

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.

Configuration:

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:

```
<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
```

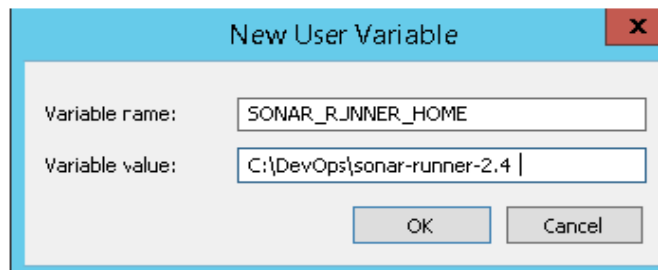
5. Start the sonar server by executing 'C:\DevOps\sonarqube\bin\windows-x86-64\StartSonar.bat'

SonarQube Runner:

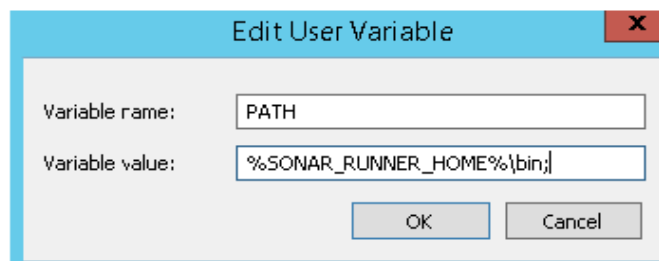
SonarQube Runner download the latest version of SonarQube runner from and unzip to the desired location. SonarQube Runner is recommended as the default launcher to analyze a project with SonarQube.

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&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=<your.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

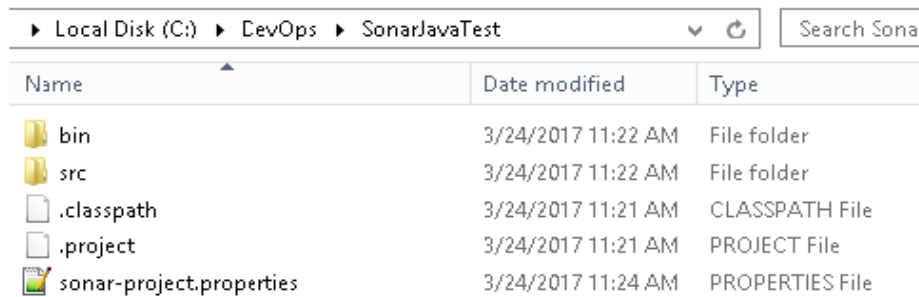
```
# On Windows, execute:
C:\sonarqube\bin\windows-x86-xx\StartSonar.bat

# 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

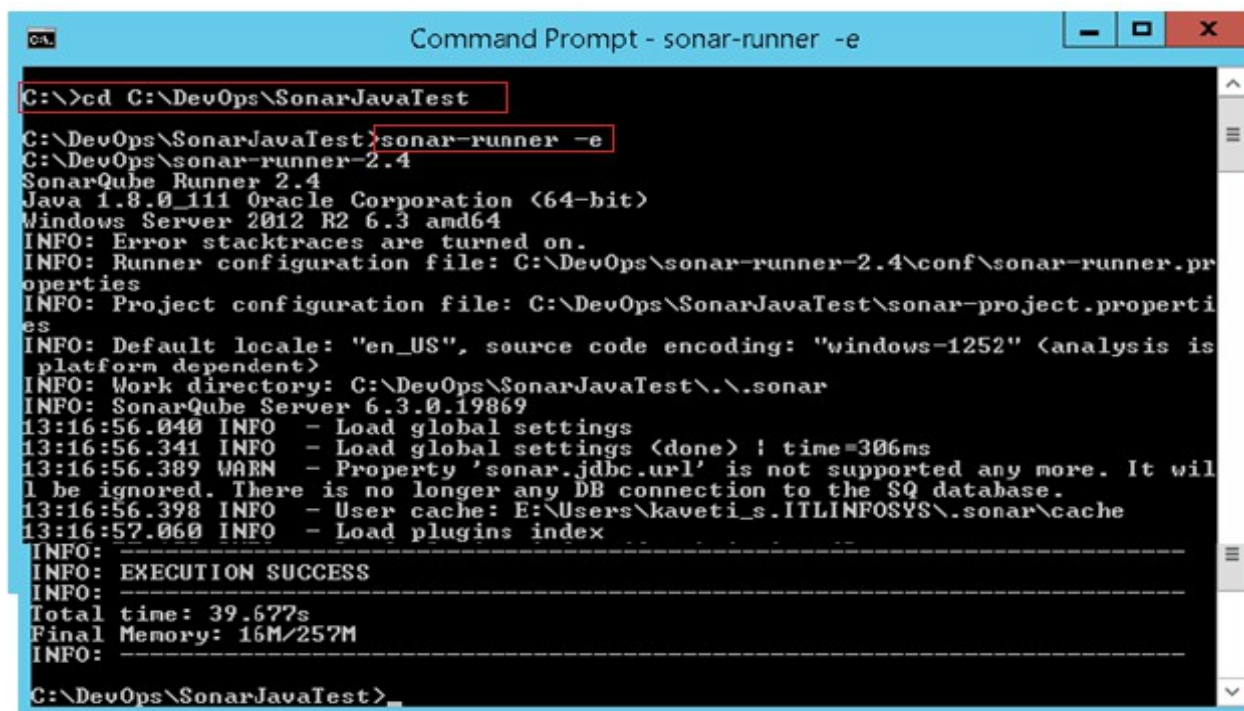


| Local Disk (C:) > DevOps > SonarJavaTest | | | Search Sonar |
|--|--------------------|-----------------|--------------|
| Name | Date modified | Type | |
| bin | 3/24/2017 11:22 AM | File folder | |
| src | 3/24/2017 11:22 AM | File folder | |
| .classpath | 3/24/2017 11:21 AM | CLASSPATH File | |
| .project | 3/24/2017 11:21 AM | PROJECT File | |
| sonar-project.properties | 3/24/2017 11:24 AM | PROPERTIES File | |

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.



```
Command Prompt - sonar-runner -e

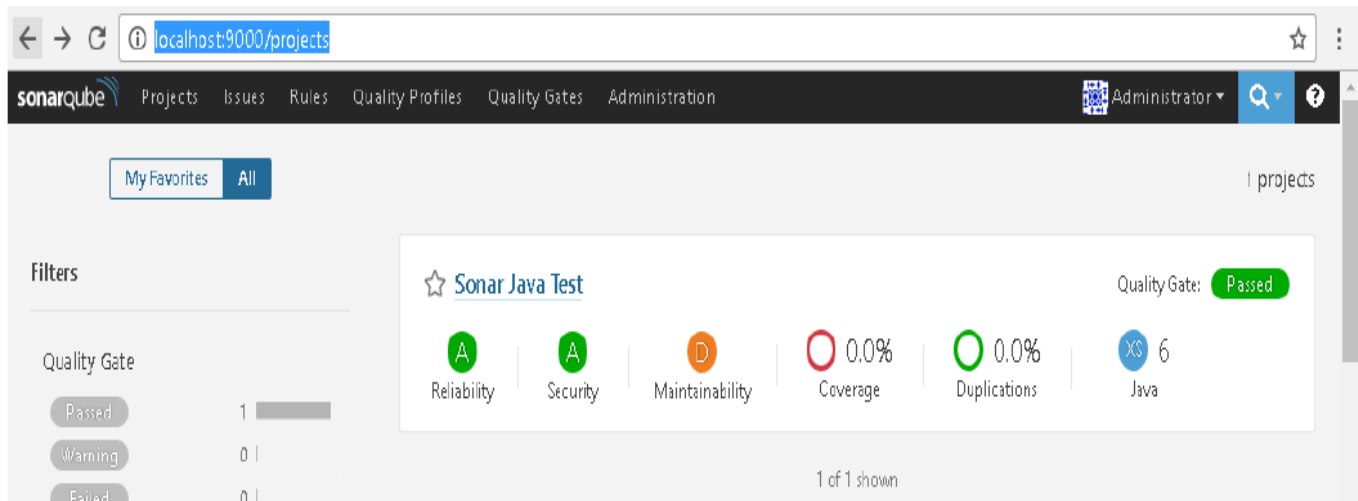
C:\>cd C:\DevOps\SonarJavaTest

C:\DevOps\SonarJavaTest>sonar-runner -e
C:\DevOps>sonar-runner-2.4
SonarQube Runner 2.4
Java 1.8.0_111 Oracle Corporation (64-bit)
Windows Server 2012 R2 6.3 amd64
INFO: Error stacktraces are turned on.
INFO: Runner configuration file: C:\DevOps\sonar-runner-2.4\conf\sonar-runner.pr
operties
INFO: Project configuration file: C:\DevOps\SonarJavaTest\sonar-project.properti
es
INFO: Default locale: "en_US", source code encoding: "windows-1252" (analysis is
platform dependent)
INFO: Work directory: C:\DevOps\SonarJavaTest\.\sonar
INFO: SonarQube Server 6.3.0.19869
13:16:56.040 INFO - Load global settings
13:16:56.341 INFO - Load global settings <done> ! time=306ms
13:16:56.389 WARN - Property 'sonar.jdbc.url' is not supported any more. It wil
l be ignored. There is no longer any DB connection to the SQ database.
13:16:56.398 INFO - User cache: E:\Users\kaveti_s.ITALINPOSYS\sonar\cache
13:16:57.060 INFO - Load plugins index
INFO: -----
INFO: EXECUTION SUCCESS
INFO: -----
Total time: 39.677s
Final Memory: 16M/257M
INFO: -----

C:\DevOps\SonarJavaTest>
```

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
```