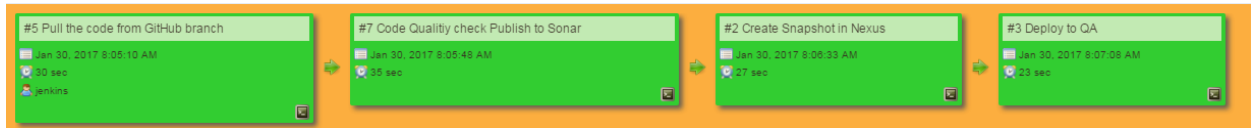# CI/CD Using Automation Tool(Jenkins)

➢ Configure the CI/CD for ims project it's a simple java applications
➢ Final output as below

Pre-requisite:

- Jdk -1.8
- Maven -3.3.9
- Git - 2.10.0
- Tomcat -8.0
- Jenkins –
- Sonar – 6.0
- Nexus
- Vagrant
- Notepad++

Required Jenkin Plugins:

1) Maven Integration Plugin   //To build maven project
2) Git Plugin   // To Add git repo in scm section
3) Git Client plugin   // To do operation on git // add, commit...etc
4) Deploy to container Plugin // To deploy on web server (tomcat)
5) Build pipeline plugin   // To orchestrate the jobs
6) SSH plugin   // To connect remote m/c

Create Jenkins Jobs:

1) Pull the code from GitHub branch

2) Code Qualitiy check Publish to Sonar

3) Create Snapshot in Nexus

4) Deploy to QA

Jenkins Configurations:

Goto   Manage Jenkins → Configure System → E-mail Notification
Configure global settings and paths.
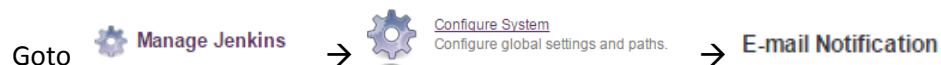
E-mail Notification

SMTP server	smtp.gmail.com
Default user e-mail suffix	
☑ Use SMTP Authentication	
User Name	devopstoolsteam@gmail.com
Password	••••••••••••••••••••••••••••••••••••••
Use SSL	☑
SMTP Port	465
Reply-To Address	
Charset	UTF-8
☐ Test configuration by sending test e-mail	

Add server details to where you want to deploy the application as below

SSH remote hosts

SSH sites		
	Hostname	192.169.50.20
	Port	22
	User Name	root
		🚫 Can't connect to server
	Password/Passphrase	••••••
	Keyfile	
	Pty	☐
	serverAliveInterval	0

Delete

Note: When you install SSH plugin then only it will show this option otherwise not.

goto 🔧 **Manage Jenkins** → 🛠️ Global Tool Configuration
Configure tools, their locations and automatic installers.

Add Jdk, git, maven paths details

JDK

JDK installations	JDK Name	JAVA_HOME
	JAVA_HOME	C:\Program Files\Java\jdk1.8.0_101
	☐ Install automatically	

Delete JDK

Add JDK
List of JDK installations on this system

Git

Git installations	Git Name	GIT_HOME
	Path to Git executable	C:\Program Files\Git\bin\git.exe
	☐ Install automatically	

Delete Git

Add Git ▼

description

Maven

Maven installations

Maven
Name | `MVN_HOME`

MAVEN_HOME | `C:\apache-maven-3.3.9`

☐ Install automatically

Delete Maven

Add Maven

List of Maven installations on this system

Nexus Details:

Add nexus details in setting.xml   in server section.

`<servers>`

`<server>`

`<id>deployment</id>`

`<username>admin</username>`

`<password>admin123</password>`

`</server>`

`</servers>`

Sonar Details:

Add sonar details in setting.xml as below.

```
<profiles>
     <profile>
          <id>sonar</id>
          <activation>
               <activeByDefault>true</activeByDefault>
          </activation>
          <properties>
               <!-- Optional URL to server. Default value is http:/
               <sonar.host.url>
                    http://localhost:9000
               </sonar.host.url>
          </properties>
     </profile>
</profiles>
```

change this url according your instance details.