

Fundamentals and
benefits of CI/CD to
achieve, build, and
deploy automation for
cloud-based software
products

Fundamental of CI/CD

One of the core DevOps implementation practices is the CI/CD pipeline, which connects the development and operations teams.

CONTINUES INTEGRATION

Ensures that the work completed by individual developers is integrated into a repository. According to the DevOps methodology, this is carried out numerous times each day to find flaws right away. Collaboration between development teams improves as a result.

CONTINUES DEPLOYMENT

Enables teams to release changes to production automatically, without human interaction. It also enables teams to occasionally interact with customers and solicit their input. Any adjustments required or any flaws detected inside the application can be resolved swiftly without spending extra time at later stage.

Fundamental of CI/CD

CONTINUES DELIVERY

Code may be reliably deployed to production via continuous delivery. At this point, code can be immediately put into use. No specific late-night shifts or sense of urgency exist for releasing the code to the production. With a CD, that becomes a common occurrence. Teams can automate the testing and deployment procedures, and CD heavily depends on the deployment pipeline.

Benefits of CI/CD

1. REDUCE RISK

A CI/CD pipeline enables you to test and release code more frequently, enabling testers to find problems as soon as they arise and to solve them right away. In essence, you are real-time risk mitigation.

2.DELIVER FASTER

Multiple daily releases can be made possible with a smooth CI/CD workflow. Teams can develop, test, and release features without a lot of manual labor. Various systems, frameworks, and tools, like Travis CI, Docker, Kubernetes, and LaunchDarkly, are used to achieve this.

3.MAKES EASIER ROLLBACKS

A CI/CD pipeline has many benefits, one of which is the ability to swiftly roll back changes. You can immediately revert the program to its former state if any new code modifications cause the production application to malfunction. To avoid production downtime, the most recent successful build is often deployed right away.

Conclusion

The process of developing and deploying software includes CI/CD in its entirety. Both big businesses and small teams may benefit from it. It aids in implementing consistent changes, receiving feedback, and performing safe deployments. The advantages of CI/CD extend beyond corporations to include other stakeholders such as product owners, dev and operations teams, and end users.

Additionally, businesses will be able to spend more time developing products and services thanks to automation as opposed to doing the same boring chores over and over again.