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WHY WE NEED CI/CD

What Is CI/CD

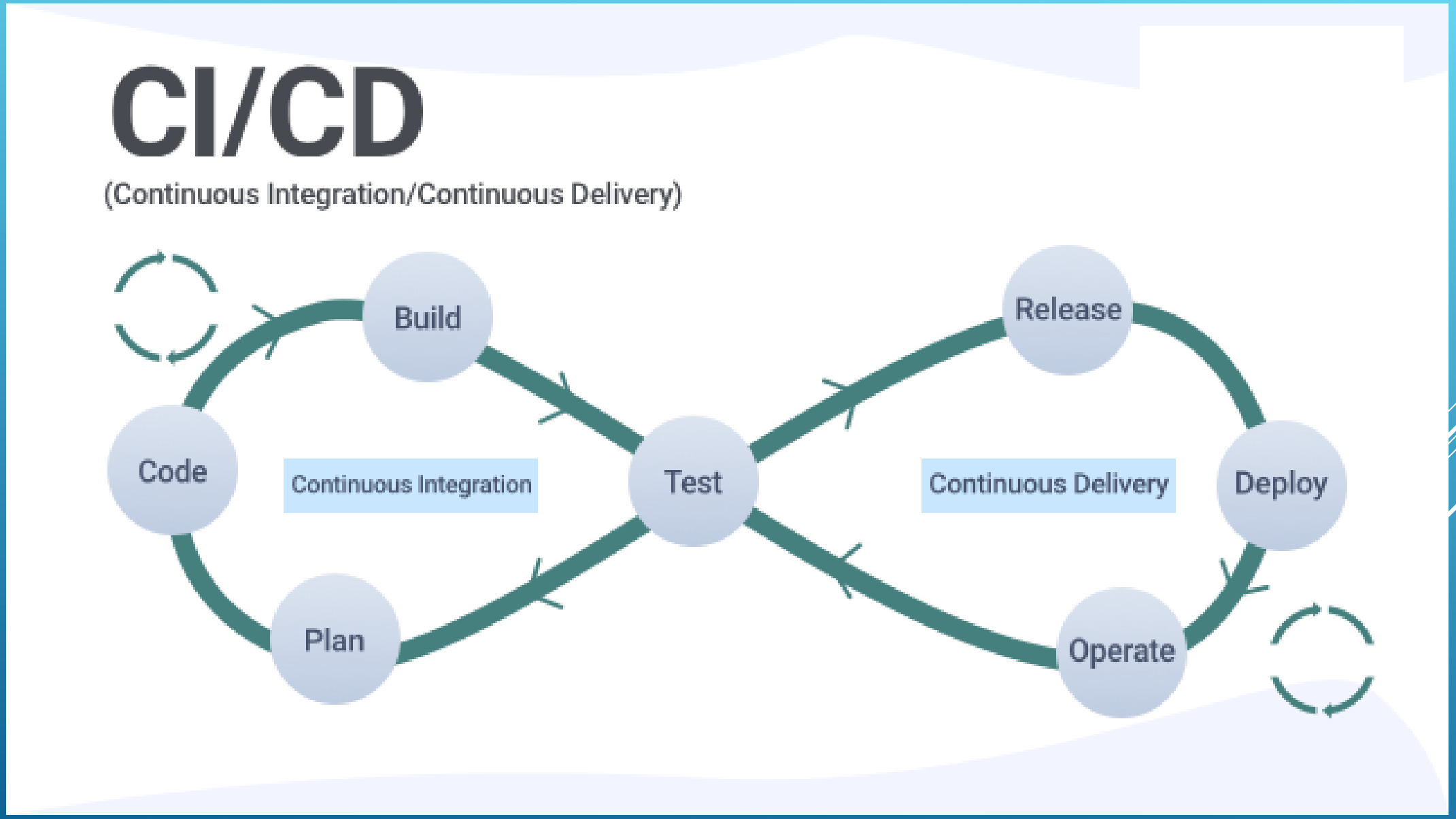
Continuous Integration (CI)?

Continuous integration is an approach in which developers merge their code into a shared repository several times a day. For verification of the integrated code, automated tests and builds are run for it.

Continuous Delivery (CD)?

Continuous delivery is a strategy in which the development teams ensure the software is reliable to release at any time. On each commit, the software passes through the automated testing process. If it successfully passes the testing, and it is ready for release into production.

What is CI/CD pipeline



What are the benefits of CI/CD?

Easy to Debug and Change: It is easier to debug and change the codes when small pieces of code are continuously integrating. We can test these pieces while continuously integrating them with the code repository.

Release and Delivery Speed Increases: With CI/CD, the speed of release and delivery is increased along with the development. Releases become more frequent and reliable.

Increased Code Quality: The code's quality increases as the code can be tested every time we integrate it with the code repository. The development becomes secure and more reliable. Also, CI/CD pipeline automates the integration and testing work, and more time use to increasing the code quality.

Reduces the Cost: CI/CD automates the development and testing process, reducing the effort of testing and integration. Reduce the errors with automation, and it saves the time and cost of the developers. This save time and cost to increase the code quality.

Increased Flexibility: With CI/CD, the errors are found quickly, and the product can be released more frequently. The flexibility to add new features increases. With automation, one can adopt new changes quickly and reliably.

What are the Most popular CI/CD Tools?

Jenkins

GitLab

GitHub Actions