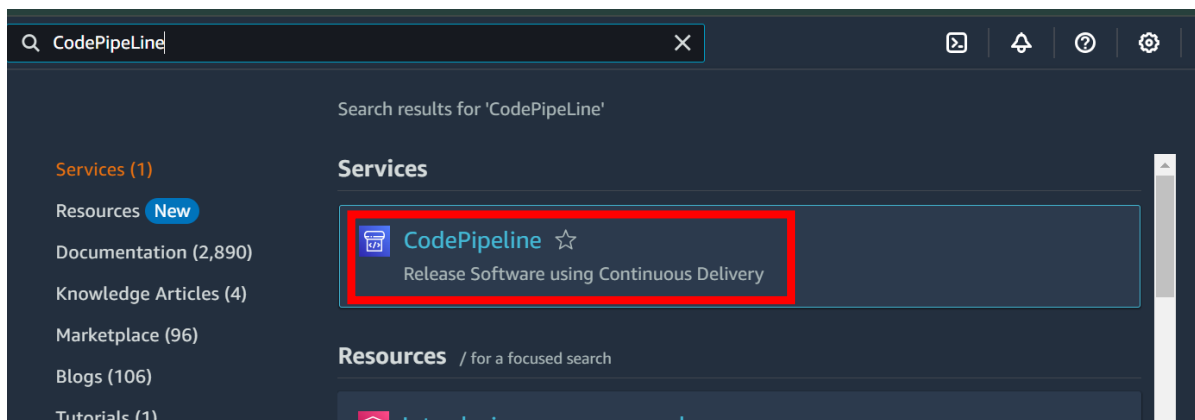
Scroll down and click on create bucket it will prompt you again for the block public access option just click on the acknowledgement.



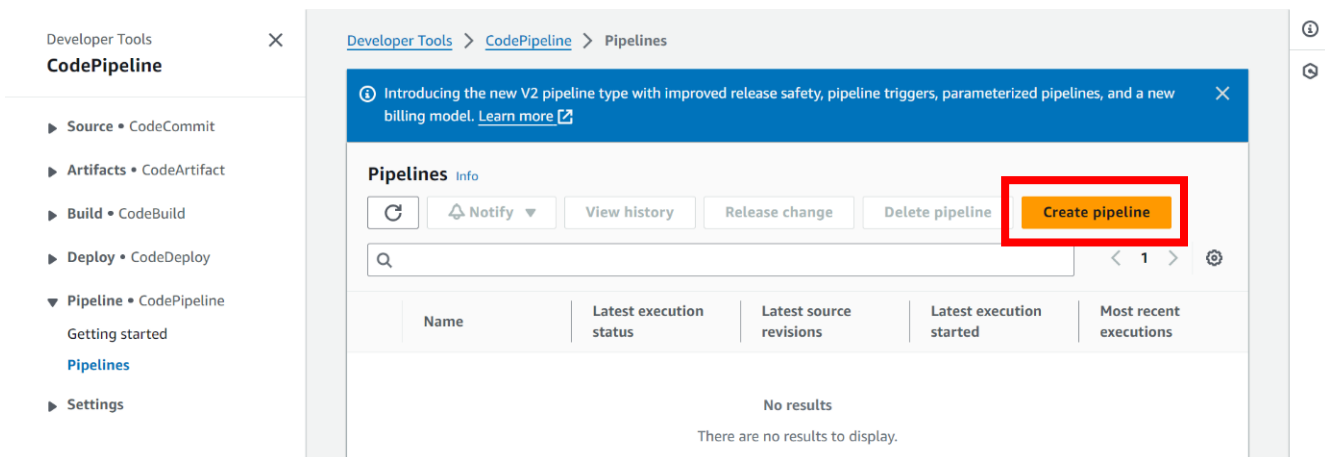
**Turning off block all public access might result in this bucket and the objects within becoming public**  
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

☐ I acknowledge that the current settings might result in this bucket and the objects within becoming public.

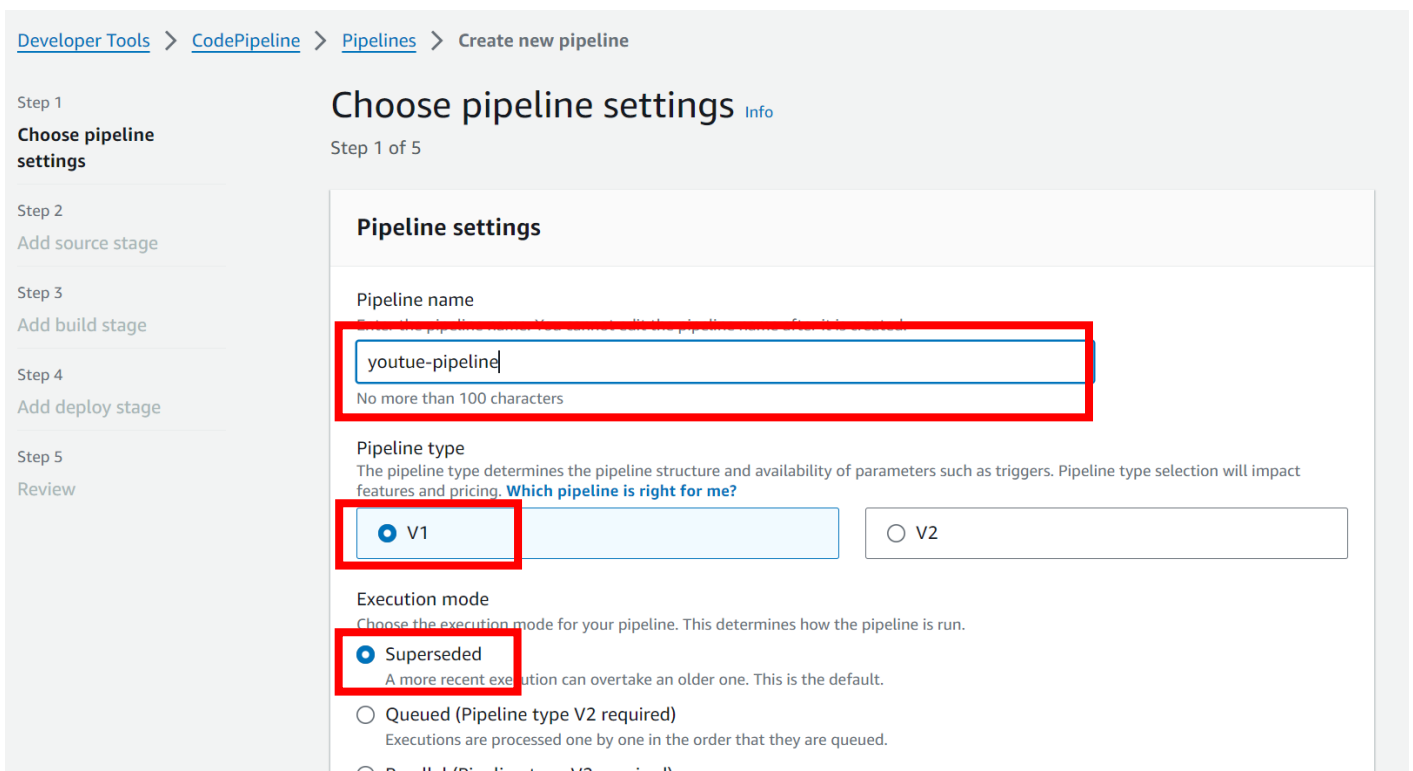
After this we will setup the codepipeline. Go to the home page and search for CodePipeline, click on it



Now click on the create pipeline option



Name your pipeline, select the V1 type, select the superseded option.



Scroll down and select the 'New service role' option and add -01 at the last of the role name to create a new one. Click on next at the last of page.

#### 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-ap-south-1-youtue-pipeline-01

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.

Add variable

You can add up to 50 variables.

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

On the next page add the storage source for this we will select the 'GitHub (Version 2)' from this the AWS will get the files automatically. Click on next.

## 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.

AWS CodeCommit

Amazon ECR

Amazon S3

Bitbucket

GitHub (Version 1)

GitHub (Version 2)

GitHub Enterprise Server

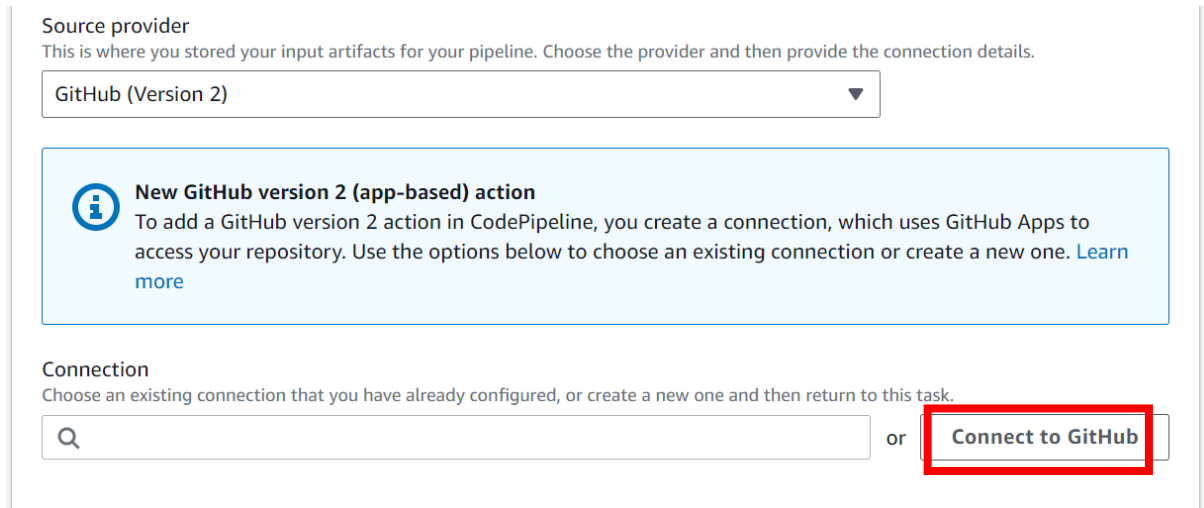
GitLab

GitLab self-managed

Previous

Next

Now we will connect to the GitHub. Click on the option



This screenshot shows the 'Source provider' configuration step in AWS CodePipeline. At the top, a dropdown menu is set to 'GitHub (Version 2)'. Below this, a light blue informational box contains an 'i' icon and text explaining that a new GitHub version 2 (app-based) action requires creating a connection using GitHub Apps. At the bottom, under the 'Connection' section, there is a search input field and a button labeled 'Connect to GitHub', which is highlighted with a red rectangle.

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

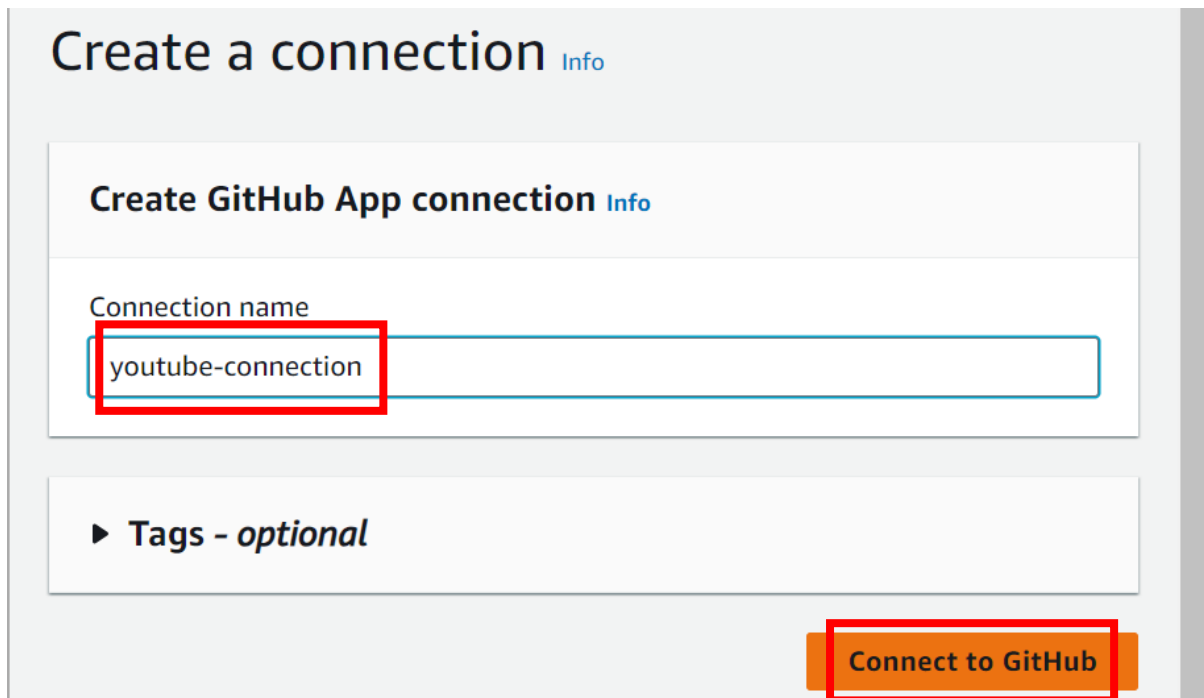
GitHub (Version 2) ▼

**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**

A new window will appear we will name our connection and click on connect



This screenshot shows the 'Create a connection' dialog box. The title is 'Create a connection' with an 'Info' link. The main heading is 'Create GitHub App connection' with an 'Info' link. Below this, there is a 'Connection name' label and a text input field containing 'youtube-connection', which is highlighted with a red rectangle. Further down, there is a section for 'Tags - optional' with a right-pointing triangle icon. At the bottom right, there is an orange button labeled 'Connect to GitHub', also highlighted with a red rectangle.

Create a connection [Info](#)

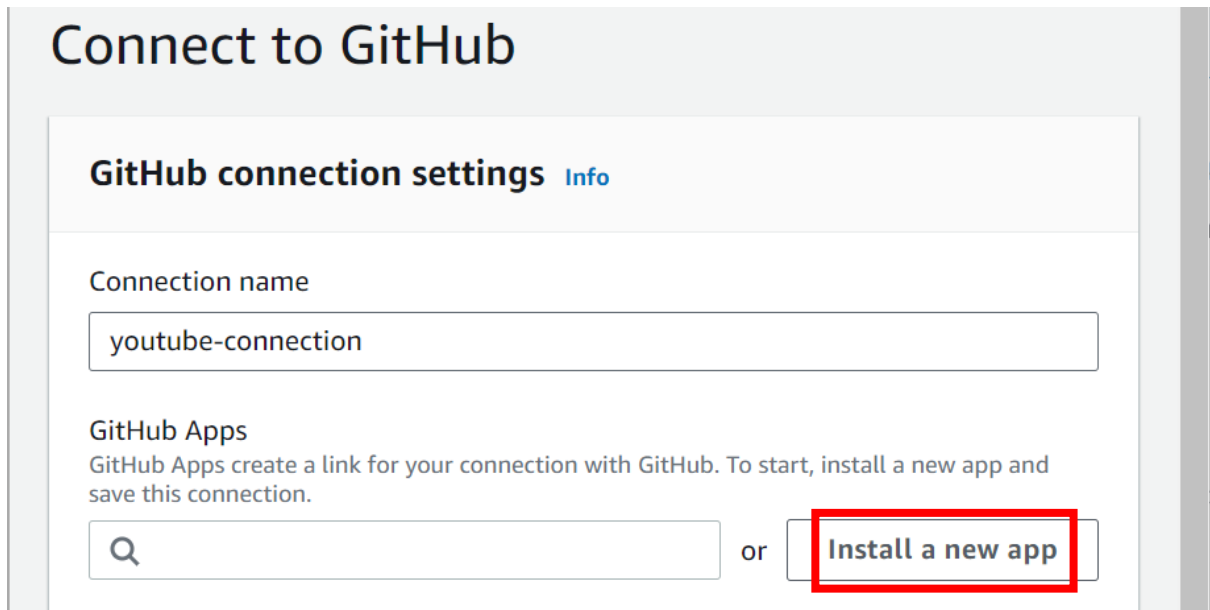
Create GitHub App connection [Info](#)

Connection name  
youtube-connection

► Tags - optional

**Connect to GitHub**

Next click on install a new app.



The screenshot shows a web interface titled "Connect to GitHub". Below the title is a section labeled "GitHub connection settings" with a blue "Info" link. Under this section, there is a "Connection name" label and a text input field containing "youtube-connection". Below that is a "GitHub Apps" section with a descriptive paragraph: "GitHub Apps create a link for your connection with GitHub. To start, install a new app and save this connection." At the bottom of this section, there is a search input field with a magnifying glass icon, followed by the word "or", and then a button labeled "Install a new app". This button is highlighted with a red rectangular box.

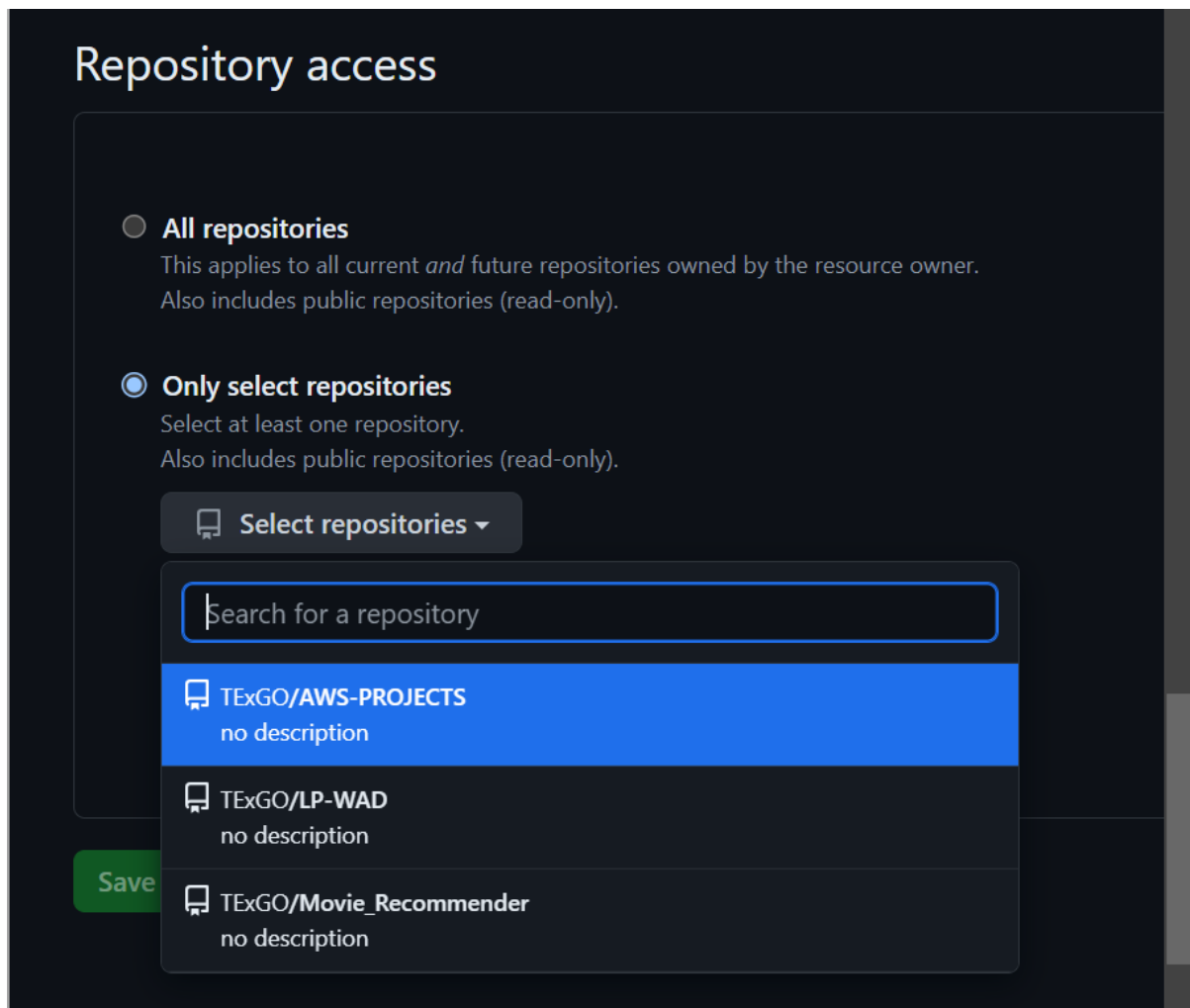
You will be redirected to your GitHub account, if you doing it for first time it will ask permissions to connect your account with AWS.

After this scroll down until you see 'Repository Access' from this you will select the option you want.

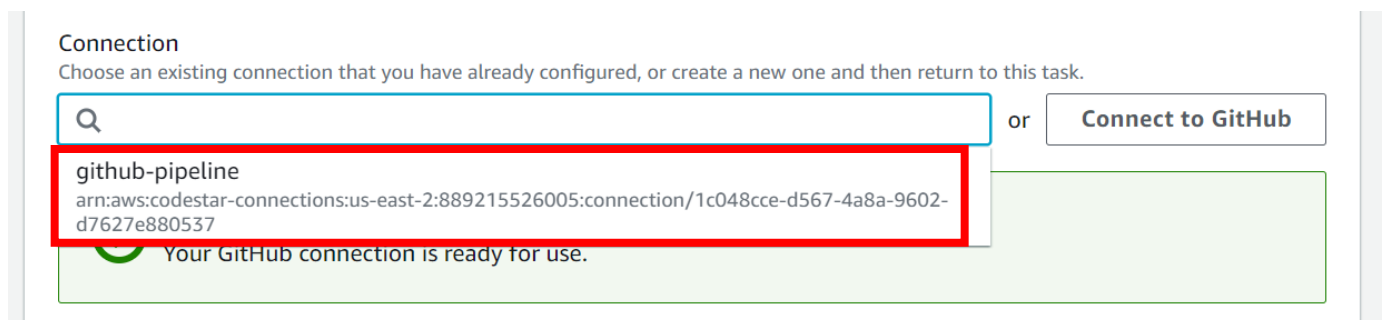
We will select only the selected repository and mention the repository we want to connect with AWS.

As I have you connected it before I don't have to connect to the GitHub again.





Now you will get back to the console. Here you will select the connection as mentioned early.



After connecting it will show a message that you are ready to connect. Under that select the repository name you want.

The screenshot shows the 'Connection' section of the AWS CodePipeline console. It indicates that the GitHub connection is 'Ready to connect'. Below this, the 'Repository name' section is highlighted with a red box. The dropdown menu is open, showing the repository 'YT-Clone' selected. The text 'Choose a repository in your GitHub account' is visible above the dropdown. To the right of the dropdown, the text 'ma 'group/subgroup/project'.' is partially visible.

Next select the branch. Here we have only one i.e 'main'

The screenshot shows the 'Default branch' section of the AWS CodePipeline console, which is highlighted with a red box. The dropdown menu is open, showing the branch 'main' selected. Below this, the 'Output artifact format' section is visible, with two options: 'CodePipeline default' (selected) and 'Full clone'. The text 'Choose the output artifact format.' is visible above the options.

Now select the output format as 'CodePipeline default' default.

And the trigger as 'No filter' to push our data into to the AWS.

Click on next.

**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.

 You can add additional sources and triggers by editing the pipeline after it is created.

Cancel

Previous

Next

Next stage is the build stage. As we are not working on it and we don't need it for now. But you can select any of the two options if you want to test your code beforehand.

Click on skip build stage it will again prompt you click on skip.

The screenshot shows the 'Add build stage' form in AWS CodePipeline. The breadcrumb navigation at the top indicates the path: > Pipelines > Create new pipeline. The main heading is 'Add build stage' with an 'Info' link. Below the heading, it says 'Step 3 of 5'. The form is titled 'Build - optional'. Under the 'Build provider' section, there is a text description: 'This is the tool of your build project. Provide build artifact details like operating system, build spec file, and output file names.' Below this is a search input field with a magnifying glass icon. A dropdown menu is open, showing two options: 'AWS CodeBuild' and 'Add Jenkins'. At the bottom of the form, there are four buttons: 'Cancel', 'Previous', 'Skip build stage', and 'Next' (which is highlighted in orange).

Next stage to add deployment. In this we have to add the provider where we want to deploy our website.

The screenshot shows the 'Add deploy stage' form in AWS CodePipeline. The breadcrumb navigation at the top indicates the path: > Pipelines > Create new pipeline. The main heading is 'Add deploy stage' with an 'Info' link. Below the heading, it says 'Step 4 of 5'. A blue information box with an 'i' icon contains the message: '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.' Below this is the 'Deploy' section. Under the 'Deploy provider' section, there is a text description: 'Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.' Below this is a dropdown menu. At the bottom of the form, there are three buttons: 'Cancel', 'Previous', and 'Next' (which is highlighted in orange).

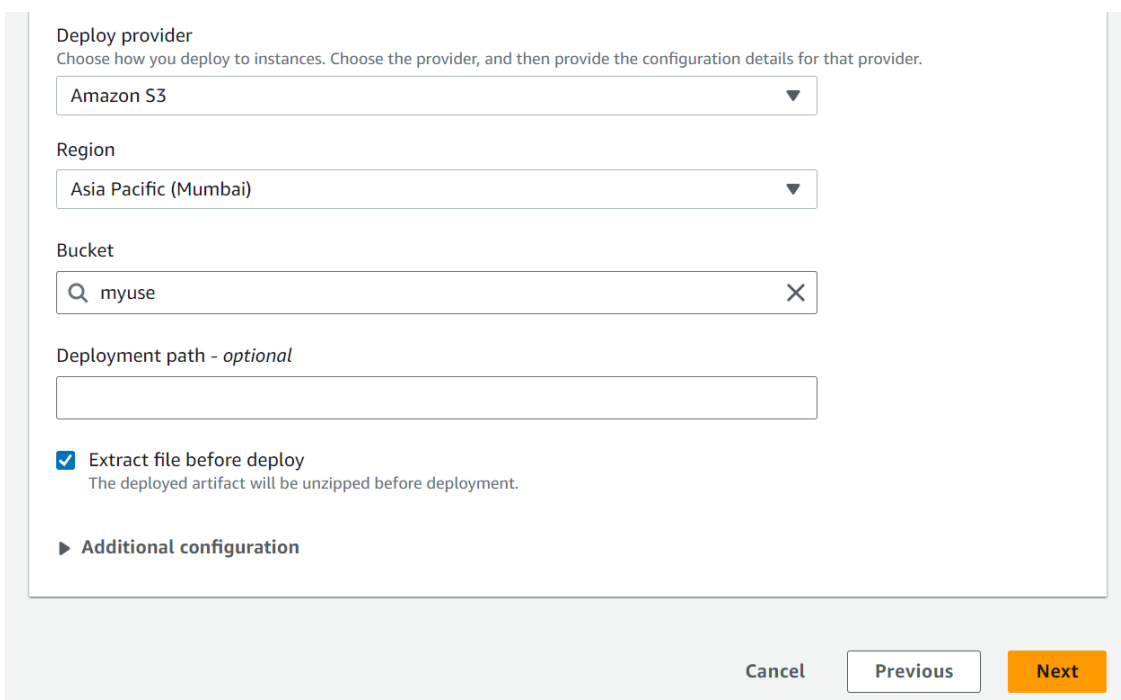
Here we will select AWS S3 as the provider. As we have created a bucket to host our static website.

Next we will select the region in which we have created our S3 bucket.

Next add the bucket which you want to use or which you have created earlier in this pdf.

Select the 'Extract file before deploy' option and click on next.

We have successfully configured the pipeline path after this the review section will appear see what all changes we have made and check them once click on 'Create Pipeline' option at last of the page.



The screenshot shows the 'Deploy provider' configuration screen in the AWS CodeDeploy console. The form is titled 'Deploy provider' with a subtitle 'Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.' The form contains several fields: 'Amazon S3' is selected in the 'Deploy provider' dropdown; 'Asia Pacific (Mumbai)' is selected in the 'Region' dropdown; 'myuse' is entered in the 'Bucket' search field; the 'Deployment path - optional' field is empty; the 'Extract file before deploy' checkbox is checked, with a note 'The deployed artifact will be unzipped before deployment.' below it; and an 'Additional configuration' link is at the bottom. At the bottom right of the form, there are three buttons: 'Cancel', 'Previous', and 'Next'.

Deploy provider  
Choose how you deploy to instances. Choose the provider, and then provide the configuration details for that provider.

Amazon S3 ▼

Region  
Asia Pacific (Mumbai) ▼

Bucket  
myuse ×

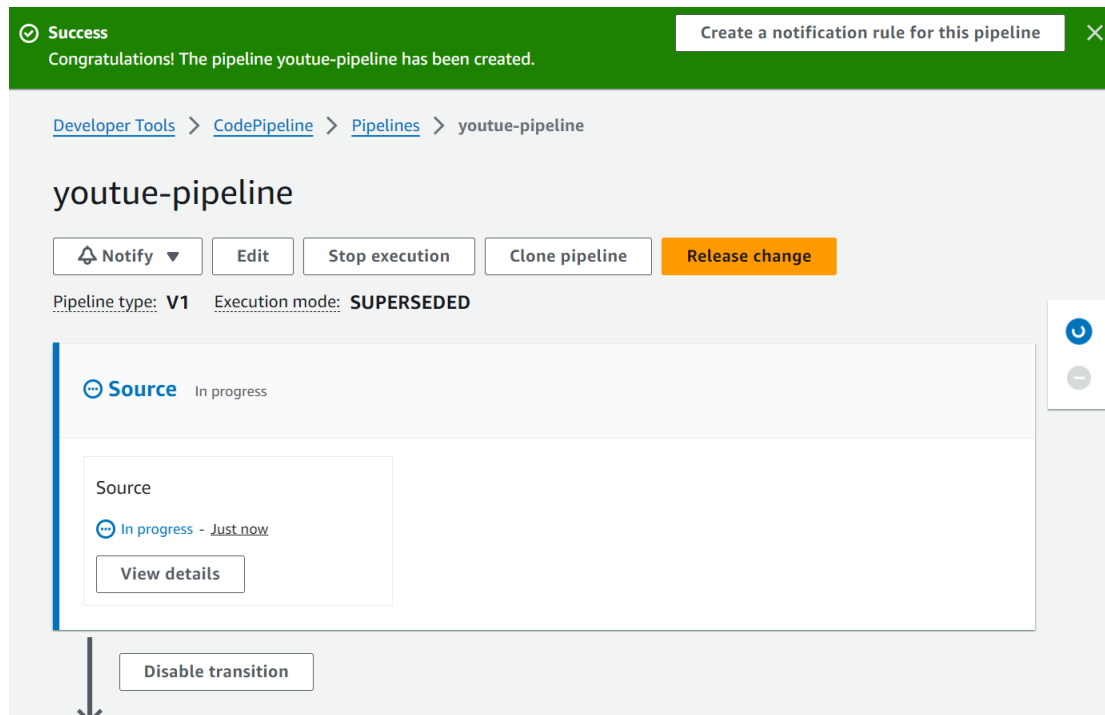
Deployment path - *optional*

☒ Extract file before deploy  
The deployed artifact will be unzipped before deployment.

► Additional configuration

Cancel Previous Next

After the successful execution you get a message of success at the top under that you will be able to see the progress of the pipeline.



After adding all the files from your repository to your bucket you will see the successful message instead of in progress.

Now get the endpoint from the S3 bucket and check if your files are uploaded and you can see your webpage contents.

**Requester pays**

Edit

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

Requester pays  
Disabled

**Static website hosting**

Edit

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

Static website hosting  
Enabled

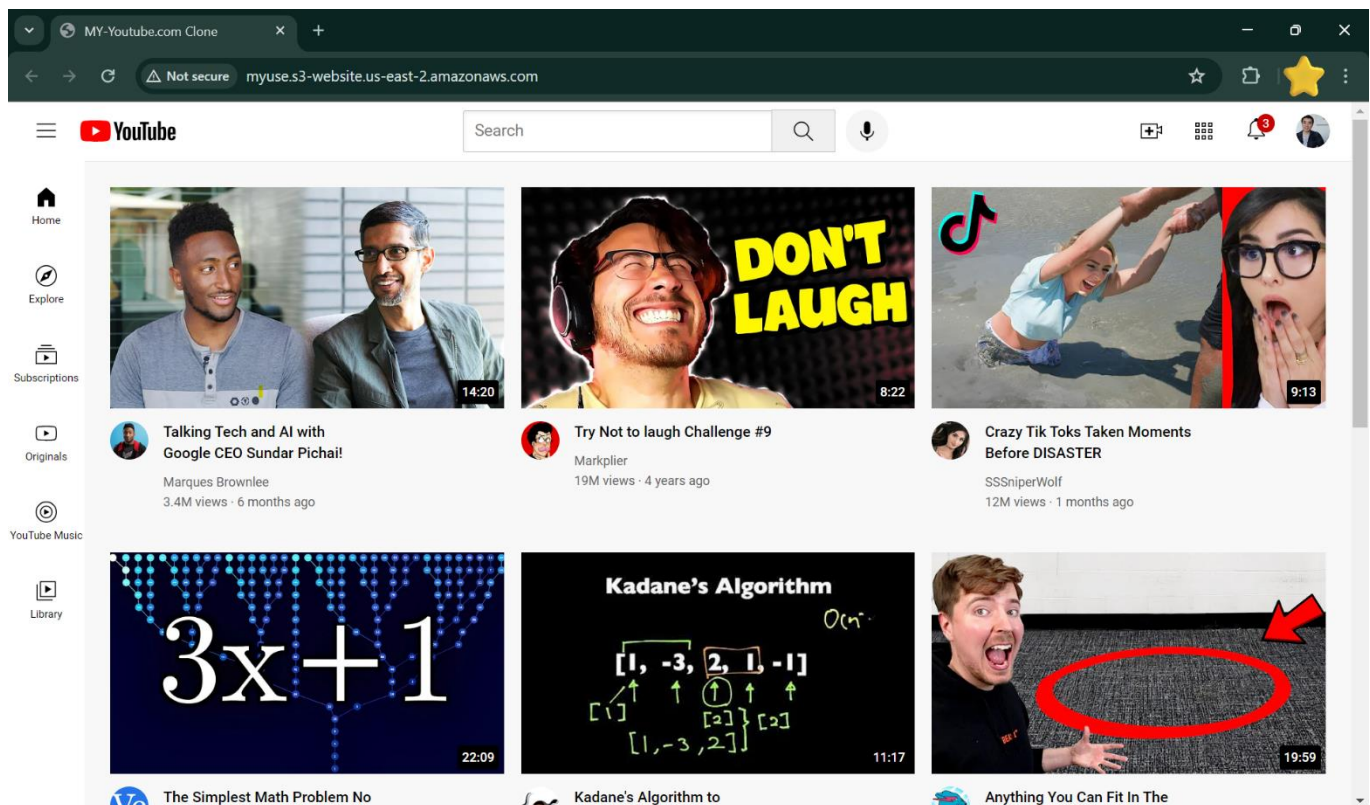
Hosting type  
Bucket hosting

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://myuse.s3-website-us-east-2.amazonaws.com>

You will be able to see the results at the endpoint. For me I can access my youtube clone webpage. At your end you may also.



If you commit any changes in your repository that will we updated automatically.

Just make the changes in your html code save the changes and come back to the pipeline in it will be in the in the progress state this means if you make any chnages the aws get it into your S3 automatically.

After success message check your webpage refresh it and you might see the changes!!!!!!!

Thank you.