

Fundamentals Benefits of CI/CD

Overview

- CI/CD is a way of developing software in which you're able to release updates at any time in a sustainable way. When changing code is routine, development cycles are more frequent, meaningful and faster.
- CI/CD is a method to frequently deliver apps to customers by introducing automation into the stages of app development.
- CI/CD are continuous integration, continuous delivery, and continuous deployment.

- **Continuous Integration:**

Continuous integration is a process for frequently building and testing new code changes. It is undoubtedly the most crucial phase of the cycle which holds it all together.

- **Continuous delivery:**

Continuous Delivery is the process of deploying new versions of an application frequently.

- **Continuous deployment**

This is the phase where the code is deployed in production-like environments.

Benefits of CI/CD

- **Reduced Changes & Review Time:**

Code changes in such an environment are done at an atomic level, which reduces the risk of unintended consequences.

- **Accelerated Release Cycles:**

Since the elapsed time to detect and correct production, escapes are shorter; CI/CD enables accelerated release rates.

- **Improved Mean Time To Resolution (MTTR):**

MTTR is the measure of reliability and maintainability of any or all the repairable features. It gives you a timeline about the average time spent taken up by recovery from a possible failure.

Benefits of CI/CD

- **Cost Deduction:**

Using a CI/CD pipeline limits the potential impact and loss that a deployment problem can cause by allowing it to be deployed in non-critical business hours.

- **Frequent Updates & Maintenance:**

Regular maintenance and updates are the backbones of making a great product, and this is one of the great benefits of CI/CD. It ensures that release cycles are shorter and targeted, which blocks fewer features that aren't ready for release.

- **Enhanced Performance Metrics:**

Applications, in all cases, need to be monitored carefully after releases. This can be considered amongst one of the top benefits of the CI/CD pipeline as it allows you to monitor the health, performance, and reliability of an app.