

UDAPEOPLE

CI/CD APPROACH



Problem Statement –Current Approach

- ▶ Manual testing process
- ▶ Lack of time for proper Quality Checks
- ▶ Increased costs in manual testing and deploy process
- ▶ Late detection of failures leading to delayed releases
- ▶ Difficult roll back processes in case of failures
- ▶ Lack of quality and maintainable code



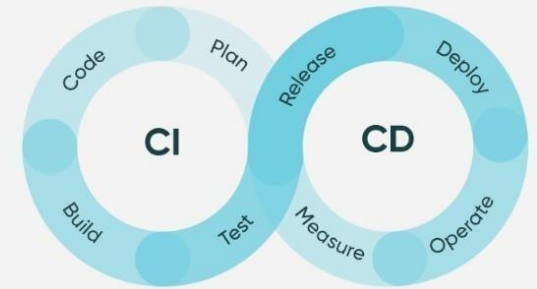
What is CI/CD

- ▶ Continuous Integration:

- ▶ Refers to build/integration stage of software release process
- ▶ Code changes are merged to central repository
- ▶ Includes automated builds and test runs

- ▶ Continuous Delivery:

- ▶ Auto prepares code changes for production release
- ▶ Expands upon CI by deploying code changes to a testing/prod environment
- ▶ Ensures deployment-ready build artifact, with passed standardized test process.



CI/CD Benefits

- 01 Automate Infrastructure Creation and clean up: Eliminating human errors and avoid unnecessary cost of unused or invalid infrastructure
- 02 Faster to production: By automating the pipeline to production this way we can deploy features as soon as created which will help increase revenue
- 03 Automated Rollback Triggered by Job Failure: Automate the process of rolling back and cleaning any infrastructure left which would help in reducing cost and lower down time
- 04 Catch Compile Errors After Merge: Discover errors as soon as the developer make his commit which will help reduce the time of developers and reduce cost
- 05 Catch Unit Test Failures: Unit tests are not neglected with CICD which will increase code quality and catch errors early before production which would decrease cost
- 06 Automated Smoke Tests: Automate smoke test after deployment and automatic rollback in case of failure which will decrease downtime and reduce cost

Conclusion

CI/CD Pipelines ensures quality code and early bug identification with automated steps throughout the pipeline

Following CI/CD approach reduces the development and release costs by increasing the successful releases

Improve team efficiency by eliminating the monotonous tasks and utilizing the resources for more innovative activities