Establishing the CI/CD pipeline for the in-house research code
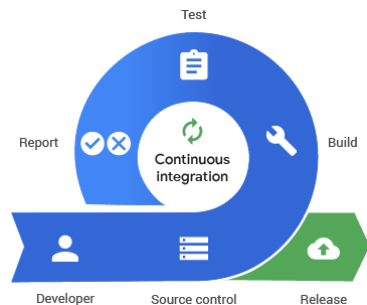
Bachelor Thesis | Study Project | Master Thesis

Continuous Integration and Continuous Deployment (CI/CD) enables the development of software with an automatic build, testing, and deployment. This ensures faster development and good quality of code. Incorporating such an efficient CI/CD pipeline to research codes can highly support sustainable development.

However, research codes are unique in terms of its complexity and the domain of application. The projects investigate the establishment of the CI/CD pipeline to the in-house research code elPaSo (Elementary Parallel Software) with focus on the code's unique development characteristics. elPaSo is deployed to perform vibroacoustic analysis of large-scale models based on the numerical method of finite element method.

Source: https://cloud.google.com/solutions/continuous-integration/

Requirements:

- Aptitude in software development
- Fundamental knowledge of CI/CD

Tasks:

- Investigating practical ways and tools to deploy CI/CD pipeline
- Establishing and evaluating the CI/CD pipeline for vibroacoustic simulations

Start: Immediately

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