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What's CI/CD?



CI and CD stand for continuous integration and continuous delivery/continuous deployment. In very simple terms, CI is a modern software development practice in which incremental code changes are made frequently and reliably. Automated build-and-test steps triggered by CI ensure that code changes being merged into the repository are reliable.

Continuous integration (CI)

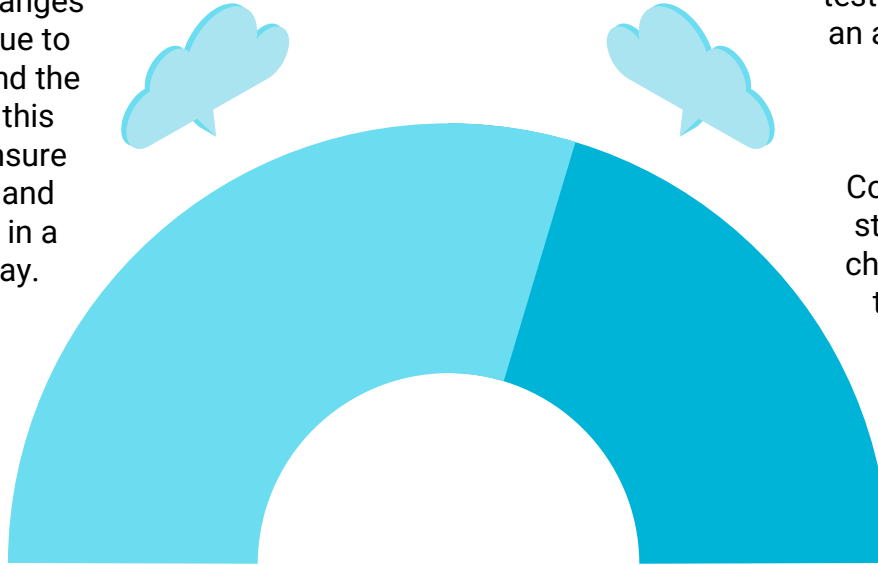
is practice that involves developers making small changes and checks to their code. Due to the scale of requirements and the number of steps involved, this process is automated to ensure that teams can build, test, and package their applications in a reliable and repeatable way.

VS.

Continuous delivery (CD)

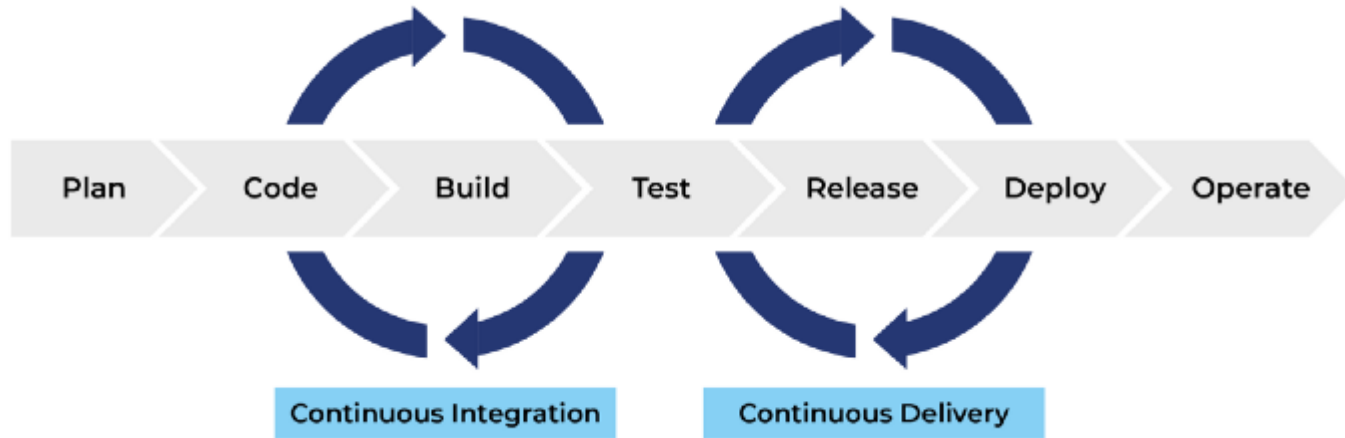
is the automated delivery of completed code to environments like testing and development. CD provides an automated and consistent way for code to be delivered to these environments.

Continuous deployment is the next step of continuous delivery. Every change that passes the automated tests is automatically placed in production, resulting in many production deployments.





CI/CD pipeline



Benefits of CI/CD





Automation in the CI/CD pipeline minimizes the number of defects or bugs that occur in CI and CD steps. This reduces the developer's time and effort and also minimizes the cost. The other benefit is, it increases the code quality with automation and increases your ROI.

Organizations that have effectively implemented CI/CD can bring new products and features to market faster and immediately start generating revenue from the features they deploy rather than waiting for the entire app to be completed (and checked manually) before they can launch.

Instead, teams already know the code is in good shape because they've automated testing, and continuous delivery means code is automatically deployed if it meets predefined criteria. Back-to-back releases are easier and less time-consuming, and if something isn't working, they can pull features with a single click.