

Sumyak Jain, 500068360, R171218106

Experiment No 5

Jenkins Integration with SonarQube

STEP 1) Open your Jenkins.war file

```
Microsoft Windows [Version 10.0.18363.1882]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\GAURAV> cd Jenkins

D:\Jenkins> java -jar Jenkins.war --httpPort=8383
Running from: D:\Jenkins\Jenkins.war
Webroot: C:\Users\Gaurav\Jenkins
2020-10-03 13:07:32.519+0000 [id=1] INFO org.eclipse.jetty.util.log.Log initialized: Logging initialized @746ms to org.eclipse.jetty.util.log.JavaUtilLog
2020-10-03 13:07:32.586+0000 [id=1] INFO winstone.Logger#logInternal: Beginning extraction from war file
2020-10-03 13:07:32.617+0000 [id=1] WARNING o.e.j.s.handler.ContextHandler#setContextPath: Empty contextPath
2020-10-03 13:07:32.695+0000 [id=1] INFO org.eclipse.jetty.server.Server#doStart: jetty-9.4.39.v20200611; built: 2020-06-11T12:34:51.929Z; git: 27183564cf4d12f12b70b13ef5a92a9276340b6; jvm 11.0.8+10-LTS
2020-10-03 13:07:33.666+0000 [id=1] INFO o.e.j.w.StandardDescriptorProcessor#visitServlet: NO JSP Support for /, did not find org.eclipse.jetty.jsp.JettyJSPServlet
2020-10-03 13:07:33.770+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIDManager#doStart: DefaultSessionIDManager workerName=node0
2020-10-03 13:07:33.776+0000 [id=1] INFO o.e.j.s.s.DefaultSessionIDManager#doStart: No SessionScavenger set, using defaults
2020-10-03 13:07:33.794+0000 [id=1] INFO o.e.j.server.session.HouseKeeper#startScavenging: no session scavenging every 600000ms
WARNING: An illegal reflective access operation has occurred
```

STEP 2) Open your Jenkins and download SonarQube Scanner plugin



STEP 3) after you download the plugin you can see a section of sonarqube created in system configuration in Jenkins

There you have to provide information of your sonarqube

duration

☐ Restrict project naming

Jenkins Location

Jenkins URL

System Admin e-mail address

Serve resource files from another domain

Resource root URL

Without a resource root URL, resources will be served from the main domain with Content-Security-Policy set.

Global properties

☐ Disable deferred wipeout on this node

☐ Environment variables

☐ Tool Locations

SonarQube servers

Environment variables ☐ Enable injection of SonarQube server configuration as build environment variables

If checked, job administrators will be able to inject a SonarQube server configuration as environment variables in the build.

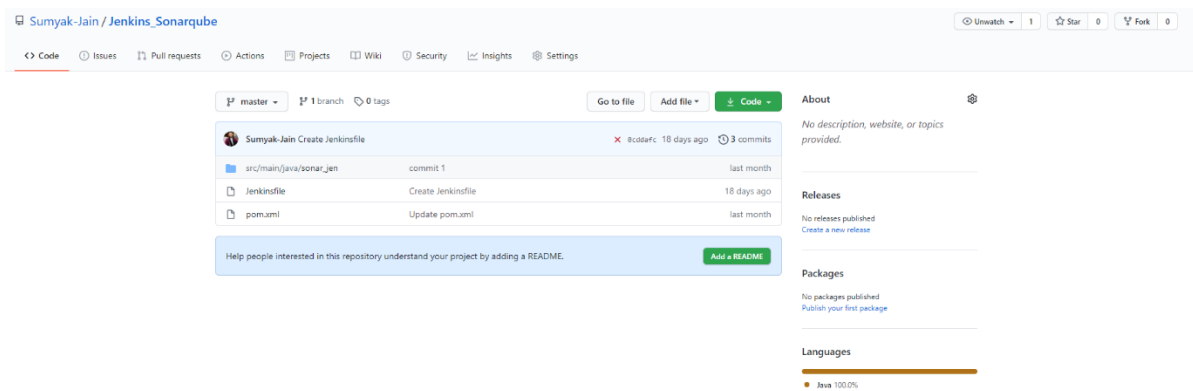
SonarQube installations

Name	Server URL	Server authentication token
sonar	http://localhost:9000	- none - <input type="button" value="Add"/>

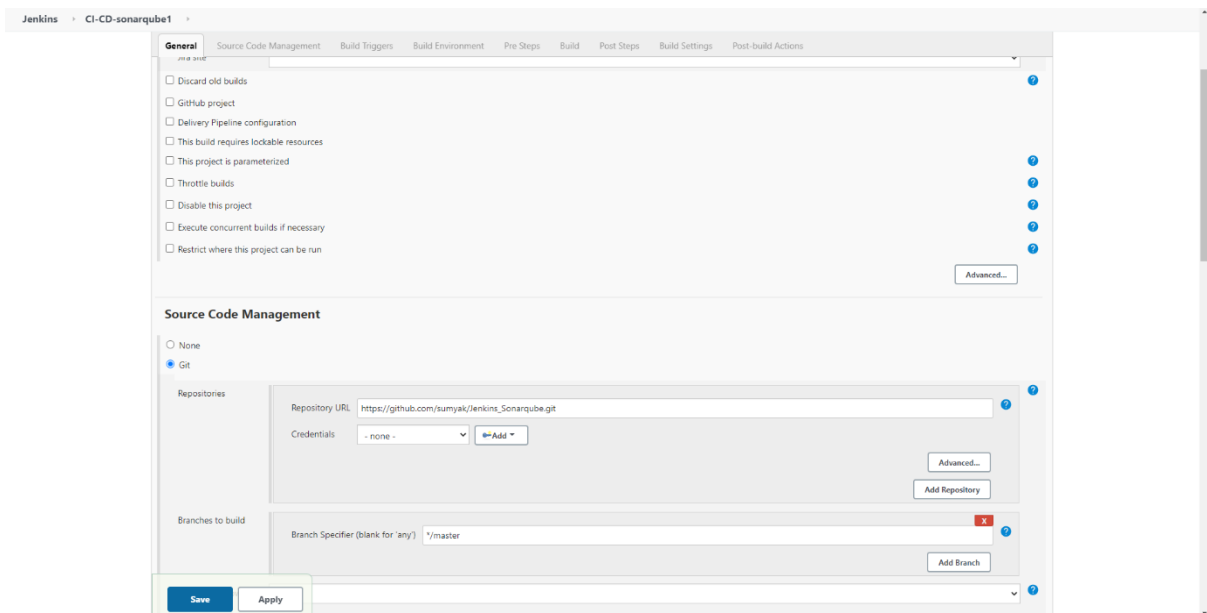
Default is http://localhost:9000

SonarQube authentication token. Mandatory when anonymous access is disabled.

STEP 4) upload your maven project at github



STEP 5) give the URL of your repo in SCM section of your project in jenkins



STEP 6) give the condition and command for build

Click save and build

The screenshot shows the Jenkins configuration page for job 'CI-CD-sonarqube1'. The 'Build Environment' tab is active. Under 'General', there are checkboxes for 'Use secret text(s) or file(s)', 'Abort the build if it's stuck', 'Add timestamps to the Console Output', 'Create Delivery Pipeline version', 'Generate Release Notes', 'Inspect build log for published Gradle build scans', and 'With Ant'. The 'Pre Steps' section has an 'Add pre-build step' button. The 'Build' section has a 'Root POM' field with 'pom.xml' and a 'Goals and options' field with 'clean install sonar:sonar -Dsonar.host.url=http://localhost:9000 -Dsonar.analysis.mode=publish'. The 'Post Steps' section has radio buttons for 'Run only if build succeeds', 'Run only if build succeeds or is unstable', and 'Run regardless of build result', with the third option selected. There is an 'Add post-build step' button. The 'Build Settings' section has a 'Save' button and an 'Apply' button.

STEP 7) console output if build successful

The screenshot shows the Jenkins console output for job 'CI-CD-sonarqube1'. The output starts with 'Started by user sumyak' and 'Running as SYSTEM'. It shows the build process on master in workspace 'C:\Users\GAURAV\.jenkins\workspace\CI-CD-sonarqube1'. The output includes commands like 'git rev-parse --is-inside-work-tree', 'git remote get-url', 'git fetch', 'git checkout', and 'mvn clean install sonar:sonar'. It also shows the SonarQube build process, including 'Building SonarQube 1.0-SNAPSHOT' and 'mvn clean-plugin:2.5:clean (default-clean) @ SonarQube'. The output ends with 'BUILD SUCCESSFUL'.

```
Jenkins  CI-CD-sonarqube1  #4

[INFO] Sensor SonarCSS Rules [csfamily]
[INFO] No CSS, PHP, HTML or VueJS files are found in the project. CSS analysis is skipped.
[INFO] Sensor SonarCSS Rules [csfamily] (done) | time=8ms
[INFO] Sensor JaCoCo XML Report Importer [jacoco]
[INFO] 'sonar.coverage.jacoco.xmlReportPaths' is not defined. Using default locations: target/site/jacoco/jacoco.xml,target/site/jacoco-it/jacoco.xml,build/reports/jacoco/test/jacocoTestReport.xml
[INFO] No report imported, no coverage information will be imported by JaCoCo XML Report Importer
[INFO] Sensor JaCoCo XML Report Importer [jacoco] (done) | time=8ms
[INFO] Sensor SurefireSensor [java]
[INFO] parsing [C:\Users\GAURAV\.jenkins\workspace\CI-CD-sonarqube1\target\surefire-reports]
[INFO] Sensor SurefireSensor [java] (done) | time=8ms
[INFO] Sensor JavaXmlSensor [java]
[INFO] 1 source files to be analyzed
[INFO] Sensor JavaXmlSensor [java] (done) | time=14ms
[INFO] 1/1 source files have been analyzed
[INFO] Sensor HTML [web]
[INFO] Sensor HTML [web] (done) | time=8ms
[INFO] Sensor XML [xml]
[INFO] 1 source files to be analyzed
[INFO] Sensor XML [xml] (done) | time=104ms
[INFO] 1/1 source files have been analyzed
[INFO] ----- Run sensors on project
[INFO] Sensor Zero Coverage Sensor
[INFO] Sensor Zero Coverage Sensor (done) | time=8ms
[INFO] Sensor Java CPD Block Indexer
[INFO] Sensor Java CPD Block Indexer (done) | time=8ms
[INFO] CPD Executor 1 file had no CPD blocks
[INFO] CPD Executor Calculating CPD for 0 files
[INFO] CPD Executor CPD calculation finished (done) | time=8ms
[INFO] Analysis report generated in 56ms, dir size=84 KB
[INFO] Analysis report compressed in 25ms, zip size=13 KB
[INFO] Analysis report uploaded in 17ms
[INFO] ANALYSIS SUCCESSFUL, you can browse http://localhost:9090/dashboard?id=com.mycompany%3ASonarQube
[INFO] Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
[INFO] Here about the report processing at http://localhost:9090/api/cz/taskTimeAction_Fr00k4e0B-dc2
[INFO] Analysis total time: 4.471 s
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 8.556 s
[INFO] Finished at: 2020-10-03T19:03:29+05:30
[INFO] -----
[WARNING] The requested profile "profiles" could not be activated because it does not exist.
waiting for Jenkins to finish collecting data
[INFO] Archiving C:\Users\GAURAV\.jenkins\workspace\CI-CD-sonarqube1\pom.xml to com.mycompany\SonarQube\1.0-SNAPSHOT\SonarQube-1.0-SNAPSHOT.pom
[INFO] Archiving C:\Users\GAURAV\.jenkins\workspace\CI-CD-sonarqube1\target\SonarQube-1.0-SNAPSHOT\SonarQube-1.0-SNAPSHOT.jar to com.mycompany\SonarQube\1.0-SNAPSHOT\SonarQube-1.0-SNAPSHOT.jar
channel stopped
Finished: SUCCESS

Page generated:
Oct 3, 2020, 7:03:15 PM IST  REST API  Jenkins 2.235.5
```

STEP 8) check your sonarqube your project is uploaded and analysed there

The screenshot displays the SonarQube web interface for a project named 'master'. The 'Overview' tab is selected, showing a 'Quality Gate Status' of 'Passed' with the message 'All conditions passed'. The 'Measures' section is expanded, showing 'Overall Code' metrics. The 'New Code' section indicates 'Since August 30, 2020' and 'Started last month'. The 'New Bugs' section shows '0' bugs. The 'Reliability' section shows '0' bugs. The 'Security' section shows '0' vulnerabilities. The 'Security Hotspots' section shows '0' hotspots. The 'Reviewed' section shows '0' hotspots. The 'Security Review' section shows '0' hotspots. The 'Added Debt' section shows '0' debt. The 'New Code Smells' section shows '0' smells. The 'Maintainability' section shows '0' smells. The 'Coverage' section shows '0' new lines to cover. The 'Duplications' section shows '0' new lines. The 'Activity' section shows a bar chart with 'Issues' on the y-axis and 'Bugs', 'Code Smells', and 'Vulnerabilities' on the x-axis. The date 'October 3, 2020' is displayed.