Continuous Integration and Continuous Delivery (CICD)

CICD in simple terms is an automated method of delivering a production job.

CI for Continuous Integration is act of integrating and merging all developers' copy of code to a shared mainline several times a day

CD for Continuous Delivery is the act of releasing values in short cycle, delivering production ready jobs for use at short times. CD is a combination of continuous integration and continuous deployment which means that as new commits are made, the codes are integrated and deployed in an automated fashion.

Traditional Method of Production

Traditional method of deployment involves stopping and manually making efforts to create releasable builds. The traditional process would include:

* Compiling locally

* Configuring server

* making a zip file

* Deployment

* Uploading via FTP

* Testing

* Loging into Server

* etc

* Unzipping files

Benefits of CICD

* CICD automates the deployment pipeline. No valuable time is lost as programmers never have to stop coding in order to compile, build, test, configure, deploy etc.

* Programmers have more time to keep coding thereby completing a wider job scope.

* Merging and integration of codes from various programmers can be done several times a day.

* New commits from programmers automatically triggers a compile sequence, test runs, static analysis of codes all through deployment

Benefits of CICD Contd.

* Values are released in short cycles. No need to wait long periods for releasable builds.

* Quick and reliable rollback if tests fail

* Deployment is reliable and can be done several times reliably

* Reduces the risks of service downtime

Conclusion

In conclusion, the benefits of CICD translate to cost in a number of ways:

* Programmers can complete more work scope which translates to more revenue.

* Service downtime is nearly eliminated thereby eliminating the associated loss cost

* Cost of programming time that is lost in the traditional method of deployment is eliminated

* Cost of running server resources during the slow traditional configuration, tests and rollbacks is eliminated

The sole aim of any business is to increase revenue and profit. CICD helps achieve that in a programming production environment.