# Automate Code Deployment on AWS using CodePipeline: CodeCommit, CodeDeploy, CloudWatch

Despite high competition, AWS has continued its stronghold on the cloud market till now. New services are continuously added, resulting in improved and high performance. And while AWS tries to keep things simple for **developers**, using the platform isn't always easy. Especially for a big organization.

For this reason, AWS provides multiple tools to help **AWS developers** utilize and develop with its cloud platform and services. Let's take a look at such tools that can help you build applications with **AWS.**
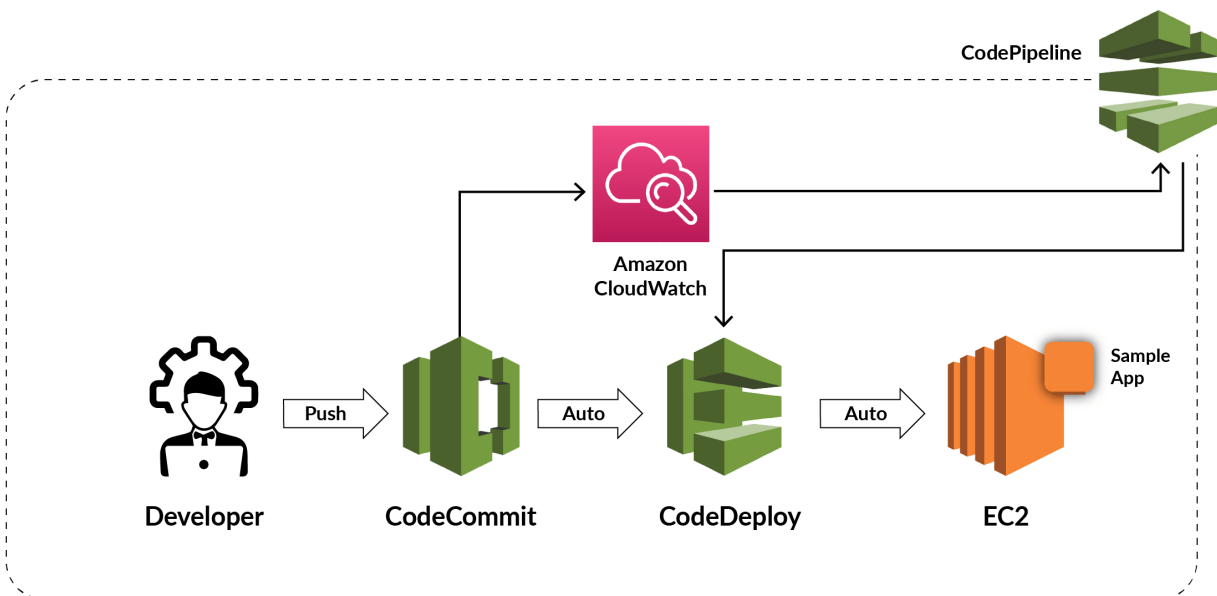
AWS CodeCommit – It is a fully-managed source control service that hosts secure Git-based repositories. CodeCommit makes it easy for teams to collaborate on code in a secure and highly scalable ecosystem

AWS CodeBuild – A fully managed continuous integration service that compiles source code, runs tests and produces software packages that are ready to deploy, on a dynamically created build server.
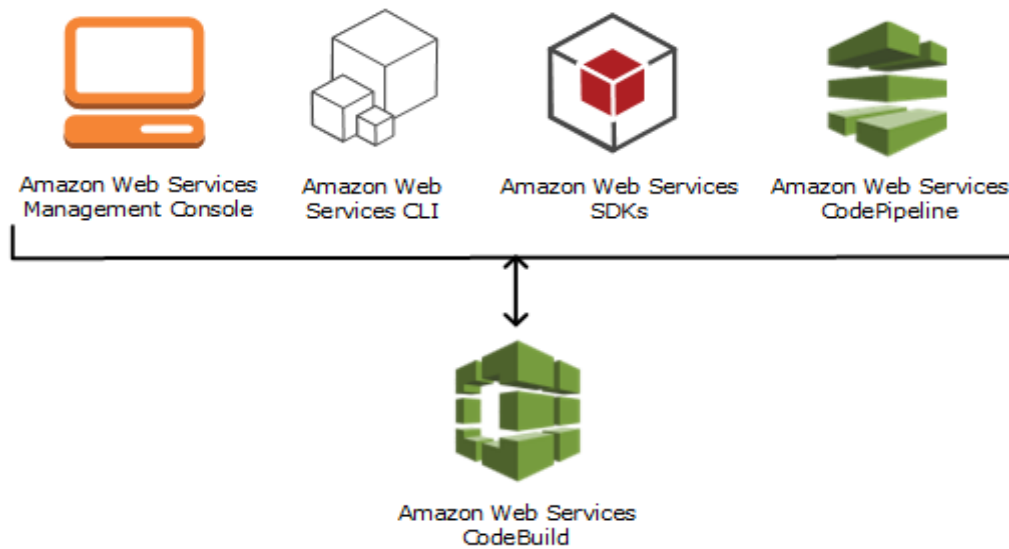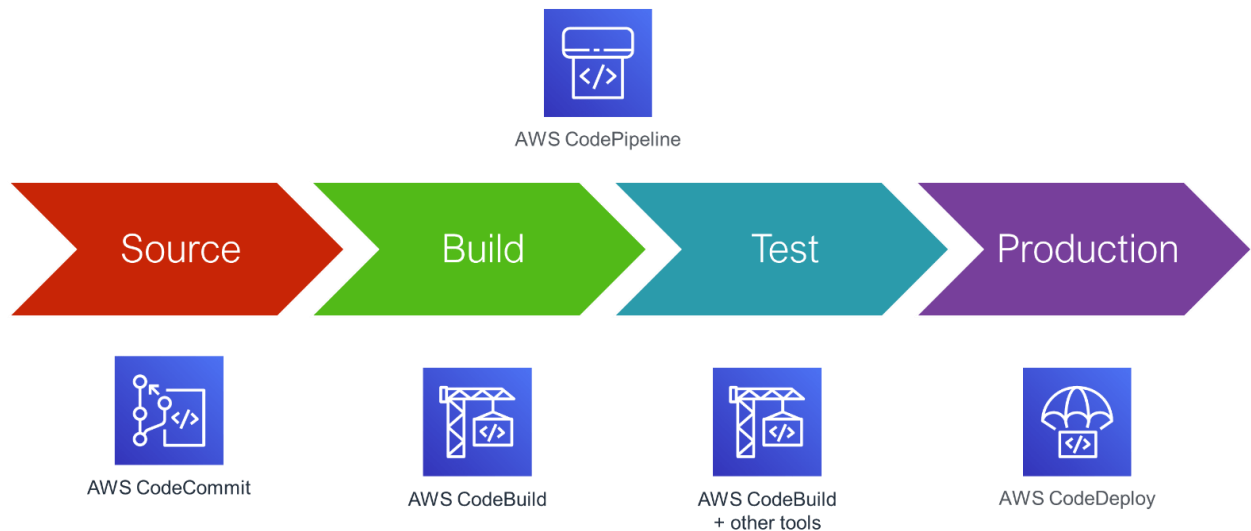

AWS CodeDeploy – A fully managed deployment service that automates software deployments to a variety of computing services such as Amazon EC2, AWS Fargate, AWS Lambda, and your on-premises servers.
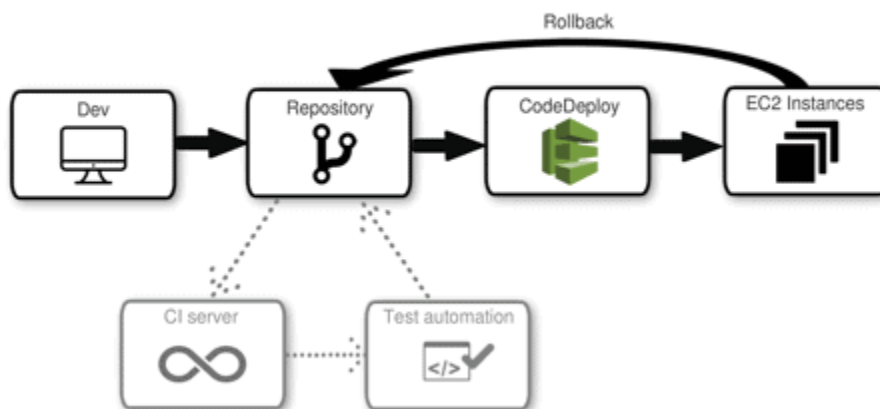
AWS CodePipeline – A fully configured continuous delivery service that helps the user to automate their released pipelines for fast and reliable application and infrastructure updates.

AWS CodePipeline

| Source | Build | Test | Production |

| AWS CodeCommit | AWS CodeBuild | AWS CodeBuild + other tools | AWS CodeDeploy |

The pipeline has two stages:
- A source stage **(Source)** for your CodeCommit source action.
- A deployment stage **(Deploy)** for your CodeDeploy deployment action.

Event triggers the CodePipeline to pull the code and then deploy using CodeDeploy

AWS CodePipeline

Here we create a
1. Service Role

PIPELINE

Stage 1

Stage 2

Source

AWS CodeDeploy

Here, we need to create.
1. Service Role
2. Application (Configure)
3. Deployment Group

Amazon CloudWatch

Whenever there will be some change in the .zip file or in code, a CloudWatch event will be triggered.

Here AWS Codecommit act as a code repository where we store our code

codecommit

Sample App

EC2 Instance

Also, here we need to create.
1. Instance Role
2. Install a CodeDeploy Agent