Less Time to Market with CI/CD

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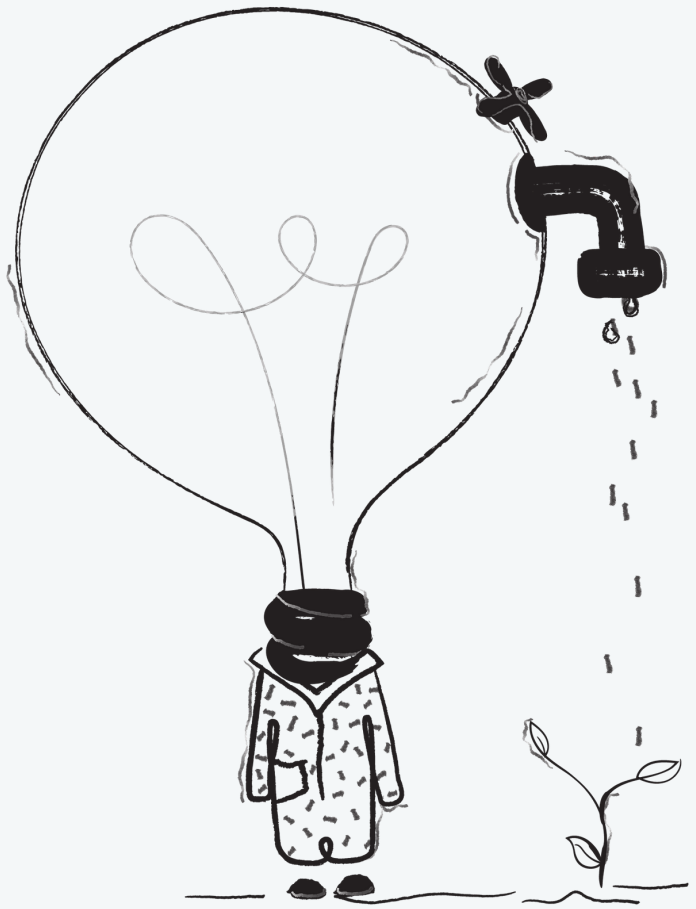
What's CI/CD?



Introduction:

Developing teams are working consistently to deliver value to customers and they often miss the deadlines due to integration problems this means business is losing money because of these delays, what if there's a great technique to fix this critical issue with a blink of an eye.

Introducing 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 (AKA “integration hell”).

What's CI?

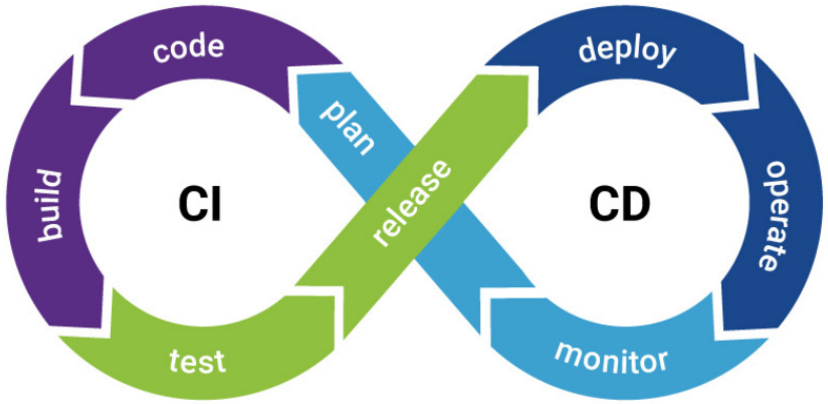
Continuous Integration:

Continuous integration (CI) is the practice of automating the integration of code changes from multiple contributors into a single software project. Allowing developers to frequently merge code changes into a central repository where builds and tests then run.

Automated tools are used to assert the new code's correctness before integration.

Advantages of CI

- **Lead time**: Early feedback and build/test automation help decrease the time it takes to go from code committed to code successfully running in production.
- **Deployment frequency**: Automated tests and builds are a prerequisite to automated deploy.
- **Change failure rate**: Early automated testing greatly reduced the number of defects that make their way out to production.



What's CD?

Continuous deployment:

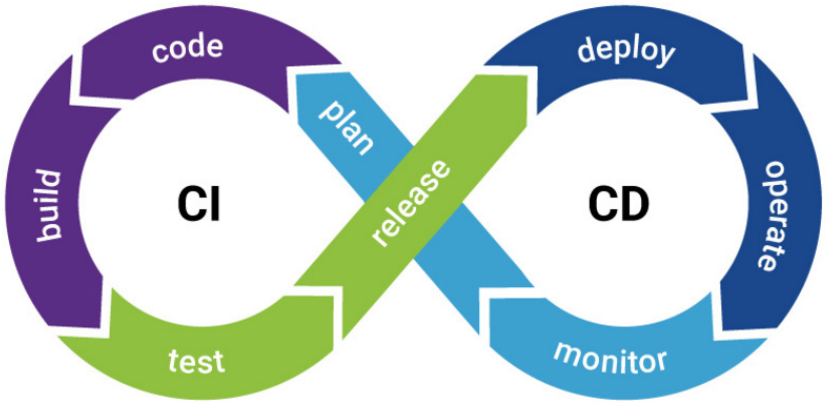
Continuous deployment is the next step of continuous delivery.

Every change that passes the automated tests is automatically placed in production, resulting in many production deployments.

In short, CI is a set of practices performed as developers are writing code, and CD is a set of practices performed after the code is completed.

Advantages of CD

- Increased speed of innovation and ability to compete in the marketplace
- Code in production is making money instead of sitting in a queue waiting to be deployed
- Higher quality code and operations due to specialization



CI/CD Pipeline example: