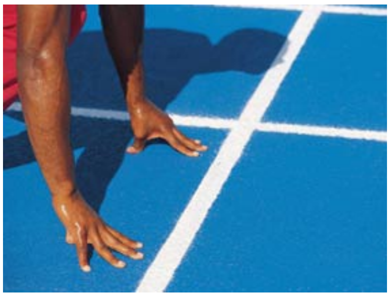
maXbox

sonar



Sonar Configuration

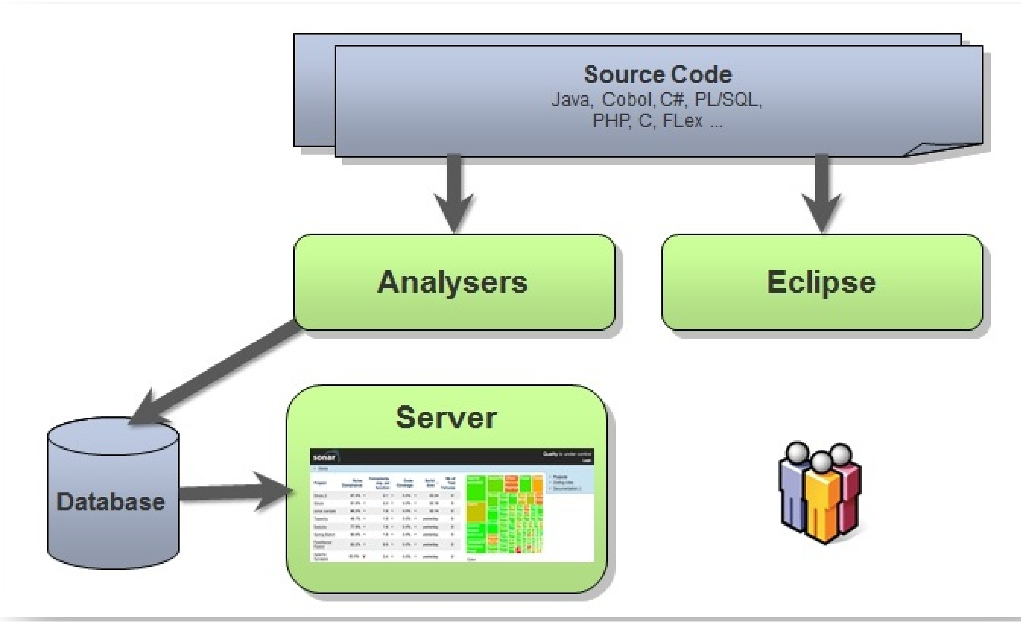
Starter21 with SONAR, Android & maXbox

1.1 Continuous Integration & Inspection

This paper shows the Installation and Configuration of Sonar with Android.

1.1.1 SonarQube Technical Architecture:

Generally, there is a “runner” that consumes the source code and analyses it via plug-ins. This information is published to the SonarQube database directly to get the code review.



Before each run, the runner makes a call to the server to download configuration settings stored there, and mashes those with config settings stored in a local config file, as well as project-specific config files.

SonarQube is originally written for Java analysis at PMD and later added C# support.

The SonarQube (web) server pulls the results from the database and provides a UI for reviewing and managing them, as well as a UI for managing configuration settings, user authentication, etc. The server also has it's own config file `sonar.properties` where you define database settings, user authentication settings, etc.

# This file must contain only ISO 8859-1 characters.
# See on
http://docs.oracle.com/javase/1.5.0/docs/api/java/util/Properties.html#load(java.io.InputStream)
#
# Property values can be:
# - reference an environment variable, for example sonar.jdbc.url= ${env:SONAR_JDBC_URL

1.2 The Server Installation

Install fist the Java JDK. Yes, the JDK. Set the JAVA_HOME environment variable to point to the JDK root folder. This should be the "jre" folder – for example, on my machine the value is set like this:
JAVA_HOME=C:\Program Files\Java\jre8

Note: You don't need to install the Source Code component like the JDK from the installer, which will save you about 500MB of disk space.

```
 JAVA_PATH = 'C:\Program Files (x86)\Java\jre1.8.0_45';
```

Download the SonarQube server. At the time of this *(revised)* project, it was version 5.1. with runner 2.4 , which we use.

For the initial configuration/setup, I'd suggest running it at the command line until you know you have it fully configured.

To do that, open a command window or run a maXbox script (later on) and run in \`bin\windows-x86-64\StartSonar.bat` (or `-x86-32` for 32-bit machines see below)

```
  I:\GENERAL\SONARQube51\SONARQube51\sonarqube-5.1\bin

  SONARBAT =
  BASEPATH+'\sonarqube-5.1\bin\windows-x86-32\StartSonar.bat';
```

We had some trouble with 64 machines, I advice to set it on 32bit.
As I said the server has a `sonar.properties` config file that drives some of it's functionality, including which database to use.

Plugins path:
I:\GENERAL\SONARQube51\SONARQube51\sonarqube-5.1\sonarqube-5.1\extensions\plugins

1.3 The Runner (Analysers)

SonarQube was build for Java, so the docs almost all assume you're using Maven. You may be able to get this working with Ant, but there's an easier route. A small, java-based runner has been created that can be start-off from the command line:

```
 SONARRUNNER = BASEPATH+'\sonar-runner-dist-2.4\sonar-runner-2.4\bin\sonar-runner.bat';
```

From the folder with the sonar-project.properties file, run the command

```
$SONAR_RUNNER_HOME/bin/sonar-runner
```

Open a command line to the sonar-runner/bin folder and run `sonar-runner -h`. This will either show you the usage statement (if things are working fine), or hang up. If it hangs up, check you're `JAVA_HOME` is set correctly to point at the jre folder, check this by open javacpl:

```
 ShellExecute3('C:\Program Files (x86)\Java\jre7\bin\javacpl.exe','',seCMDOpen);
```

Browse and access the source code for your projects to learn more about the code is essential.
You'll see the runner start up, listing some details like the working folder, etc, then it will kick off the source code parsing, then the plugins (such as running the unit or class tests). If there are any errors, a Java exception will be thrown.

Name the gobbler stream java execution exception
Sometimes these contain enough details to troubleshoot, sometimes not, so you may need to run with the -X command line argument to get additional details when errors occur.
You can fix this by setting the encoding in your sonar-project.properties or the sonar-runner.properties file:

```
#----- Default source code encoding
sonar.sourceEncoding=UTF-8
```

After a successful run of the analysis, you can see the results in the SonarQube server webpage. Unless you have changed the port in the sonar.properties file, this will be on default at http://localhost:9000/

1.4 The sonar-project.properties File

Each Solution will need to have it's own `sonar-project.properties` file for the languages. This file will need to exist in the folder from which you execute the sonar-runner. To make this easy, I would suggest putting the file in the same folder as your `.sln` file in example of a .net project.

The file will have a few sections, which I will describe here.

Here is my sonar-project.properties file.

```
##########################
# Required configuration #
##########################

sonar.projectKey=my-projectmx
sonar.projectName=My projectmx
sonar.projectVersion=1.3
sonar.language=java

# Project description
sonar.projectDescription=Fake description

# Path to source directories
#sonar.sources=srcDir1,srcDir2
sonar.sources=srcjava
# Path to test directories (comment if no test)
#sonar.tests=testSrcDir
```

Important Note: **Any** folder names in the config file will need to either escape the backslash with another backslash (\\) or use a forward slash (/). I've chosen the latter.

```
##########################
# Optional configuration #
##########################

# Encoding of the source code
sonar.sourceEncoding=UTF-8

# JUnit report generated by run-sonar.sh is stored in sonar-
reports/TEST-report.xml
# Change it only if you generate the file on your own
# The XML files have to be prefixed by TEST- otherwise they
are not processed
# sonar.junit.reportsPath=sonar-reports/

# Cobertura report generated by run-sonar.sh is stored in
sonar-reports/coverage.xml
# Change it only if you generate the file on your own
# sonar.objectivec.coverage.reportPattern=sonar-
reports/coverage*.xml

# OCLint report generated by run-sonar.sh is stored in sonar-
reports/oclint.xml
# Change it only if you generate the file on your own
# sonar.objectivec.oclint.report=sonar-reports/oclint.xml

# Paths to exclude from coverage report (tests, 3rd party
libraries etc.)
# sonar.objectivec.excludedPathsFromCoverage=pattern1,pattern2
sonar.objectivec.excludedPathsFromCoverage=.*Tests.*

# Project SCM settings
# sonar.scm.enabled=true
# sonar.scm.url=scm:git:https://...
```

Implements SCM dependent features of SonarQube for Git projects. Pure Java implementation so no need to have Git command line tool installed on the computer doing the SQ analysis.

1.4.1 Usage

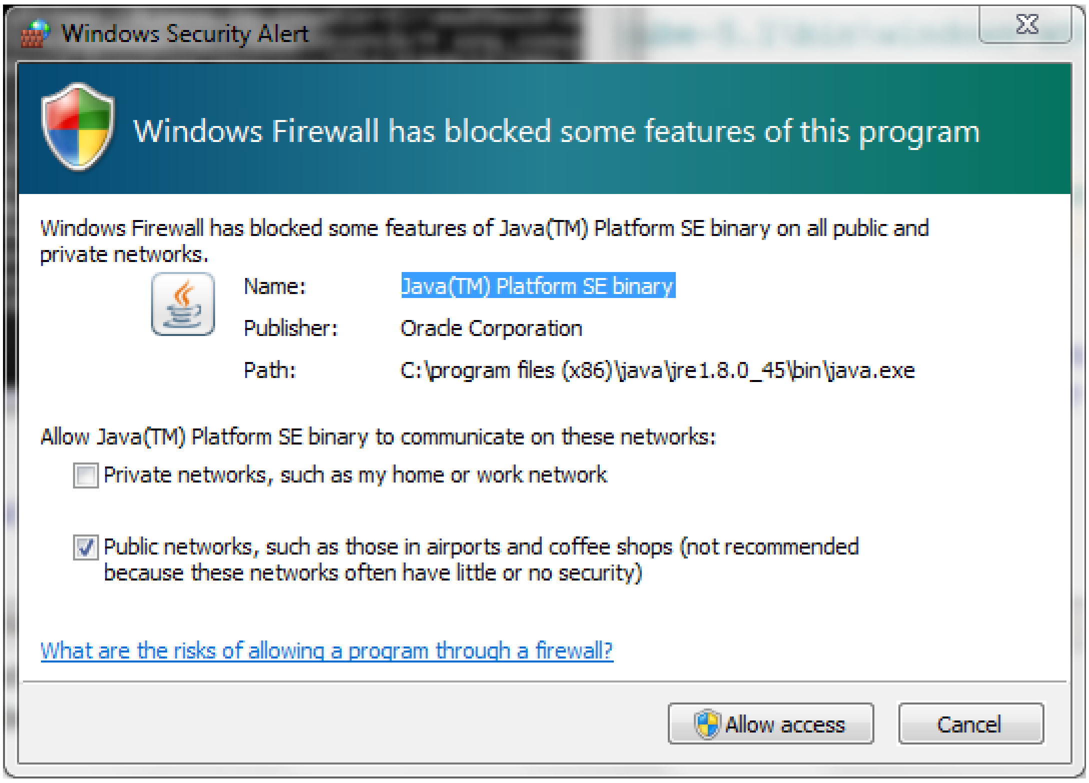
Install the plugin in SonarQube. Auto-detection will work if there is a .git folder in the project root directory. Otherwise you can force the provider using -Dsonar.scm.provider=git.

The SonarQube GitHub Plugin serves only one purpose: analyse GitHub pull requests in a preview mode, and publish issues that were found as comments of the pull request.

```
INFO: Runner configuration file:

 C:\maXbook\maxbox3\SONARQube51\sonar-runner-dist-2.4\sonar-runner-
2.4\conf\sonar-runner.properties

INFO: Project configuration file:

 C:\maXbook\maxbox3\SONARQube51\sonar-runner-dist-2.4\sonar-runner-
2.4\bin\sonar-project.properties

INFO: Default locale: "en_US", source code encoding: "UTF-8"
INFO: Work directory: C:\maXbook\maxbox3\SONARQube51\sonar-runner-
dist-2.4\sonar-runner-2.4\bin\.\.sonar
INFO: SonarQube Server 5.1
```

You do find more examples on web on GitHub or SourceForge:

After starting the box you can search for keywords in code with <Ctrl> F3 and a full text retrieval on /examples is running. Helping you find real world examples of functions and running scripts:



Windows Security Alert

Windows Firewall has blocked some features of this program

Windows Firewall has blocked some features of Java(TM) Platform SE binary on all public and private networks.

Name: Java(TM) Platform SE binary

Publisher: Oracle Corporation

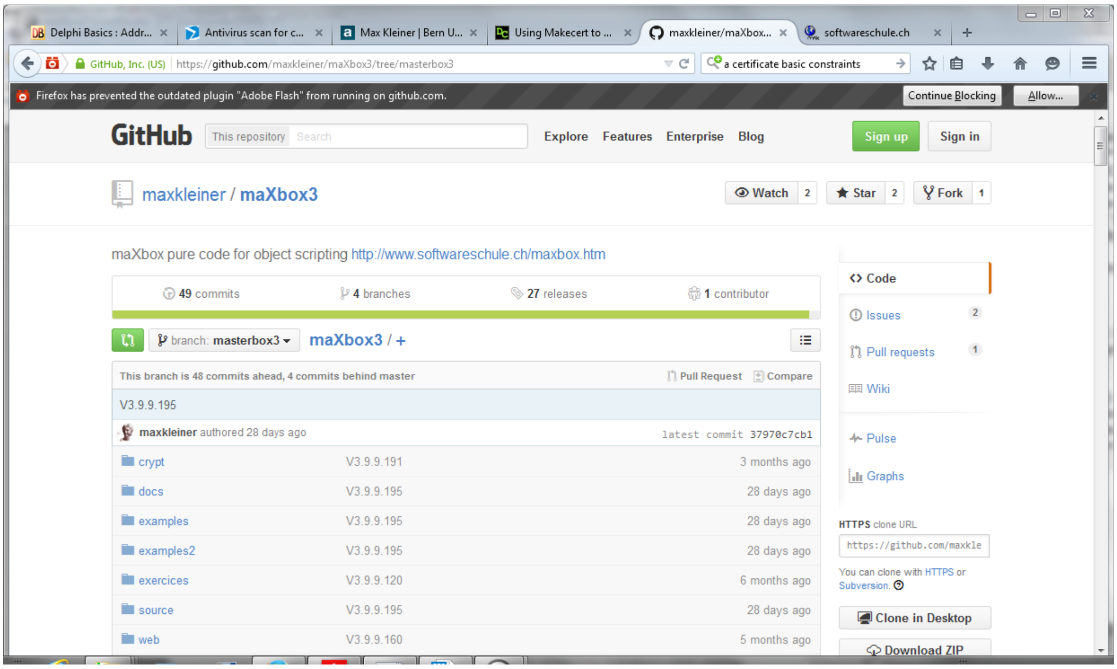
Path: C:\program files (x86)\java\jre1.8.0_45\bin\java.exe

Allow Java(TM) Platform SE binary to communicate on these networks:

□ Private networks, such as my home or work network

☑ Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)

What are the risks of allowing a program through a firewall?



https://github.com/maxkleiner/maXbox3/tree/masterbox3

Firefox has prevented the outdated plugin "Adobe Flash" from running on github.com.

maxkleiner / maXbox3

maXbox pure code for object scripting http://www.softwareschule.ch/maxbox.htm

49 commits 4 branches 27 releases 1 contributor

branch: masterbox3 maXbox3 / +

This branch is 48 commits ahead, 4 commits behind master Pull Request Compare

V3.9.9.195

maxkleiner authored 28 days ago latest commit 37970c7cb1

crypt	V3.9.9.191	3 months ago
docs	V3.9.9.195	28 days ago
examples	V3.9.9.195	28 days ago
examples2	V3.9.9.195	28 days ago
exercices	V3.9.9.120	6 months ago
source	V3.9.9.195	28 days ago
web	V3.9.9.160	5 months ago

HTTPS clone URL

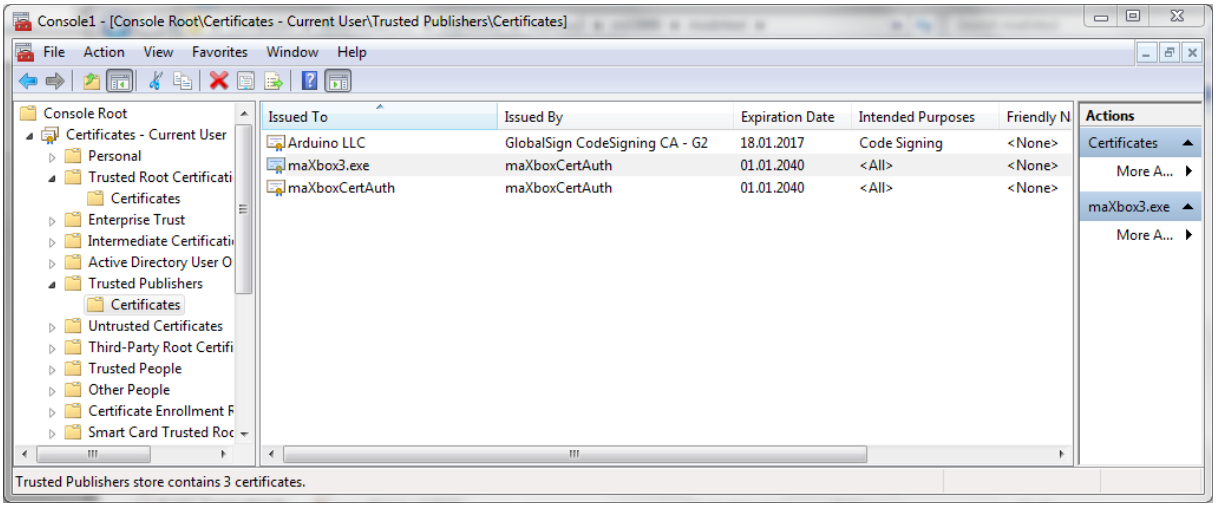
https://github.com/maxkle

You can clone with HTTPS or Subversion.

Then you enter with OK and you get a list of sections with the full path of the file-name. Open this scripts from the repository[1] to produce new ones is the idea.
http://sourceforge.net/projects/maxbox/files/Examples/

[1] By default CodeSearchEngine points to a local drive.

What about scripts that reside on a file share inside the network? On my machine they run just fine but keep in mind, that all scripts must reside in a directory called /examples, sort of convention over configuration.



Issued To	Issued By	Expiration Date	Intended Purposes	Friendly N
Arduino LLC	GlobalSign CodeSigning CA - G2	18.01.2017	Code Signing	<None>
maXbox3.exe	maXboxCertAuth	01.01.2040	<All>	<None>
maXboxCertAuth	maXboxCertAuth	01.01.2040	<All>	<None>

Trusted Publishers store contains 3 certificates.

What about trust in `maXbox3.exe` as the running host machine of the scripts. After test, scan and examine you get the SHA1 of the executable to make sure for example V 3.9.9.195 the SHA1 (20 bytes):

```
F0AB7D054111F5CE46BA122D6280397A841C6FAB
```

In menu `/Help/About` you can check this with a recompute of the Hash.

Git doesn't consider old "Mac" line ends (CR) as new lines. As a result the blame operation will contains fewer lines than expected by SonarQube and will fail the analysis. The solution is to fix line ends to use either Windows (CR/LF) or Unix (LF) line ends.

- JGit doesn't support .mailmap file to "clean" email adress during the blame
- The plugin uses the JGit pure Java implementation of Git client: https://www.eclipse.org/jgit/

1.5 Set the language plugins (including PL/SQL) File

Also a certificate for digital signing is possible (see above). Certificates are a type of identification that try to ensure that you know who you are talking to, and that it is not somebody else just impersonating the person you are expecting to be talking to.

```
Def Plugins:
30: Plugin Version Description
31: C# [csharp] 4.0 Enable analysis and reporting on C# projects.
33: Java [java] 3.1 SonarQube rule engine.
34: PL/SQL [plsql] 2.7 Enable analysis and reporting on PL/SQL projects.
```

```
Python [python] 1.5 Enable analysis /reporting on python projects.
Git [scmgit] 1.0 Git SCM Provider.
SVN [scmsvn] 1.0 SVN SCM Provider.
Web [web] 2.3 Analyze HTML (also within PHP/Ruby/etc. templates)
and JSP/JSF code.
XML [xml] 1.2 Enable analysis and reporting on XML files.
```

For the PL/SQL you need a special treatment, see below chapter 1.7:

☝ A server ID is linked to the IP address of the hosting machine that runs SonarQube. If the server IP address was to change, the server ID will have to be regenerated.

The PL/SQL plugin enables analysis and reporting on PL/SQL projects.

1.5.1 Prerequisites

The PL/SQL plugin does not have any specific requirement in addition to the SonarQube platform requirements.

1.5.2 Sample Projects

You can download our sample projects and check the:

- PL/SQL project in /projects/languages/plsql/plsql-sonar-runner
- Oracle Forms project in /projects/languages/plsql/plsql-oracle-forms

1.5.3 PL/SQL Plugin Installation

Read the installation guide to deploy and configure the SonarQube platform. Extra steps specific to the PL/SQL plugin are:

- Copy the file sonar-plsql-plugin-X.X.jar to SONARQUBE_HOME/extensions/plugins or use the update center to install the latest version.
- Restart the SonarQube server.
- Login as a System administrator, go to Configuration > General Settings > Licenses, paste your license key and Save (was Configuration > General Settings > PL/SQL prior to version 2.4).
- Restart the SonarQube server.

1.5.4 PL/SQL Project Analysis Configuration

To analyze a PL/SQL project, you must create a configuration file ‘sonar-project.properties’ in the root directory of the project. Here is a template for this file. Then, run your analysis with the SonarQube Runner by executing the following command from the root directory of the project:

```
sonar-runner
```

Browse the results at http://localhost:9000.

1.5.5 Files to analyze

Go to Settings > General Settings > PL/SQL, set the *File Suffixes* property to the list of file extensions to analyze. Ex: *sql,pkb,pks*

In more technical terms, a certificate binds together a name or binary (an identity) and a public key.

```
PROGRAM Sonar Rule Set for 5+1 Languages:
2:
3: Version 5.1 - LGPL v3 <http://www.gnu.org/licenses/lgpl-3.0.txt> -
5: Java (192) - C# (31) - PLSQL (128) - XML (4) - HTML (14) Python (35)
== 404 ==
6:
7: Doc Embrace Quality </>
8:
9: Ref * Dashboards <#>
10: o Home </dashboard/?did=4>
11: o Proposal V 1.1 - #file:SONAR_Rule_Set_Proposal_2015.txt
12: o Manage Dashboards </dashboards> #locs:1996
13: * Issues </issues/search>
14: * Measures </measures/search?qualifiers[]=TRK>
15: * Rules </coding_rules>
16: * Quality Profiles </profiles>
17: * Quality Gates </quality_gates>
18: * Settings </settings>
19: * More // <#>
20: o Compare Projects </comparison>
21: o Dependencies </dependencies>
22:
23: * Administrator <#>
24: o My profile </account/index> 25: o Log out </sessions/logout>
26: * // <#> Max Kleiner - Review – III 27: * // <#>
```

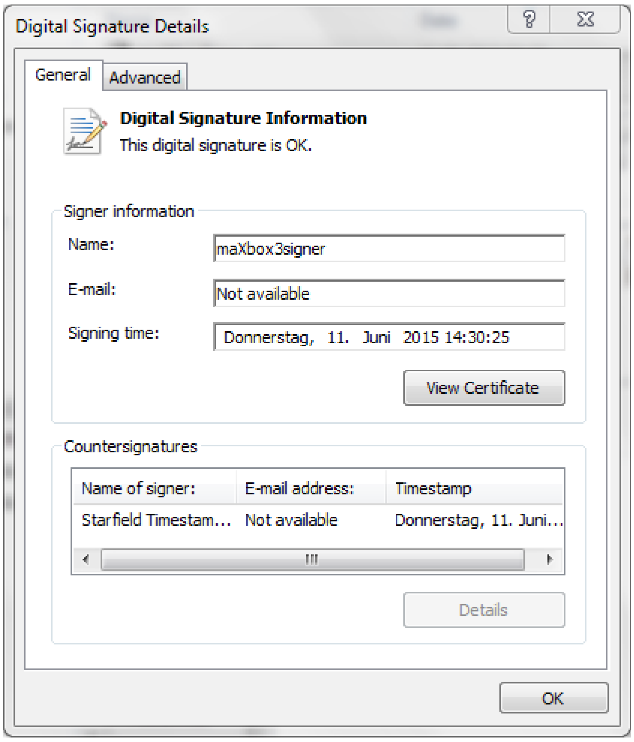
So a public key certificate, usually just called a certificate, is a digitally signed statement that binds the value of a public key to the identity of the person, device, or service that holds the corresponding private key.

```
//***************************************************3
1961: Quality Profiles
1962:
1963: Choose which profile is associated with this project on a
language-by-language basis. (Note that you will
only need to select profiles for multiple languages for multi-
language projects.)
1964: 1965: Language Quality Profile 1966:
1967: C#
1968: Java
1969: PL/SQL
1970: Python
1971: Web
1972: XML
```

```
1974:
1975: General Settings Edit global settings for this SonarQube
1976: Category
1977: C#
1978: Exclusions
1979: General
1980: Java
1981: Licenses
1982: PL/SQL
1983: SCM
1984: Security
1985: Technical Debt
1986: Web
1987: XML
```

The same goes for scripts placing on a network drive with Sonar Runner:

```
Sonar TCP Port Open! ExecuteShell3 Command could be protected in ini-
File! by setting EXECUTESHELL=N
D:\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4
SonarQube Runner 2.4 Java 1.7.0_40 Oracle Corporation (32-bit)
Windows 7 6.1 x86
INFO: Runner configuration file: D:\SONARQube51\sonar-runner-dist-
2.4\sonar-runner-2.4\conf\sonar-runner.properties
INFO: Project configuration file: D:\SONARQube51\sonar-runner-dist-
2.4\sonar-runner-2.4\bin\sonar-project.properties
INFO: Default locale: "en_US", source code encoding: "UTF-8"
INFO: Work directory: D:\SONARQube51\sonar-runner-dist-2.4\sonar-
runner-2.4\bin\..\bin\.sonar
INFO: SonarQube Server 5.1
```



Digital Signature Information

This digital signature is OK.

Signer information

Name: maXbox3signer

E-mail: Not available

Signing time: Donnerstag, 11. Juni 2015 14:30:25

Countersignatures

Name of signer:	E-mail address:	Timestamp
Starfield Timestam...	Not available	Donnerstag, 11. Juni...

```
14:06:37.476 INFO  - Sensor PythonSquidSensor (done) | time=2153ms
14:06:37.476 INFO  - Sensor PythonXUnitSensor
14:06:38.100 INFO  - Sensor PythonXUnitSensor (done) | time=624ms
14:06:38.100 INFO  - Sensor PythonCoverageSensor
14:06:38.224 INFO  - Sensor PythonCoverageSensor (done) | time=124ms
14:06:38.224 INFO  - Sensor SCM Sensor
14:06:38.224 INFO  - Sensor SCM Sensor (done) | time=0ms
14:06:38.224 INFO  - Sensor CPD Sensor
14:06:38.224 INFO  - DefaultCpdEngine is used for py
14:06:38.224 INFO  - Cross-project analysis disabled
14:06:38.614 INFO  - Sensor CPD Sensor (done) | time=390ms
14:06:38.614 INFO  - No quality gate is configured.
14:06:38.786 INFO  - Execute decorators...
14:06:39.644 INFO  - Store results in database
14:06:41.282 INFO  - Analysis reports gen in 218ms, dir size=364 KB
14:06:41.438 INFO  - Analysis rep compressed in 156ms, zip size=121 KB
14:06:41.485 INFO  - Analysis reports sent to server in 47ms
14:06:41.485 INFO  - ANALYSIS SUCCESSFUL, you can browse
http://localhost:9000/dashboard/index/my-projectmx_python_2
14:06:41.485 INFO  - Note that you will be able to access the updated
dashboard once the server has processed the submitted analysis report.
INFO:
------------------------------------------------------------------------
INFO: EXECUTION SUCCESS
INFO:
------------------------------------------------------------------------
Total time: 13.696s
Final Memory: 12M/116M
INFO:
------------------------------------------------------------------------
```

The same goes for scripts placing on a network drive. If the function attempts to make a connection and the network provider returns the message ERROR_INVALID_PASSWORD, the system prompts the user to enter a password. The system uses the new password in another attempt to make the net share connection.
I think each code you want to publish or share has the 3 steps produce, share and get some code from others in exchange.

C:\Program Files (x86)\Java\jre1.8.0_45

https://github.com/maxkleiner/maXbox3/releases/download/V3.9.9.195/maxbox_mini_demo.zip

1.6 Share Collaboration Code with GIT

GIT is enabled in SONAR with:

```
# Project SCM settings
# sonar.scm.enabled=true
# sonar.scm.url=scm:git:https://...


##########################
# Optional configuration #
##########################

# Encoding of the source code
sonar.sourceEncoding=UTF-8

# JUnit report generated by run-sonar.sh is stored in sonar-reports/TEST-report.xml
# Change it only if you generate the file on your own
# The XML files have to be prefixed by TEST- otherwise they are not processed
# sonar.junit.reportsPath=sonar-reports/

# Cobertura report generated by run-sonar.sh is stored in sonar-reports/coverage.xml
# Change it only if you generate the file on your own
# sonar.objectivec.coverage.reportPattern=sonar-reports/coverage*.xml

# OCLint report generated by run-sonar.sh is stored in sonar-reports/oclint.xml
# Change it only if you generate the file on your own
# sonar.objectivec.oclint.report=sonar-reports/oclint.xml

# Paths to exclude from coverage report (tests, 3rd party libraries etc.)
# sonar.objectivec.excludedPathsFromCoverage=pattern1,pattern2
sonar.objectivec.excludedPathsFromCoverage=.*Tests.*
```

GitHub is a Web-based Git repository hosting service, which offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features. Unlike Git, which is strictly a command-line tool, GitHub provides a Web-based graphical interface and desktop as well as mobile integration.

It also provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project.[3]

Firstly, a few concepts. Most certificates in common use are based on the X.509 v3 certificate standard and the name bytecode stems from instruction sets which have one-byte opcodes followed by optional parameters.

Intermediate representations such as bytecode may be output by programming language implementations to ease interpretation, or it may

be used to reduce hardware and operating system dependence by allowing the same code to run on different platforms.
So you can share your code as source in a normal text-file (*.txt) or as bytecocde (*.psb).

In some cases, you may want to export or deliver a script with its bytecode to store on removable media or to use on a different computer without the source as a text-file. This is how you can do that:

1. You open a script and compile it before.
2. you go to /Options/Save Bytecode/ and the console writes:

   ```
   -----PS-BYTECODE (PSB) mX4-----13:48:38
   -----BYTECODE saved as:
   C:\maXbook\maxbox3\mX3999\maxbox3\examples\287_eventhandl
   ing2_primewordcount.psb -----
   IFPS#
   ```

3. you load the bytecode by /Options/Load Bytecode...

   ```
   IFPS#
   ### mX3 byte code executed: 10.06.2015 13:53:20  Runtime:
   0:0:1.577  Memoryload: 60% use
   ByteCode Success Message of:
   287_eventhandling2_primewordcount.psb
   ```

4. When testing is finished you send the bytecode to your client

But there are some restrictions to this procedure:

You should avoid self referencing commands like `maxform1.color` or `memo1.text` in your bytecode. Also reflection calls, unsafe type casts or runtime type information can fail.

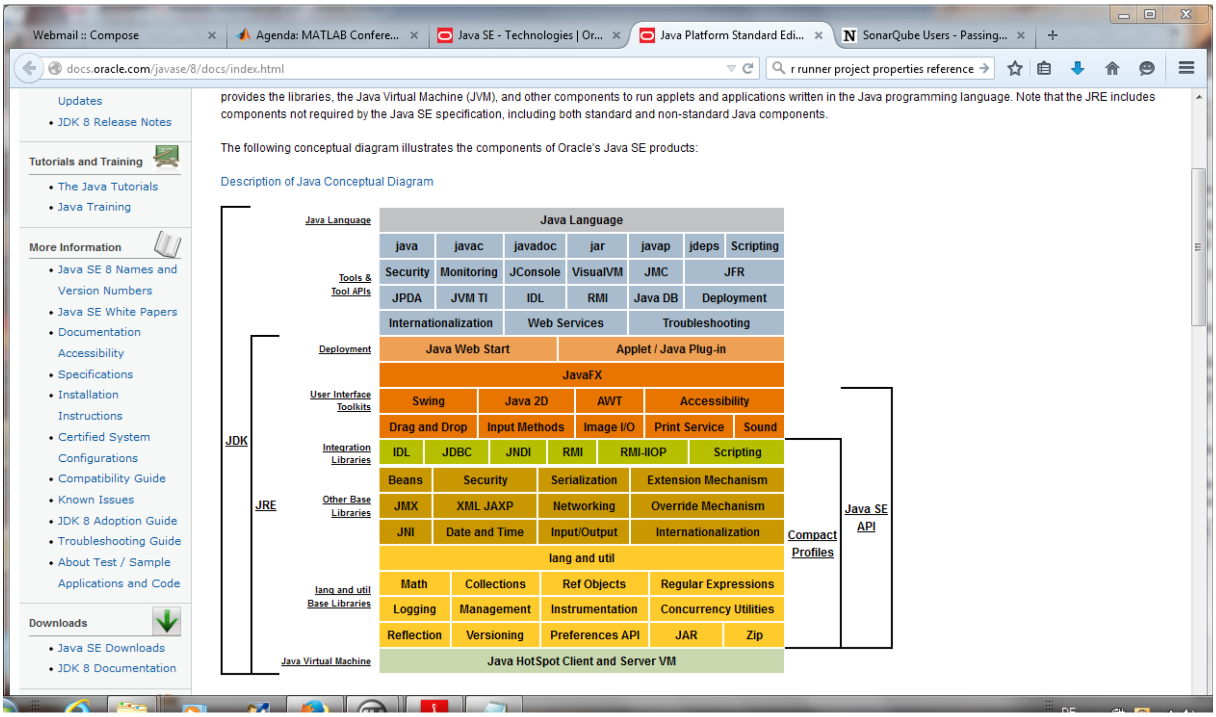
So during development, we may want to create code for our own purposes and then implicitly share them to test, deploy or reuse. But we don't really want to go to an app- or store authority and get a signed certificate for code signing, because that costs money and makes us dependent.
If you don't want to share the source code for property or security reasons you can deliver the bytecode of the script which they can load and run in maXbox like previously said.

On the other side you want that others can trust to your code so you deliver them simply the SHA1 hash of the file as a signature:

5. You open the bytecode as a normal file in the editor (see below):
6. ..\examples\287_eventhandling2_primewordcount.**psb** File loaded
7. you go to /Program/Information and copy the SHA1 of file:
   F01801AA105463EC6A937602AD2FA67DAA06C8D0
8. you send this number (fingerprint) to your client
9. Client loads the bytecode and compares the fingerprint to verify!

By meaning signature is just a hash. Real Code Signing uses a certificate associated with key pairs used to sign active content like a script or an application explained above. The storage location is called the certificate store. A certificate store often has numerous certificates, possibly issued from a number of different certification authorities.

But where does this byte code function come from? Byte code is an intermediate step, right before compilation into machine code. Because the last step is left to load time (and often runtime, as is the case with Just-In-Time (JIT) compilation, byte code is architecture independent.



Webmail :: Compose
Agenda: MATLAB Confere...
Java SE - Technologies | Or...
Java Platform Standard Edi...
SonarQube Users - Passing...
docs.oracle.com/javase/8/docs/index.html
r runner project properties reference

Updates
- JDK 8 Release Notes

Tutorials and Training
- The Java Tutorials
- Java Training

More Information
- Java SE 8 Names and Version Numbers
- Java SE White Papers
- Documentation Accessibility
- Specifications
- Installation Instructions
- Certified System Configurations
- Compatibility Guide
- Known Issues
- JDK 8 Adoption Guide
- Troubleshooting Guide
- About Test / Sample Applications and Code

Downloads
- Java SE Downloads
- JDK 8 Documentation

provides the libraries, the Java Virtual Machine (JVM), and other components to run applets and applications written in the Java programming language. Note that the JRE includes components not required by the Java SE specification, including both standard and non-standard Java components.

The following conceptual diagram illustrates the components of Oracle's Java SE products:

Description of Java Conceptual Diagram

JDK
JRE
Java Language: Java Language
Tools & Tool APIs: java | javac | javadoc | jar | javap | jdeps | Scripting
Security | Monitoring | JConsole | VisualVM | JMC | JFR
JPDA | JVM TI | IDL | RMI | Java DB | Deployment
Internationalization | Web Services | Troubleshooting
Deployment: Java Web Start | Applet / Java Plug-in
JavaFX
User Interface Toolkits: Swing | Java 2D | AWT | Accessibility
Drag and Drop | Input Methods | Image I/O | Print Service | Sound
Integration Libraries: IDL | JDBC | JNDI | RMI | RMI-IIOP | Scripting
Other Base Libraries: Beans | Security | Serialization | Extension Mechanism
JMX | XML JAXP | Networking | Override Mechanism
JNI | Date and Time | Input/Output | Internationalization
lang and util
lang and util Base Libraries: Math | Collections | Ref Objects | Regular Expressions
Logging | Management | Instrumentation | Concurrency Utilities
Reflection | Versioning | Preferences API | JAR | Zip
Java Virtual Machine: Java HotSpot Client and Server VM
Compact Profiles
Java SE API

But having a call to a DLL isn't independent from the operating system – this native call cant load on a Linux maXbox. So the same call is valuable from a DLL only on Win:

```
  if ConnectDrive('T:','\\maxbox.sonar.admin.ch\storage',
True,True) = NO_ERROR then
    writeln('Net Share T: Storage\ Connected');
     DisconnectNetDrive('Z:', True, True, True);
```

```
function  MyNETConnect(hw: hwnd; dw: dword): Longint;
    external 'WNetConnectionDialog@Mpr.dll stdcall';
```

You see the library is called `Mpr.dll` as the external DLL.

And this is how we call the external function:

```
if MyNETConnect(GetForegroundWindow, RESOURCETYPE_DISK)
                          = NO_ERROR then  writeln('connect dialog success');
```

And this is how bytecode decompile works:

```
Proc [3] Export: STSPAWNAPPLICATION1COMPLETED -1 @44
 [0] PUSHTYPE 27(U8) // 1
 [5] ASSIGN Base[1], [1]
 [17] CALL 6
 [22] POP // 0
 [23] PUSHTYPE 18(String) // 1
 [28] ASSIGN Base[1], ['Process Done']
 [55] CALL 18
 [60] POP // 0
 [61] RET
```

We do not need to understand this bytecode, but doing so can assist debugging and can improve performance and memory convention.

1.7 Get Network Configuration of SONAR

```
# Path to JVM executable. By default it must be available in PATH.
# Can be an absolute path, for example:
#wrapper.java.command=/path/to/my/jdk/bin/java
#wrapper.java.command=java

# RECOMMENDED : uncomment if Java Virtual Machine is a JDK but not a
JRE. To know which JVM you use, execute
# 'java -version'. JDK displays 'Server VM'.
# wrapper.java.additional.3=-server

#wrapper.java.command=C:\tools\java\jdk-7u40-windows-i586
#wrapper.java.command=C:\tools\java\jdk1.6.0_26
#wrapper.java.command=C:\tools\java\jdk-7u40-windows-i586\jre\bin\java

wrapper.java.command=C:\Program Files (x86)\Java\jre7\bin\java

#wrapper.java.command=java
```

I will be useful to set on a virtual machine the needed IP to full-fill the license agreement with netsh.

https://www.petri.com/configure_tcp_ip_from_cmd

The following command configures the interface named Local Area Connection with the static IP address 192.168.0.100, the subnet mask of 255.255.255.0, and a default gateway of 192.168.0.1:

```
netsh interface ip set address name="Local Area Connection"
static 192.168.0.100 255.255.255.0 192.168.0.1 1
```

Apparently on Windows 7, you need to use a different syntax to execute the command in the correct context. Preface the context specifiers interface ipv4 with a -c parameter and quote the entire context specifier. For example, to set the adapter to DHCP:

```
netsh -c "interface ipv4" set address name="Local Area
Connection" source=dhcp
```

http://www.techrepublic.com/article/10-things-you-should-know-about-the-netsh-tool/

Create an account of your own on code share to collaborate with project owners and other members on existing projects, and create and register projects of your own in accordance with the right IP and Server ID for example with the tool netsh:

```
Admin State    State          Type             Interface Name
-------------------------------------------------------------------------
Enabled        Connected      Dedicated        Local Area Connection
Enabled        Disconnected   Dedicated        Wireless Network Connection
Enabled        Disconnected   Dedicated        Wireless Network Connection 2
```

DHCP is already enabled on this interface.

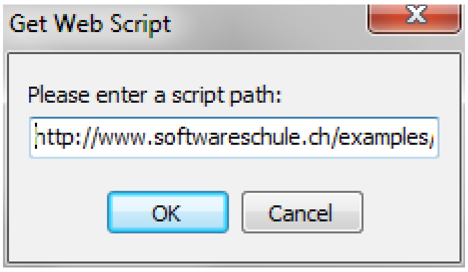
```
Configuration for interface "Local Area Connection"
    DHCP enabled:                         Yes
    IP Address:                           192.168.1.42
    Subnet Prefix:                        192.168.1.0/24 (mask
                                             255.255.255.0)
    Default Gateway:                      192.168.1.1
    Gateway Metric:                       0
    InterfaceMetric:                      20
    DNS servers configured through DHCP:  192.168.1.1
    Register with which suffix:           Primary only
    WINS servers configured through DHCP: None

Configuration for interface "Loopback Pseudo-Interface 1"
    DHCP enabled:                         No
    IP Address:                           127.0.0.1
    Subnet Prefix:                        127.0.0.0/8 (mask
                                                  255.0.0.0)
    InterfaceMetric:                      50
    Statically Configured DNS Servers:    None
    Register with which suffix:           Primary only
    Statically Configured WINS Servers:   None
```

In maXbox with SONAR you can download, load and run directly scripts from the web. When setting the script execution policy, I generally first see what it is, then set the policy, and then check again to make sure that I have properly set the policy. If you don't want execute scripts from the web you can stop this in the ini-file `maxboxdef.ini` with N. This is seen in the following figure.

```
LINENUMBERS=Y
EXCEPTIONLOG=Y
EXECUTESHELL=N
MEMORYREPORT=Y
BOOTSCRIPT=Y
```

To set the execution policy to require digital signatures if the script comes from a remote location is planned for a next version.

But how do you get a web-script?
Just type in menu ../Help/Get Web Script


Get Web Script

Please enter a script path:

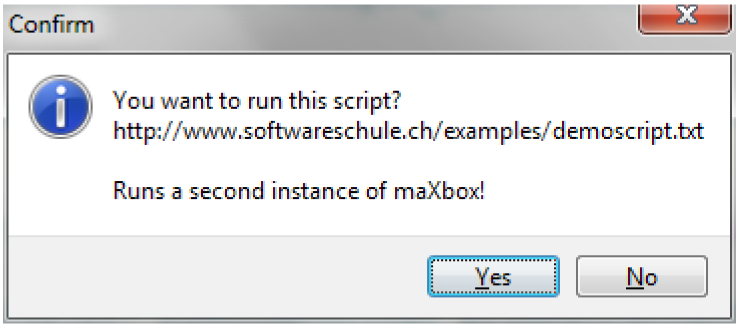
http://www.softwareschule.ch/examples/

If you only want to run a script from a remote share or http site without modifying the default script execution policy, you can use this simple dialog when launching maXbox shell. You can specify the path to the script by using the file or url-site parameter. This is seen in the figure above.

Then it will ask you to run the script in a second box. Yes it will start in any case a second instance (like a sandbox) so your first instance of maXbox won't touched.
After you have a second box or console that is running for the execution policy and you said yes, you can run the remote script again and again. Remember, the script execution policy in the ini-file is not a security feature to protect you against malware cause no scanning or checking whatsoever of the file is made.

It is a convenience or convention feature. In a car, a seat belt actually protects you, and is therefore a security feature. The beeper (like a dialog) that annoys you until you put the seat belt on is a convenience feature (i.e., it does not actually protect you).
It's up to you to decide yes or no and study the script before you run it.

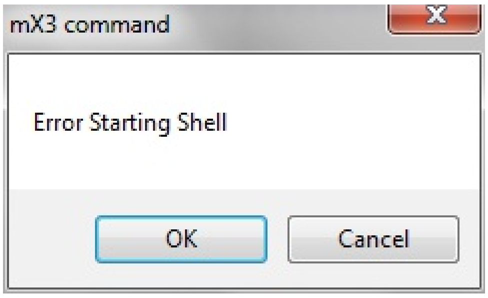
The error seen in the figure below is because the script was downloaded from the Internet and you set in the ini-file EXECUTESHELL=N . The file itself has now the block property set.



You want to run this script?
http://www.softwareschule.ch/examples/demoscript.txt

Runs a second instance of maXbox!

To unblock the script, you have to change the property in the ini-file and restart the box again. After the script is unblocked, it should run without any problems.



Error Starting Shell

☝ Be aware you should first examine a script to make sure that you know what it actually does! In addition, testing scripts in a Virtual Machine is a great practice to enter.
You can also copy just a section/block or a function from the web-script like this:

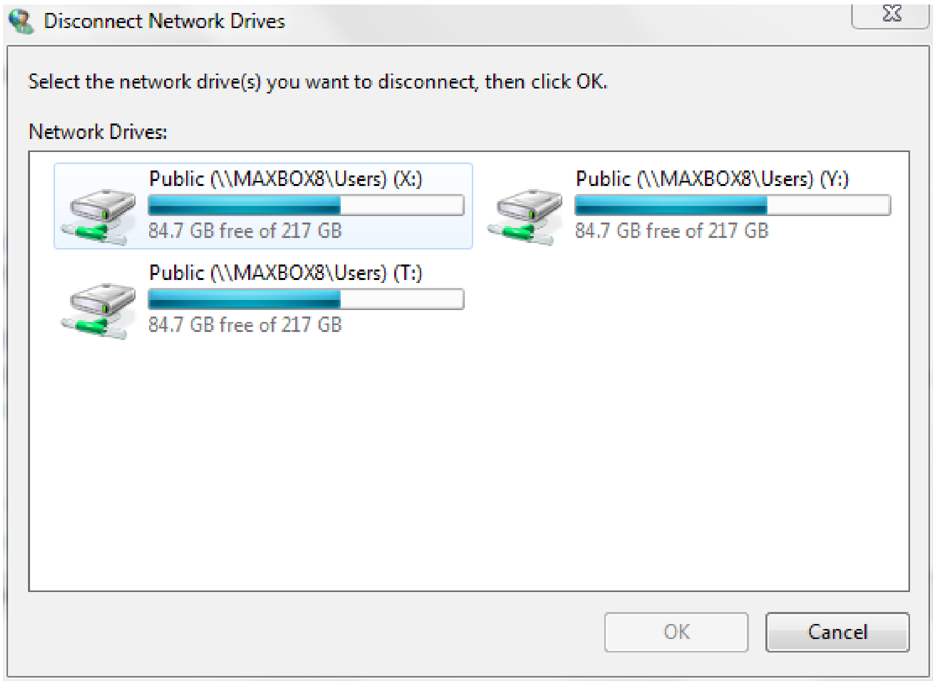
```
function TJvNetworkConnect_Execute: Boolean;
var fconnect: boolean;
begin
 //RESOURCETYPE_DISK
 //WNetDisconnectDialog
 fconnect:= true;
 if fconnect then
   Result:= WnetConnectionDialog(GetForegroundWindow,
                                              RESOURCETYPE_DISK) = NO_ERROR
 end;
```

You copy it to the clipboard, and then paste it into your script editor. This makes maXbox think the script was locally generated. Therefore, it will not be blocked. As with any other script, you should also ensure you know what scripts downloaded from the web repository do also.

```
function ExtComName(ComNr: DWORD): string;
begin
  if ComNr > 9 then
    Result := Format('\\\\.\\COM%d', [ComNr])
  else
    Result := Format('COM%d', [ComNr]);
end;


Const

  BASEPATH = 'C:\maXbox\maxbox3\work2015\SONAR_2015\SONARQube51\';

  SONARBAT = BASEPATH+'\sonarqube-5.1\bin\windows-x86-32\StartSonar.bat';

  SONARRUNNER =
       BASEPATH+'\sonar-runner-dist-2.4\sonar-runner-2.4\bin\sonar-runner.bat';

  // JAVA_PATH = 'C:\Program Files (x86)\Java\jre1.8.0_45';

   JAVA_PATH = 'C:\Program Files (x86)\Java\jre7';

   //curl -u admin:admin http://localhost:9000/api/server/system

    if iswin64  then writeln(' is win64 machine: '+ gethostname);
  //if DirectoryExists(AWORKPATH) then writeln(AWORKPATH+ ' existst');
 { if ConnectDrive('K:','\\maxbox.sonar.ch\storage', True,True) = NO_ERROR then
  writeln('Net Share K: Storage\ Connected');
   DisconnectNetDrive('K:', True, True, True);
 }

   if FileExists(SONARBAT) and fileExists(SONARRUNNER) then begin
        filecondition:= true
         writeln('BAT Sonar filecondition is true')
       end else filecondition:= false;

       if IsTCPPortOpen(9000,getIP(getHostName)) then begin
          writeln('Sonar Port Open!');
        end;

   ShellExecute3(JAVA_PATH+'\bin\javacpl.exe','',seCMDOpen);

  //$ switch Web Server ! ****************************************

  if FileExists(SONARBAT) then begin
     ShellExecute3(SONARBat,'',seCMDOpen);
       //ExecuteCommand('cmd','/c '+SONARBat)
      sleep(BATCHWAIT) end else
      writeln('file not found: '+SONARBAT);
    //end;
```

```
      if IsTCPPortOpen(9000,getIP(getHostName)) then begin
          writeln('Sonar TCP Port Open!');
      // ShellExecute3('http://127.0.0.1:9000/system','',seCMDOPen)
        ShellExecute3('http://127.0.0.1:9000/dashboard/?did=4','',seCMDOPen)
      end else
         writeln('sonar tcp port not open?');

     //$ switch Web Server END ! ****************************************
  //if ShellExecute3(SONARRUNNER,'',seCMDOpen) = '' then S_SonarRunning:=
true;

    srlist:= TStringlist.create;
    ConsoleCapture(Extractfilepath(SONARRUNNER),
                   'cmd.exe','/c sonar-runner.bat',srlist);
      writeln(srlist.text)
    srlist.Free;

  if IsApplicationRunning('ConsoleWindowClass','')
                          AND IsApplicationRunning('Shell_TrayWnd','')
      AND S_SonarRunning then
      writeln('SONAR & Runner all is up!');
```

☝ Embedded database should be used for evaluation purpose only
The embedded database will not scale, it will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database engine.



Disconnect Network Drives

Select the network drive(s) you want to disconnect, then click OK.

Network Drives:

Public (\\MAXBOX8\Users) (X:)
84.7 GB free of 217 GB

Public (\\MAXBOX8\Users) (Y:)
84.7 GB free of 217 GB

Public (\\MAXBOX8\Users) (T:)
84.7 GB free of 217 GB

☝ So the idea of download and opening the bytecode file directly isn't at all successful, hence we shall use a Hex editor to disassemble the bytecode first, which will produce the implementation logic in hexadecimal bytes.

By the way at last:
In maXbox you can also map (connect) or disconnect a network drive without a dialog as a console or shell call!:

```
ConnectDrive('Z:', '\\Servername\C', True, True);
```

```
 Const SHARENAME = '\\MAXBOX8\Users\Public';

  if ConnectDrive('Z:','\\MAXBOX8\Users\Public', True,True) = NO_ERROR then
       writeln('Net Share Z:\ Connected');  //see appendix with const

  DisconnectNetDrive('Z:', True, True, True);
```

Plugins

Plugin	Version	Description
C# [csharp]	4.0	Enable analysis /reporting on C# projects.
Java [java]	3.1	SonarQube rule engine.
PL/SQL[plsql]	2.7	Enable analysis and reporting on PL/SQL projects.
Git [scmgit]	1.0	Git SCM Provider.
SVN [scmsvn]	1.0	SVN SCM Provider.
Web [web]	2.3	Analyze HTML (also within PHP/Ruby/etc. templates) and JSP/JSF code.
XML [xml]	1.2	Enable analysis and reporting on XML files.

Hope you did already work with the Starter 28 on DLL Code topics:

http://www.softwareschule.ch/download/maxbox_starter28.pdf

http://www.softwareschule.ch/download/maxbox_starter37.pdf

Feedback @ max@kleiner.com
Literature: Kleiner et al., Patterns konkret, 2003, Software & Support

http://docs.sonarqube.org/display/PLUG/Git+Plugin

http://www.softwareschule.ch/download/codesign_2015.pdf

http://superuser.com/questions/462940/digitally-signing-software-self-signing-cerificate http://www.digitallycreated.net/Blog/38/using-makecert-to-create-certificates-for-development

http://resources.infosecinstitute.com/java-bytecode-reverse-engineering/

https://github.com/maxkleiner/maXbox3/releases

http://www.wrightfully.com/category/sonarqube/page/4/

http://sonarsource.com

1.8 Appendix Logs and Event Log Study

```
SonarQube Runner 2.4
Java 1.7.0_40 Oracle Corporation (32-bit)
Windows 7 6.1 x86
INFO: Runner configuration file: D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\conf\sonar-runner.properties
INFO: Project configuration file: NONE
INFO: Default locale: "en_US", source code encoding: "UTF-8"
INFO: Work directory: D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\bin\..\bin\.sonar
INFO: SonarQube Server 5.1
16:30:23.488 INFO  - Load global repositories
16:30:23.644 INFO  - Load global repositories (done) | time=156ms
16:30:23.644 INFO  - Server id: 20150511154411
16:30:23.644 INFO  - User cache: C:\Users\review\.sonar\cache
16:30:23.660 INFO  - Install plugins
16:30:23.972 INFO  - Install JDBC driver
16:30:23.987 INFO  - Create JDBC datasource for jdbc:h2:tcp://localhost/sonar
16:30:25.173 INFO  - Initializing Hibernate
16:30:27.248 INFO  - Load project repositories
16:30:27.716 INFO  - Load project repositories (done) | time=468ms
16:30:27.716 INFO  - Load project settings
16:30:28.308 INFO  - Load technical debt model
16:30:28.371 INFO  - Apply project exclusions
16:30:28.636 WARN  - SCM provider autodetection failed. No SCM provider claims to support this project. Please use sonar.scm.provider to define SCM of your project.
16:30:28.636 INFO  - -------------  Scan Simple XML Multi Java project analyzed with Sonar Runner
16:30:28.652 INFO  - Load module settings
16:30:28.792 INFO  - Language is forced to xml
16:30:28.808 INFO  - Load rules
```

```
16:30:29.291 INFO  - Base dir: D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\bin
16:30:29.291 INFO  - Working dir: D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\bin\.sonar
16:30:29.291 INFO  - Source paths: srcxml2
16:30:29.291 INFO  - Source encoding: UTF-8, default locale: en_US
16:30:29.291 INFO  - Index files
16:30:30.258 INFO  - 463 files indexed
16:30:31.397 INFO  - Quality profile for xml: Sonar way
16:30:31.600 INFO  - Sensor Lines Sensor
16:30:31.662 INFO  - Sensor Lines Sensor (done) | time=62ms
16:30:31.662 INFO  - Sensor QProfileSensor
16:30:31.678 INFO  - Sensor QProfileSensor (done) | time=16ms
16:30:31.678 INFO  - Sensor InitialOpenIssuesSensor
16:30:32.130 INFO  - Sensor InitialOpenIssuesSensor (done) | time=452ms
16:30:32.130 INFO  - Sensor ProjectLinksSensor
16:30:32.146 INFO  - Sensor ProjectLinksSensor (done) | time=16ms
16:30:32.146 INFO  - Sensor VersionEventsSensor
16:30:32.146 INFO  - Sensor VersionEventsSensor (done) | time=0ms
16:30:32.146 INFO  - Sensor XmlSensor
16:30:34.408 WARN  - Unable to anayle file D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\bin\srcxml2\Relation-FREQUENCY_KEY-NOMINAL_FREQUENCY.xml
16:30:34.408 WARN  - Cause: org.xml.sax.SAXParseException; lineNumber: 1; columnNumber: 1; Content is not allowed in prolog.
16:30:35.485 WARN  - Unable to anayle file D:\Software\SONARQube51\sonar-runner-dist-2.4\sonar-runner-2.4\bin\srcxml2\log4j.xml
16:30:35.485 WARN  - Cause: org.xml.sax.SAXParseException; lineNumber: 3; columnNumber: 22; The prefix "log4j" for element "log4j:configuration" is not bound.
16:30:35.563 INFO  - Sensor XmlSensor (done) | time=3417ms
16:30:35.563 INFO  - Sensor LineCountSensor
16:30:36.187 INFO  - Sensor LineCountSensor (done) | time=624ms
16:30:36.187 INFO  - Sensor SCM Sensor
16:30:36.187 INFO  - No SCM system was detected. You can use the 'sonar.scm.provider' property to explicitly specify it.
16:30:36.187 INFO  - Sensor SCM Sensor (done) | time=0ms
16:30:36.187 INFO  - Sensor CPD Sensor
16:30:36.187 INFO  - DefaultCpdEngine is used for xml
16:30:36.187 INFO  - Sensor CPD Sensor (done) | time=0ms
16:30:36.187 INFO  - No quality gate is configured.
16:30:36.218 INFO  - Compare to previous analysis (2015-05-26)
16:30:36.233 INFO  - Compare over 30 days (2015-04-26, analysis of Tue May 26 16:22:39 CEST 2015)
16:30:36.483 INFO  - Execute decorators...
```

```
16:30:39.307 WARN  - Too many components under resource 'srcxml2'. DSM will not be displayed.
16:30:39.634 INFO  - Store results in database
16:30:44.221 INFO  - Analysis reports generated in 1373ms, dir size=2 MB
16:30:45.032 INFO  - Analysis reports compressed in 811ms, zip size=762 KB
16:30:45.204 INFO  - Analysis reports sent to server in 172ms
16:30:45.204 INFO  - ANALYSIS SUCCESSFUL, you can browse http://localhost:9000/dashboard/index/XMLLjava-sonar-runner-simple
16:30:45.204 INFO  - Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report.
INFO: ------------------------------------------------------------------------
INFO: EXECUTION SUCCESS
INFO: ------------------------------------------------------------------------
Total time: 22.636s
Final Memory: 12M/114M
INFO: ------------------------------------------------------------------------
```

Extract Sonar Log on sonar.log

```
2015.06.30 21:17:37 WARN  web[o.s.s.d.DatabaseChecker] H2 database should be used for evaluation purpose only
2015.06.30 21:17:42 INFO  web[o.s.s.p.DefaultServerFileSystem] SonarQube home: C:\maXbook\maxbox3\SONARQube51\sonarqube-5.1
2015.06.30 21:17:43 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Install plugins
2015.06.30 21:17:43 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Core / 5.1 / 4aa9af3a6a4362b61db365fba32eb0a55d411e7a
2015.06.30 21:17:43 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Email notifications / 5.1 / 4aa9af3a6a4362b61db365fba32eb0a55d411e7a
2015.06.30 21:17:43 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin C# / 4.0 / 4b8e811700eee3f7365ed67aa268fb5277d67a11
2015.06.30 21:17:44 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Python / 1.5 / 10c8f1d2e8ded13634d3ee71c096e97d3fb3cfe9
2015.06.30 21:17:44 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Java / 3.1 / c6983a5d48112eadd5387f78753865c81491c26e
2015.06.30 21:17:45 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Web / 2.3 / 51b8f30097242f2bd6c64883f74779f141ef0691
2015.06.30 21:17:45 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin Git / 1.0 / 9ce9d330c313c296fab051317cc5ad4b26319e07
2015.06.30 21:17:46 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin XML / 1.2 / 8a0e3c61b4bf3568125302a7ac87d677e8566c1f
2015.06.30 21:17:46 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin English Pack / 5.1 / 4aa9af3a6a4362b61db365fba32eb0a55d411e7a
2015.06.30 21:17:46 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin SVN / 1.0 / 213fc8a8b582ff530b12dd4a59a6512be1071234
2015.06.30 21:17:46 INFO  web[o.s.s.p.ServerPluginJarsInstaller] Deploy plugin PL/SQL / 2.7 / 839e142439bc433452af9233043d773da0bfb07f
2015.06.30 21:17:47 INFO  web[o.s.s.p.RailsAppsDeployer] Deploy Ruby on Rails applications
2015.06.30 21:17:47 INFO  web[o.s.j.s.AbstractDatabaseConnector] Initializing Hibernate
```

```
2015.06.30 21:17:56 INFO  web[o.s.s.p.UpdateCenterClient] Update center: http://update.sonarsource.org/update-center.properties (no proxy)
2015.06.30 21:17:59 INFO  web[o.s.s.n.NotificationService] Notification service started (delay 60 sec.)
2015.06.30 21:17:59 ERROR web[plsql] Server ID is invalid. Please check settings.
2015.06.30 21:18:03 INFO  web[o.s.s.s.IndexSynchronizer] Index rules
2015.06.30 21:18:24 INFO  web[o.s.s.s.IndexSynchronizer] Index activeRules
2015.06.30 21:18:25 INFO  web[o.s.s.s.RegisterMetrics] Register metrics
2015.06.30 21:18:33 INFO  web[o.s.s.s.RegisterMetrics] Cleaning quality gate conditions
2015.06.30 21:18:33 INFO  web[o.s.s.s.RegisterDebtModel] Register technical debt model
2015.06.30 21:18:33 INFO  web[o.s.s.r.RegisterRules] Register rules
2015.06.30 21:18:42 INFO  web[o.s.s.q.RegisterQualityProfiles] Register quality profiles
2015.06.30 21:18:47 INFO  web[o.s.s.s.RegisterNewMeasureFilters] Register measure filters
2015.06.30 21:18:47 INFO  web[o.s.s.s.RegisterDashboards] Register dashboards
2015.06.30 21:18:47 INFO  web[o.s.s.s.RegisterPermissionTemplates] Register permission templates
2015.06.30 21:18:47 INFO  web[o.s.s.s.RenameDeprecatedPropertyKeys] Rename deprecated property keys
2015.06.30 21:18:47 INFO  web[o.s.s.s.IndexSynchronizer] Index activities
2015.06.30 21:18:48 INFO  web[o.s.s.s.IndexSynchronizer] Index issues
2015.06.30 21:18:48 INFO  web[o.s.s.s.IndexSynchronizer] Index source lines
2015.06.30 21:18:48 INFO  web[o.s.s.s.IndexSynchronizer] Index users
2015.06.30 21:18:48 INFO  web[o.s.s.s.IndexSynchronizer] Index views
2015.06.30 21:18:49 INFO  web[jruby.rack] jruby 1.7.9 (ruby-1.8.7p370) 2013-12-06 87b108a on Java HotSpot(TM) Client VM 1.8.0_45-b15 [Windows 7-x86]
2015.06.30 21:18:49 INFO  web[jruby.rack] using a shared (threadsafe!) runtime
2015.06.30 21:20:05 INFO  web[jruby.rack] keeping custom (config.logger) Rails logger instance
2015.06.30 21:20:06 INFO  web[o.a.c.h.Http11NioProtocol] Starting ProtocolHandler ["http-nio-0.0.0.0-9000"]
2015.06.30 21:20:06 INFO  web[o.s.s.a.TomcatAccessLog] Web server is started
2015.06.30 21:20:06 INFO  web[o.s.s.a.EmbeddedTomcat] HTTP connector enabled on port 9000
2015.06.30 21:20:06 INFO  app[o.s.p.m.Monitor] Process[web] is up
(unknown):0 warning: already initialized constant Input
WARNING: while creating new bindings for class org.jruby.rack.RackInput,
found an existing binding; you may want to run a clean build.
CTRL-C trapped.  Shutting down.
2015.06.30 21:31:35 INFO   es[o.elasticsearch.node]  [sonar-1435691792723] stopping ...
2015.06.30 21:31:35 INFO   es[o.elasticsearch.node]  [sonar-1435691792723] stopped
2015.06.30 21:31:35 INFO   es[o.elasticsearch.node]  [sonar-1435691792723] closing ...
2015.06.30 21:31:35 INFO  app[o.s.p.m.TerminatorThread] Process[web] is stopping
2015.06.30 21:31:35 INFO   es[o.elasticsearch.node]  [sonar-1435691792723] closed
2015.06.30 21:31:36 INFO  web[o.s.s.n.NotificationService] Notification service stopped
2015.06.30 21:31:37 INFO  web[o.s.s.d.EmbeddedDatabase] Embedded database stopped
2015.06.30 21:31:38 INFO  web[o.s.s.a.TomcatAccessLog] Web server is stopped
Java HotSpot(TM) Client VM warning: ignoring option MaxPermSize=160m; support was removed in 8.0
2015.06.30 21:31:38 INFO  app[o.s.p.m.TerminatorThread] Process[web] is stopped
<-- Wrapper Stopped
```

```
{ srlist:= TStringlist.create;
    //ConsoleCapture('C:\', 'cmd.exe', '/c dir *.* /s',srlist);
    //ConsoleCapture('D:\Software\SONARQube51\sonarqube-5.1\', 'cmd.exe','/c
dir *.* /s',srlist);
    writeln(srlist.text)
    srlist.Free;
    }

  if IsApplicationRunning('ConsoleWindowClass','')
             AND IsApplicationRunning('Shell_TrayWnd','')
     AND S_SonarRunning then
     writeln('SONAR & Runner all is up!');
     //openSonarStart;

    //maxform1.compile1.caption:= 'SONAR Start';
     // TToolButton(findcomponent('tbtnFind')).caption:= 'Qubefind2';
    maxform1.myscript1.caption:= 'SONAR Start';
    //TMenuItem(findcomponent('myscript1')).caption:= 'SONAR Batch';
```

```
// WriteToOSEventLog//
procedure WriteToOSEventLog(const logName, logCaption, logDetails : UnicodeString;
                   const logRawData : String = '');
var
  eventSource : THandle;
  detailsPtr : array [0..1] of PWideChar;
begin
  if logName<>'' then
    eventSource:=RegisterEventSourceW(nil, PWideChar(logName))
  else eventSource:=RegisterEventSourceW(nil,
PWideChar(ChangeFileExt(ExtractFileName(ParamStr(0)), '')));
  if eventSource>0 then begin
    try
      detailsPtr[0]:=PWideChar(logCaption);
      detailsPtr[1]:=PWideChar(logDetails);
      ReportEventW(eventSource, EVENTLOG_INFORMATION_TYPE, 0, 0, nil,
              2, Length(logRawData),
              @detailsPtr, Pointer(logRawData));
    finally
      DeregisterEventSource(eventSource);
    end;
  end;
end;
```