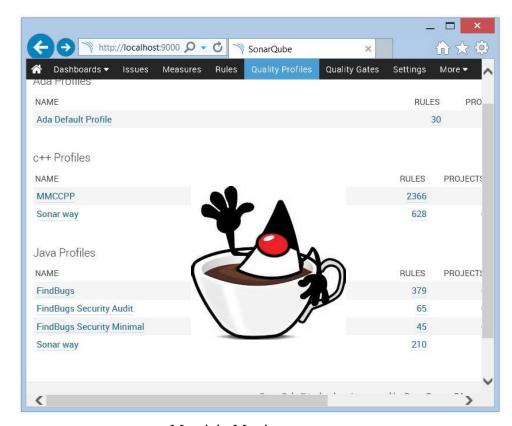
SPAZIO IT — SOAAROUBE AAD JAVA



SPAZIO IT

SONAROUBE AND JAVA



Maurizio Martignano Spazio IT – Soluzioni Informatiche s.a.s Via Manzoni 40 46030 San Giorgio di Mantova, Mantova http://www.spazioit.com

Agenda



- SonarQube
- Tools
- IDEs
- Continuous Integration
- Hands on the Platform
- Processes

SonarQube Code Quality Platform





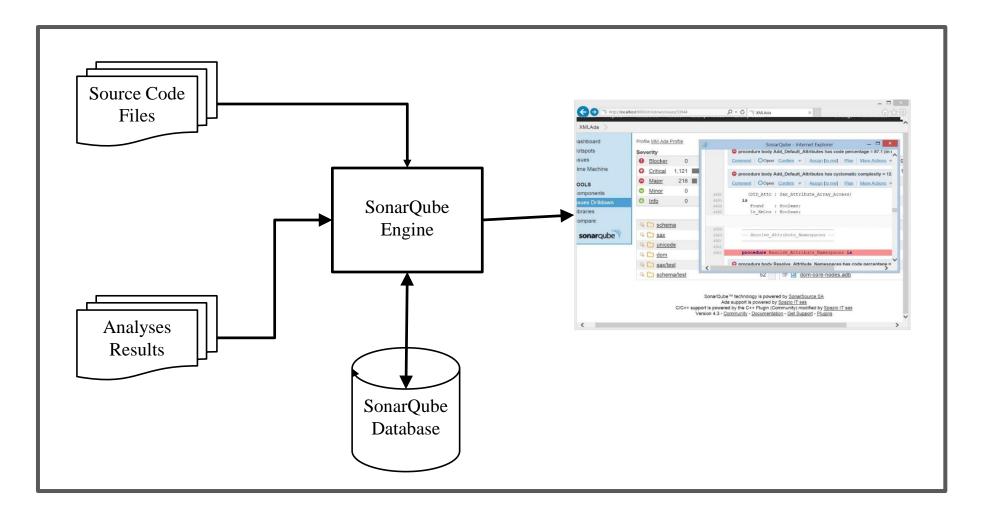
SonarQube - What is it?



- SonarQube is an open source Web Application (http://www.sonarqube.org) which
 - Takes in input a set of source code files and a set of analyses results (produced by external tools).
 - Stores both sources and results in a database.
 - Makes available the gathered information via a dynamic website where the results are shown in the context of the code itself.

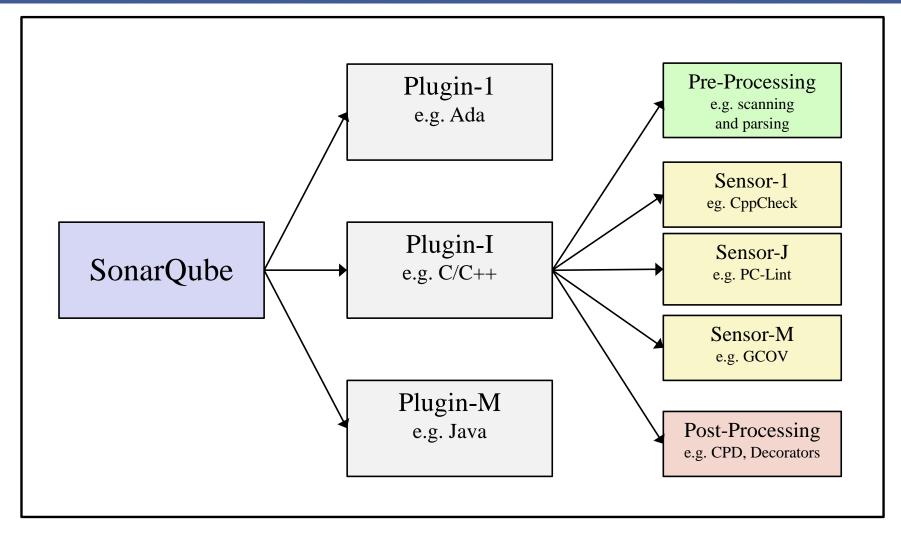
SonarQube - What is it?





SonarQube / Plugins / Sensors





SonarQube - There's more

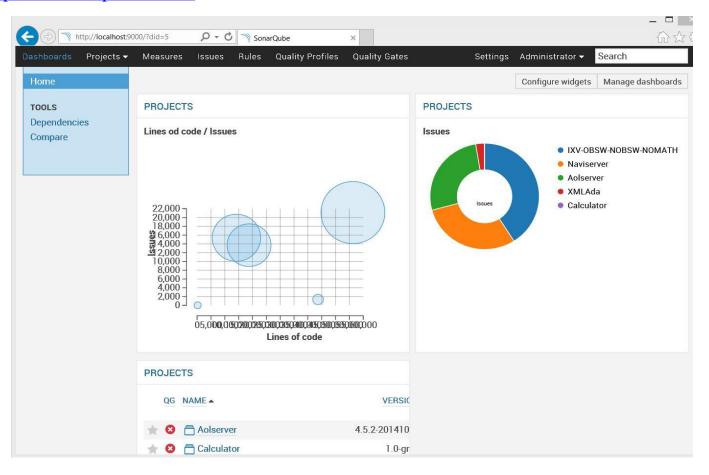


- Analyses on the same code base can be performed at different moments in time and SonarQube keeps track of the changes/evolution.
- The problems found during analyses (a.k.a. issues) can be managed directly from within the system itself, e.g.
 - Identifying false positives
 - Assigning issues to developers
 - Checking their status (if they have been solved)

– ...

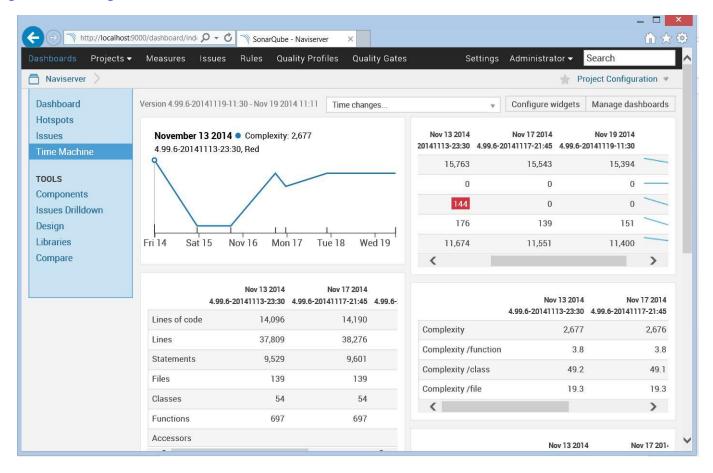


http://sonarsrv.spazioit.com/



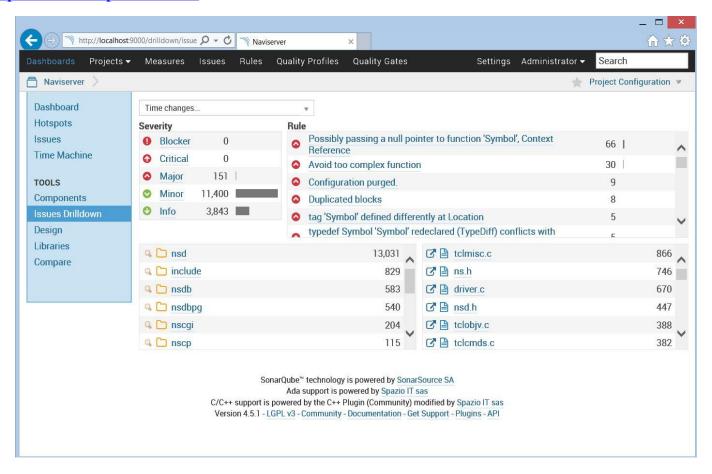


http://sonarsrv.spazioit.com/





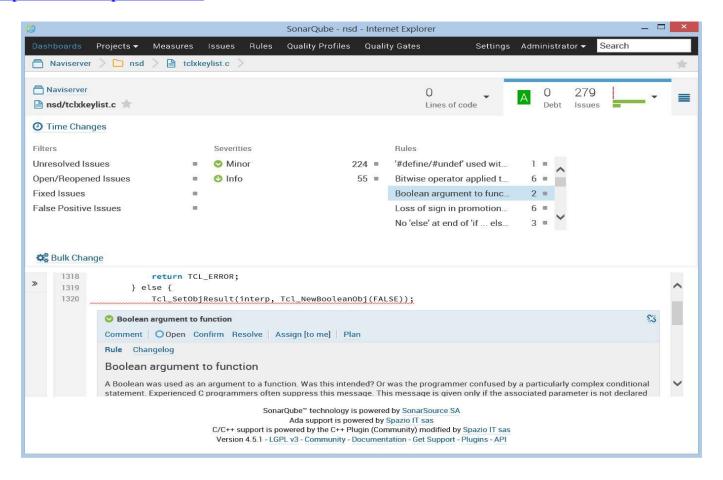
http://sonarsrv.spazioit.com/



October 2016 10



http://sonarsrv.spazioit.com/



11

SonarQube = Tools (+ Platform)

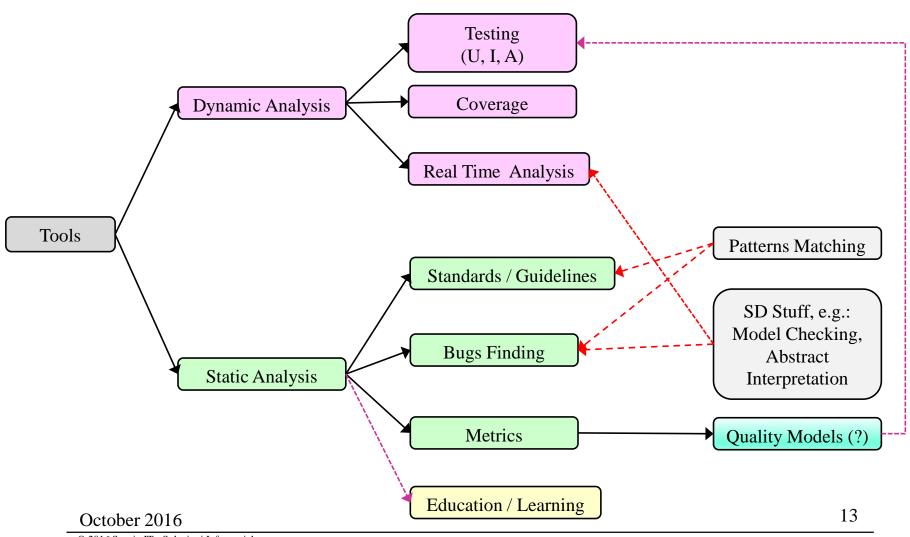




12

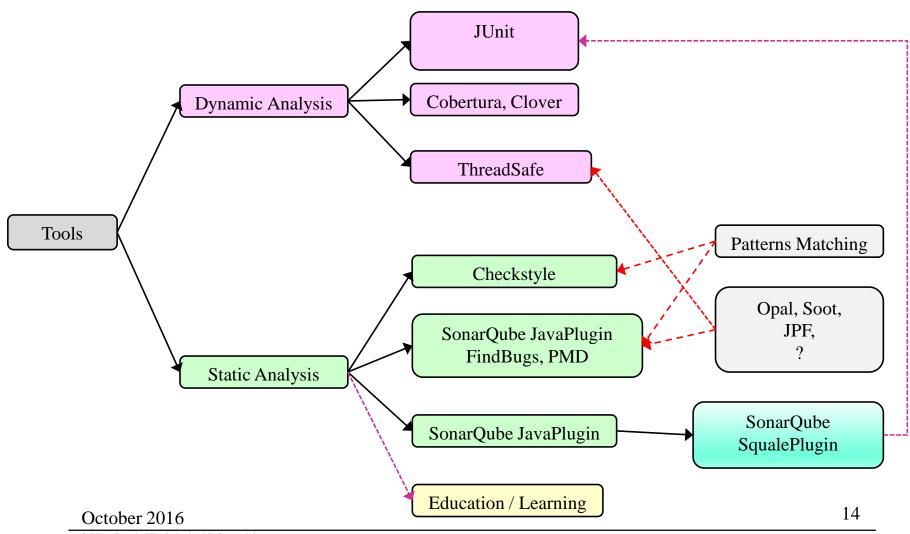
Tools Classification





Tools: Java





SonarQube Integration with IDEs







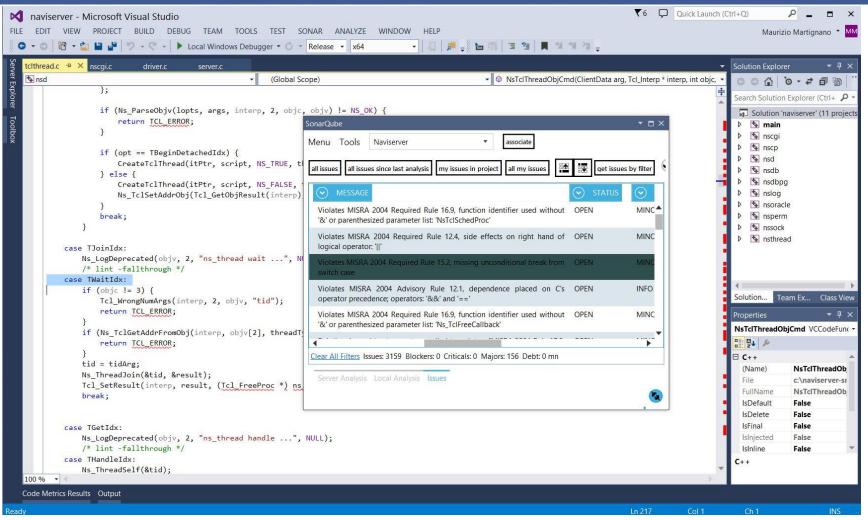


15

SonarQube and Visual Studio (C/C++)

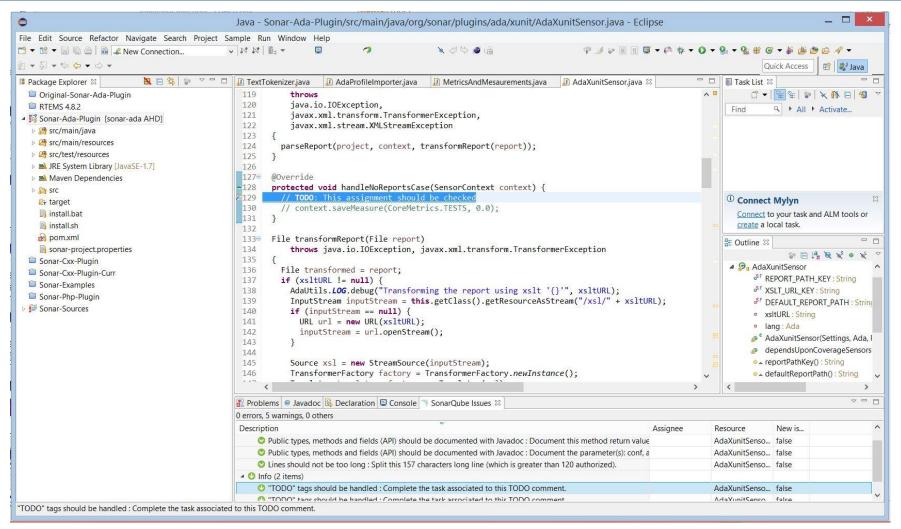


16



SonarQube and Eclipse (Java)

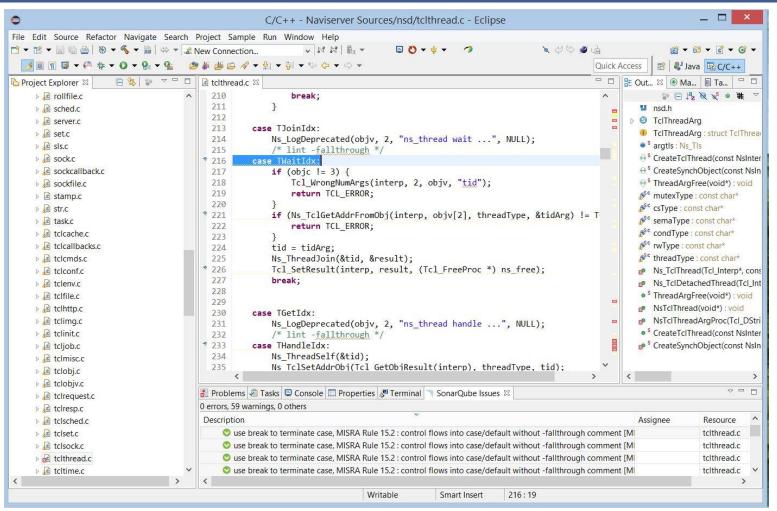




October 2016 17

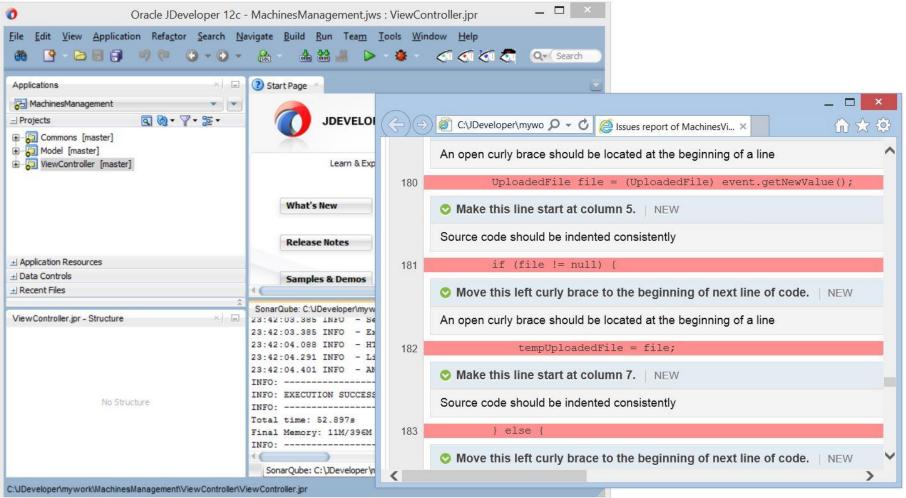
SonarQube and Eclipse (C/C++)





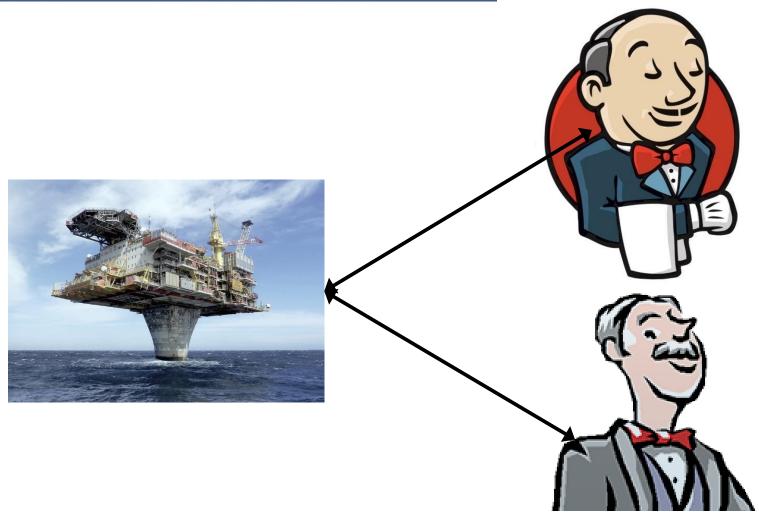
SonarQube and Oracle JDeveloper (Java)





SonarQube and Continuous Integration





SonarQube and Jenkins

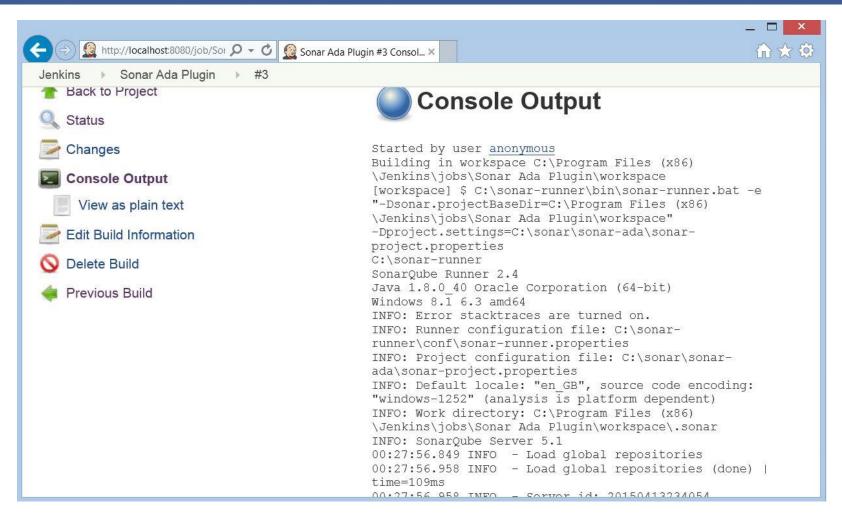


enkins Sonar Ada Plugin configuration	on .		
	Path to project properties	C:\sonar\sonar-ada\sonar-project.prope	
	Analysis properties	^	•
	JVM Options		0
Execute Windows batch command	Add build step ▼	Delete	
Execute shell	Post-build Actions		
Invoke Ant Invoke Standalone SonarQube Analysis Invoke top-level Maven targets	Add post-build action		

October 2016 21

SonarQube and Jenkins





SonarQube and Jenkins



- Running SonarQube Analyses:
 - Sonar-Runner
 - Maven
 - Ant

■ Where?

- SonarQube analyses can be distributed.
- Jenkins and all the others CI systems allow for distributed execution of builds and build steps.
- The analyses should take place where the code is.

Hands On the Platform...





Processes



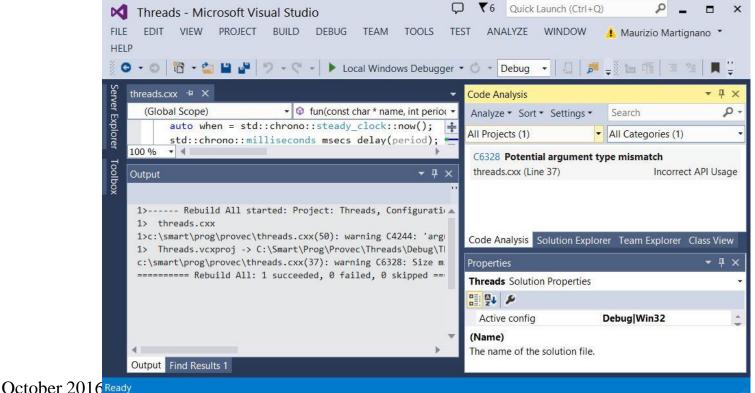


October 2016 25

Who does what?



■ All nowadays Integrated Development Environments (IDEs) like GNAT GPS 2016, Visual Studio 2013, Eclipse Luna, offer some form of Code Analysis.



Who does what?



- IDE's analysis tools are to be used by software developers during their everyday work.
- SonarQube analyses are more for the «quality people» and they are not supposed to be executed everyday, but rather at specific / well defined moments in the software development life cycle.
- SonarQube analyses can also be used by software developers to:
 - Execute project defined analyses
 - Complement the IDE analysis capabilities
 - Increase the "awareness" on the programing language (Educational)

27

When?



- SonarQube analyses should be performed after any «significant» delivery in a software development project, e.g. using ECSS 40 terminology, at:
 - CDR
 - QR
 - AR
- In maintenance projects SonarQube analyses should be performed after any «significant» new delivery, e.g. supposing a versioning like: major.minor[.build[.revision]]
 After every «minor» delivery.

28

Thank you for your time!



Software \square



Spazio IT