

# AWS CI/CD Pipeline

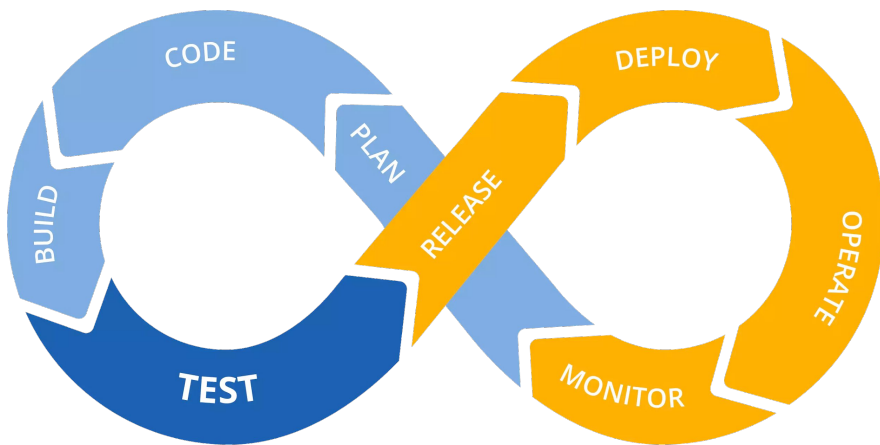


CLARUSWAY  
WAY TO REINVENT YOURSELF

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# What is DevOps?

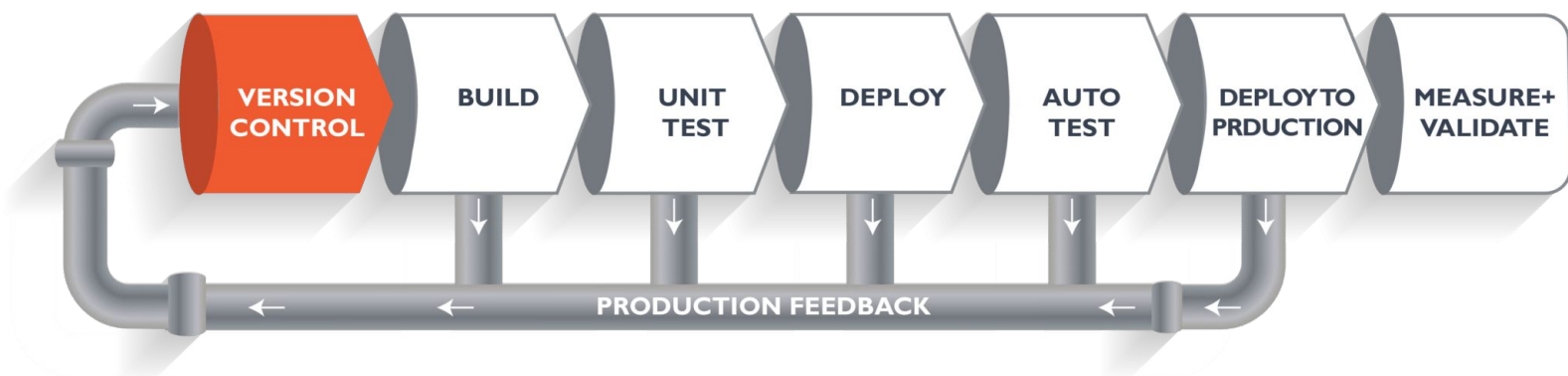


DevOps is a software development approach which involves:

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

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## CI/CD



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Version Control (Code)



Build



Test

Deploy



# CI/CD

CI/CD Pipeline



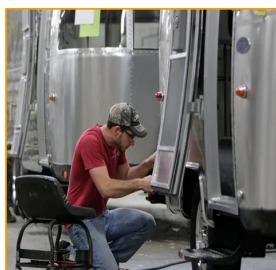
Version Control  
(Code)



Build



Test



Deploy

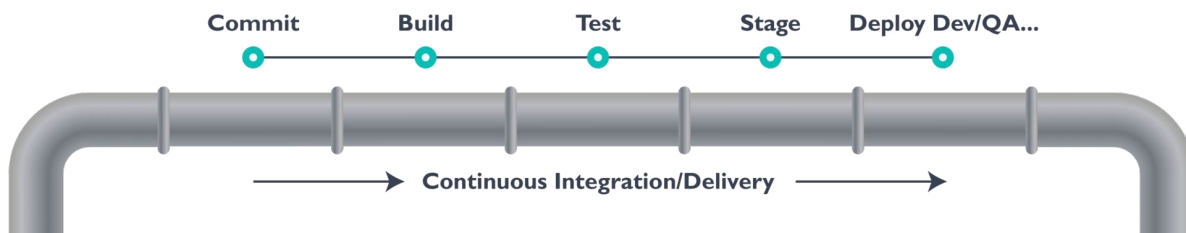


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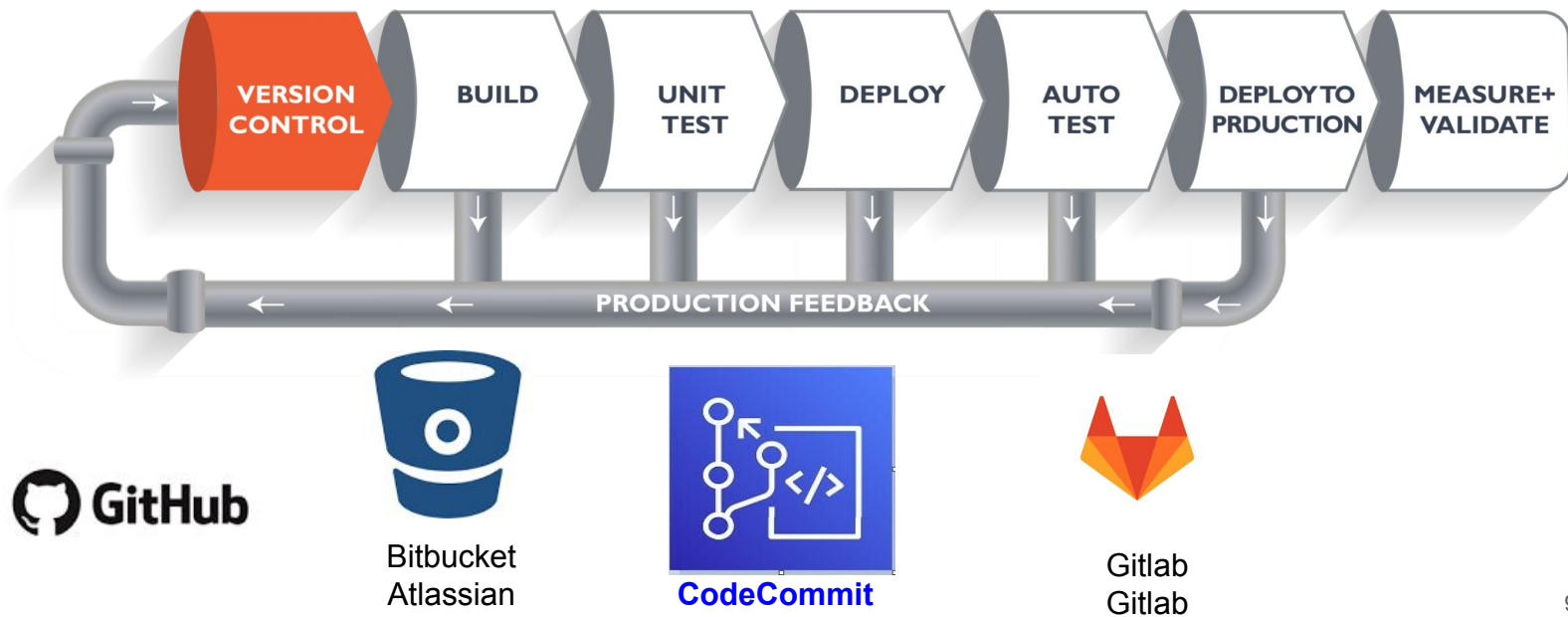
# CI/CD Pipeline Stages

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## CI/CD Pipeline

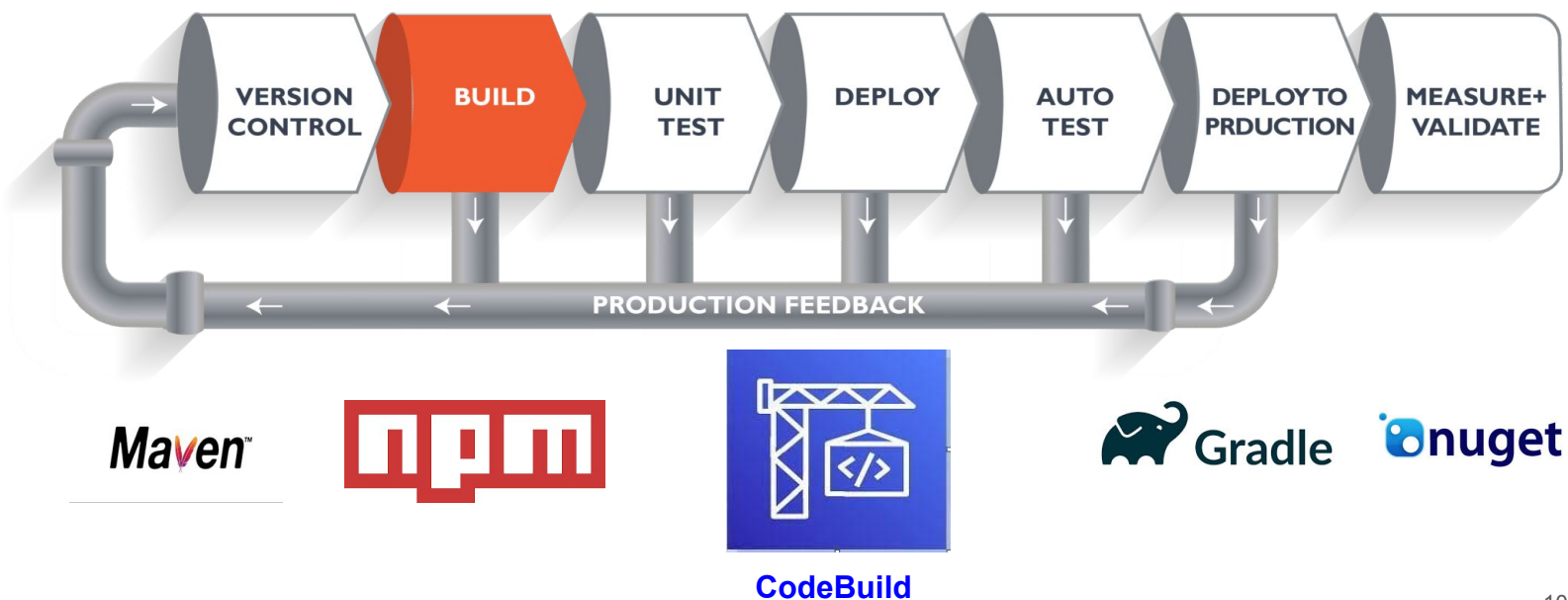


# Version Control Stage



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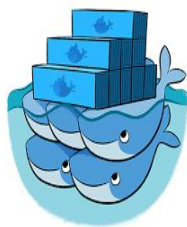
# Build Stage



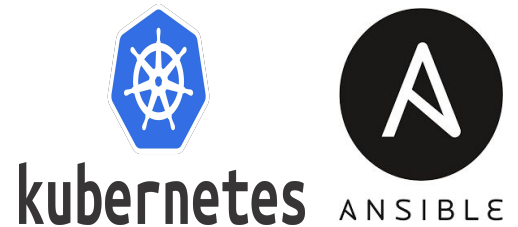
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# Deploy Stage



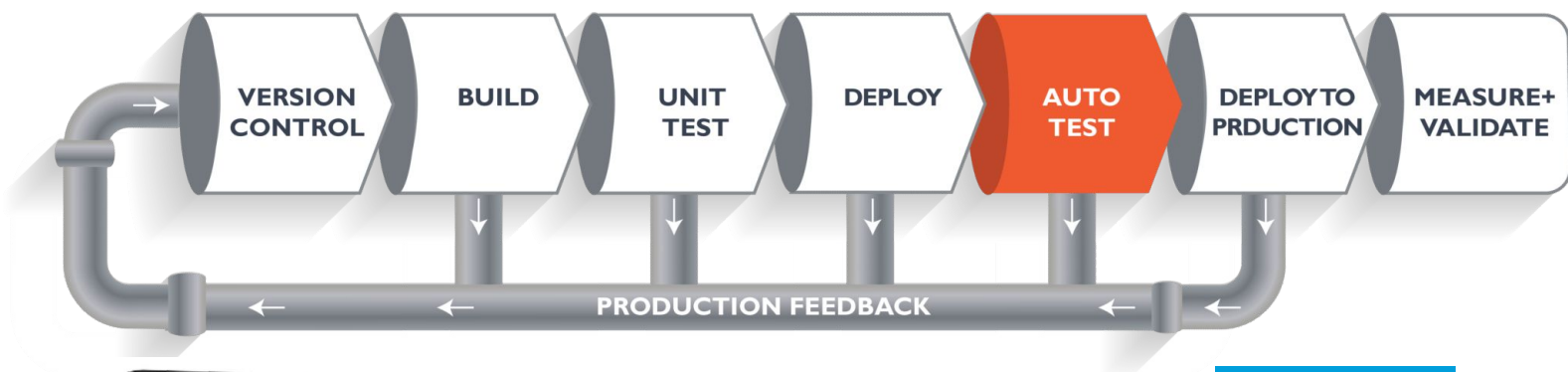
CodeDeploy



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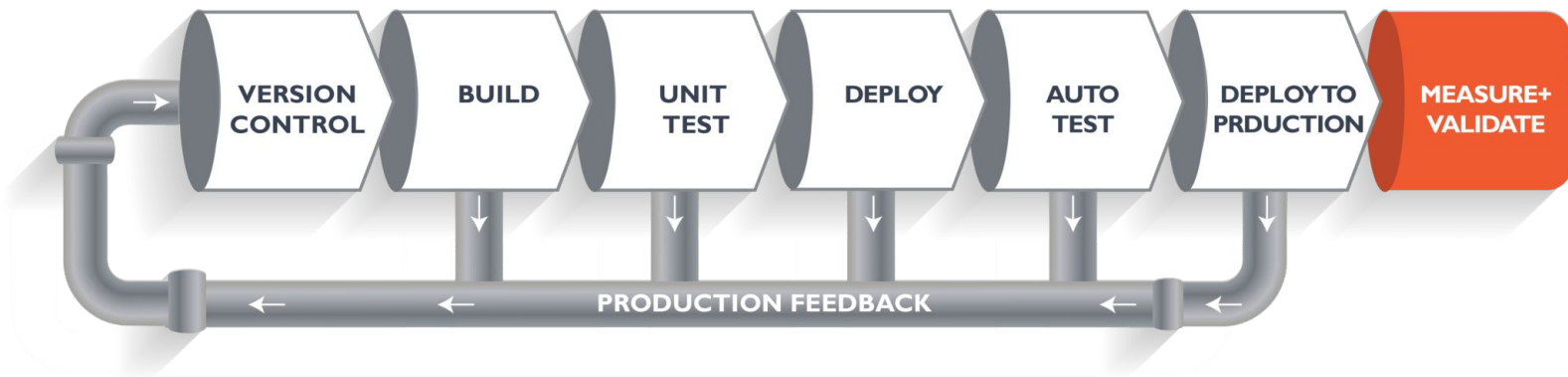
# Auto Test Stage

User Acceptance Tests  
Functional Tests  
Load Tests  
Security Tests



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# Measure + Validate



**Nagios**<sup>®</sup>



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# Continuous Delivery vs Continuous Deployment

## Continuous Integration



## Continuous Delivery



## Continuous Deployment

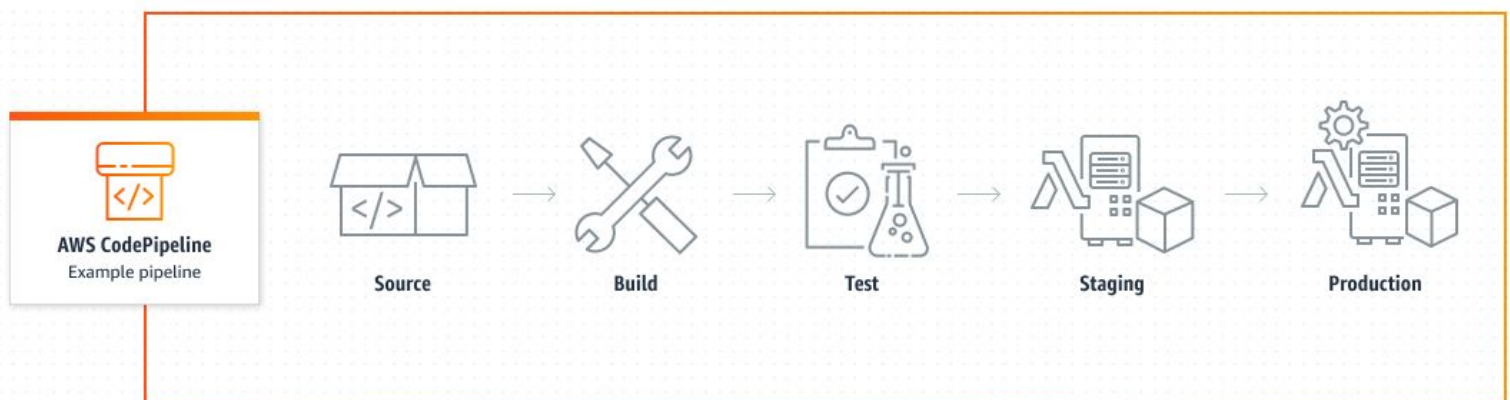


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# CI/CD Pipeline with AWS

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## AWS CodePipeline

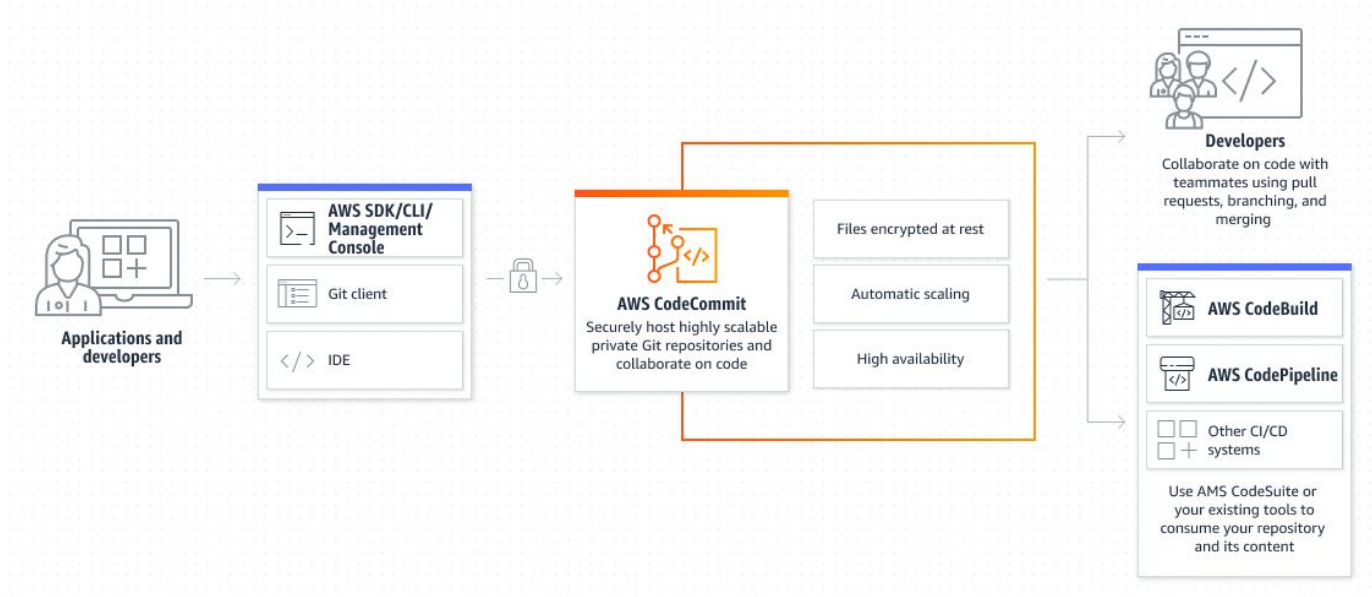


AWS CodePipeline is a continuous delivery service you can use to **model, visualize, and automate the steps** required to release your software.

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# 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.

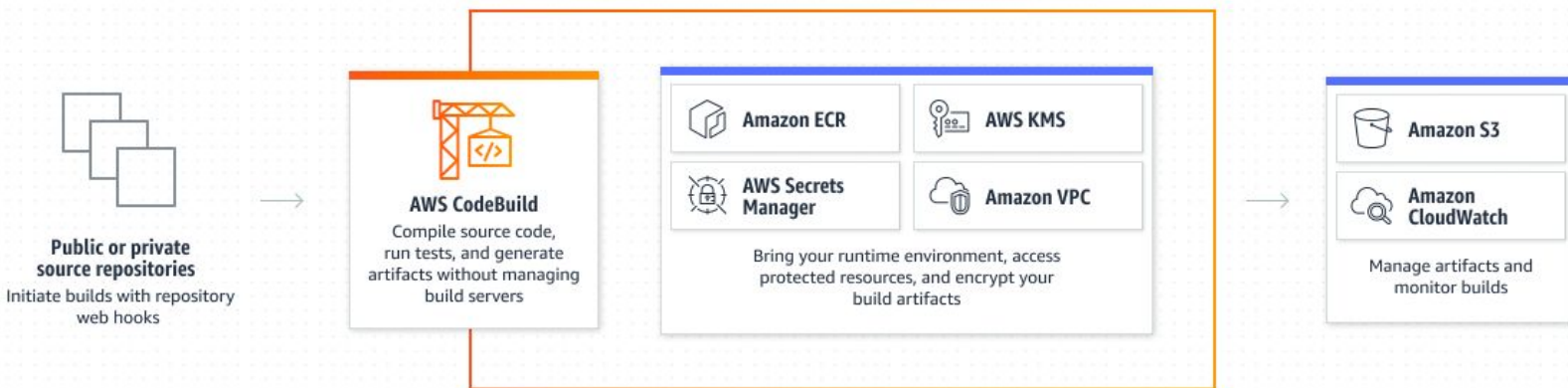
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# AWS CodeCommit

- 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**.

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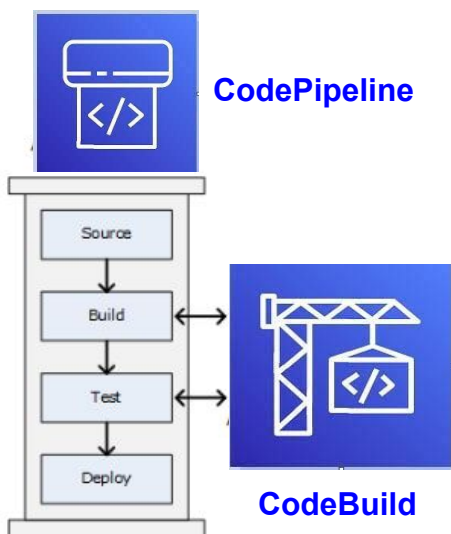
# AWS CodeBuild



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

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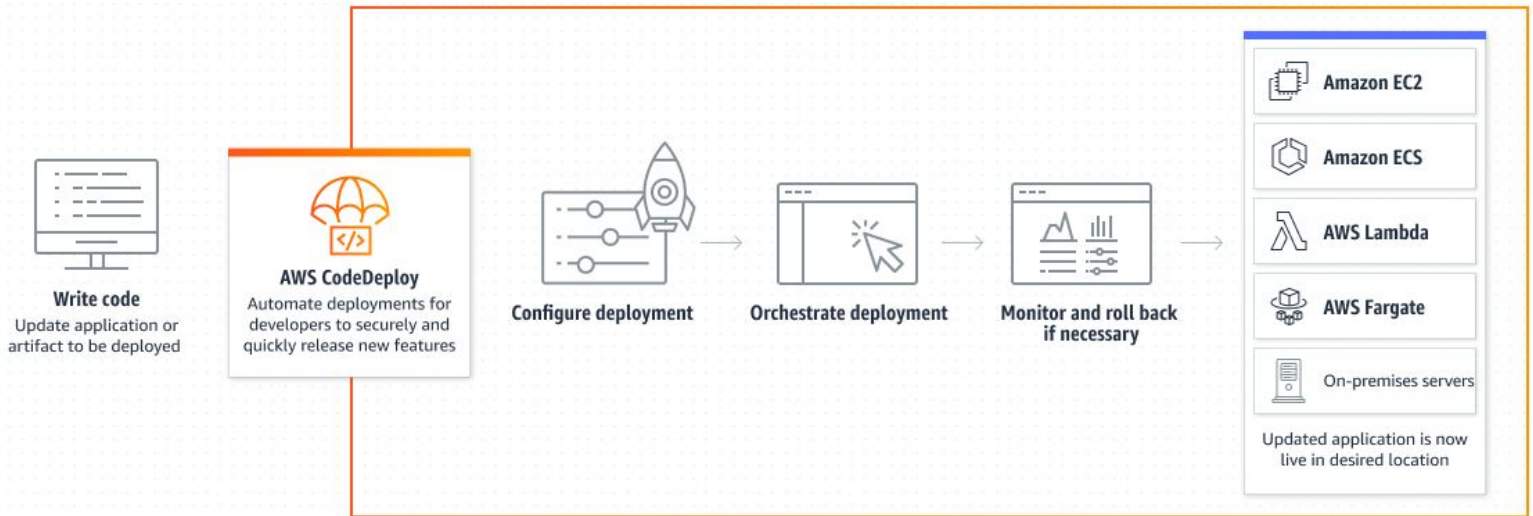
# AWS CodeBuild



- **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

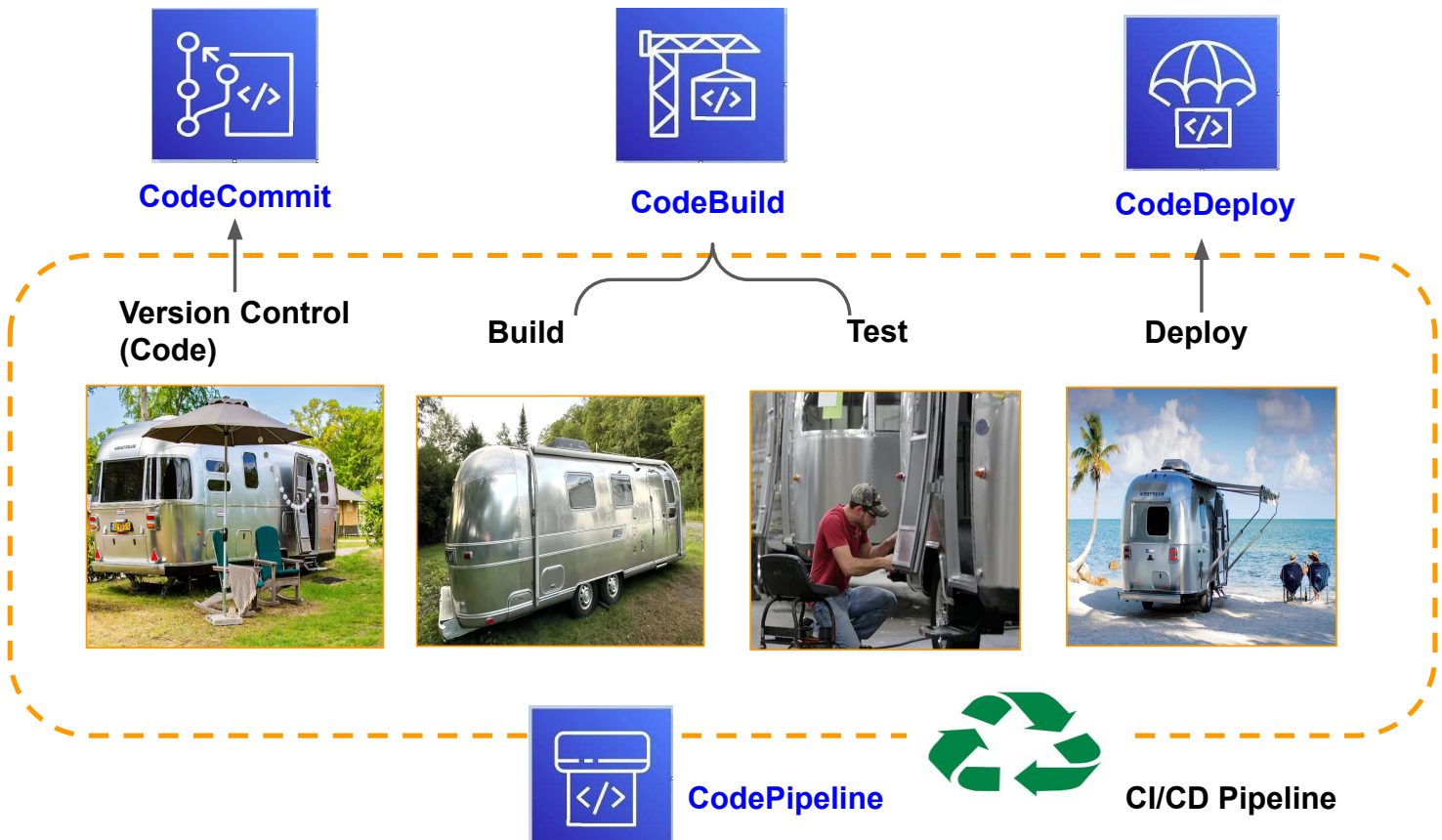
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# AWS Deploy



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**.

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