Adoption of CICD by Udapeople

Cost and Benefit Analysis

What is CICD?

The acronym CICD stands for Continuous Integration and Continuous Deployment/Delivery, both are methods used to frequently deliver applications to customers by automating the processes from when a developer checks in a code to a repository and code reviews, to building the code and running all sorts of tests such as unit, functional and integration test, to validating those codes are good production candidates and standing up infrastructures for the deployment. These processes are carried in an automated and repeated fashion, with less human intervention.

The ultimate aim is to get bug free applications into the hands of customers, as well as updates.

Benefits

- Smaller code changes and hence fewer bugs thus reducing cost associated
- Fault isolation and faster mean time to resolution thus improving developer productivity and avoiding costs.
- More testable and reliable codes which reduced costs due to bad codes, and also guarantees customer retention, thus sustain or increase revenue
- Faster release rates leading to high operation efficiency and reduced cost
- Easy maintenance and updates.
- Good customer satisfaction and improved customer experience which improve or secure revenue

CICD tools that can be adopted

1. Azure Devops

This will be a good choice since Udapeople's resources are within Azure Cloud, it will be easier to implement and integrate

2. Gitlab-CI

One of the great alternatives out there and it's feature rich, This can also meet the build and release workflow of Udacity.

3. Jenkins

While the other two are hosted in private clouds, we can have Jenkins in our private cloud or on premises, the most important benefit of Jenkins is that it is open source.

Thank You!

Udapeople will begin to reap the benefits of CICD if implemented to automated our build and release process. This will also put us ahead our competitors and in a better position before our customers.