**Jenkins Build 2**

**Objectives:**
- Configure Unit tests with Jenkins
- Configure a second build node
  - This requires a second vm (we are going to use linux)
- Configure email-based notifications
- Integrate Jenkins and SonarQube

**Requirements:**

Continue where you left off on your last project with Jenkins. You will start in chapter 2 at the ‘Configuring JUnit’ section, and work to the end of the chapter.

**Plugins**

When configuring the dashboard view plugin, after configuring it, you must attach it to a build job. Attach it to your PetClinic build job you created in the last assignment. I don’t care what portlets you add.

**Nodes**

Configure a second VM as a build node. Though the book uses a windows machine, we will use a Linux vm as our second node. Make sure to install `default-jre`, `default-jdk`, `git`. (You could use your production vm, if you still have that one.)

On that machine:

- Add a new user called `jenkins`
- As that new user, in their home directory, create a directory called `jenkins_slave`.
- From the jenkins web interface, as you are adding your new node, use the following configuration:
  - remote root directory `/home/jenkins/jenkins_slave`
  - Launch slave agent via SSH
  - Configure the host ip of second machine
  - Add new credentials (will ask you for name and password of jenkins user)
  - Use non-verifying host strategy
- Verify the log status of the agent that it is online
- I ran my build project on this node at this point. You only need to edit your project settings and select where the project can run. (Look for the checkbox `restrict where this can run`, then enter the name of your node)
- Make sure that you can build your project on BOTH the `master` node and your new `slave` node.

**SonarQube**

- I installed on same node as jenkins (though you probably want to bump the RAM to 4G if possible)
- DO NOT USE SUDO WHEN YOU UNZIP OR RUN THIS OR YOU WILL BREAK THINGS!
- Default username/password = admin/admin
- The real command to run it is `./sonar.sh start`
  - If it doesn’t seem to run, look for the logs directory inside the sonarqube directory that you extracted. See if you can figure what the error is.
  - This has to be re-run if you reboot the node
- After you start it, you have to visit port 9000 on that node (as indicated in the instructions).
- One thing that the text doesn’t make clear is that you MUST add a build step to your project to have the SonarQube scanner run.
- I also found that my build failed with SonarQube, unless I added the following line to sonar-project.properties (I already added it to the repo, you don’t have to do anything).

```plaintext
sonar.java.binaries=src
```
Check off procedure:

For this project, you should submit the following screenshots:

- JUnit tests are showing up
- That you have added some dashboard plugins
- That you can successfully execute a build job on a second node
- That you can receive an email notification when the build fails
- That sonarqube has received some information from your build job.