

AWS CI/CD Pipeline

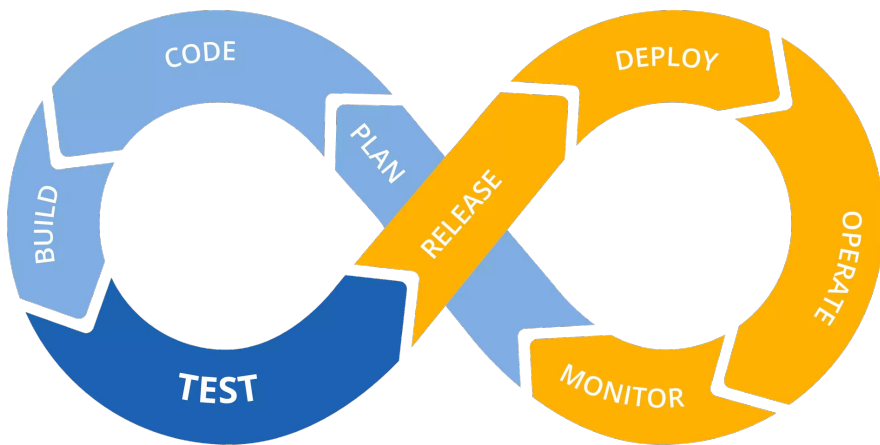


CLARUSWAY
WAY TO REINVENT YOURSELF

Table of Contents

- ▶ What is DevOps?
- ▶ What is Continuous Integration?
- ▶ What is Continuous Delivery/Deployment?
- ▶ AWS's Options

What is DevOps?

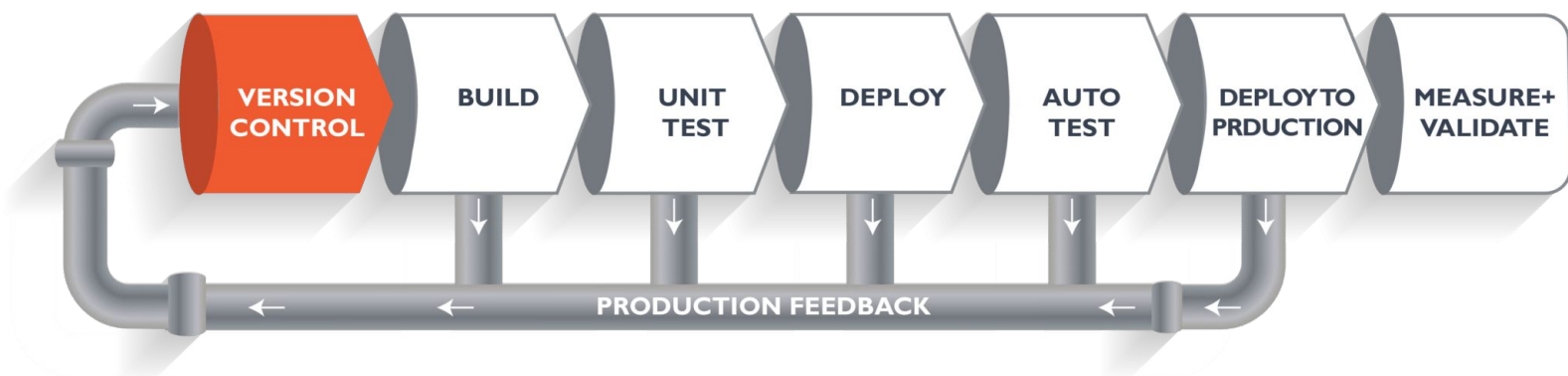


DevOps is a software development approach which involves:

- continuous development,
- continuous testing,
- continuous integration,
- continuous deployment
- continuous monitoring of the software throughout its development lifecycle

3

CI/CD



4



Version Control (Code)



Build



Test

Deploy



CI/CD

CI/CD Pipeline



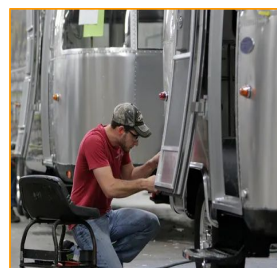
Version Control
(Code)



Build



Test



Deploy

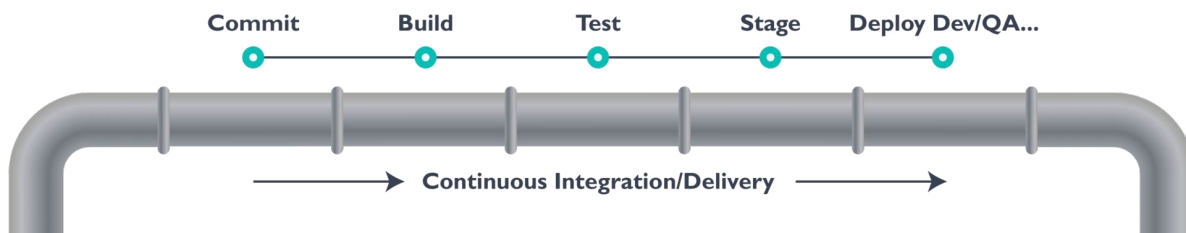


3

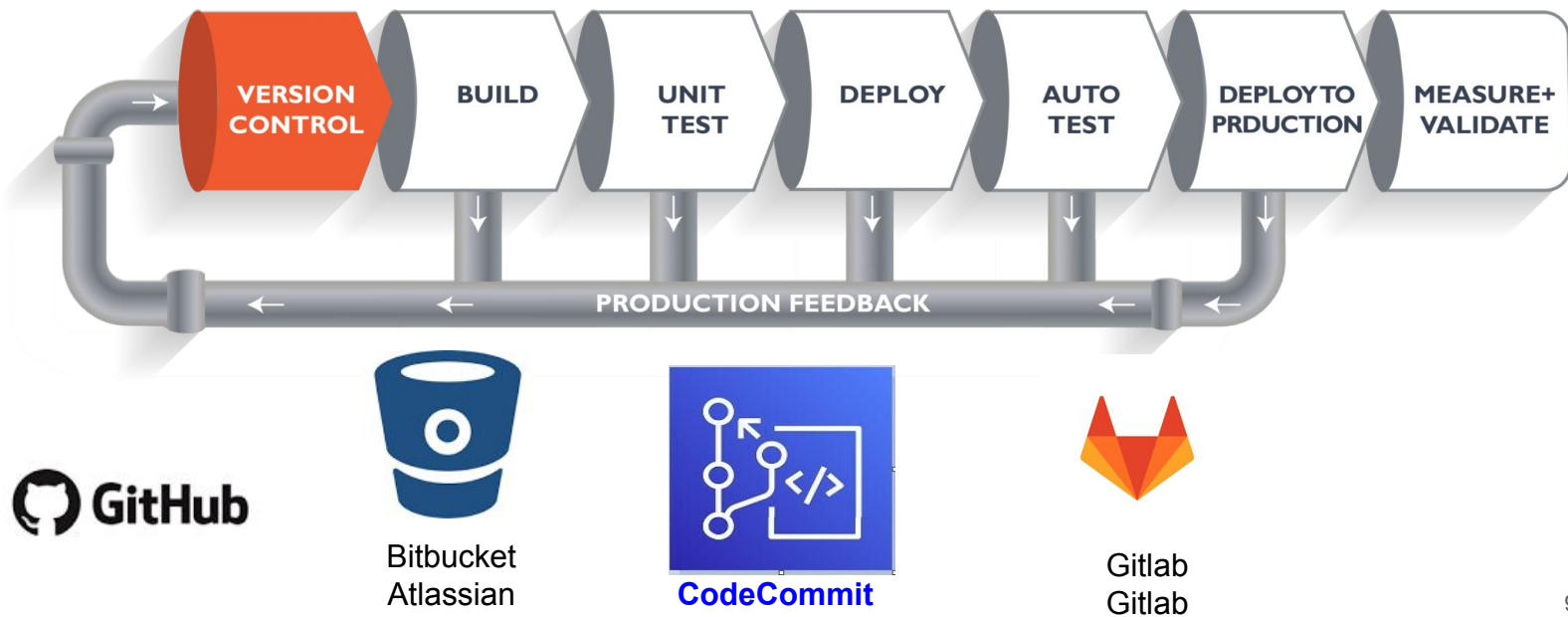
CI/CD Pipeline Stages

CLARUSWAY
WAY TO REINVENT YOURSELF

CI/CD Pipeline

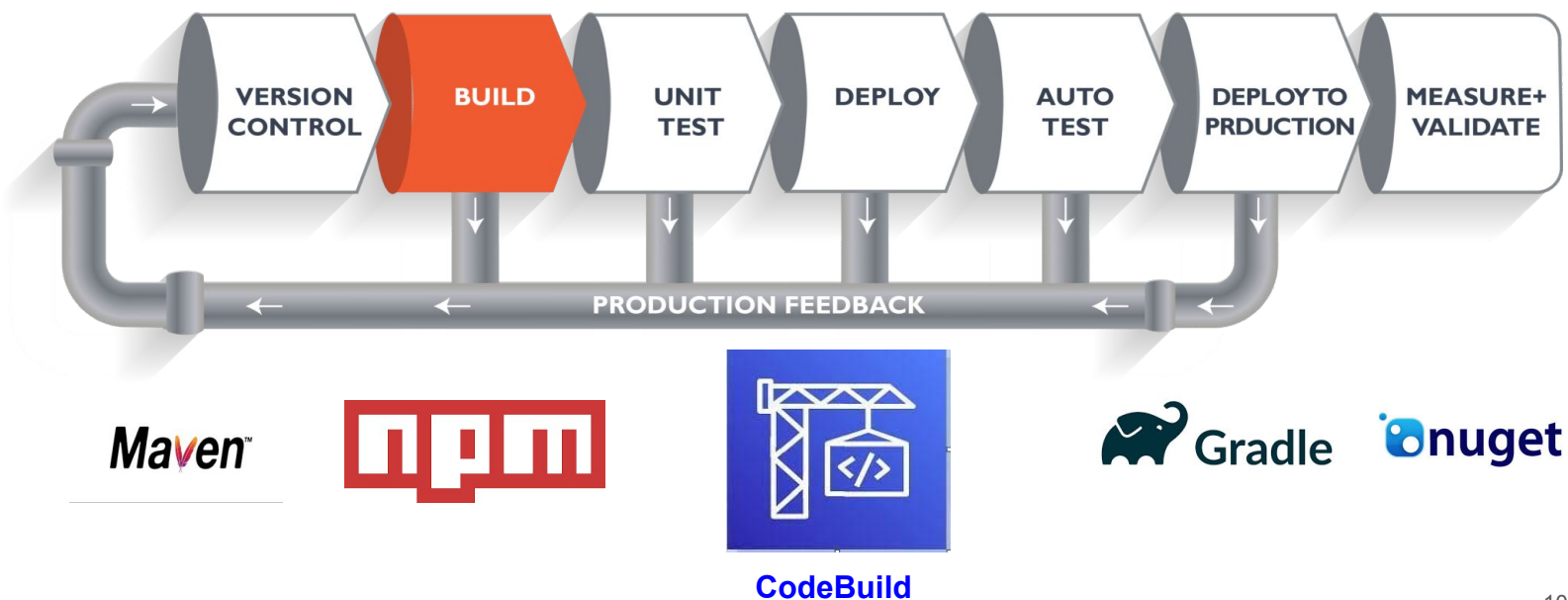


Version Control Stage



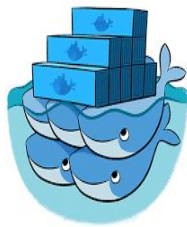
9

Build Stage

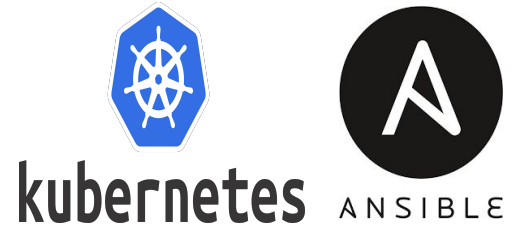


10

Deploy Stage



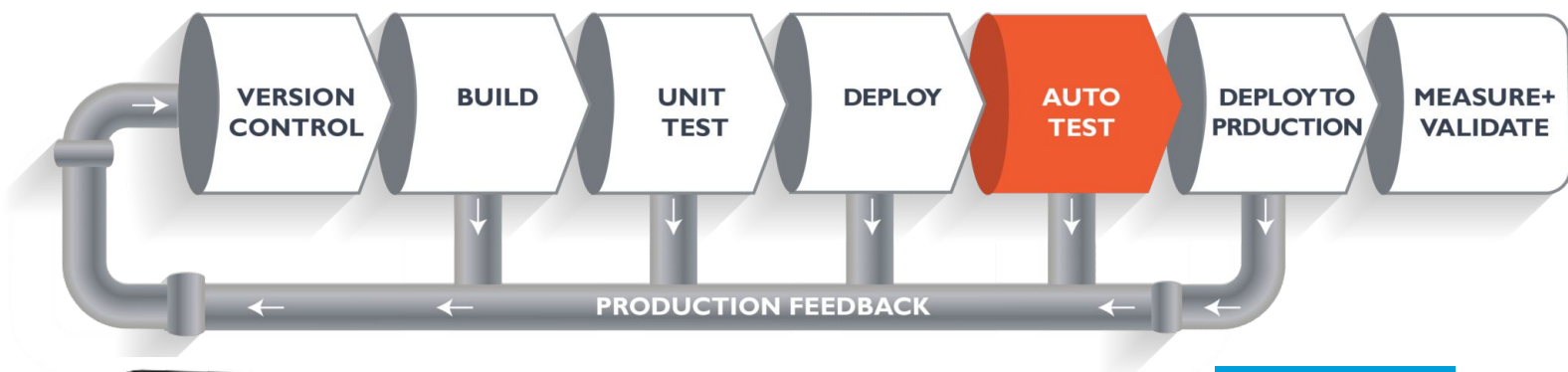
CodeDeploy



11

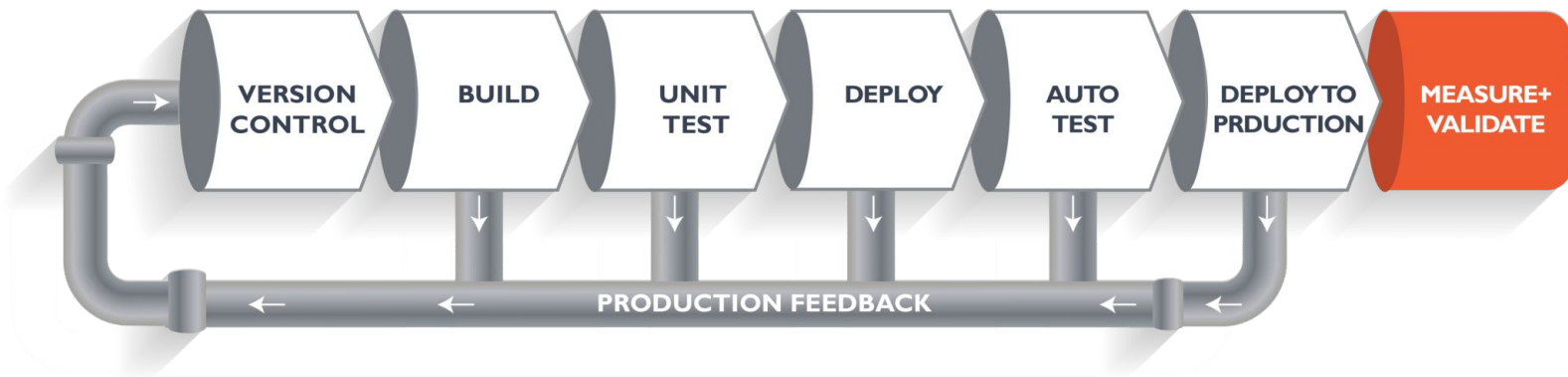
Auto Test Stage

User Acceptance Tests
Functional Tests
Load Tests
Security Tests



12

Measure + Validate

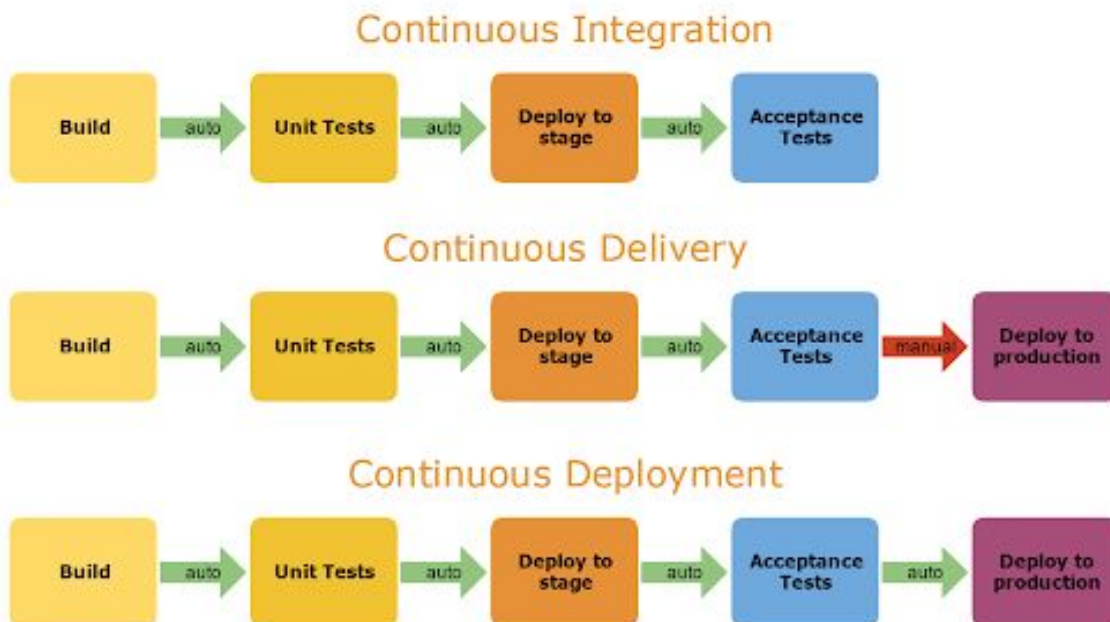


Nagios[®]



13

Continuous Delivery vs Continuous Deployment

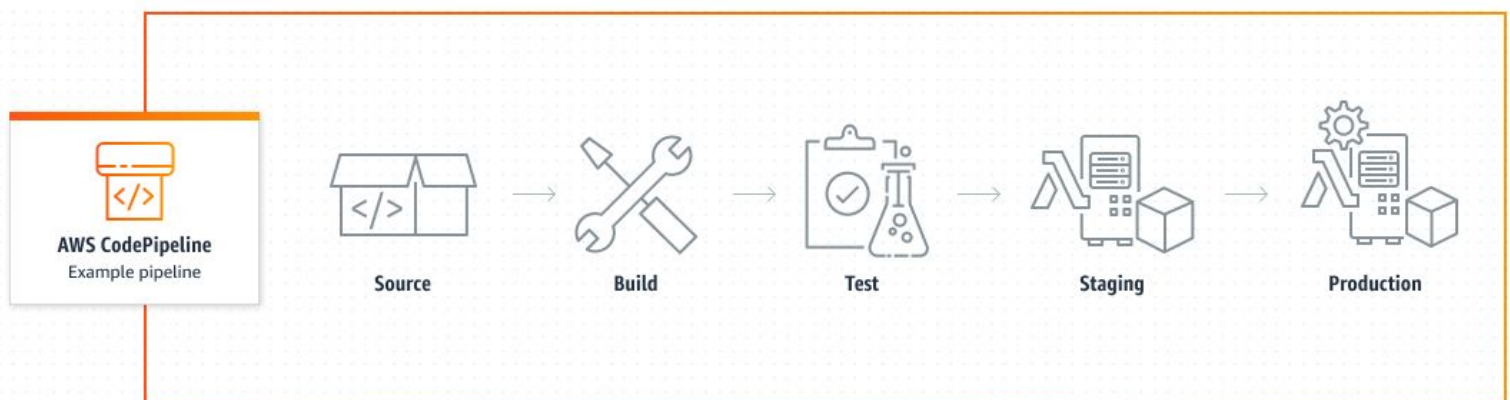


14

CI/CD Pipeline with AWS

15

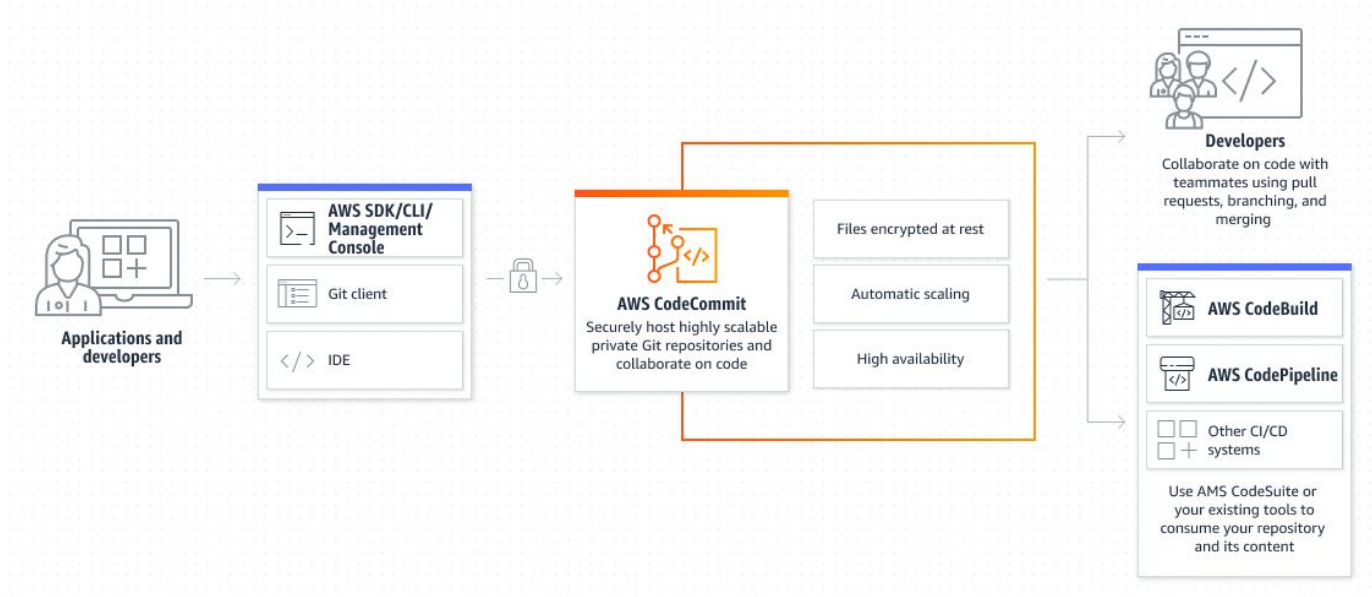
AWS CodePipeline



AWS CodePipeline is a continuous delivery service you can use to **model, visualize, and automate the steps** required to release your software.

16

AWS CodeCommit



AWS CodeCommit is a **version control service** hosted by Amazon Web Services that you can use to **privately** store and manage assets (such as documents, source code, and binary files) in the cloud.

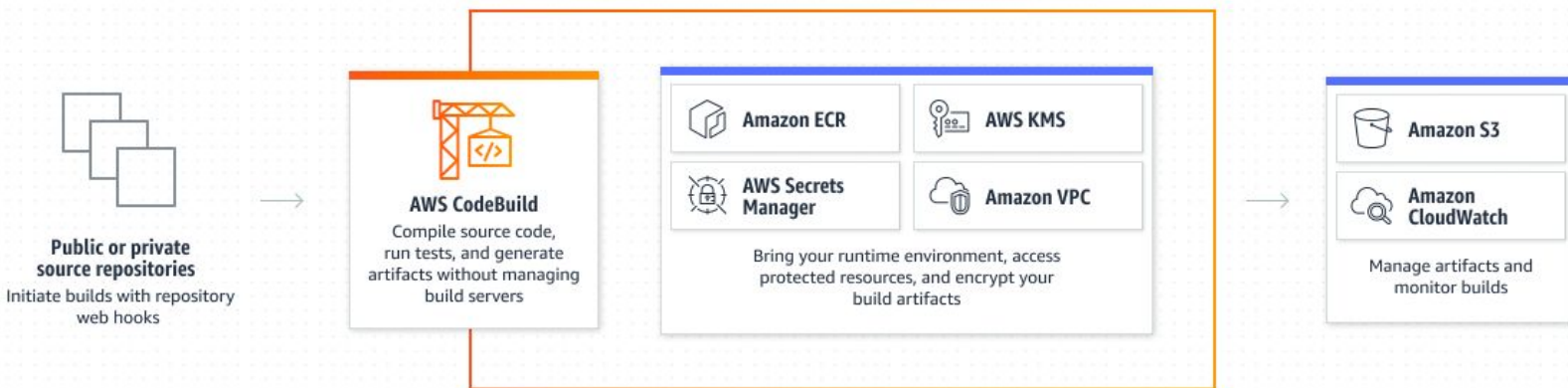
17

AWS CodeCommit

- It supports the standard functionality of Git, so **it works seamlessly** with your **existing Git-based tools**.
- It hosts **private repos**
- CodeCommit repositories are **encrypted at rest as well as in transit**.
- **Support pull requests** where users can review and comment on each other's code changes before merging them to branches
- CodeCommit has **no limit on the size** of your repositories
- You can **migrate to CodeCommit from any Git-based repository**.

18

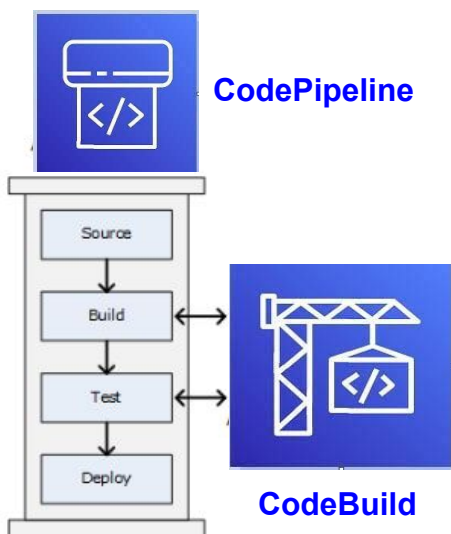
AWS CodeBuild



- **compiles** your source code,
- runs **unit tests**,
- **produces artifacts** that are ready to deploy.

19

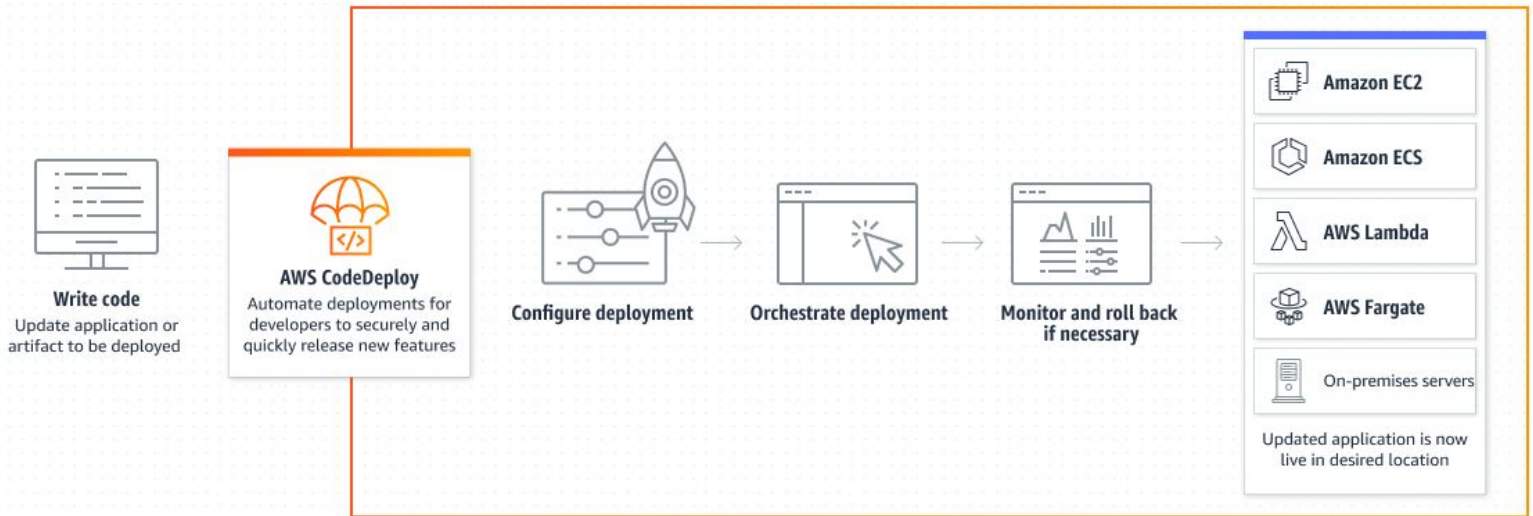
AWS CodeBuild



- **Fully managed** – CodeBuild eliminates the need to set up, patch, update, and manage your own build servers.
- **On demand** – CodeBuild scales on demand to meet your build needs. **You pay only for the number of build minutes you consume.**
- **Out of the box** – CodeBuild provides preconfigured build environments for the most popular programming languages. All you need to do is point to your build script to start your first build.
- **Easily reachable** from Codepipeline Console

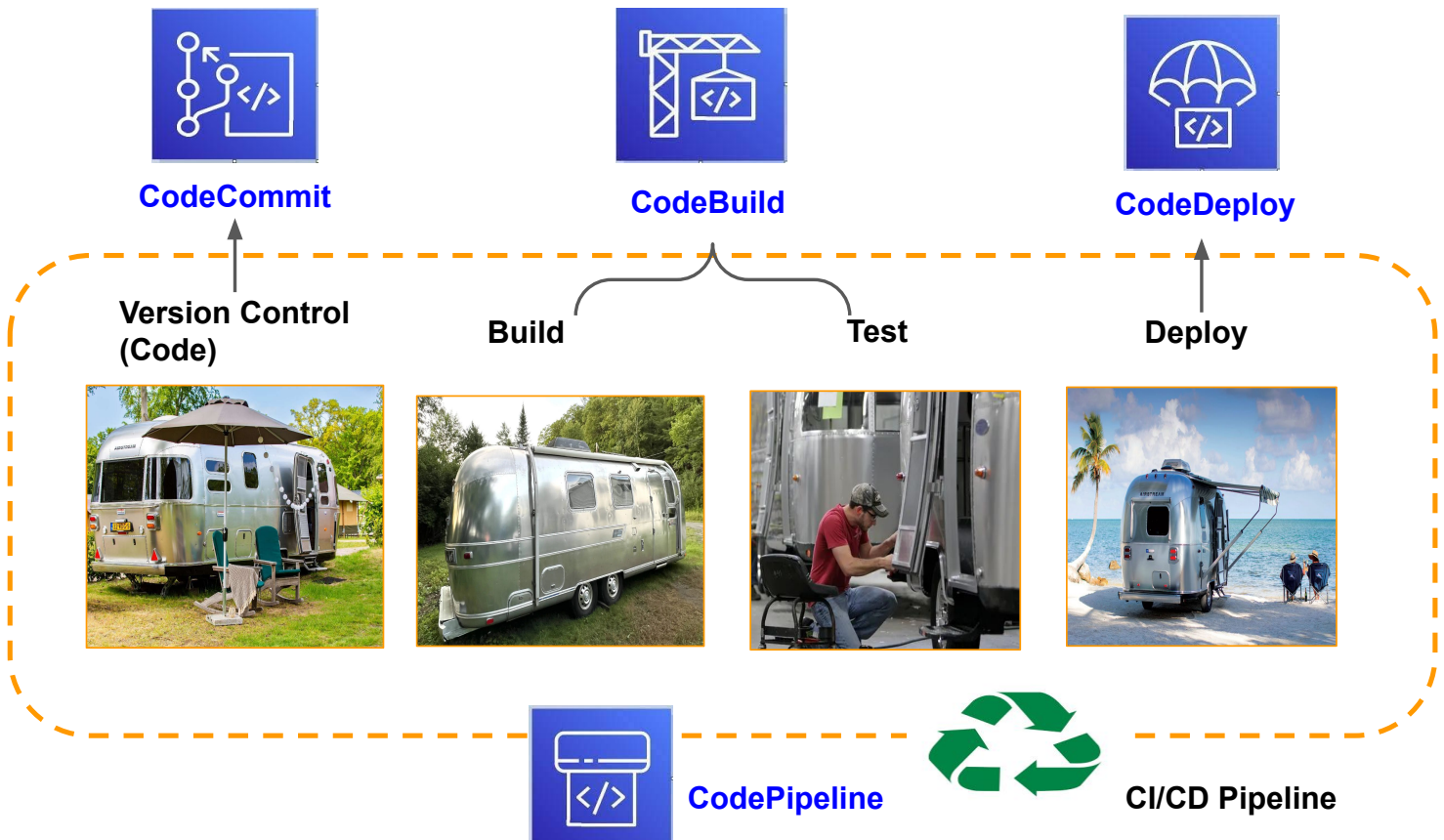
20

AWS Deploy



AWS CodeDeploy is a fully managed deployment service that automates software deployments to various compute services, such as **Amazon Elastic Compute Cloud (EC2)**, **Amazon Elastic Container Service (ECS)**, **AWS Lambda**, and **your on-premises servers**.

21



22