



CI/CD

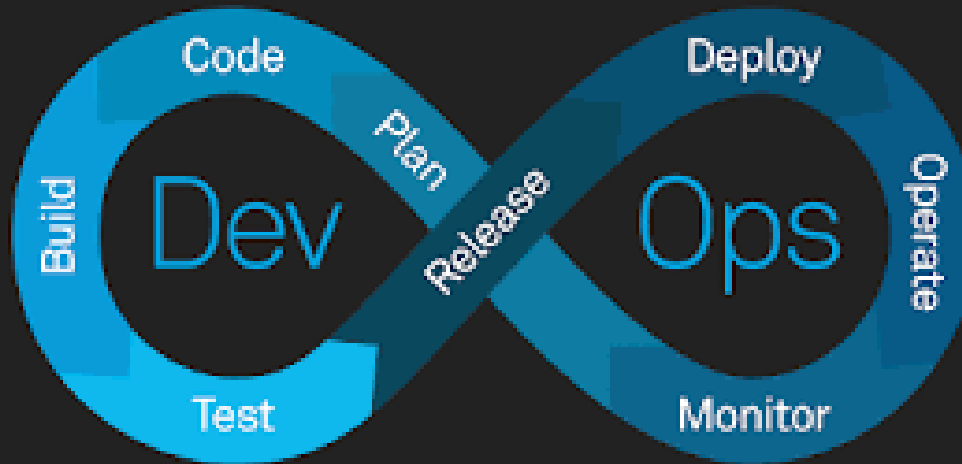
Continuous integration (CI)
&
continuous delivery (CD)

Alsafa Wagdy



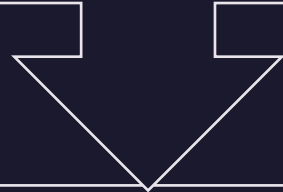
CI/CD

time-to-market, tighter feedback loops, and greater interaction with internal and external customers are all benefits of CI/CD processes.



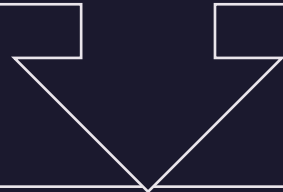
Continuous Integration (CI):

Consider an application that has its code stored in a Git repository in GitLab. Developers push code changes every day, multiple times a day. For every push to the repository, you can create a set of scripts to build and test your application automatically. These scripts help decrease the chances that you introduce errors in your application



Continuous Delivery (CD):

a step beyond Continuous Integration. Not only is your application built and tested each time a code change is pushed to the codebase, but the application is also deployed continuously. However, with continuous delivery, you trigger the deployments manually. It checks the code automatically, but it requires human intervention to manually and strategically trigger the deployment of the changes.



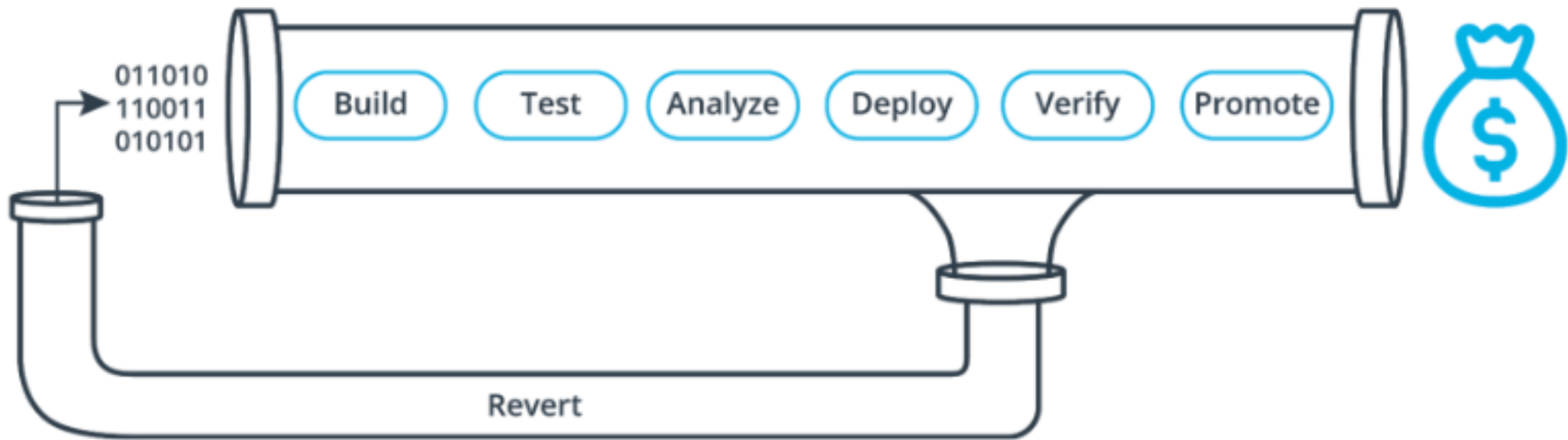
Continuous Deployment (CD):

is another step beyond Continuous Integration, like Continuous Delivery. The difference is that instead of deploying your application manually, you set it to be deployed automatically. Human intervention is not required.



CI/CD PIPELINE

The CI/CD Pipeline



Benefits OF CI/CD

- 1) Higher efficiency
- 2) Reduced risk of defects
- 3) Faster product delivery
- 4) Log generation
- 5) Quick rollback if required
- 6) Better planning
- 7) Efficient testing & monitoring
- 8) Cost-effectiveness
- 9) Smaller Code Changes
- 10) Fault Isolations
- 11) Faster Mean Time To Resolution (MTTR)
- 12) More Test Reliability
- 13) Faster Release Rate
- 14) Customer Satisfaction
- 15) Increase Team Transparency and Accountability
- 16) Easy Maintenance and Updates

Benefits



Efficient and quicker software releases



Cleaner code and increased productivity



Fewer risks in product delivery.



Better fault isolation.



Improved customer satisfaction.



Adopting a standardized process