CM-2603 Data Science Group Project

Introduction to CI/CD Pipeline

Week 11 | Prasan Yapa | Sriyan Fernando

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Learning Outcomes

- Covers LO3 for Module
- On completion of this lecture, students are expected to be able to:
    - Identify the difference between CI and CD
    - Identify how to use CI/CD Pipeline

CONTENT

- What is continuous Integration(CI)?
- What is continuous delivery(CD)?
- What is continuous deployment?
- CI/CD Process, Tools

What is continuous Integration(CI)?

- Successful CI means new code changes to an app are regularly built, tested, and merged to a shared repository.
- It’s a solution to the problem of having too many branches of an app in development at once that might conflict with each other.
- The developer's changes are validated by creating a build and running automated tests.

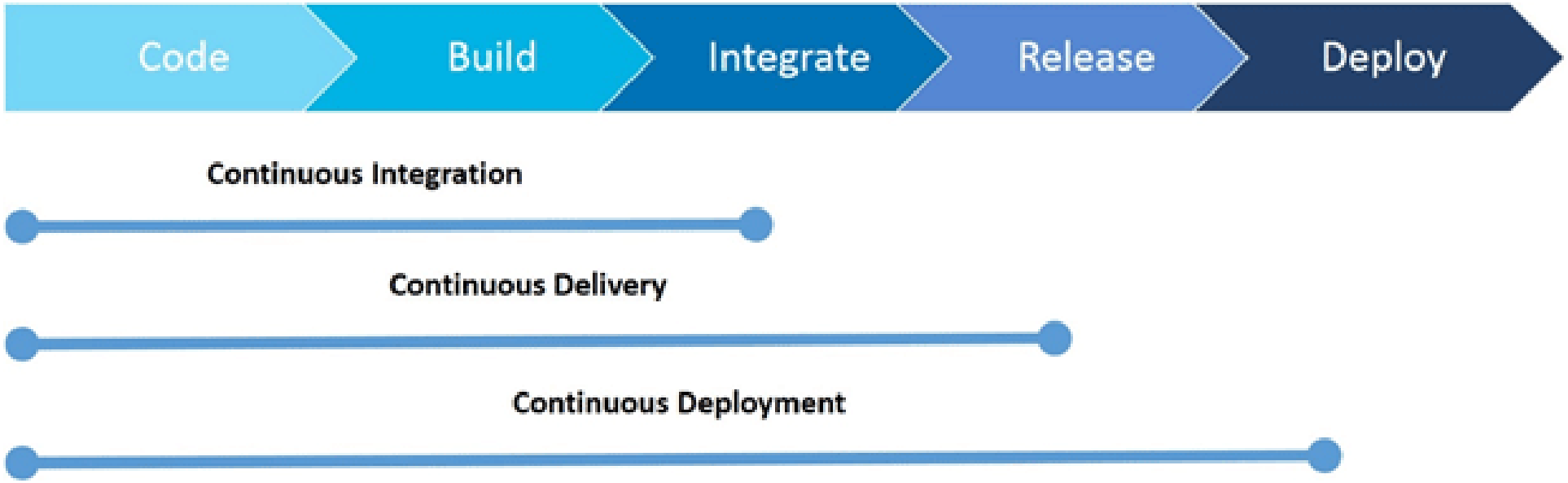
What is continuous delivery(CD)?

- Extension of continuous integration.
- Deploys all code changes to a testing and/or production environment.
- It means a developer's changes to an application are automatically bug tested and uploaded to a repository.

What is continuous deployment?

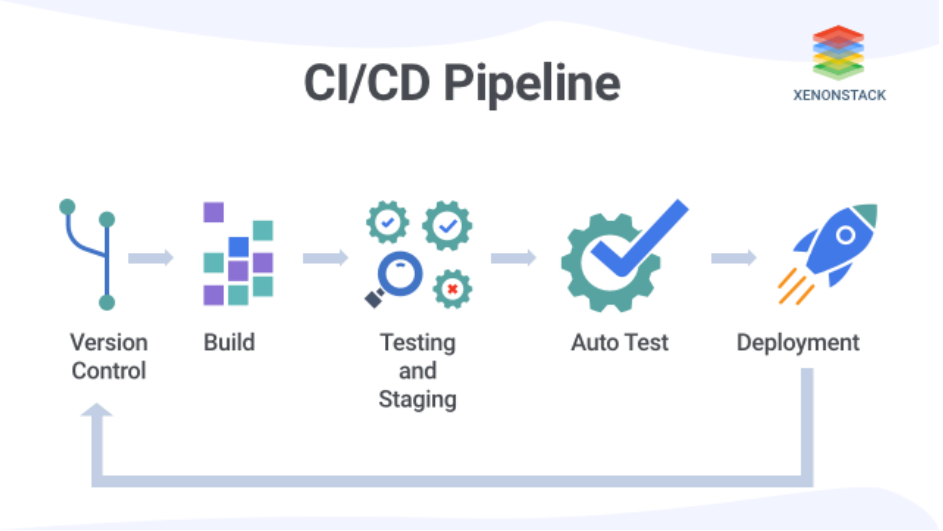
- Every change that passes all stages of your production pipeline is released to your customers.(refer to automatically releasing a developer's changes from the repository to production)

Overall Process of CI/CD



Why CI/CD should use it?

- More Test Reliability
- Quickly deploy code to production
- Simultaneous work on builds
- Never ship broken code



What are some common CI/CD tools?

- Jenkins
- CircleCi
- Teamcity
- GitLab

Referrences

- https://www.redhat.com/en/topics/devops/what-is-ci-cd