

OVERVIEW

Continuous Integration

The practice of merging all developers' working copies to a shared mainline several times a day. It's the process of "Making". Everything related to the code fits here.

Continuous Deployment

A software engineering approach in which the value is delivered frequently through automated deployments. Everything related to deploying the artifact fits here. It's the process of "Moving" the artifact from the shelf to the spotlight.

Continuous Delivery

An engineering practice in which teams produce and release value in short cycles.

Continuous + Continuous Deployment = Continuous Delivery

BENEFITS OF CICD

Reduce Risk	Catch compile errors and fixing bugs giving testers the ability to detect issues as soon as they occur and to fix them immediately which mitigating risks in real time and reduce cost
Deliver faster	Teams can build, test and deploy features automatically with almost no manual intervention which increase revenue.
Expend less manual effort	After the tests run, the code gets deployed to different environments, including QA, staging and production.
Generate extensive logs	Extensive logging information is generated in each stage of the development process. There are various tools available to analyze these logs effectively and get immediate feedback about the system.
Make easier rollbacks	Immediately return the application to its previous state. Usually, the last successful build gets immediately deployed to prevent production outages and protect revenue.