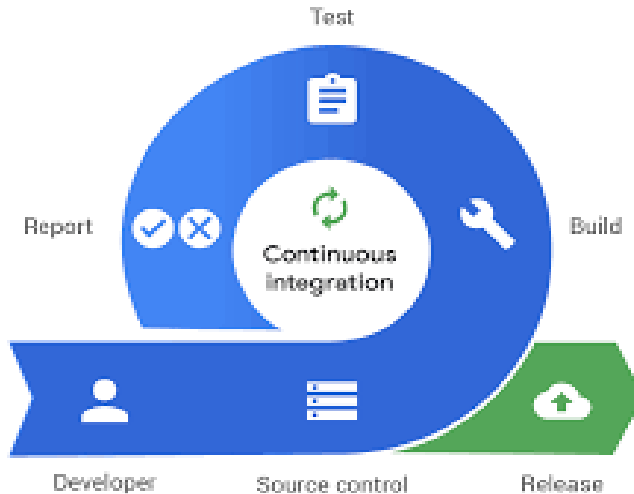# Jenkins

:- Pulkit Dhingra

Continuous Integration

After a new commit to a source code repository, a build process of code is initiated automatically.

The autonomous building of code is one of the initial steps in the continuous integration setup.

The build process may include unit testing and source code analysis.

If the build fails for some reason, then the integration process is terminated and the previous successful build is rollback.

Some confusing terms
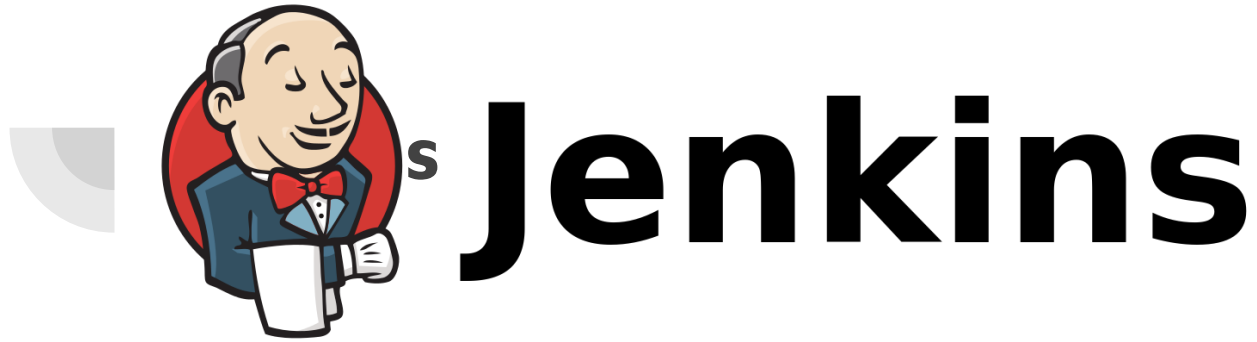
Continuous Integration

The practice of merging development work with the main branch

Continuous Deployment

The deployment or release of code to production as soon as it is ready

Continuous Delivery

Continuous delivery of code to an environment once the code is ready to ship. This could be staging or production. The idea is the product is delivered to a user base, which can be QAs or customers for review and inspection.

Jenkins

★ It is a continuous integration and build server

★ It is written in java thus requiring a JRE to run

★ Manual,automatic or periodic builds are possible for software deployment

Distributed Architecture of Jenkins

Jenkins Master
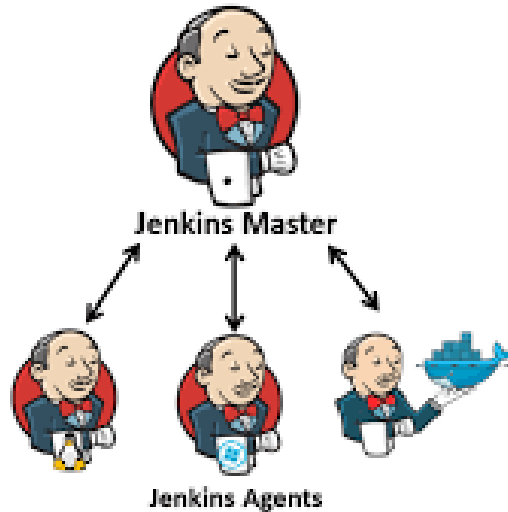
Jenkins Agents

The master node is responsible for the job scheduling and dispatch builds to the slaves for actual job execution.

The Jenkins agents execute the jobs assigned by the master.

Demo

- Install jenkins
- Install plugin jenkins overview
- Various pipeline possible
- Build java code pipeline
- Build dotnet code pipeline
- Build python pipeline