**GUIDE.04: INSTRUCTIONS FOR SETUP SONARQ AND**

**SCAN SOURCE CODE BY SONARQ**

1. **Item destination**

Configuration manual Install and use SonarQube to scan the source code with the attend sentence Java and .NET.

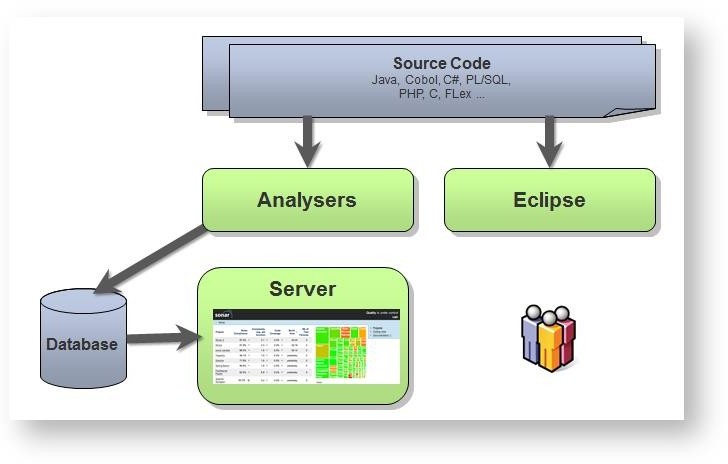
# INSTALL PUT SERVER SONARQUBE

* 1. **Structure of SonarQube**

SonarQube to be one background platform code the source open for manager physical matter quantity code the source.

SonarQube support support rather lots of language language: Java, C#, C/C++, PL/SQL, Cobol, ABAP… SonarQube platform including 3 Fort part:

* + 1. **Database** save store:
       - Structure Figure belong to SonarQube (security, plugins settings, etc.)
       - Quality snapshots belong to the attend sentence
    2. **Web Server** help users review the status temperament quantity belong to the attend sentence one of on duty mandarin and help People use structure Figure Sonar
    3. One or few **Analyzers** use for feces volume matter quantity.



# Install Database

Sonar yes can do job Okay with lots of type DBMS is different together, for single simple chemistry and system best then they ta will only use MySQL copy opensource.

Job install put MySQL No Okay topic access arrive in talent Whether this, only yes save idea about job history use engine InnoDB give socks chief the table belong to database.

For obtain Okay brand power High give Sonar's DB, do 2 step after:

* + 1. Set price treat Maximum belong to RAM give parameter: innodb\_buffer\_pool\_size
    2. Set price treat little best 15Mb for parameter: query\_cache\_size

# Install Web Server

Download Web Server in land only: [*http://www.sonarqube.org/downloads/*](http://www.sonarqube.org/downloads/)

unzip in land only *: <install\_directory>*

*<install\_directory>* Okay understand to be place solution compression package Web Servers, wallet example: D:\Sonar\sonarqube-4.5.1

Structure Figure conclude connect with database:

Edit the file *<install\_directory>/conf/sonar.properties* to configure connection options to the database. In this file there will be full templates for all databases that Sonar supports supported, but only a single connection will be used, with MySQL the configuration part will as follows:

*<install\_directory>/conf/sonar.properties*

*sonar.jdbc.username=sonar sonar.jdbc.password=****sonar*** *# MySQL 5.x*

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

*Uncle idea create before a database* ***sonar*** *live above muscle department evil Whether MySql!*

For Windows Server 64 bits (preferably Windows Server 2012 R2), the configuration must be Sonar image supports server mode. Find the parameter sonar.web.javaOpts and delete its comment go:

*sonar.web.javaOpts=………..*

Start dynamic Web Server:

Port wear determined will to be "9000" and context path wear determined to be "/". The price treat this yes can is changed by changing the values in the file

*<install\_directory>/conf/sonar.properties* . Wallet example, would like change Fort port 80 and context part Fort sonar then need structure Figure as follows:

*<install\_directory>/conf/sonar.properties*

*sonar.web.host=192.0.0.1 sonar.web.port=80 sonar.web.context=/sonar*

Run the bat file *<install\_directory>/bin/windows-x86-XX/StartSonar.bat* to start Web Server. After complete configuration, maybe access land after to see the server Sonar (Wear determined): http://localhost:9000/

# INSTALL AND GUIDE FOR USE SCANER

SonarQube support support install put the Scaner is different together opposite to with ever type language language/project.

The type Scaner as follows:

* Sonar-sunner: History use give the project Java (Scaner wear determined belong to Sonar).
* [SonarQube Scanner for Maven](http://docs.sonarqube.org/display/SONAR/Installing%2Band%2BConfiguring%2BSonarQube%2BScanner%2Bfor%2BMaven) .
* [SonarQube Scanner give MSBuild](http://docs.sonarqube.org/display/SONAR/Installing%2Band%2BConfiguring%2BSonarQube%2BScanner%2Bfor%2BMSBuild) .

**3.1 Scan JAVA project source code with Sonar runner.**

# Install put Sonar-runner:

* Download Sonar-runner are from website. [Click here](http://docs.sonarqube.org/display/SONAR/Installing%2Band%2BConfiguring%2BSonarQube%2BRunner)
* Price \_ \_ compression and o letters muc ca i already *<install\_directory>*
* In file *<install\_directory> /conf/sonar-runner.properties* , bridge Figure give Sonar-runner as follows :

*# MySQL*

*sonar.jdbc.url=jdbc:mysql://localhost:3306/sonar?useUnicode=true&amp;characterEncoding= utf8*

*# Oracle*

*#sonar.jdbc.url=jdbc:oracle:thin:@localhost/XE # Microsoft SQLServer*

*#sonar.jdbc.url=jdbc:jtds:sqlserver://localhost/sonar;SelectMethod=Cursor # Global database settings*

*sonar.jdbc.username=sonar sonar.jdbc.password=sonar*

* Create the SONAR\_RUNNER\_HOME environment *to* i want

*<install\_directory>* .

* To add *<install\_directory>/bin* and o change lips before day path.
* Master \_ content command after for feces ti ch code:

*sonar-runner [options]*

*Options:*

*-D,--define <arg> Define property*

*-e,--errors Produce execution error messages*

*-h,--help Display help information*

*-v,--version Display version information*

*-X,--debug Produce execution debug output*

# Scan source code maven project

**Condition:** Multi download and ca i put Maven

# configue maven:

- confuge a file *settings.xml* in *$MAVEN\_HOME/conf*

Or in folder

*~/.m2*

*<settings>*

*<profiles>*

*<profile>*

*<id>sonar</id>*

*<activation>*

*<activeByDefault>true</activeByDefault>*

*</activation>*

*<properties>*

*<!-- Example for MySQL-->*

*<sonar.jdbc.url>*

***jdbc:mysql://localhost:3306/sonar?useUnicode=true&amp;characterEncoding=utf8***

*</sonar.jdbc.url>*

*<sonar.jdbc.username>****sonar****</sonar.jdbc.username>*

*<sonar.jdbc.password>****sonar****</sonar.jdbc.password>*

*<!-- Optional URL to server. Default value is http://localhost:9000 -->*

*<sonar.host.url>*

***http://myserver:9000***

*</sonar.host.url>*

*</properties>*

*</profile>*

*</profiles>*

*</settings>*

**Note :**

In case of error java.lang.OutOfMemoryError, set the value of environment variable ̣ MAVEN\_OPTS as follows:

For linux:

*export MAVEN\_OPTS="-Xmx512m -XX:MaxPermSize=128m"*

for windows:

*set MAVEN\_OPTS=-Xmx512m -XX:MaxPermSize=128m*

**Scan with maven**

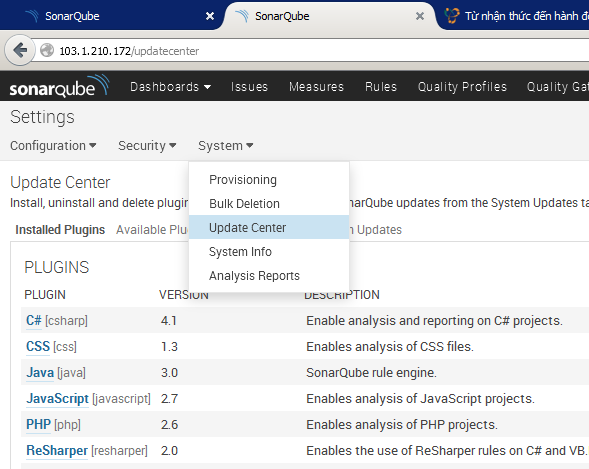
*# The sonar:sonar goal must be executed in a dedicated mvn command mvn clean install*

*mvn sonar:sonar*

*# The following command may lead to unexpected issues mvn clean install sonar:sonar*

# To scan code the source with .Net Project

# Install C# plugin



* + 1. Choose Available Plugins, make a choice install put C# plugin for install put give Plugins this.
    2. After when the install put Fort labour, start up again SonarQube Server for active C# Plugins
    3.  **Structure Figure MSBuild SonarQube Runner and real presently to scan with .NET project**

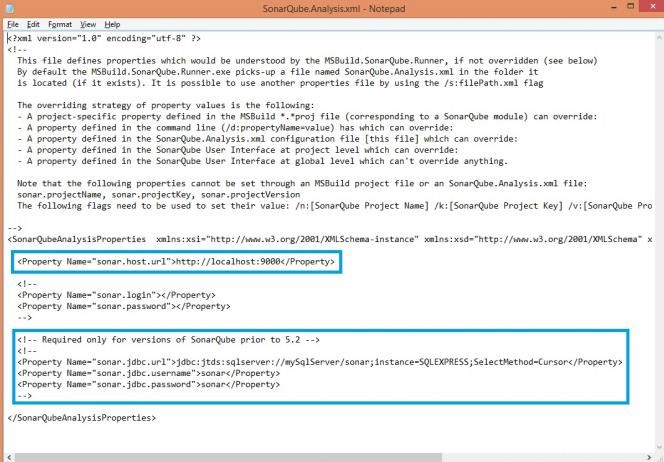
Structure Figure MSBuild SonarQube Runner above Build Agent Machine (Set put above machine would like feces code accumulation, wallet example machine play develop or build agent)

# Extract:

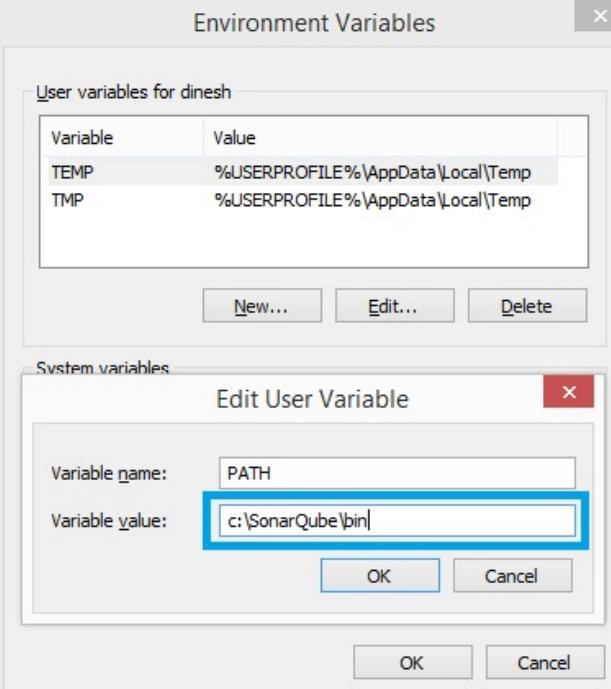
* Download MSBuild SonarQube Runner are from website belong to Sonar
* Solution compression MSBuild.SonarQube.Runner-[version] above letters item Friend would like. Wallet example: C:\SonarQube\bin

# Structure Figure:

* Correction fix file C:\SonarQube\bin\SonarQube.Analysis.xml for yes the greed number after (opposite to with SonarQube 5.1.x):
  + sonar.jdbc.url
  + sonar.jdbc.username
  + sonar.jdbc.password



* Egypt Japan Street guide %PATH% give file run MSBuild SonarQube Runner. If letters prize item compression to be C:\SonarQube\bin then structure Figure as follows:



* Real presently to scan:
  + Run *MSBuild.SonarQube.Runner.exe begin* with owl France:

*MSBuild.SonarQube.Runner.exe*

*/k:BUGD.UNI.ONE*

*begin*

*/v:1.0*

*/n:"BUGD*

*UNIONE"*

In there:

* + - /v:”Version project”
    - /n:”Name project”
    - /k: “Key project”
  + Build project:

*msbuild*

School history use nuget:

*nuget restore msbuild*

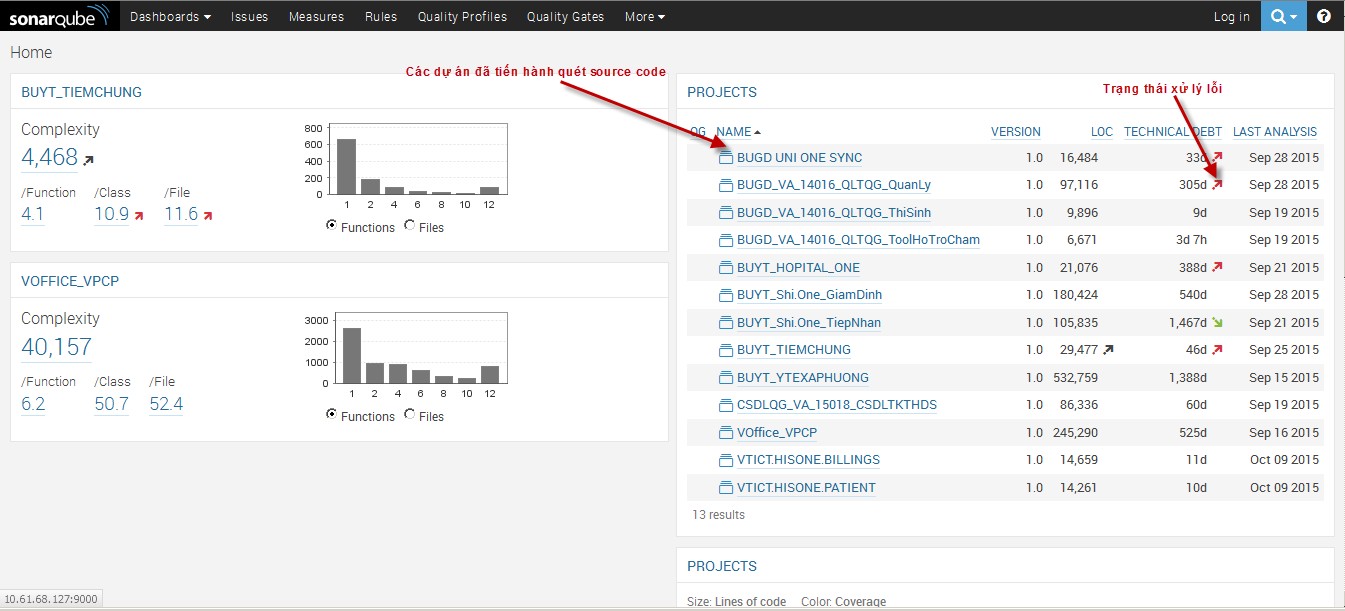
***Uncle idea:*** *Run MSBuild.SonarQube.Runner in "MSBuild console", or*

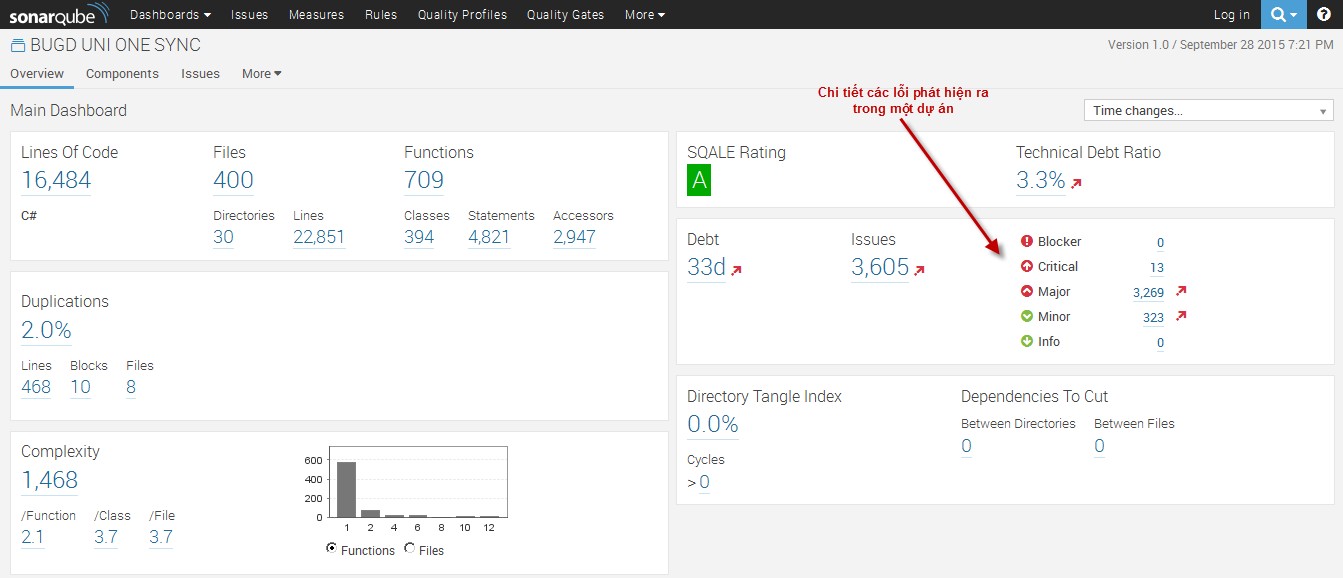
*"WITH Developer Command Prompt" to yes can run Okay MSBuild command*

* + Conclude end

*MSBuild.SonarQube.Runner.exe end*

# How to adjust Rules

* 1. **One common**
     + Access the newly installed server at the following address: http://localhost:9000/ let's see information of projects that have conducted code analysis. The dashboard screen displays like after:
     + Spend period pine believe attend sentence after when the to scan like after:

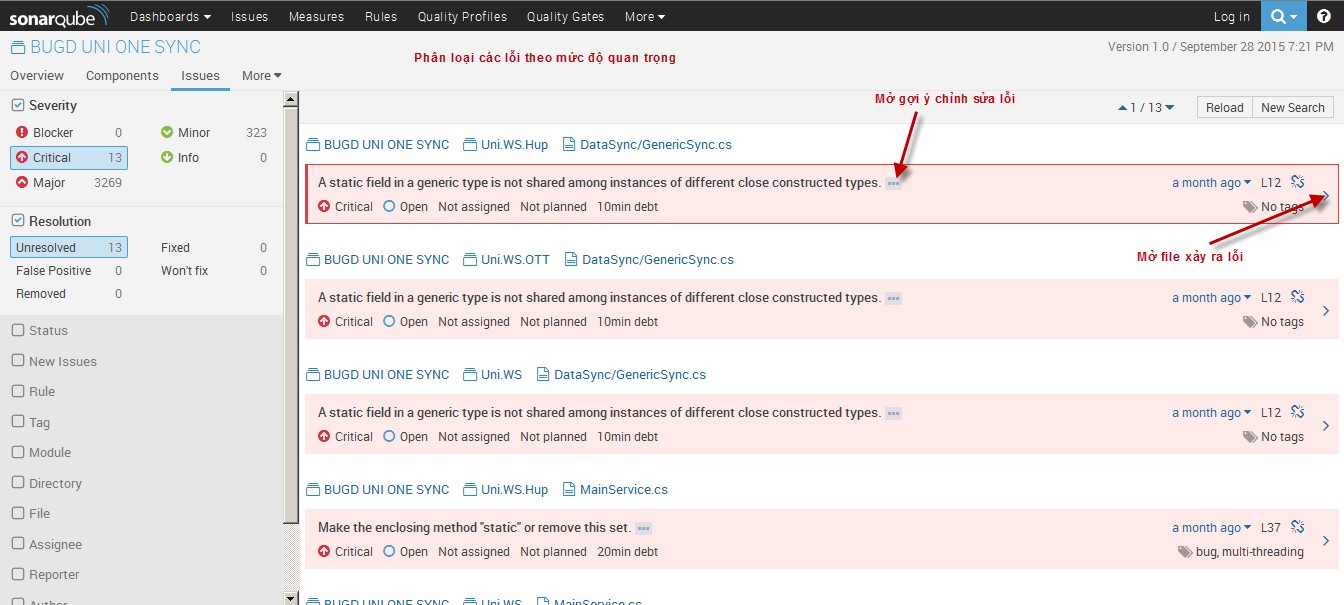


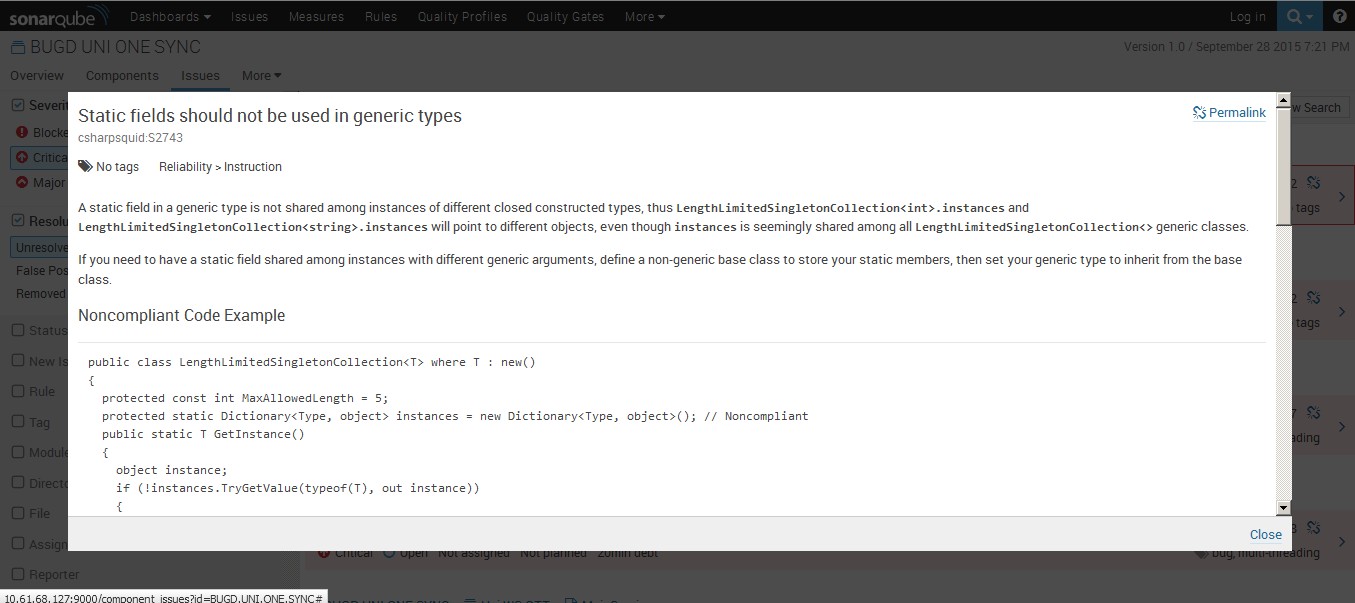
* + - Degree seriously important belong to the okay feces share like after:

|  |  |
| --- | --- |
| **Severity** | **Tissue description** |
| Blocker | These risk ro (risk) about Hentai dynamic or an full pine believe yes can cause arrive events unsettled determined give full system system. |

|  |  |
| --- | --- |
| **Severity** | **Tissue description** |
| Critical | Operational or information security risks in some school fit tool body, No Photo enjoy next full set system system. Wallet example: NullPointerException, badly caught exceptions... |
| Major | These question topic yes can cause go out works dynamic worth tell about brand power. Wallet example: too complex methods, package cycles, etc. |
| Minor | The question topic about coding conventions.... |
| Info | These risk ro not yet corpse determined clear. |

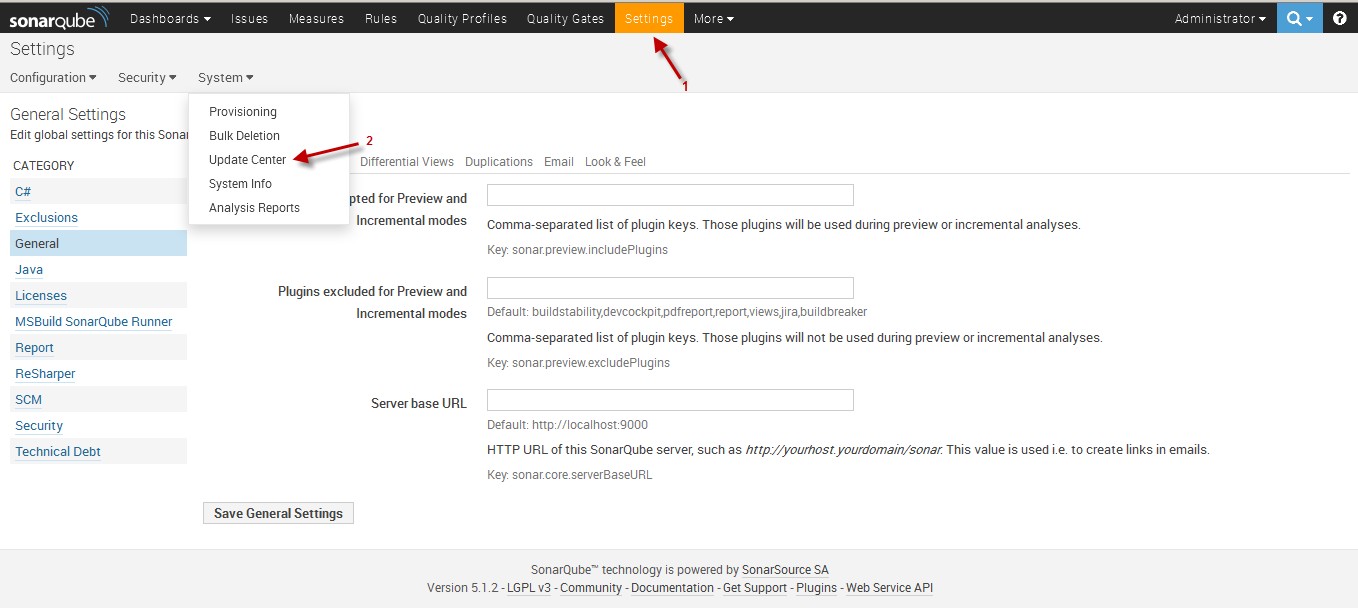
These error Blocker and Critical to be error mandarin important need Okay pros fairy judge physical thoroughly for!

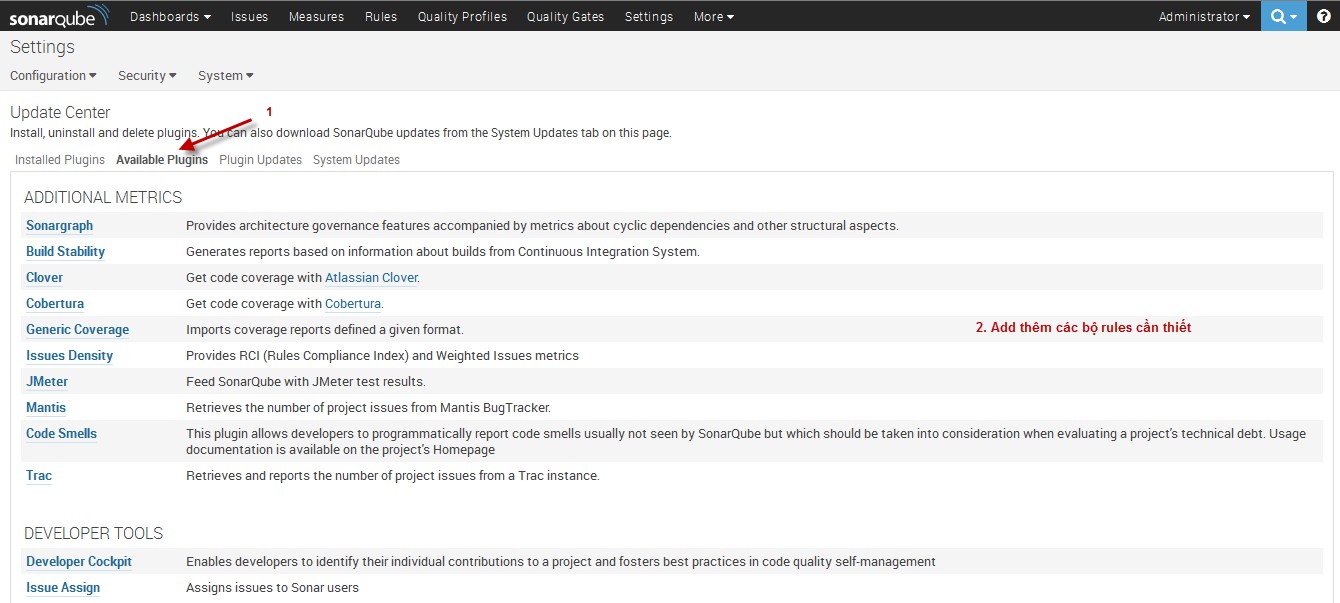
* + - To watch error happen go out in ever file and suggest idea fix error.

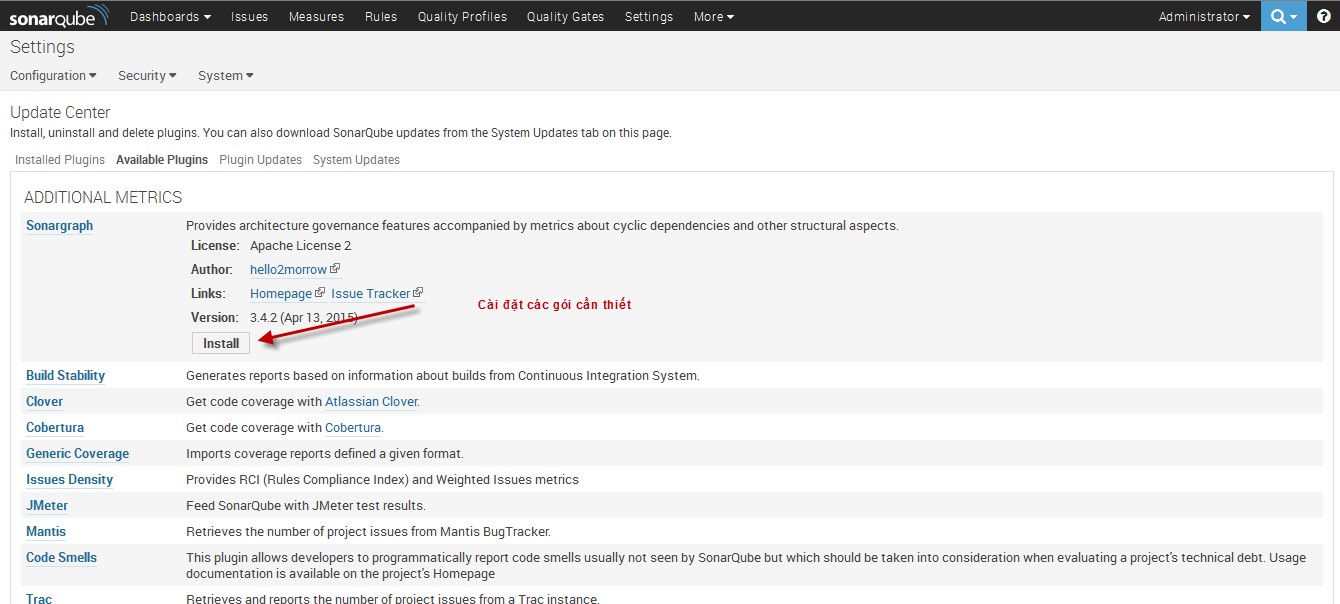


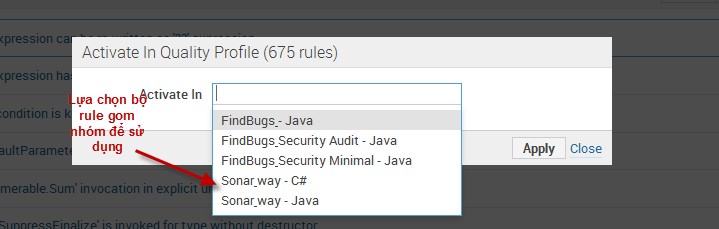
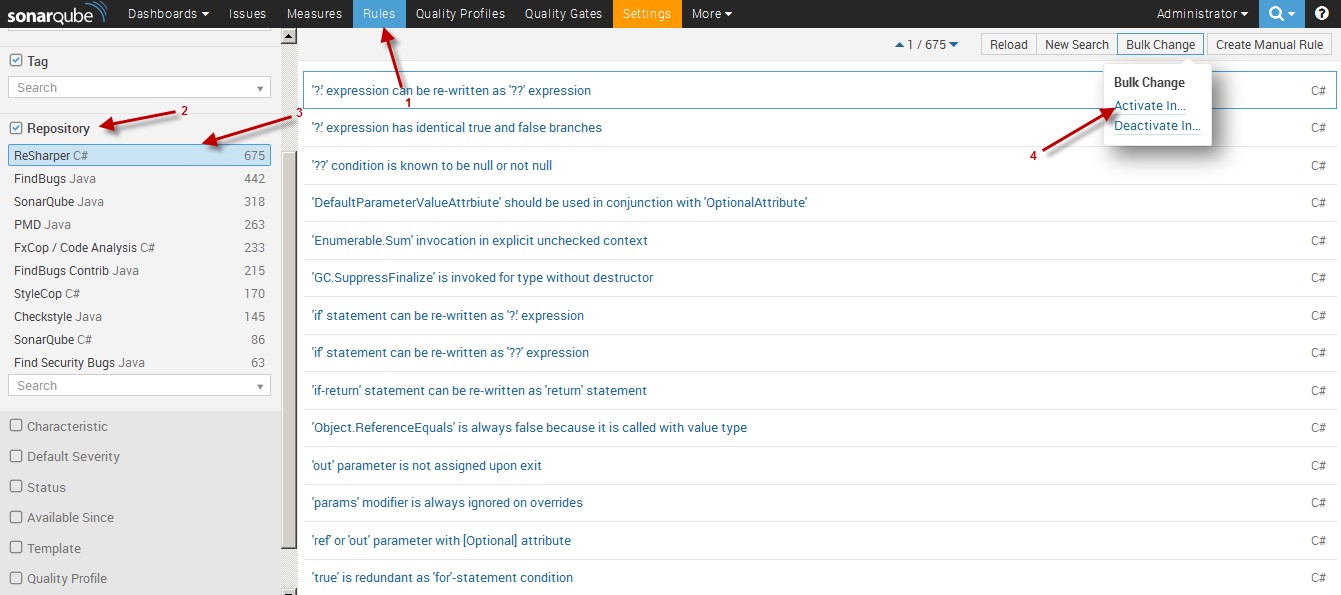
# Add to add set rule

* Login into system system with talent clause wear determined to be **admin/admin.**
* Sonar bow grant one number set rule is different together soy sauce application with ever language language.
  + Java:
    - SonarQube for java
    - PMD
    - Findbug
    - Checkstyle
    - Find security bugs
    - ...
* .NET
  + SonarQube for .NET
  + fxcop/ Code analytic C#
  + StyleCop
  + ....
* The step for to add the set rule like after:



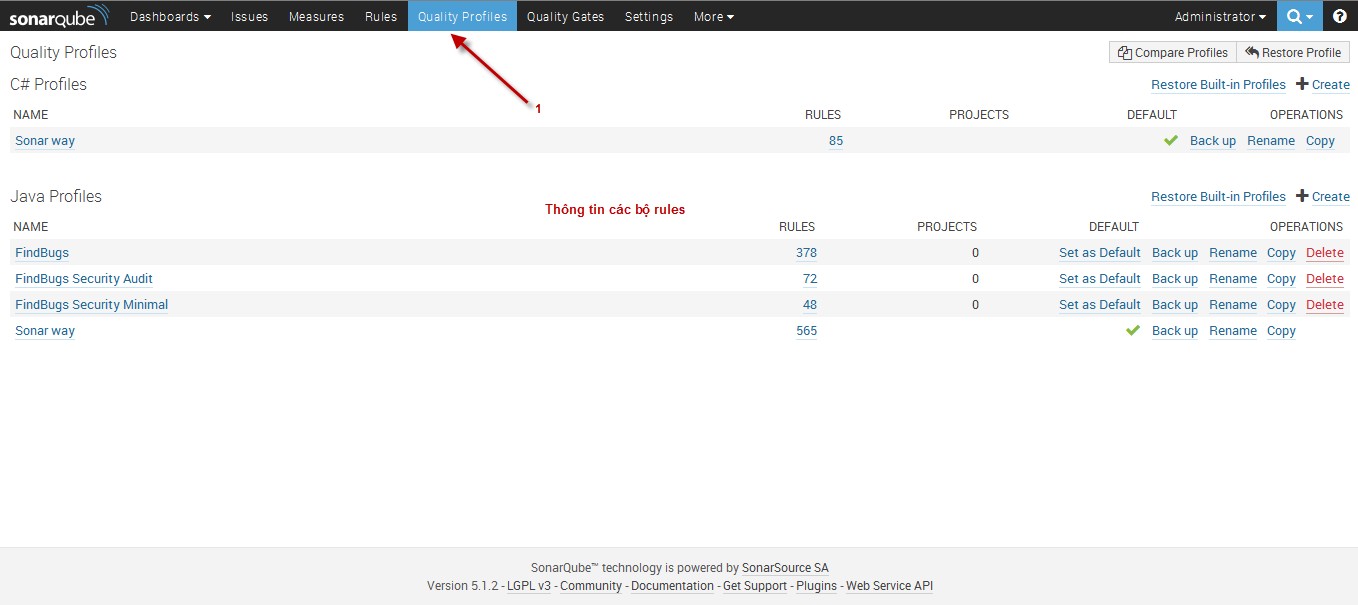
* Install put to add the rules would like history use



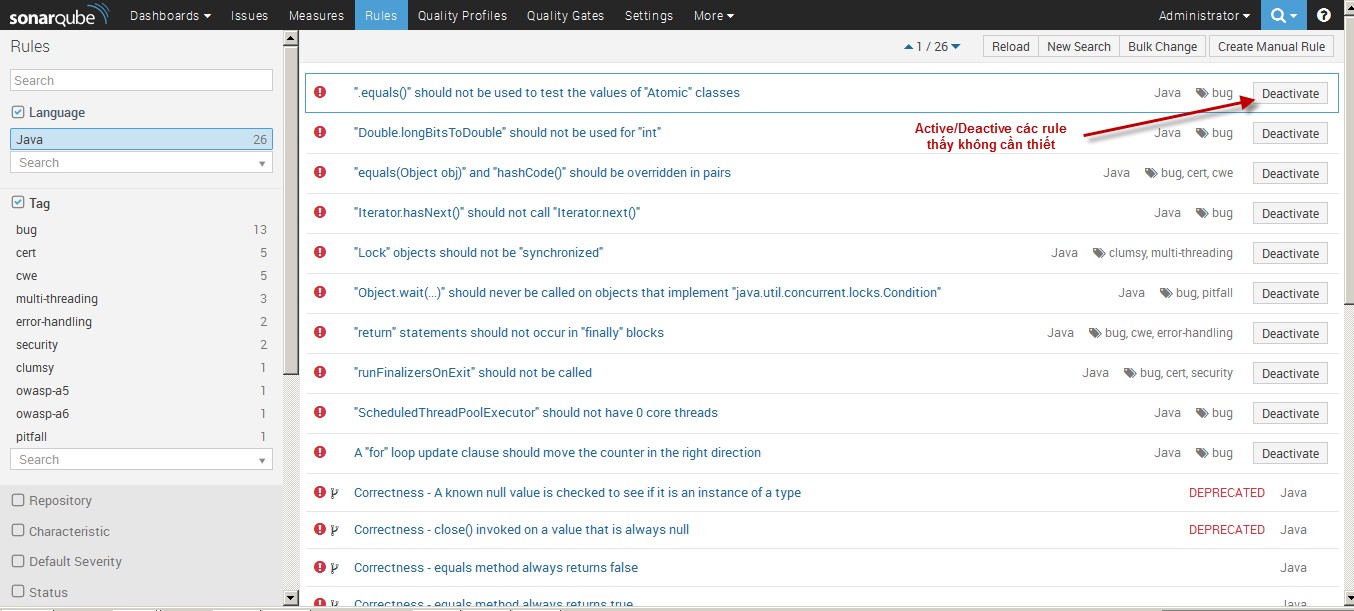
* Gom group the set rules fit install put for use.

# To add remove/remove some rules

Opposite to with ever set rules, will yes one number rules when the history use they ta see No need set. For up onion type cancel they go out out of episode rules history use for to scan, up onion the step like after:

* To watch information the set rules in progress pressure use.
* Choose choose an rules, to watch review the level degree feces type seriously important.



* Active/deactive the rules No need set.