Introduction to DevOps

CLARUSWAY
WAY TO REINVENT YOURSELF

Table of Contents

- What is DevOps?
- What is Continuous Integration?
- Continuous Integration Basics
- Continuous Delivery vs Continuous Deployment
- Continuous Integration Server
- DevOps Tools

1 DevOps Basics

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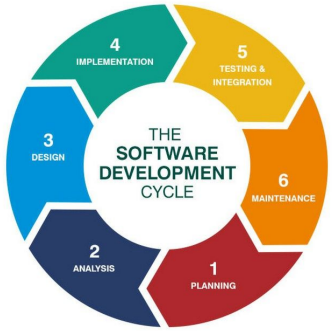
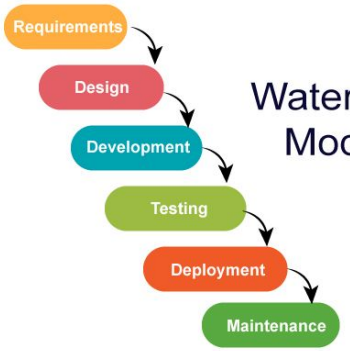
What is Devops?



What is Devops?

- Each phase completely wrapping up before the next phase begins
- If parameters change along the way, it's harder to change course



Waterfall Model

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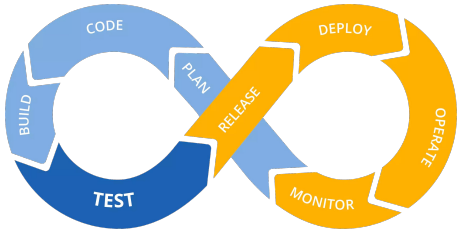
What is DevOps ?



DevOps is a software development approach which involves continuous development, continuous testing, continuous integration, continuous deployment, and continuous monitoring of the software throughout its development lifecycle

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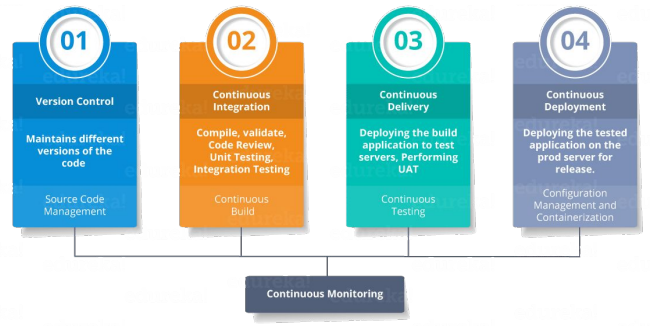
What is DevOps ?



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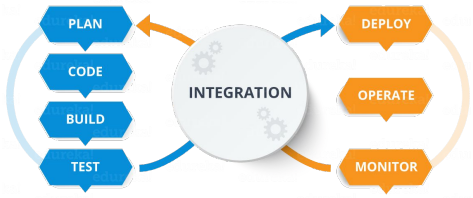
What is Continuous Integration ?



Continuous integration is a software development method where members of the team can integrate their work at least once a day. In this method, every integration is checked by an automated build to search for an error.

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With CI vs Without CI

Development without CI	Development with CI
Lots of Bugs	Fewer bugs
Infrequent and slow releases	Regular working releases
Difficult integration	Easy and Effective Integration
Late bug finding (days,weeks)	Early bug finding (minutes,hours)
Issue raised are harder to fix	Find and fix problems faster and more efficiently.
Poor project visibility	Better project visibility

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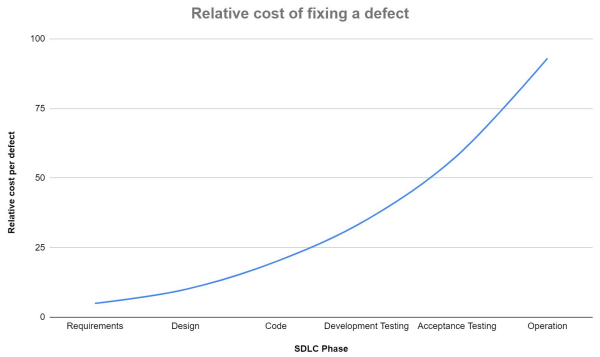

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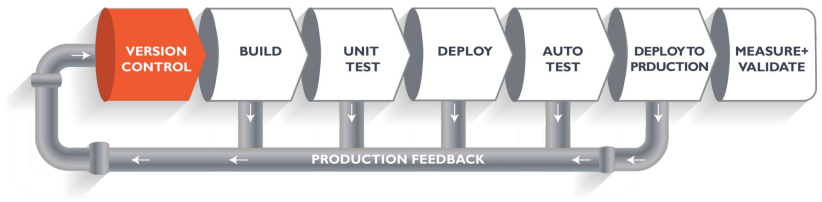

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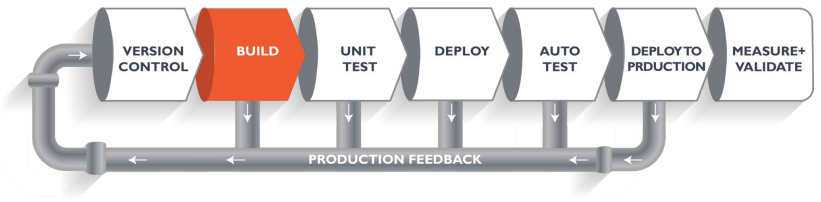

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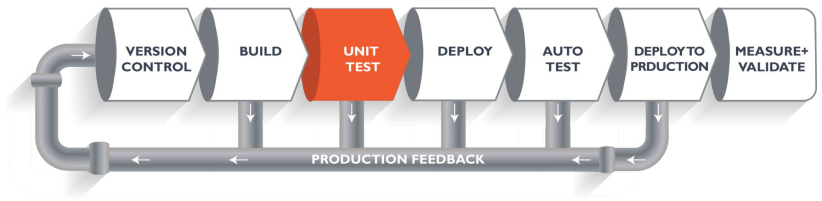

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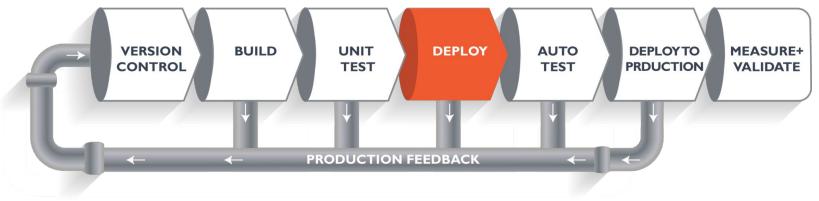

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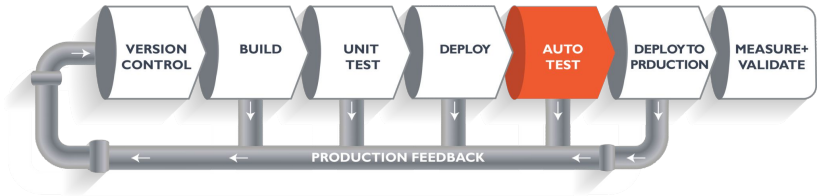

User Acceptance Tests

Functional Tests

Load Tests

Security Tests

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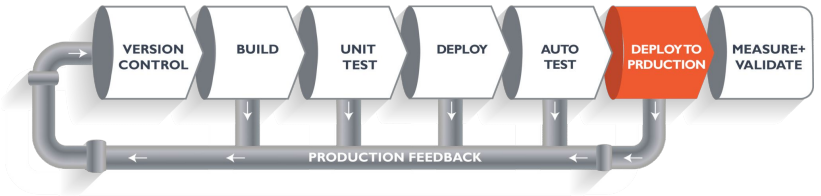
What is Continuous Delivery/Deployment ?



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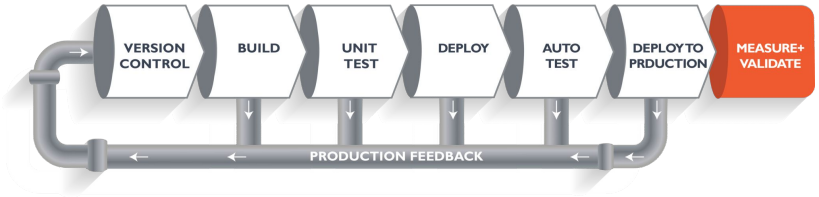

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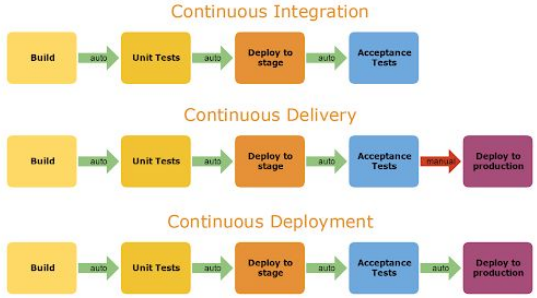
Continuous Delivery vs Continuous Deployment



2 DevOps Tools

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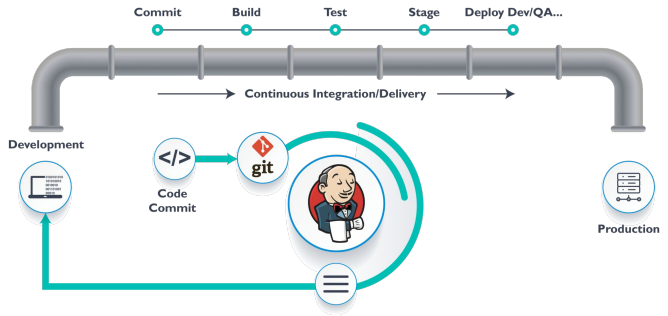
Continuous Integration Server



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Continuous Integration Server

Jenkins

Gitlab

Teamcity

circleci

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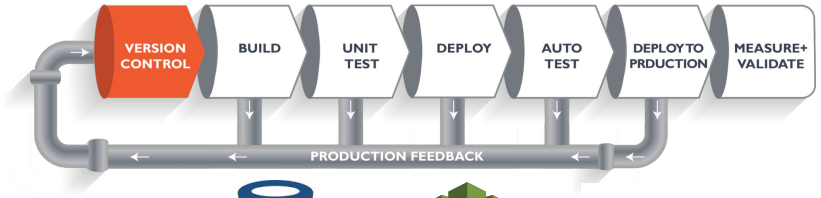
Version Control Stage

EC2
CodeCommit



GitHub

Bitbucket
Atlassian

Codecommit
AWS

Gitlab

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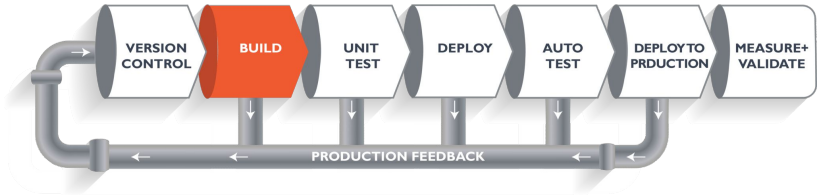
What is Continuous Integration ?

EC2
CodeCommit,CodeBuild
ECS(Elastic Container Service)



Maven npm nuget BASH Xcode Gradle CMake

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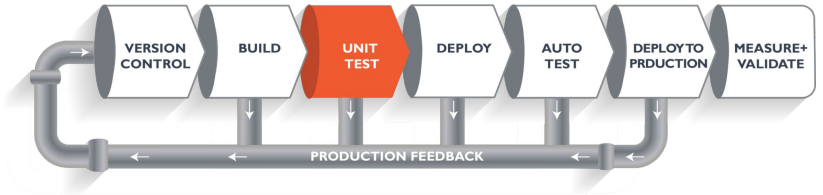

JUnit JACOCO Java Code Coverage sonarqube

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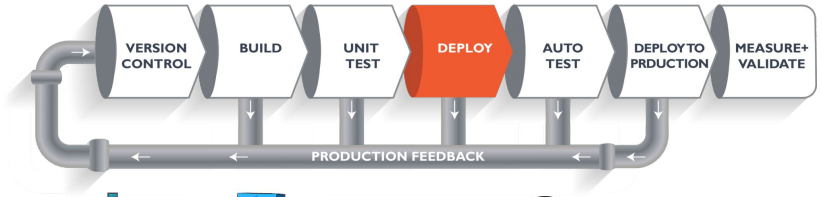
What is Continuous Integration ?

EC2
CodeCommit,CodeBuild, CodeDeploy
ECS(Elastic Container Service)
ECR,S3,RDS,DynamoDB
Cloudformation,Beanstalk
ELB, AutoScaling



docker kubernetes ANSIBLE Terraform

Introduction to DevOps

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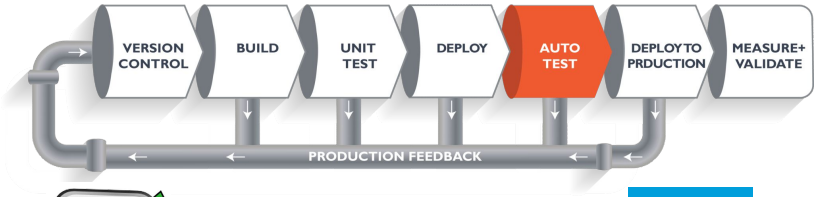

Se Protractor end to end testing for AngularJS cypress.io Visual Studio Coded UI

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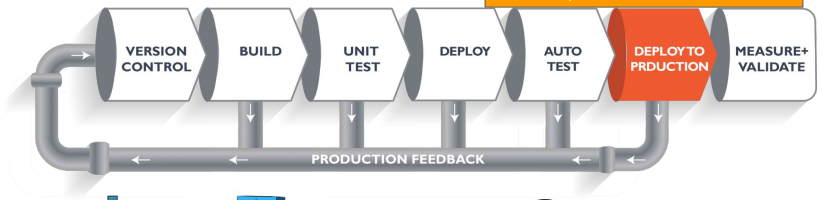
Continuous Delivery/Deployment ?

EC2
CodeCommit,CodeBuild, CodeDeploy
ECS(Elastic Container Service)
ECR,S3,RDS,DynamoDB
Cloudformation,Beanstalk
ELB, AutoScaling
Cloudfront,Route53



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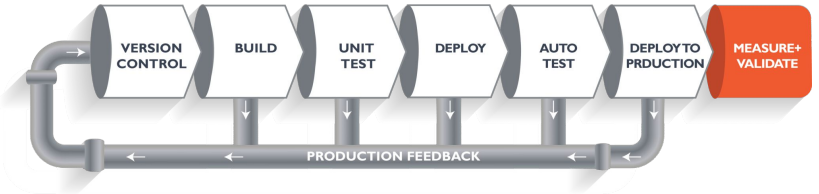
Continuous Delivery/Deployment ?

Cloudwatch
SNS
SQS
SES



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