

Introduction to CI/CD

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What is CI/CD

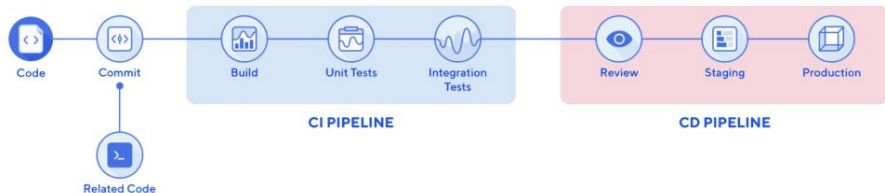
Continuous integration (CI) and continuous delivery (CD) are the processes that are used to build, package, and deploy your application.

Basically, it lays out some practices to follow in order for the code you write to more quickly and safely get to your users and ultimately generate value.

Why CI/CD Matters

- Reduce costs
- Smaller code changes
- Faster release rate
- Fault isolations
- More test reliability

CI/CD Pipeline



- Phase 1: Commit
 - developers commit change to the repository
- Phase 2: Build
 - Source code from the repository is integrated into a build
- Phase 3: Automate tests
 - Automated tests are run against the build
- Phase 4: Deploy
 - The built version is delivered to production.

Importance of Test Automation for CI/CD

Test automation is a crucial component of any CI/CD pipeline. The benefits of applying CI/CD cannot be realized if there is a lack of automated testing and a low level of test coverage. Teams need to perform automated testing at all levels including unit, integration, and system testing.

Also, teams need to apply automation testing for multiple testing types such as functionality, usability, performance, load, stress, and security.