**CI/CD**(Continuous Integration & Continuous Delivery)

**WFT\_Continuous\_Integration\_Admins @epam.com**

**24/10/2016**

**Source Code Management**

* Version control system(vcs)
* SVN and Hooks
* Pre commit Hooks

Commit message should not be empty

The message length should be minimum 60 characters

Jira ID is also very important to commit changes

* Post commit Hooks
* Life Cycle of SVN
* GIT –Master Branch, Branches, Local branches

GIT

* Clone Repository to Computer (GIT clone –url)
* Create a local branch of the master branch
* Switch to that branch
* Make changes to files in local branch
* Commit changes to local branch( GIT commit 🡪 ?)
* Switch back to master
* Perform a pull operation
* Accept latest changes
* Merge local branch to local master

**25/10/2016**

Build is preparation of artifacts, source code is ready to compile

Push includes build and deployment

Maintainable code 🡪 Compatibility

Reliable code 🡪software must work on any platform and on any device

High Performance code

Secure code 🡪Maintain different security levels

**Continuous Integration Platform**

It is a software development practice where members of a team integrate their work frequently, usually each person integrates at least daily – leading to multiple integrations per day

* Martin Fowler

**CI cycle**

🡪Source Code

🡪Version Control System

🡪Source code Build

🡪 Static Code Analysis

🡪 Run Automated Unit Tests

🡪Code Coverage Analysis

🡪Build Artifact

🡪 Set-up Test ‘Fixtures’

🡪Provision and Deploy to Test Environment

🡪Run Automates Functional Tests

🡪 Publish Reports

🡪Development Team

**Jenkins(HUDSON)**

It is an open source software tool written in the Java programming language for testing and reporting

Quality Gate will check for violations in source code

Code coverage 🡪90%

Duplicate Code 🡪 not more than 15%

**26/10/2016**

**Continuous Value Delivery**

SCM 🡪SVN,GIT,github

Jenkins

Build

Deployment

Test automation tool🡪XAFT, SoapUI, Telexek ,protractor

**Repo Management**

* Nexus
* Artifacts
* Nugets

**Static code Analysis** 🡪SonarQube

Analyze the code

Execute and generate the code coverage

Quality profiles

Quality gate

Dashboard widgets

**Code Reports and Metrics**

* Reports
* Benefits
* Metrics

**Application Life Cycle** 🡪InsideView

JIRA & PMO Dashboard

On the top of the Alfresco , Inside View is build

Alfresco is an open source, used for document management system

**27/10/2016**

Tortoise SVN

Enriched Branch includes

Trunks

Branches

Tags

* **CVS**
* **SVN**
* **TFS**
* **GIT**
* **GITHUB**