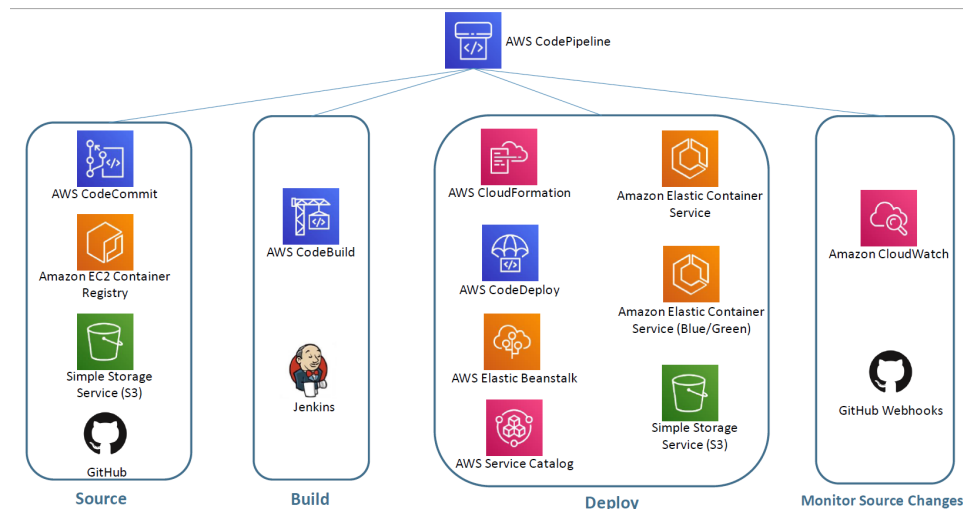


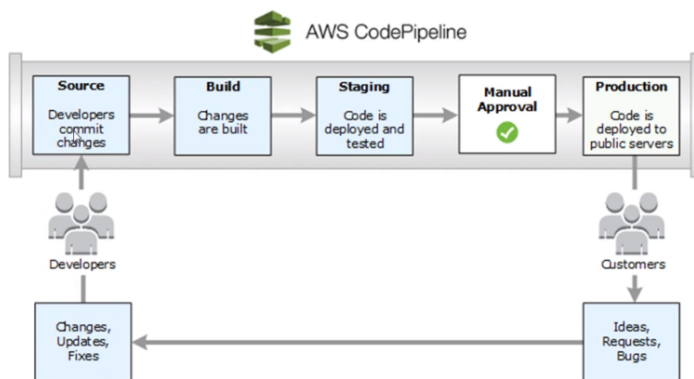
4. CI/CD in AWS - Part III

CodePipeline Overview



- Any changes in the Source, Code Pipeline triggers *Build* *Deploy* Stages for the new changes

Continuous Delivery



Implementation

Step 1: Create a Pipeline

Here we will use Artifacts from S3, Source from CodeCommit, Build from CodeBuild, Deploy from CodeDeploy, Server from EC2 Server

Step 2: Make changes and Check-in the code

Make changes in the source and Pipeline should be triggered automatically

AWS Console CodePipeline

NOTE: Make a change in the source code and push it to Code Commit. By doing this, we can view the changes being picked by the Code Pipeline.

Create Pipeline Process:

Developer Tools > CodePipeline > Pipelines

Pipelines [Info](#)

< 1 > ⚙

Name	Most recent execution	Latest source revisions	Last executed
No results			
There are no results to display.			

Choose pipeline settings [Info](#)

Pipeline settings

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

No more than 100 characters

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

Type your service role name

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

► **Advanced settings**

Cancel **Next**

Source

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

Repository name
Choose a repository that you have already created where you have pushed your source code.

Branch name
Choose a branch of the repository

Change detection options
Choose a detection mode to automatically start your pipeline when a change occurs in the source code.

☒ Amazon CloudWatch Events (recommended)
Use Amazon CloudWatch Events to automatically start my pipeline when a change occurs

☐ AWS CodePipeline
Use AWS CodePipeline to check periodically for changes

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.

Cancel Previous **Next**

Add Build Stage.
Here Select CodeBuild and 'Create Project'. Because Existing Project may have issues with the existing S3 location mapping.

Add build stage [Info](#)

Build - *optional*

Build provider

This is the tool of your build project. Provide build artifact details like operating system, build spec file, and output file names.

AWS CodeBuild

Region

US East (N. Virginia)

Project name

Choose a build project that you have already created in the AWS CodeBuild console. Or create a build project in the AWS CodeBuild console and then return to this task.



or

Create project



Create build project

Project configuration

Project name

restapps-pipe1-demo

A project name must be 2 to 255 characters. It can include the letters A-Z and a-z, the numbers 0-9, and the special characters - and _.

Description - *optional*

Code build project

Enable concurrent build limit - *optional*

Limit the number of allowed concurrent builds for this project.

☐ Restrict number of concurrent builds this project can start

► Additional configuration

tags

Environment

Environment image

☒ Managed image

Use an image managed by AWS CodeBuild

☐ Custom image

Specify a Docker image

Operating system

Ubuntu

i The programming language runtimes are now included in the standard image of Ubuntu 18.04, which is recommended for new CodeBuild projects created in the console. See [Docker Images Provided by CodeBuild for details](#).

Runtime(s)

Standard

Image

aws/codebuild/standard:6.0

Image version

Always use the latest image for this runtime version

Environment type

Linux

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

codebuild-restapps-pipe1-demo-service-role

Type your service role name

▼ Additional configuration

Timeout, certificate, VPC, compute type, environment variables, file systems

Timeout

Default timeout is 1 hour

Hours

0

Timeout must be between 5 minutes and 8 hours

Minutes

5

Queued timeout

Default time in build queue is 8 hours

Hours

0

Timeout must be between 5 minutes and 8 hours

Minutes

10

Certificate

If you have a self-signed certificate or a certificate signed by a certification authority, choose the option to install it from your S3 bucket.

☒ Do not install any certificate

☐ Install certificate from your S3 bucket

Build specifications

☒ Use a buildspec file

Store build commands in a YAML-formatted buildspec file

☐ Insert build commands

Store build commands as build project configuration

Buildspec name - optional

By default, CodeBuild looks for a file named buildspec.yml in the source code root directory. If your buildspec file uses a different name or location, enter its path from the source root here (for example, buildspec-foo.yml or configuration/buildspec.yml).

Batch configuration

You can run a group of builds as a single execution. Batch configuration is also available in advanced option when starting build.

☐ Define batch configuration - optional

You can also define or override batch configuration when starting a build batch.

Logs

CloudWatch

☒ CloudWatch logs - optional

Checking this option will upload build output logs to CloudWatch.

Group name

restapps-pipe1-distro-group

Stream name

restapps-pipe1-demo-stream

US East (N. Virginia) ▼

Project name

Choose a build project that you have already created in the AWS CodeBuild console. Or create a build project in the AWS CodeBuild console and then return to this task.

restapps-pipe1-demo

✕

 or

Create project

✓ Successfully created restapps-pipe1-demo in CodeBuild.

✕

Environment variables - optional

Choose the key, value, and type for your CodeBuild environment variables. In the value field, you can reference variables generated by CodePipeline. [Learn more](#)

Add environment variable

Build type

☒ Single build

Triggers a single build.

☐ Batch build

Triggers multiple builds as a single execution.

Cancel

Previous

Skip build stage

Next

Deploy Stage

Add deploy stage [Info](#)

Deploy - optional

Deploy provider

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

AWS CodeDeploy ▼

Region

US East (N. Virginia) ▼

Application name

Choose an application that you have already created in the AWS CodeDeploy console. Or create an application in the AWS CodeDeploy console and then return to this task.

rest-app

✕

Deployment group

Choose a deployment group that you have already created in the AWS CodeDeploy console. Or create a deployment group in the AWS CodeDeploy console and then return to this task.

dev-env

✕

Cancel

Previous

Skip deploy stage

Next

Create Pipeline

Build action provider

AWS CodeBuild

ProjectName

restapps-pipe1-demo

Step 4: Add deploy stage

Deploy action provider

Deploy action provider

AWS CodeDeploy

ApplicationName

rest-app

DeploymentGroupName

dev-env

Cancel

Previous

Create pipeline

Pipeline Created. It automatically picks up the source changes and Pipeline is triggered from Code Commit

