



# Benefits of CI/CD

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# What is CI/CD?

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An assembly line in a factory produces consumer goods from raw materials in a fast, automated, reproducible manner.

Similarly, a software delivery pipeline produces releases from source code in a fast, automated, and reproducible manner.

# CI

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- The "CI" refers to continuous integration, which is an automation process for developers.
- It is a process of merging code which lead to have multiple developers working simultaneously on different features of the same app.
- CI might include:
  - Compile
  - Unit test
  - Static analysis
  - Vulnerability testing
  - Store artifact

# CD

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- The "CD" refers to continuous deployment, automates releasing an app to production.
- Continuous deployment means that a developer's change to a cloud application could go live within minutes of writing it. This makes it much easier to continuously receive and incorporate user feedback.
- CD might include:
  - Creating infrastructure
  - Provisioning servers
  - Promoting to production
  - Smoke Testing
  - Rollbacks

# Benefits of CI/CD at the Business Level

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- **Deploy faster:** The automation the CI/CD pipeline brings to the software development lifecycle reduces manual labor (reduce cost) and time required for creating and maintaining deployment scripts and tools.
- **Detect Security Vulnerabilities:** Avoid cost by prevent embarrassing or costly security holes.
- **Automated Smoke Tests:** protect revenue by reducing downtime from a deploy-related crash or major bug.
- **Faster and More Frequent Production Deployments:** increase revenue by adding new features which released quickly
- **Automated Rollback Triggered by Job Failure:** protect revenue by quick undo for the new version that makes failure

# Cont. Benefits of CI/CD at the Business Level

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