

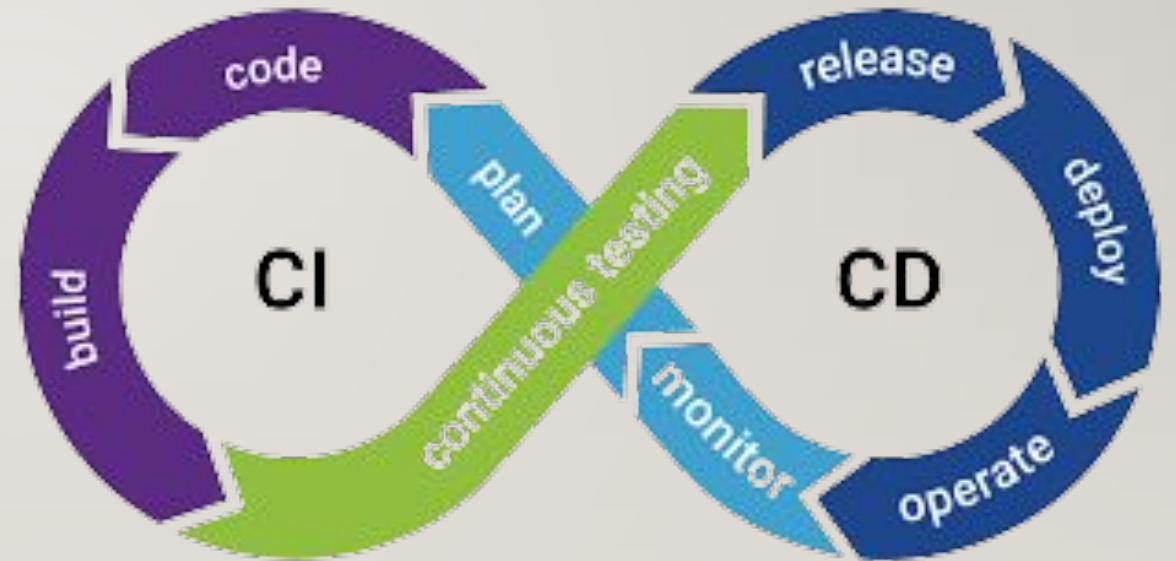
CI/CD AT A GLANCE

AN EXPLANATION TOWARDS UNDERSTANDING OF CI/CD BUSINESS SIDE



GENERAL OVERVIEW

- The concept of CI/CD
- Challenges/Problems of CI/CD
- What CI/CD comes to solve



CI - CONTINUOUS INTEGRATION

*The practice of merging all developers' working copies to a shared mainline several times a day. It's the process of "**Making**". Everything related to the code fits here, and it all culminates in the ultimate goal of CI: a high quality, deployable artifact!*

CI PHASES...

- Compile
 - Support the developers to catch compile errors from other dev in the team and reduce cost
- Unit Test
 - Reduce bug in production and time for testing
- Static Analysis
 - Enable early security catches and safe us from security holes
- Dependency vulnerability testing
 - Enable early security catches and safe us from security holes
- Store artifact

CD - CONTINUOUS DEPLOYMENT

*A software engineering approach in which the value is delivered frequently through automated deployments. Everything related to deploying the artifact fits here. It's the process of "**Moving**" the artifact from the shelf to the spotlight.*



CD PHASES...

- Creating infrastructure
 - Avoid cost by less human error and make faster deployments
- Provisioning servers
 - Less infrastructure costs from unused resources
- Copying files

CD PHASES... CONT'D

- Promoting to production
 - Less time to market
- Smoke Testing (aka Verify)
 - Reduced downtime from a deploy-related crash or major bug
- Rollbacks
 - Quick undo to return production to working state

WHAT CI/CD COMES TO SOLVE

- More time for delivering service and release circle
- Merge Issues prevention
- Conflicts merging and botch merging caused code loss
- Friction and issues between operation team and dev departments
- One member of the development can not deploy to production
- Deployment time are not celebration time