



THE FUNDAMENTALS AND BENEFITS OF CI/CD

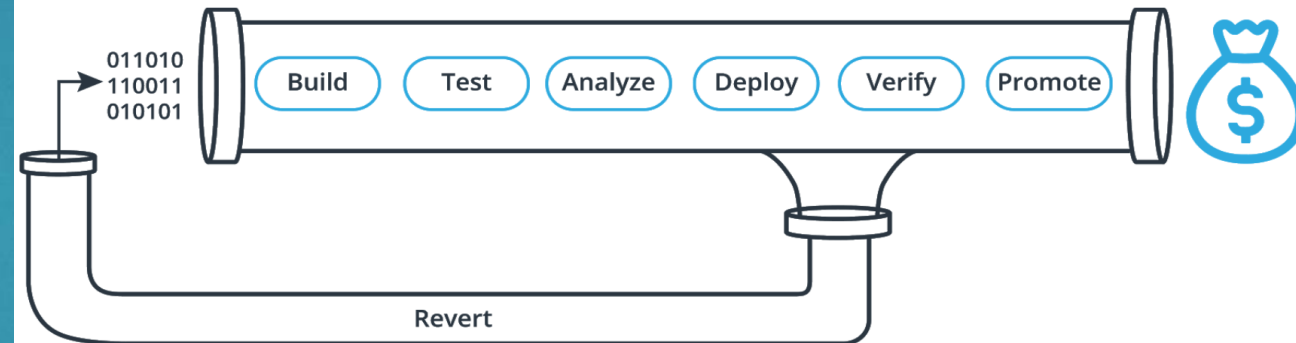
INTRODUCTION

- CI/CD is a term that stands for the combined principles of continuous integration and continuous Delivery or Deployment
- Continuous integration(CI) refers to the practice whereby developers frequently push and merge their working codebase to the main or shared branch so as to come up with a deployable artefact.
- Meanwhile, Continuous Delivery is the practice that automates the release of the validated code in short cycles, to a repository that can be easily deployed to a production environment.
- On the other hand, Continuous Deployment is paradigm that frequently delivers value through automated deployments

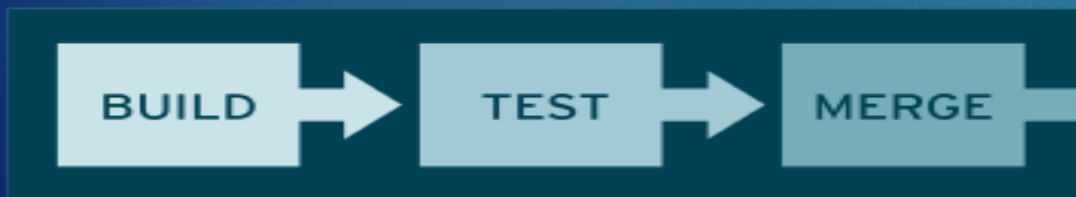
INTRODUCTION



The CI/CD Pipeline



CONTINUOUS INTEGRATION



CONTINUOUS DELIVERY



CONTINUOUS DEPLOYMENT



CI/CD BENEFITS?

1. Reduce and Avoid Costs

- Less time will be wasted on resolving issues with the source codes as the Development Team will be able to easily catch code related errors with automated test tools. Hence, this cut down costs that could have been incurred through the Development Team spending much time on debugging the code instead of concentrating on developing the software application.
- There will be also less bugs in production as the development team will be easily catching failures using automated unit testing tool in the CI/CD pipeline.
- Besides, there will be less costs over the unused infrastructure as CI/CD pipeline will ensure that all of the unused resources are automatically cleaned up, thereby avoiding unnecessary/unaccounted costs by the company. This will then ensure that the available finances is saved for the other activities within the organization.

CI/CD BENEFITS?

2. Boost and Protect Revenue

- There will be faster release cycles from production to deployments as the new revenue-generating features will be shipped at speed to the intended users. This will instill the user confidence in the organizations' products, and in turn the instilled confidence will be exchanged for the increased revenues.
- Meanwhile, the application will automatically revert to production working state in cases of job failures that might be introduced with the new code updates. This will ensure that our applications downtime is low and the user will get maximum support with minimal or no frustration. This will then ensure that the revenue are protected as the users will have confidence in the applications and then keep on using our applications.



Take Home?

- If properly adopted and implemented, the CI/CD pipeline can greatly improve the image of the company via increasing and protecting revenues while at the same time cutting and avoiding all of the unnecessary costs in line with the Development Workflow, a thing that we are not assured of without CI/CD pipeline.