Sonar Configuration for Maven

Prerequisites:

- Jdk 1.8 or greater
- Maven 3.x
- SonarQube 5.x
- Sonar Scanner 3.x
- The language plugins for each of the languages you wish to analyze are installed

Compatibility:

From maven-sonar-plugin 2.7, SonarQube < 4.5 is no longer supported.
If using SonarQube instance prior to 4.5, you should use maven-sonar-plugin 2.6.

From maven-sonar-plugin 3.1, Maven < 3.0 is no longer supported.
If using Maven prior to 3.0, you should use maven-sonar-plugin 3.0.2.

Configuation:

Global Settings:

Edit the **settings.xml** file, located in *$MAVEN_HOME/conf* or *~/.m2*, to set the plugin prefix and optionally the SonarQube server URL.

Example:

```xml
<settings>
    <pluginGroups>
        <pluginGroup>org.sonarsource.scanner.maven</pluginGroup>
    </pluginGroups>
    <profiles>
        <profile>
            <id>sonar</id>
            <activation>
                <activeByDefault>true</activeByDefault>
            </activation>
            <properties>
                <!-- Optional URL to server. Default value is http://localhost:9000 -->
                <sonar.host.url>
                  http://myserver:9000
                </sonar.host.url>
            </properties>
        </profile>
    </profiles>
</settings>
```

Database Configuration with SonarQube: (MySQL)

1. Go to MySQL website (**https://www.mysql.com/downloads/**), download & Install MySQL Server Database
2. Login to MySQL database
3. Create new Database. For Ex: CREATE DATABASE sonarqube ;
4. Go To SonarQube config folder location (**C:\DevOps\sonarqube\conf**) edit **sonar.properties** file and uncomment the following line for MySql and save it

```
sonar.jdbc.url=jdbc:mysql://localhost:3306/sonar?useUnicode=true&
characterEncoding=utf8&rewriteBatchedStatements=true&useConfigs=maxPerformance
```

5. Start the sonar server by executing '**C:\DevOps\sonarqube\bin\windows-x86-64\StartSonar.bat**'
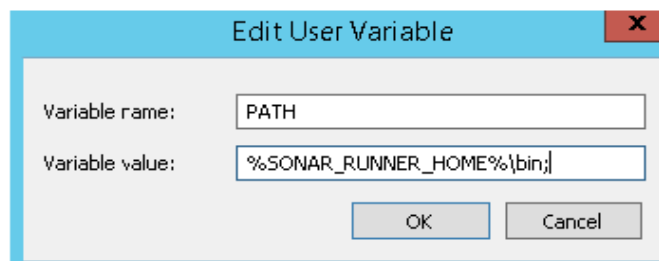
SonarQube Runner:

SonarQube Runner download the latest version of SonarQube runner from and unzip to the desired location. SonarQube Runner is recommended as the default launcher to analyze a project with SonarQube.

1.Set a new environment variable as **SONAR_RUNNER_HOME** . And its value should be the unzipped path of sonar-runner zip file.
Example, "*C:\DevOps\sonar-runner-2.4"* **don't put the semicolon (;)**
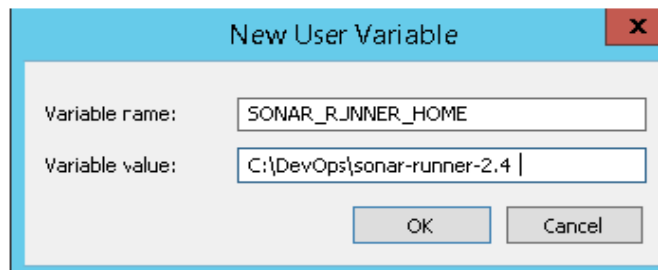
2.Append Sonar Runner's bin path (**%SONAR_RUNNER_HOME%\bin**) to the environment variable "PATH".

3.Uncomment the following lines in the property file,
' **C:\DevOps\sonar-runner-2.4\conf\sonar-runner.properties'** and save it.

```
C:\DevOps\sonar-runner-2.4\conf\sonar-runner.properties
#----- Default SonarQube server
 sonar.host.url=http://localhost:9000



#----- MySQL sonar.jdbc.url=jdbc:mysql://localhost:3306/sonar?useUnicode=true&amp;characterEncoding=utf8
```

Proxy configuration:

SonarQube is located behind a proxy, additional information must be provided in the
SONAR_HOME/conf/sonar.properties configuration file:

```
SONAR_HOME/conf/sonar.properties
http.proxyHost=<your.proxy.host>
http.proxyPort=<yout.proxy.port>

#If proxy authentication is required
http.proxyUser=<your.proxy.user>
http.proxyPassword=<your.proxy.password>
```

Installation & Configuration:

1. Download (**http://www.sonarsource.org/downloads/**) and unzip the SonarQube distribution (let's say in
"C:\sonarqube" or "/etc/sonarqube")
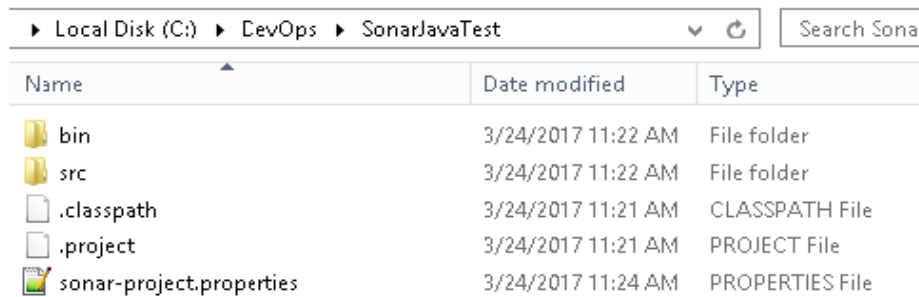2. Start the **SonarQube** server as follows

```
# On Windows, execute:
C:\sonarqube\bin\windows-x86-xx\StartSonar.bat

# On other operating system, execute:
/etc/sonarqube/bin/[OS]/sonar.sh console
```

3. Once it is up, open **http://localhost:9000/** from the browser to access **SonarQube**
4. You can Login by using default System administrator
(**https://docs.sonarqube.org/display/SONAR/Authorization**) credentials admin/admin
5. 9000 is the default port and can be changed in **SONAR_HOME\conf\sonar.properties**

SonarQube Java Project Configuration:

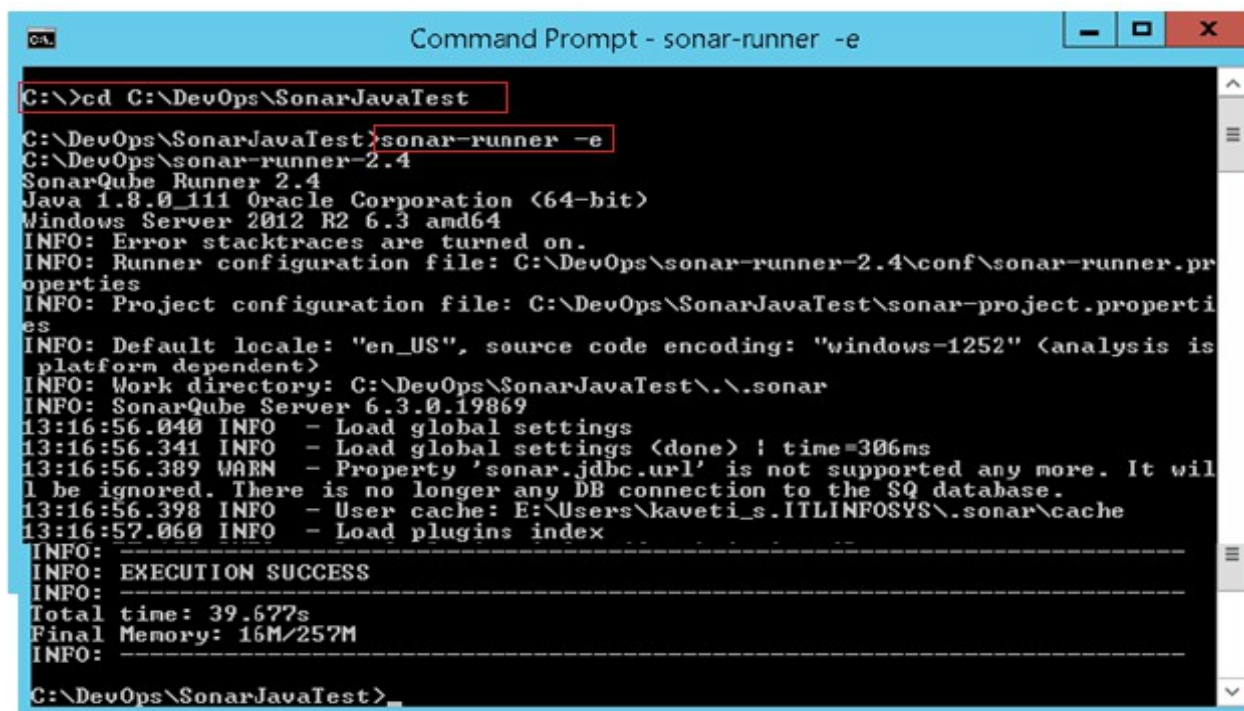1. Go to the root folder of the Java Project to be analyze

2. Create **'sonar-project.properties'** file under the root folder of the project.

3. Provide project details in **sonar-project.properties** like below


```
sonar.projectKey=SonarJavaTest
sonar.projectName=Sonar Java Test
sonar.projectVersion=1.0
sonar.sources=.
```

4. Go to the project root folder through the Command prompt

5. Execute the command **'sonar-runner -e'.**
      '-e' option is useful when some error occurs and it gives the stack trace.
      '-X' options will run it in debug mode.

6. Once the analysis is successful, launch the sonar web application **http://localhost:9000** and login as administrator.

7.Go to **http://localhost:9000/projects** it will show the summary of the analysis of the project.
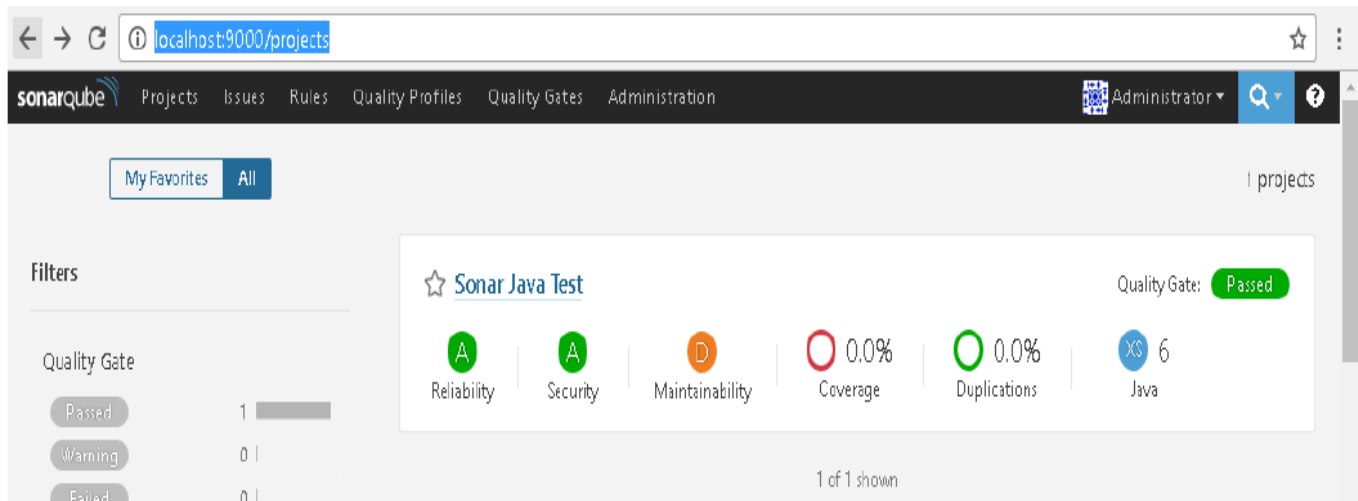
8. By Clicking on the Sonar Java Test, you can get the more details about the project

9. If you want to run the analysis in module wise just change **sonar-project.properties** file as below

```
sonar-project.properties
sonar.projectKey=Project Name
sonar.projectName= Project project
sonar.projectVersion=1.0
sonar.sources=.
sonar.modules=Module1, Module2,Module3
Module1.projectName=Module 1
Module2.projectName=Module 2
Module3.projectName=Module 3
```