CI/CD — A better way to build and ship our products.

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What is CI/CD? Continuous integration and continuous delivery explained

CI/CD IS A BEST PRACTICE FOR DEVOPS AND AGILE DEVELOPMENT. HERE'S HOW SOFTWARE DEVELOPMENT TEAMS AUTOMATE CONTINUOUS INTEGRATION AND DELIVERY ALL THE WAY THROUGH THE CI/CD PIPELINE.

Continuous Integration

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*The practice of merging all developers' working copies to a shared mainline several times a day. It's the process of "**Making**".*

Some common CI-related phases might include:

- Compile
- Unit Test
- Static Analysis
- Dependency vulnerability testing
- Store artifact

Continuous Deployment

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

Some common CD-related phases might include:

- Creating infrastructure
- Provisioning servers
- Copying files
- Promoting to production
- Smoke Testing (aka Verify)
- Rollbacks

Benefits of CI/CD to Business

- **Catch Compile Errors After Merge:** Less developer time on issues from new developer code
- **Catch Unit Test Failures:** Less bugs in production and less time in testing
- **Detect Security Vulnerabilities**: Prevent embarrassing or costly security holes
- **Automate Infrastructure Creation:** Less human error, Faster deployments
- **Automate Infrastructure Cleanup:** Less infrastructure costs from unused resources
- **Automated Smoke Tests: Reduced downtime from a deploy-related crash or major bug**
- **Automated Rollback Triggered by Job Failure:** Quick undo to return production to working state