



CI/CD - A better way to build and ship products to market

Benefits of CI/CD to achieve build and deploy automation within our company's products

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, and it all culminates in the ultimate goal of CI: a high quality, deployable artifact!
- ▶ Some common CI-related phases might include:
 - Compile
 - Unit Test
 - Static Analysis
 - Dependency vulnerability testing
 - Store artifact

Continuous Deployment

- ▶ A software engineering approach in which the value is delivered frequently through automated deployments.
- ▶ Everything related to deploying the artifact autonomously fits here. It's the process of "Moving" the artifact from the shelf to the spotlight without human intervention.
- ▶ Some common CD-related phases might include:
 - Creating and configuring infrastructure
 - Promoting to production
 - Smoke Testing (aka Verify)
 - Rollbacks in case of any failure

Benefits of CI/CD at the Business Level

- ▶ The rationale of CI/CD is the famous saying: 'a penny saved is a penny earned', so here's a preview of the benefits of setting up a CI/CD pipeline:
- ▶ Catch Compile Errors After Merge:
 - This would help to avoid cost by Less bugs in production and less time in testing
- ▶ Deploy to Production Without Manual Checks:
 - This would help to increase revenue by making features take less time to market.
- ▶ Catch Compile Errors After Merge:
 - This would help to reduce cost by Less developer time on issues from new developer code

Continued...

- ▶ Automate Infrastructure Creation:

This will help to avoid cost by providing less human error, which means faster deployments

- ▶ Faster and More Frequent Production Deployments:

This would help to increase revenue by releasing new value-generating features more quickly

- ▶ Automated Smoke Tests:

This would help protect revenue by reducing downtime from a deploy-related crash or a major bug

- ▶ Detect Security Vulnerabilities:

This would help to avoid cost by preventing embarrassing or costly security holes.

And many more ...