Better Development lifecycle with CI/CD

Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Products.

Why CI/CD

An integral part of DevOps is adopting the culture of continuous integration and continuous delivery/deployment (CI/CD), where a commit or change to code passes through various automated stage gates, all the way from building and testing to deploying applications, from development to production environments.

What is CI

The "CI" in CI/CD always refers to continuous integration, which is an automation process for developers. Successful CI means new code changes to an app are regularly built, tested, and merged to a shared repository. It's a solution to the problem of having too many branches of an app in development at once that might conflict with each other.

What is CD

Continuous deployment refers to automatically releasing a developer's changes from the repository to production, where it is usable by customers. It addresses the problem of overloading operations teams with manual processes that slow down app delivery. It builds on the benefits of continuous delivery by automating the next stage in the pipeline.

Benefits of CI/CD to our business

1. Fault Isolations
2. Faster Mean Time To Resolution (MTTR); it helps you track the amount of time spent to recover from a failure.
3. Faster Release Rate
4. Customer Satisfaction
5. Reduce Costs; Automation in the CI/CD pipeline reduces the number of errors that can take place in the many repetitive steps of CI and CD. Doing so also frees up developer time that could be spent on product development as there aren't as many code changes to fix down the road if the error is caught quickly.