Jenkins

# What can Jenkins do?

* Generate test reports
* Integrate with many different Version Control Systems(like GIT)
* Push to various artifact repositories
* Deploys directly to production or test environments
* Notify stakeholders of build status
* …and much more

# How Jenkins works ! Setup?

1. When setting up a project in Jenkins, out of the box you have the following general options:

* Associating with a version control server (ex [Subversion](https://en.wikipedia.org/wiki/Subversion_(software)) (SVN) )
* Triggering builds
  + - Polling, Periodic, Building based on other projects
* Execution of shell scripts, bash scripts, Ant targets, and Maven targets
* Artifact archival(An artifact can be any result of your build process.)
* Publish JUnit test results and Javadocs
* Email notifications

1. As stated earlier, plugins expand the functionality even further

# How Jenkins works – Building?

1. Once a project is successfully created in Jenkins, all future builds are automatic
2. Building

* Jenkins executes the build in an executer
* By default, Jenkins gives one executer per core on the build server
* Jenkins also has the concept of slave build servers (<https://wiki.jenkins-ci.org/display/JENKINS/Distributed+builds>)
* Useful for building on different architectures
* Distribution of load

# How Jenkins works – Reporting

1. Jenkins comes with basic reporting features

* Keeping track of build status
* Last success and failure
* “Weather” – Build trend

1. These can be greatly enhanced with the use of pre-build plugins
   * + Unit test coverage
       - Test result trending
     + Findbugs, Checkstyle, PMD

# Flow Diagram (Jenkins – Fitting in) :

