Gitlab CI/CD

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Gitlab CI/CD

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  - Explanation of CI/CD
  - Introduction to Gitlab
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Essential Question: What is CI/CD?

Explaining CI/CD

CI (Continuous Integration)

- CI (Continuous Integration) service builds and tests the software whenever developer pushes code to application.

CD (Continuous Delivery)

- CD (Continuous Delivery) s a software service that places the changes of every code in the production which results in every day deployment of production.
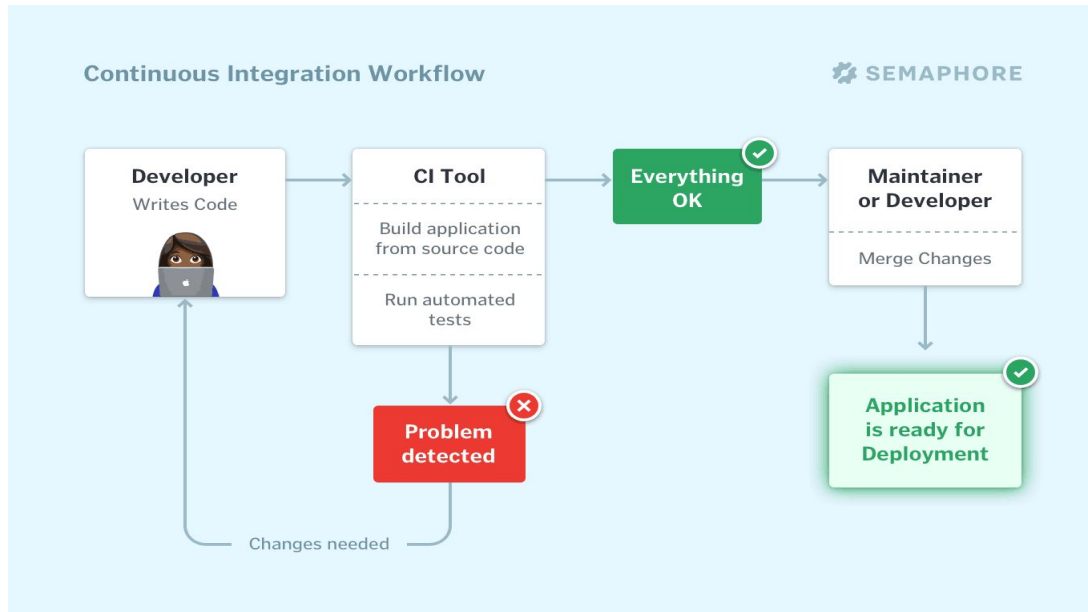
Examples CI/CD

CI/CD Tools and Platforms

- [Jenkins](#)
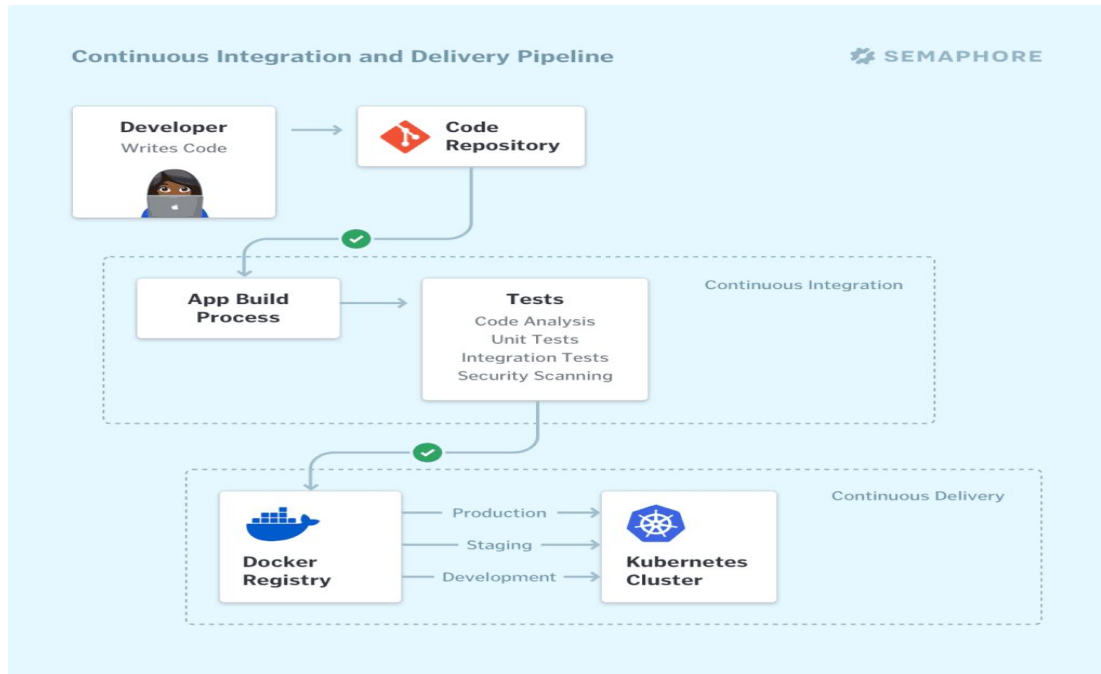- [Teamcity](#)
- [Github](#)
- ...
- **[Gitlab](#)**
- ....
-

Explaining CI (Continuous Integration)

Source:

https://semaphoreci.com/continuous-integration

Explaining CD (Continuous Delivery)

Source:

https://semaphoreci.com/continuous-integration

Why Gitlab CI/CD?

- Open Source
- Fast
- Complete CI/CD with only one tool without other tools
  - create tickets
  - merge requests
  - write code
  - setup CI/CD

Why Gitlab CI/CD?

- What are some of the benefits of a good CI/CD strategy?
  - 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
  - Great ability to attract and retain talent
  - Higher quality code and operations due to specialization
- ......
- Source : https://medium.com/@gitlab/4-benefits-of-ci-cd-efc3d6b9d09d

What is Gitlab?

- **"GitLab** is a web-based DevOps lifecycle tool that provides a Git-repository manager providing wiki, issue-tracking and CI/CD pipeline features, using an open-source license, developed by GitLab Inc."
- Launched in 2011
- Available in English
- Written in Ruby, Go and Vue JS
- Community Edition (MIT License)
- Enterprise Edition (EE License)
- Valuation about 2.7 Billion $
- Source : https://en.wikipedia.org/wiki/GitLab
- Interesting facts
  - https://about.gitlab.com/blog/2017/02/01/gitlab-dot-com-database-incident/

What is Gitlab Pipeline?

- **Commit**: A code change.
- **Job**: Instructions that a runner has to execute.
- **Pipeline**: A collection of jobs split into different stages.
- [Runner](#): An agent or server that executes each job individually that can spin up or down as needed.
  - GitLab CI/CD runs builds on **GitLab Runners**.
  - **Runners** are isolated virtual machines that run predefined steps through the GitLab CI API.
- **Stages**: A keyword that defines certain stages of a job, such as `build` and `deploy`. Jobs of the same stage are executed in parallel.

What is Gitlab Pipeline?
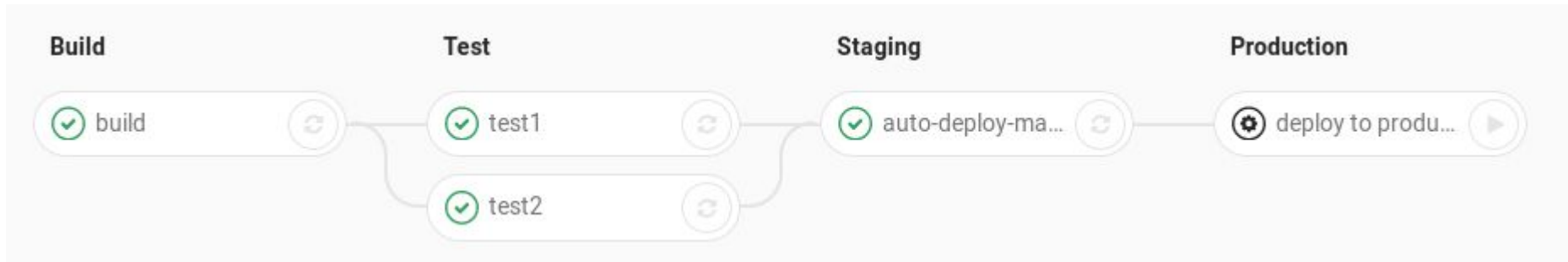
Live Intro to Gitlab Website

- **GITLAB**

Live Coding and CI/CD Scenario

- **Programming Language : Java**
- **Framework : Spring Boot**
- **Project Management tool: Maven**
- **Deployment : Heroku**