UdaPeople

CI/CD Adoption Proposal Document

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Fundamentals :

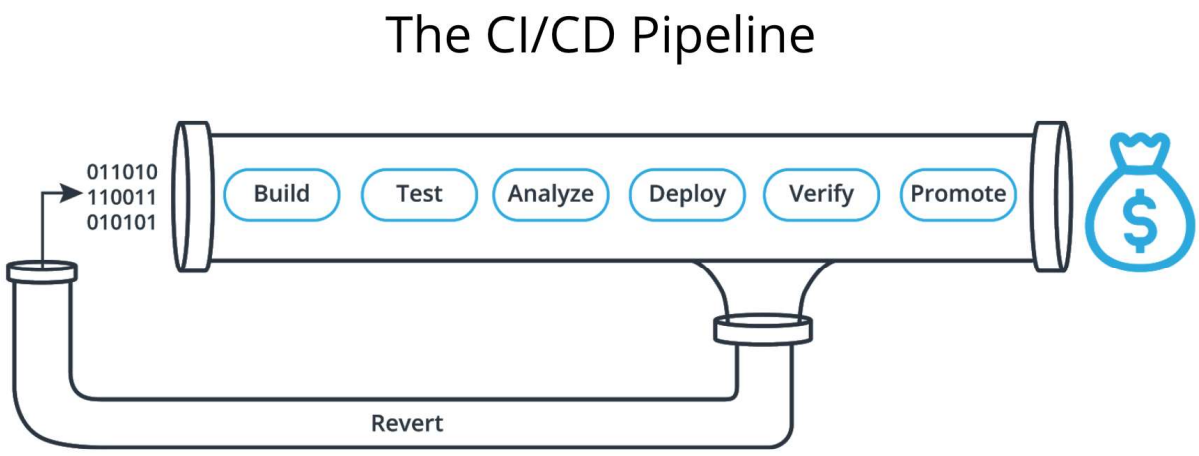
Here is the key fundamentals of CI/CD process . It will help you to understand the concept and why it is required for our Organization.

Continuous Integration :

The practice of merging all developers' working copies to a shared mainline several times a day. It's the process of making. Everything related to the code fits here, and it all culminates in the ultimate goal of CI: a high quality, deployable artefact.

Continuous Deployment :

A software engineering approach in which the value is delivered frequently through automated deployments. Everything related to deploying the artefact fits here. It's the process of moving the artefact from the shelf to the spotlight.

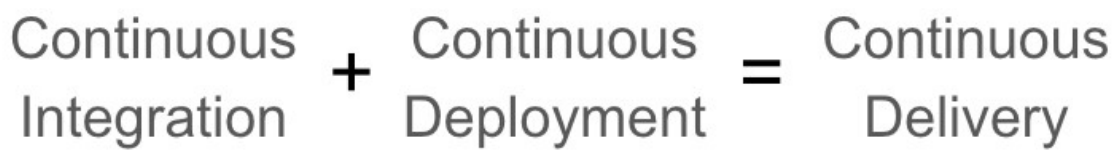


Key Principal of Continuous Delivery :

Here I am mentioning key principal of continuous delivery-

1. Repeatable Reliable Process
2. Automate Everything
3. Version Control Everything
4. Bring the Pain Forward
5. Build-in Quality
6. "Done" Means Released
7. Everyone is Responsible
8. Continuous Improvement

So basically if we start following these best practices in our projects It will make huge difference in our product delivery.

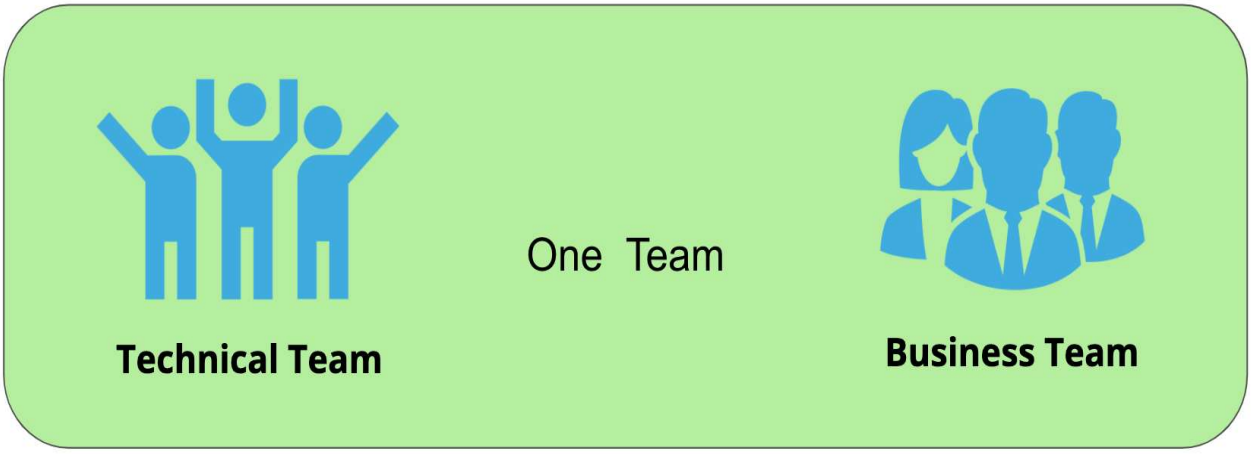


Initial Cost/Changes :

- Our team will need to write automated tests for each new feature, improvement or bug fix.
- Our need a continuous integration server that can monitor the main repository and run the tests automatically for every new commits pushed.
- Deployments need to be automated. The trigger is still manual but once a deployment is started there shouldn't be a need for human intervention.
- Our documentation process will need to keep up with the pace of deployments.
- Feature flags become an inherent part of the process of releasing significant changes to make sure you can coordinate with other departments (Support, Marketing, PR).

Benefits of CI/CD :

Now I will explain key information on which I will get your attention on benefits that create revenue, protect revenue, control costs or reduce costs.



Below Table is demonstrating what we will achieve after adopting CI/CD in our organization .

SN	Objective	How we will get it?
1	Reduce Cost	Less developer time on issues from new developer code Less infrastructure costs from unused resources
2	Avoid Cost	Less bugs in production and less time in testing Prevent embarrassing or costly security holes Less human error, Faster deployments
3	Increase Revenue	New value-generating features released more quickly Less time to market
4	Protect Revenue	Reduced downtime from a deploy-related crash or major bug Quick undo to return production to working state