CI/CD

Fundamentals and Benefits of CI/CD (Focus on Revenue and Cost Control)

Continuous Integration (CI)

CI is the practice of merging all developers working codes to a shared mainline several times a day. The goal of CI is to deploy a high-quality artifact.

Phases in CI are compile, unit test, static analysis, dependency vulnerability scanning, store artifact.

Continuous Deployment (CD)

CD is a software engineering approach where teams release value in short cycles (frequently), through automation. It is the process of moving the high-quality artifact from CI to deployment or production.

Phases in CD are creating infrastructure, copying files, provisioning servers, promoting to production, smoke testing, rollbacks.

Benefits of CI/CD

The befits of CI/CD will be grouped into 4 Values which are cost reduction, cost avoidance, increased revenue, protect revenue.

- **Cost Reduction**: by adopting ci/cd in development and production, you'll have less developer time on issues from new codes and less infrastructure costs from unused resources.

- **Avoid Cost**: less bugs in production and less time in testing, preventing costly security holes, and less human errors translates to faster deployment and avoidance of unnecessary costs.

Benefits of CI/CD (Cont.)

- **Protect Revenue**: reduced downtime from a deploy-related crash or major bug and quick undo to return production to working state will protect revenue and keep customers happy.

- **Increase Revenue**: less time to market product and new value-generating features which are released more quickly will increase revenue. Who doesn't want to make more money?