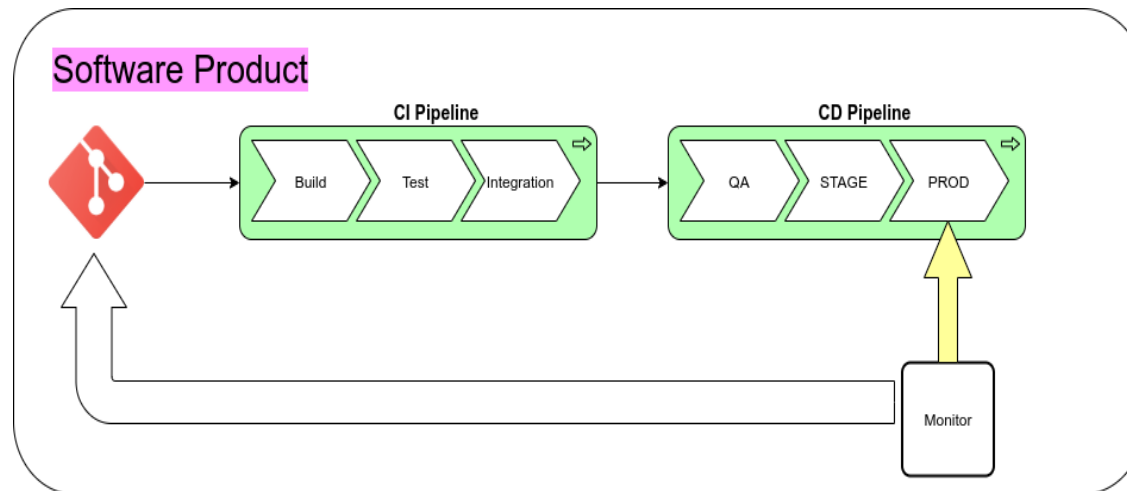


Continuous Integration/ Continuous Delivery/ Deployment.

Continuous-integration packages and tests software builds and alerts developers if their changes fail any unit tests. *Continuous delivery* is the automation that delivers applications, services, and other technology deployments to the runtime infrastructure and may execute additional tests.

Developing a CI/CD pipeline is standard practice for businesses that frequently improve applications and require a reliable delivery process. Once in place, the CI/CD pipeline lets the team focus more on enhancing applications and less on the details of delivering it to various environments.



The CI/CD pipeline consists of the following in order:



Importance of CI/CD

- The importance of continuous integration, continuous deployment and continuous delivery cannot be overemphasized. This is the single tool that means that production will be available for users and features will be built correctly. There are two main areas in which CI/CD will affect. These areas are it will reduce cost and increase revenue for the organization.

Cost is reduced in the following ways:

- The developer spends less time on issues from new developer code because they are able to catch compile errors after merge.
 - fewer infrastructure costs from unused resources because infrastructure cleanup is automated.
 - Prevent costly security holes from the code and infrastructure because the team is able to detect security vulnerabilities.

Revenue is increased in the following ways:

- New value-generating features released more quickly because of faster and more frequent deployments.
 - Less time to market because deployment is made to production without manual checks but with automated checks.
 - Reduced downtime from a deploy-related crash or major bug because smoke tests are automated.

All these and more are achieved because more time is invested in delivering value rather than the release cycle which brings less friction between the development team and the operations team.

