

What is CI/CD in DevOps

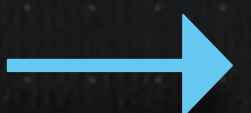


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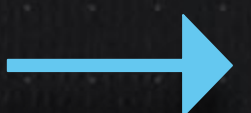


1. Continuous Integration

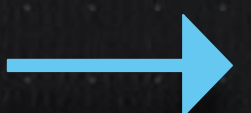
- CI/CD stands for **Continuous Integration - Continuous Delivery**
- Let's understand what is meant by Continuous Integration
- In the Dev team, **multiple developers work on different modules** where daily code is committed
- **Dev tests their part** of the code but many times they **don't do integration testing**



- For this they need other's code as well this is where CI comes.
- CI process, **integrates code** from all team members, **builds the project** and **runs integrations tests** and **unit tests** on the project.
- It **saves time**, and **informs of any bugs** in the early stage.
- This process is **completely automated** there's less chance of human errors.

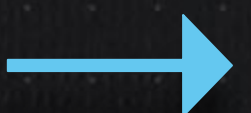


- CI process is **always connected with a code repository**.
- At any given time, it **gives the latest status of the repository** for any possible errors.

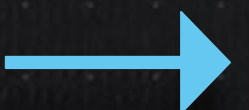


2. Continuous Development

- After the source code is merged, build & unit tested, it is time to deploy it on a QA server for QA testing
- Again this is a continuous process, which means **the moment code is merged it will be deployed on server via CI/CD pipeline**
- QA tests and reports for any bug.
- That bug is fixed by Dev.

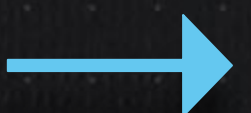


- Code gets merged & deployed Instantly on server.
- Instantly available to QA for further testing. Thanks to CI/CD pipeline!
- This full process is completely automated & super fast.



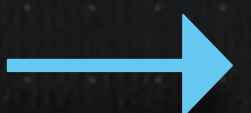
3. How does it work?

- Popular tools like **Jenkins, Bamboo, etc are used to create a CI/CD pipeline**
- For deploying code on each server, there is a separate pipeline which is connected to there respective repository
- For, eg: Separate pipelines for QA, Stage, Prod env



4. **Benefits**

- **Fully automated system** with fewer human errors.
- **Save time**, and increases the efficiency of them.
- **Feedback loop is more frequent** between end-customer and the software development team.
- **Blends well with Agile and DevOps** culture.



❤️ **Thanks** for reading !

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