Continuous Integration & Continuous Development

Accelerating development work and code submission

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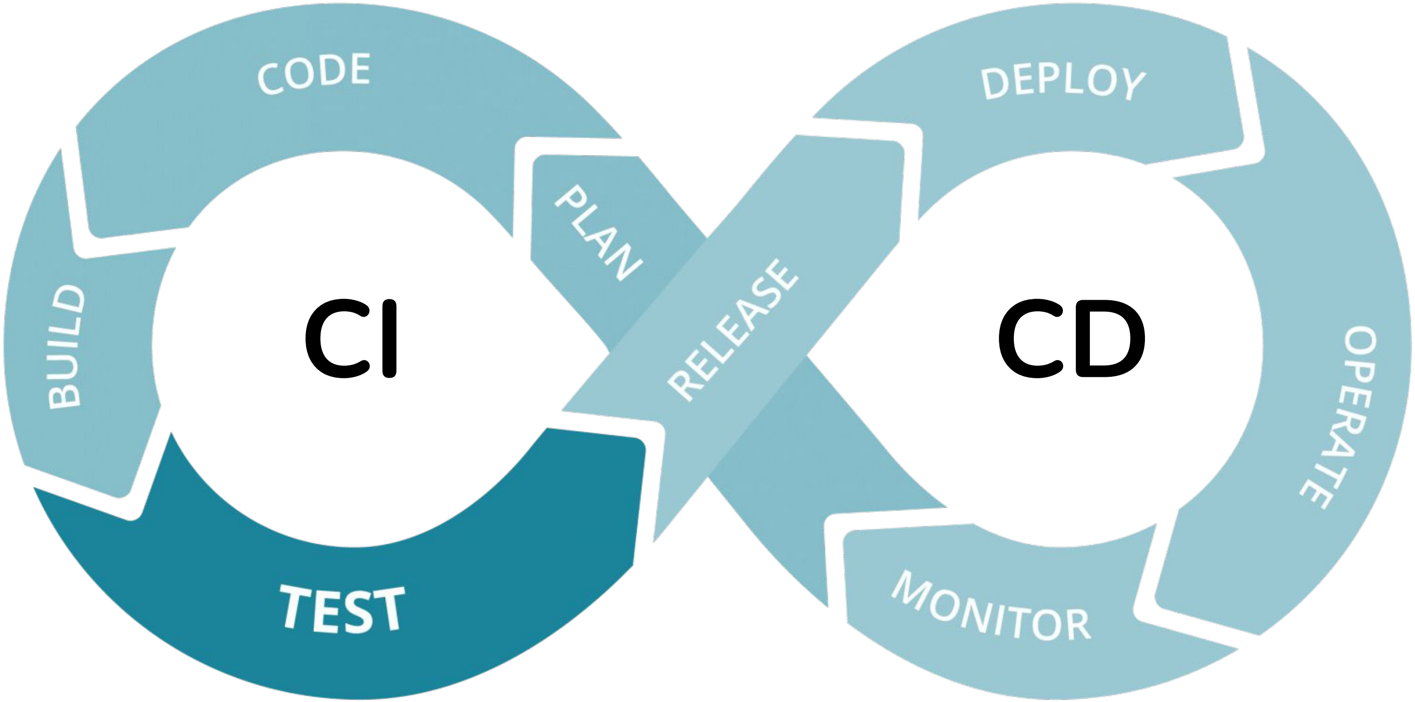
The most powerful tool we have as agile developers today is automation supporting us shipping reliable code in minutes…

not hours or days.

"CI / CD is a software development principle where you build software in such a way that the software can be released to production at any time."

CI CD lifecycle



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Continuous Integration

- Less bugs get shipped to production as regressions are captured early by the automated tests.
- Testing costs are reduced drastically – your CI server can run hundreds of tests in the matter of seconds.
- The QA team spend less time testing and can focus on significant improvements to the quality culture.

Continuous Development

- Develop faster as there's no need to pause development for releases. Deployments pipelines are triggered automatically for every change.
- Releases are less risky and easier to fix in case of problem as you deploy small batches of changes.
- Customers see a continuous stream of improvements, and quality increases.

Engineering improvements

BETTER CODE

- Smaller code changes
- Fault isolations

FASTER & LESS FIXES

- Faster MTTR to find and fix broken features
- Enhanced test reliability

LESS WORKLOAD

- Reduced backlog
- Overall cost reduction

BETTER STRUCTURE

- Enhanced transparency, accountability and ownership
- Streamlined communication

Requirements and costs

Continuous Integration

- The team will need to write automated tests for each new feature, improvement or bug fix.
- Need of a continuous integration server that can monitor the main repository and run the tests automatically for every new commits pushed.
- Developers need to merge their changes as often as possible, at least once a day.

Continuous Development

- Testing culture needs to be at its best. Quality of the test suite will determine the quality of releases.
- Documentation process will need to keep up with the pace of deployments.
- Feature flags become an inherent part of the process of releasing significant changes to make sure you can coordinate with other departments.

Building code confidence

Implementing CI / CD is a crucial step in increasing the confidence level of developers and business people in newly released software.

Stakeholders need confidence in:

- Features are being implemented correctly
- Production is an reliable environment for users
- Issues can be detected and resolved quickly

With CI / CD the
engineering team and
business team becomes…

…ONE.