



The background features a large, faded diagram of a CI/CD pipeline. It consists of two overlapping circular flows. The left circle, labeled 'CI' (Continuous Integration), is purple and contains the steps 'code', 'build', and 'test'. The right circle, labeled 'CD' (Continuous Deployment), is blue and contains the steps 'release', 'deploy', and 'operate'. A green arrow labeled 'planning' points from the CI circle to the CD circle. A blue arrow labeled 'monitoring' points from the CD circle back to the CI circle, completing a cycle.

Fundamentals and Benefit of CI/CD

What is CI/CD?

Continuous Integration is method of automating the integration of code changes from various developers into a single software project, while Continuous Delivery (CD) is a software development practice where code changes are automatically prepared for a release to production.

Hence, CI/CD can be defined as a combination of principles, practices, and capabilities that allow for software changes of all kinds to get to users in a quick, efficient, repeatable, and safe manner.

It is the method to frequently deliver apps to customers by introducing automation into the stages of app development.

Benefits of CI/CD

A circular diagram representing a CI/CD pipeline. The cycle includes stages: 'code' (purple), 'release' (blue), '2326' (light blue), 'operate' (dark blue), 'monitor' (light blue), 'deploy' (green), and 'build' (light green). The center of the diagram contains the text 'CI/CD'.

Detect Vulnerabilities in Security:

We can all agree that security is a key concern in this firm. CI/CD immediately identifies any vulnerability in our codes before they are deployed to production, as it even gives it more priority, thereby saving saving money by preventing humiliating and/or expensive security vulnerabilities.

As important as it is to save time and deliver top quality codes, it's equally as important to save cost and increase revenue.

Benefits of CI/CD

A circular diagram representing the CI/CD pipeline. It consists of several colored segments: a purple segment labeled 'code', a blue segment labeled 'release', a light blue segment labeled 'deploy', a dark blue segment labeled 'operate', a green segment labeled 'rollback', and a purple segment labeled 'build'. The segments are arranged in a circle, with arrows indicating a clockwise flow from one stage to the next.

Automated Rollback Triggered by Job Failure:

There are occasions when a code will include problems after it has been deployed (put into use).

Therefore, attempting to identify the error's cause can take minutes, hours, days, or even weeks.

However, with CI/CD, there is a rapid way to return to the code's prior working state, protecting revenue and saving time.

Benefits of CI/CD

A circular diagram representing the CI/CD pipeline. It consists of several colored segments: a purple segment labeled 'code', a blue segment labeled 'release', a light blue segment labeled 'deploy', a dark blue segment labeled 'operate', a green segment labeled 'monitor', and a light green segment labeled 'plan'. The segments are arranged in a circle, with arrows indicating a clockwise flow from one stage to the next.

Codes Get Deployed to Production Faster:

Automating the integration and deployment of codes makes it possible to deploy code to the production state considerably, more quickly than with human checks. As a result, the development and operations teams spend less time reviewing and rechecking the code's quality, which boosts productivity and saves time, thereby boosting revenue.