

Benefits Of CI/CD

What Is CI/CD and its components ?

CI/CD contains three major concepts:

Continuous Integration: Development practice that requires developers to integrate code into a shared repository several times a day.

Continuous Delivery: Process of releasing new software frequently through the use of automated testing and continuous integration.

Continuous Deployment: Continuous deployment is the next step of continuous delivery: Every change that passes the automated tests is deployed to production automatically. “Push to go”

What makes for good CI?

- **Decoupled Stages:** Each step in CI should be a single focused task.
- **Repeatable:**
 - Automated in a way that is consistently repeatable.
 - Tooling should work for local developers too – Local/Remote parity
- **Fail fast:** fail at first sign of trouble.
- **Design with the system in mind:**
 - Cover as many as part of deployment as possible.
 - Application | Infrastructure | Configuration | Data
- **Pipelines:** Continuously increase confidence as you move towards the production.
- **Globally Unique Version:**
 - Know the state of the system at any time.
 - Be able to demonstrate difference between current and future state.

Reduce Cost

- Automate Infrastructure Cleanup.
- Catch Compile errors after merge.

Increase Revenue

- Without manual check one can deploy to production.
- Faster and more frequent production deployments.
- Test, support, development and operations must work together as one delivery team to automate and streamline the build-test-release process.

What are the challenges confronted with ?

- Establishing CI/CD comes with a high amount of initial cost and learning.
- CI/CD requires constant support and maintenance as well as continuous development and improvement.
- It will improve overall business process and reduce cost for long run.