



UdaPeople

CI/CD Business Case



What is CI/CD

CI/CD is a method to frequently deliver apps to customers by introducing automation into the stages of app development. The main concepts attributed to **CI/CD** are continuous integration and continuous deployment that help achieve continuous delivery in high quality with low cost.

Continuous Integration : CI is 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 artifact.

Continuous Deployment : A software engineering approach in which the value is delivered frequently through automated deployments. Everything related to deploying the artifact fits here. It's the process of "**Moving**" the artifact from the shelf to the spotlight. With automation in place for deployment it reduces delivery time as well as risk of incorrect deployment.

Overall CI/CD works like a pipeline of jobs that help manage code merging, build, test, Analyse, Deploy, Verify/Sanity Test and promote the code to production.



Benefits of CI/CD for UdaPeople

There will be several benefits of using CI/CD in our project that we can divide into three categories Reduce/Avoid Cost, Increase Revenue, Protect Revenue.

- By **Automating Unit Test** through CI/CD we can perform basic health check every time build happen that will help reducing actual test time by capturing basic bugs early. It will help **avoid extra testing cost**.
- By using standard **code analysis** tools in CI/CD pipe line, we can find unwanted security loop holes in system and it will reduce code review time by finding basic code standard issue. It will help **reducing review cost** and also will **prevent embarrassment** due to security issue if any.
- By **automation infrastructure** we can reduce time taken in creation and deletion of infrastructure and we can avoid **human errors and avoid cost** of manual work done repeatedly.

Overall We will be developing UdaPeople application that will that will be having an CI/CD pipe line in place that will make sure we are doing quality development in less time with reduced cost and no manual errors with automation in place for repetitive tasks. With all above we provide fast-track delivery of the application and any change propose. As UdaPeople required frequent change in application due to regulatory requirements it is best to put CI/CD pipe line in place for fast and error free release of the change to production.



Thank You