
CI/CD
UDA PEOPLE

WHAT IS CI/CD STANDS FOR ?

consist of three major concepts

- Continuous Integration: describes the process of merging developer branches to the main branch several times a day. CI puts an emphasis on test automation and finally generates a high quality, deplorably artifact.

- Continuous Delivery: In addition to Continuous Integration, Continuous Delivery makes sure that changes of a software product can be released quickly to customers in an automated way and at any point in time.

- Continuous Deployment extends Continuous Delivery in such a way that it allows frequent automated deployments without any human interaction. Typical phases in Continuous Deployment are Infrastructure Provisioning, Smoke Testing, Production Deployments and automated Rollbacks.

WHAT IS CI/CD ?

- CI/CD is a method to frequently deliver apps to customers by introducing automation into the stages of app development. The main concepts attributed to CI/CD are continuous integration, continuous delivery, and continuous deployment.
- CI/CD is a solution to the problems integrating new code can cause for development and operations teams
- Specifically, CI/CD introduces ongoing automation and continuous monitoring throughout the lifecycle of apps, from integration and testing phases to delivery and deployment. Taken together, these connected practices are often referred to as a "CI/CD pipeline"

WHAT IS CONTINUOUS INTEGRATION ?

- Compile
- Unit Test
- Static Analysis
- Dependency vulnerability testing
- Store artifact

WHAT IS CONTINUOUS DEPLOYMENT ?

- Creating infrastructure
- Provisioning servers
- Copying files
- Promoting to production
- Smoke Testing
- Rollbacks

THE BENEFITS

- TECHNICAL BENEFIT

- Catch Compile Errors After Merge
- Catch Unit Test Failures
- Deploy to Production Without Manual Checks
- Automate Infrastructure Creation
- Automated Smoke Tests

- BUSINESS BENEFIT

- Less developer time on issues from new developer code
- Less bugs in production and less time in testing
- Less human error, Faster deployments
- Less time to market

CONFIGURATION MANAGEMENT TOOL

- INSTALLABLE/ON-PREM

- Catch compile error after merge
- Catch unit test failure
- Automatic infrastructure creation
- Automated Smoke test

CONFIGURATION MANAGEMENT TOOL

- CLOUD-BASED

- Bambo
- Circle CI
- Travirs CI
- Gitlap

MONITORING

- MONITORING TOOLS

- Graphity
- Loggely
- Cloud watch
- prometheus
- Datadog
- logstash