CI/CD - Organizations save cost and deliver fast

Continuous Integration

- The practice of merging all developers' working copies to a shared mainline several times a day.

- 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 if any failure

Benefits of CI/CD at the Business Level

- Automate Infrastructure Creation - Less human error, Faster deployments - Avoid Cost
- Catch Unit Test Failures - Less bugs in production and less time in testing - Avoid Cost
- Automated Smoke Tests - Reduced downtime from a deploy-related crash - Protect Revenue
- Detect Security Vulnerabilities - Prevent embarrassing or costly security holes - Avoid Cost

- Faster and More Frequent Production Deployments - New value-generating features released more quickly - Increase Revenue

- Automated Rollback Triggered by Job Failure - Quick undo to return production to working state – Protect Revenue