

CI/CD

Continuous Integration/Continuous
Deployment





Overview

Continuous Integration:

The practice of merging all developers' working copies to a shared main branch several times per day. Everything related to the code fits under this umbrella, and it all culminates in the form a high quality deployable artifact.

Continuous Deployment:

It's an approach in which value is delivered frequently through automatic deployments. It's the process of moving the artifact from the "shelf" to the "spotlight."



Benefits of CI/CD

1- Faster to production

As by automating the entire pipeline to production, features can be deployed as soon as they are ready; leading to an increase in revenue.

2- Automated infrastructure cleanup:

Creating our infrastructure using code (IAC), eliminates human error and avoids unnecessary cost of unused infrastructure.



Benefits of CI/CD

3- Automated smoke tests:

Catching failure in the main features of our app faster will lead to reduced downtime and costs.

4- Automated rollback triggered by job failure:

Automating the process of rolling back after a failed deployment reduces downtime and costs.



Benefits of CI/CD

5-Catch unit test failures:

Running unit test after each commit and notifying the developer of any failures, will reduce the wasted developer time and in turn costs.

6-Deploy to production without manual checks:

Automating the release of production builds, reduces the amount of variance and accelerates development life cycle leading to increased revenue and less time to market.