

Benefits of CI/CD

Do we need CI/CD?

Every time we work on new feature we find ourselves doing the following:

- ▶ Each release cycle invest more time than delivering value.
- ▶ Programmers consume more time fixing issues due to botched merges all of these will increase the possibility for more bugs and cost at the end of the day.
- ▶ Developers do not follow code standards or do not write unit tests for every functionality they add, this will increase possibility for more issues then take more time to debug and fix so this will directly impact code quality, deliver time and cost.
- ▶ Each deployment contributes to schedule slip.
- ▶ There is a big gap between ops and development departments that make communication between them very hard and waste of time and increase cost.
- ▶ Sometimes only one engineer knows how to deploy the system.

Benefits of Continuous integration

- ▶ Less bugs get shipped to production as regressions are captured early by the automated tests.
- ▶ Prevent embarrassing or costly security holes as security vulnerabilities are detected by scanning code in CI.
- ▶ Building the release is easy as all integration issues have been solved early.
- ▶ Less context switching as developers are alerted as soon as they break the build and can work on fixing it before they move to another task.
- ▶ Testing costs are reduced drastically - your CI server can run hundreds of tests in the matter of seconds.
- ▶ Your QA team spends less time testing and can focus on significant improvements to the quality culture.
- ▶ All of the above points will reduce or avoid cost.

Benefits of Continuous deployment

- ▶ Avoid cost because of Less human error, Faster deployments using automate infrastructure creation.
- ▶ Reduce Cost because of Less infrastructure costs from unused resources using automate infrastructure cleanup.
- ▶ Increase Revenue because of New value-generating features released more quickly as CD guarantees faster and more frequent production deployments.
- ▶ Increase Revenue because of Less time to market as not human or manual checks are needed.
- ▶ Protect Revenue because CD reduced downtime from a deploy-related crash or major bug using automated smoke tests.
- ▶ Protect Revenue because CD allows quick undo to return production to working state using automated rollback triggered by job failure.
- ▶ 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 every day, instead of every month, quarter or year.