Continuous integration and continuous deployment/delivery for software systems

Type: Type 2
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CSC 8350: Advanced Software Engineering
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Spring, 2018

Background

Continuous Integration (CI) and Continuous Deployment (CD) are software engineering techniques used to bring about rapid change to a software system or application. CI frequently integrates different developer copies of a code tree into the central source code repository, while CD builds frequent releases of a code base. These techniques work together to make software integration easier and less error prone and ensure that software is kept in a state that can always be released to users.

Overview of the hands-on project

The goal of the project is to understand how CI/CD help improve software deployment by taking an in-depth look at automated code quality checking using the Python-based Pylint code analysis tool, which can be integrated into the Jenkins CI/CD server. With multiple, divergent code bases, it is important to ensure that coding standards are enforced to help expedite integration. In addition, quickly and automatically finding errors and potential bugs in the code will maintain the quality of the software deployed to the users. By adding code quality checking to the CI/CD pipeline, certain standards can be enforced, preventing code that does not meet these standards from being added to any deployment packages. This enforcement of standards is what we will explore and analyze in our hands-on project.
References
