

**A presentation on the
Fundamentals and Benefits
of CI/CD to Achieve, Build,
and Deploy Automation for
Cloud-Based Software
Products**

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What is CI/CD

CI/CD is an abbreviation for continuous integration and continuous deployment: Continuous integration implies that new user stories in agile are built, tested, and integrated into the existing system. Maintaining the wholeness and the integrity of the software. Continuous deployment implies the automatic release of the new user stories in a central repository, meaning newly added features are available to the end-users.

Benefits of CI/CD

- **Smaller code changes are simpler:** When it comes to updating of codes, with the help of CI/CD. It significantly reduces the time spent and resources on pushing new updates. If for example, you were to pay a developer \$300 for code updates and deployments. With the use of CI/CD, you can reduce the cost to \$200. Because the developer won't need to manually deploy the updates
 - **Better Code Quality and ensures Faster Time to Market:** unit and integration test needs to be carried out before auto deployment can take place, which leads to better code quality and reduction in the shipping of buggy production code, which will save you some significant amount of money.
 - **Increased Focus on Core Responsibilities:** With CI/CD, you can confidently focus your revenue in other section of the company, because you're certain that they won't be any issue with deployments, and even if there is, you'll get an immediate notification of what went wrong and where. Thereby saving you money from hiring QA testers.
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The cost of CI/CD

Because you are introducing automation to the system, CI/CD pipeline implementation will be expensive. Costly operations, rollouts, and training are the possible reasons for the rise in cost. Whether you use a SaaS or manage it yourself, these expenses will still be incurred. The up-front charges must be considered first. To reduce typical errors and increase the effectiveness of your CI/CD budget, there are also hidden expenditures that you should be aware of. Therefore it is better to start CI/CD immediately when you start any project in order to reduce the cost of implementation, because it is easier to automate at the start of the project than at the end of the project. Without CI/CD you'll need to pay QA testers to test the project which will incur an extra cost and time to the timeline of the project.

Thank you for listening