

# Fundamental and benefits of CI/CD

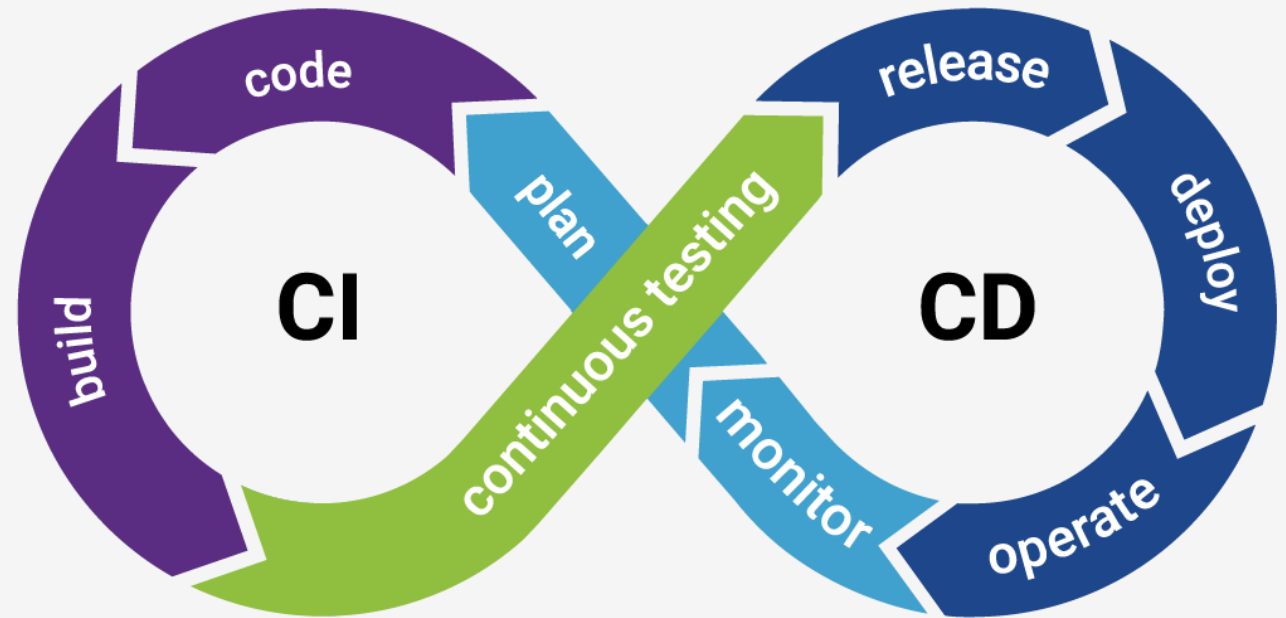
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CI is the software development strategy that increases the speed of development while ensuring the quality of the code that the team deploys.

It works when every developer commit code in small increments daily and even more often or they shared mainline online repository. Every commits triggers automated build and test of the code base.

If the build or the test fails it repairs quickly often within minutes.

Continuous Integration works with agile methodology where team member work on incremental changes and the code for this merge update incrementally into the shared repository multiple times a day.



# Benefits of CI/CD to business innovation

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How it works:

1 Reduces human error and enhance code quality.

2 Faster and more frequent production deployments.

New value-generating features released more quickly.

3 Detect security vulnerabilities which prevents embarrassment or costly security holes.

4 Automated rollback triggered by job failure.

Quick undo to return production to working stage.

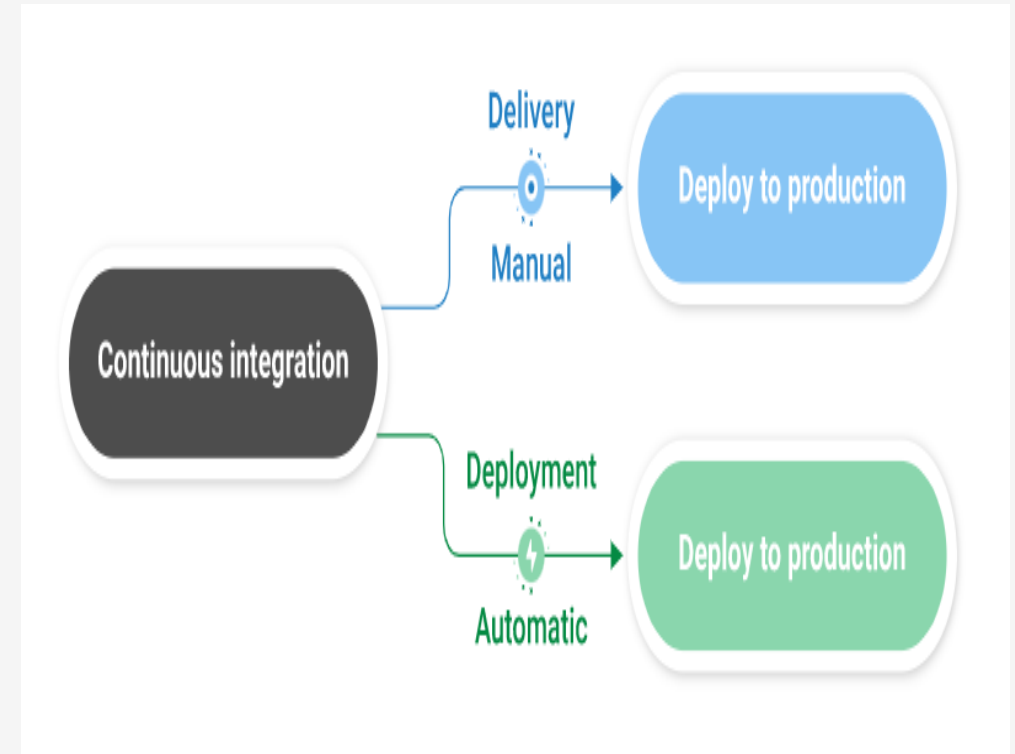
# Business benefits of CI/CD

Getting code out of the door with the risk of discovering showstoppers like critical bugs found late, infrequent releases, too much manual work, or late feedback has spawned a need for adopting Continuous Integration and Continuous Deployment/Delivery (CI/CD) technologies. For any competent software house, CI/CD is evolving as the modus operandi for rapid software delivery.

The “automate everything” mindset is gaining momentum as the need to streamline sprawling delivery ecosystems amplifies. Leveraging the benefits of deployment at the push of a button has transformed the software distribution and delivery paradigm over the last few decades. CI/CD, in unison, automates the flow from design to deployment – offering you better integration, delivery, and accelerated value.

All potential bugs can be discovered at the pre-deployment stage on automating the release pipeline. Teams and individuals can take control of the uncertainties when going into production with a pragmatic and visible CI/CD pipeline. You experience value and business flow by delivering products and solutions with all the features that meet quality and deployment specific needs.

Owing to the rise of modern applications, cloud native architecture, and microservices, all you need to do now is commit code to ship a bug-free product. Implementing CI/CD in your product development setup ensures a shorter software development life cycle, continuous deployment, more frequent releases, and improved security. The CI/CD loop amplifies feedback and communication with minimal sign-offs, no manual authentications, more iteration, and thus more innovation.

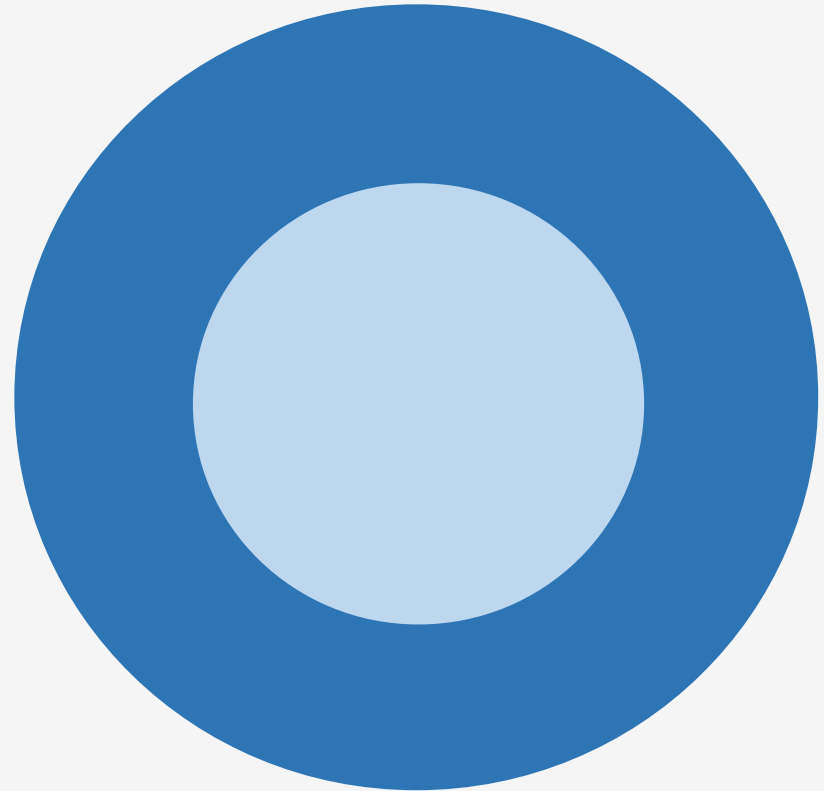


# Benefit of CI/CD in software development

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The benefits of CI/CD to software development include:

- 1 Superior Quality code:** Developers release code into a shared repository in small batches, which enables them to conduct parallel testing. Rather than working in isolation, they share their builds with the entire team frequently.
- 2 Accelerated Release Cycle:** With CI/CD, you can visualize the development cycle from commit to production, continuously merge code, and repair detected bugs. You can release software to production multiple times after thorough testing without compromising quality parameters.
- 3 Cost Reduction:** Delivering high quality tailor-made solutions to address business-specific challenges requires a way to meet the rapid time constraints imposed by rivals. Embracing CI/CD is the perfect fix to shorten the time to finish a project and market new features. The shorter the development cycle, the higher the chances are to meet ambitious time-to-market goals.



# Conclusion

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CI/CD will ultimately become imperative for your business – the benefits are simply too many. Migrating from the legacy software release cycles to CI/CD won't just accelerate the time-to-market, but also result in a productive and satisfied development team.