

CI/CD

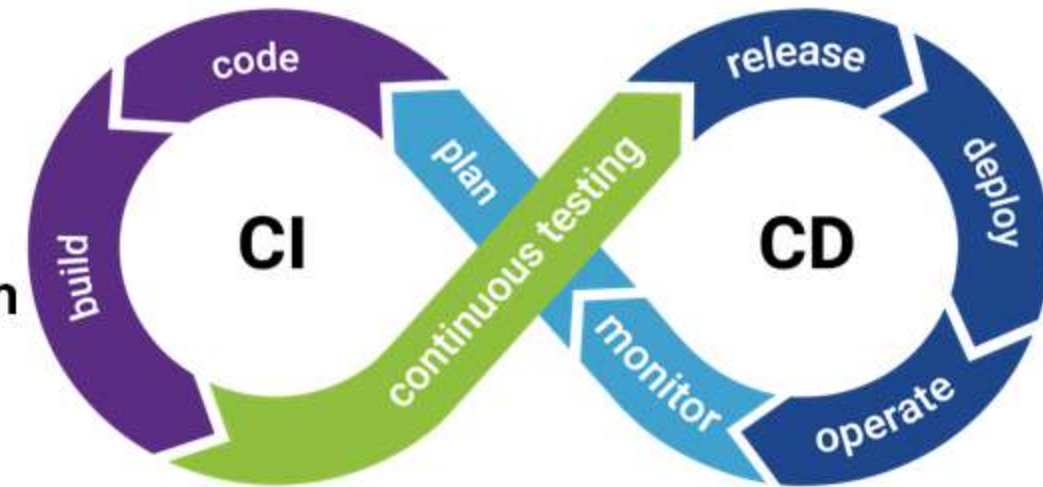
THE NEW CORNERSTONE OF THE DEVELOPMENT FIELD

What is CI/CD

- ▶ The acronym CI/CD refers to:

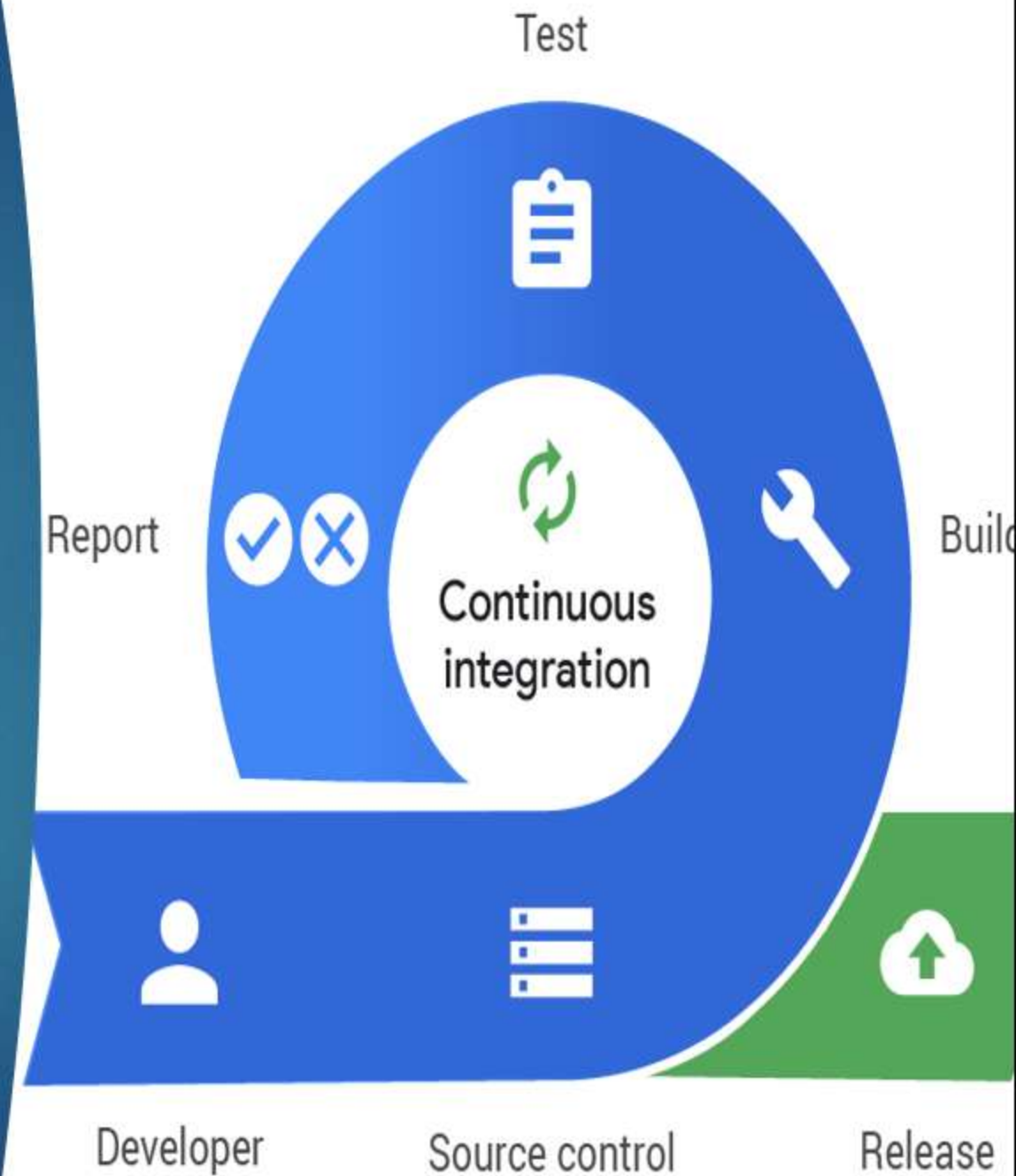
Continuous-integration/Continuous deployment(delivery)

- ▶ CI/CD is a revolutionary approach to frequently delivering value to customers by introducing automation into the stages of app development.
- ▶ CI/CD relies on automation to mitigate human elements that ultimately create bottlenecks in releasing and improving the software.



Continuous-integration

- ▶ **Continuous integration** means new code changes to an app are regularly built, tested, and merged into a shared repository.
- ▶ It's a solution to the problem of having multiple branches participating in an application development simultaneously that might conflict with each other.



Continuous-Delivery/Deployment

- ▶ **Continuous delivery** means a developer's changes to an application are automatically bug tested and uploaded to a repository (like GitHub or a container registry), where they can then be deployed to a live production environment by the operations team.



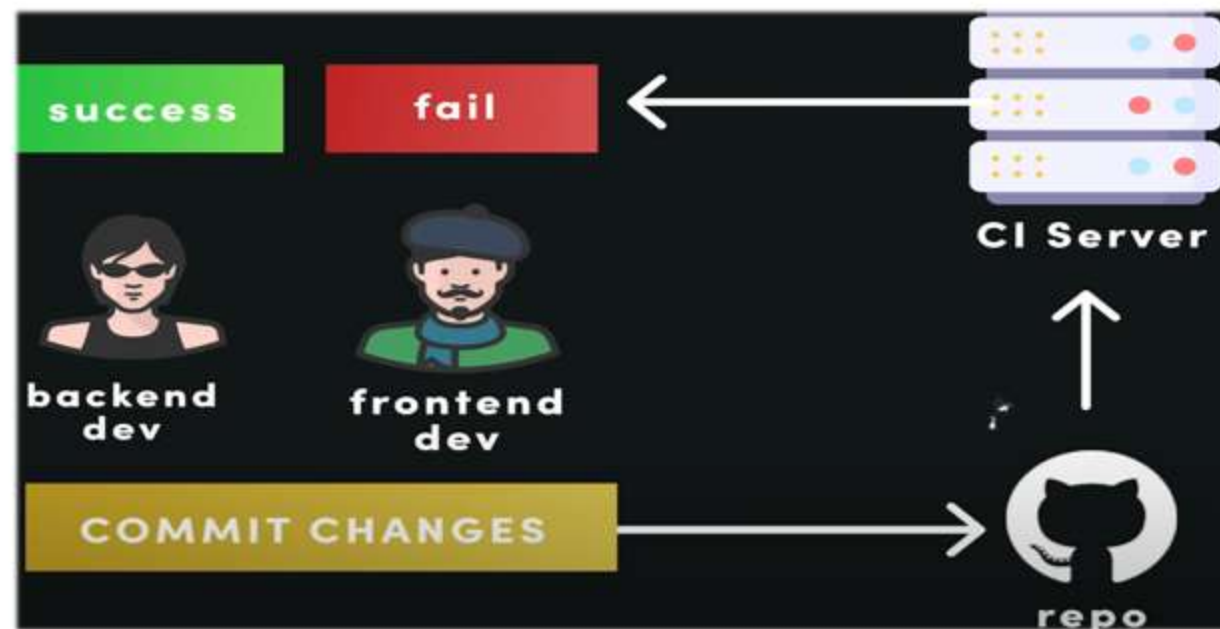
- ▶ **Continuous deployment** refers to automatically releasing a developer's changes from the repository to production, where it is usable by customers.

Key benefits of CI/CD



► Reduce cost:

- **Catching Compile Errors After Merge**, a common example of this would be a back-end developer and a front-end developer both committing changes to the same project.
- CI/CD allows the merging process to be frequent and thus less developer time needed on issues from new code.
- **Automate Infrastructure Cleanup**, thus Fewer infrastructure costs from unused resources.



Key benefits of CI/CD



► Avoid cost:

- **Automate Infrastructure Creation** leading to Less human error, no bottleneck and faster deployments.
- **Higher chance of detecting security vulnerabilities** thus avoiding costly security breaches.

► Increase Revenue:

- **Faster and more frequent production deployments** thus providing value to your customer at an increased rate thus returning revenues and improving feedback.
- Automated smoke tests and rollbacks thus massively reducing downtimes.

Benefits of CI/CD

