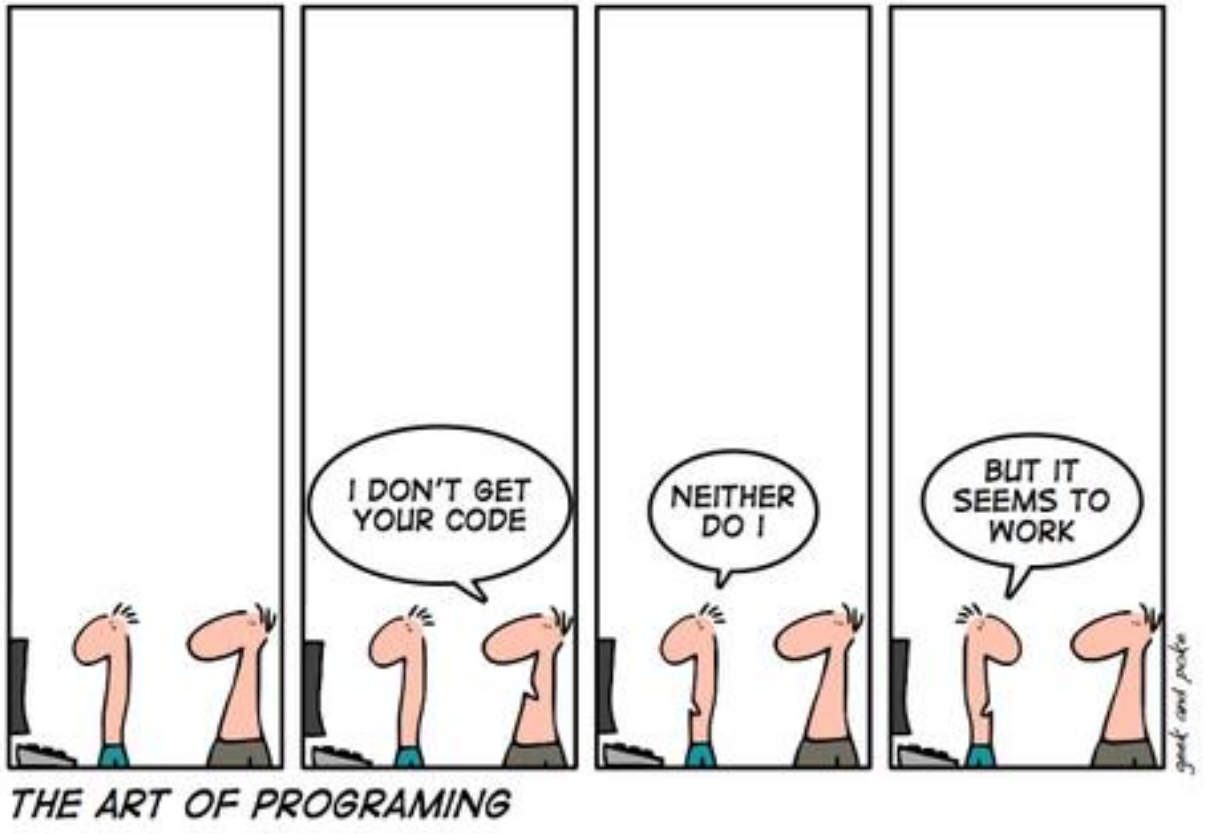
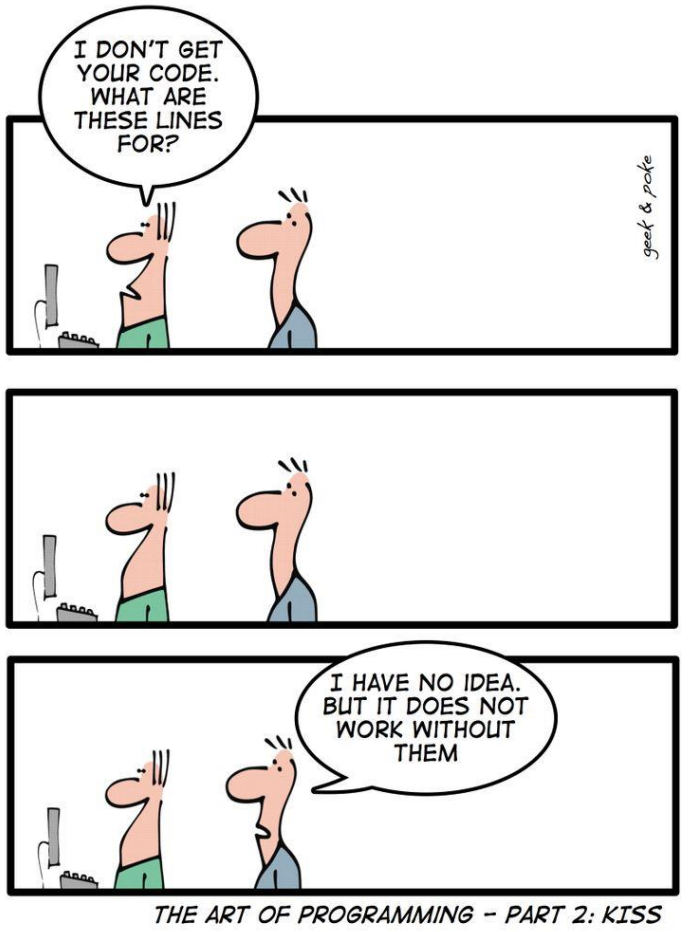
SonarQube in action

GILLES QUERRET • RIVERSIDE SOFTWARE

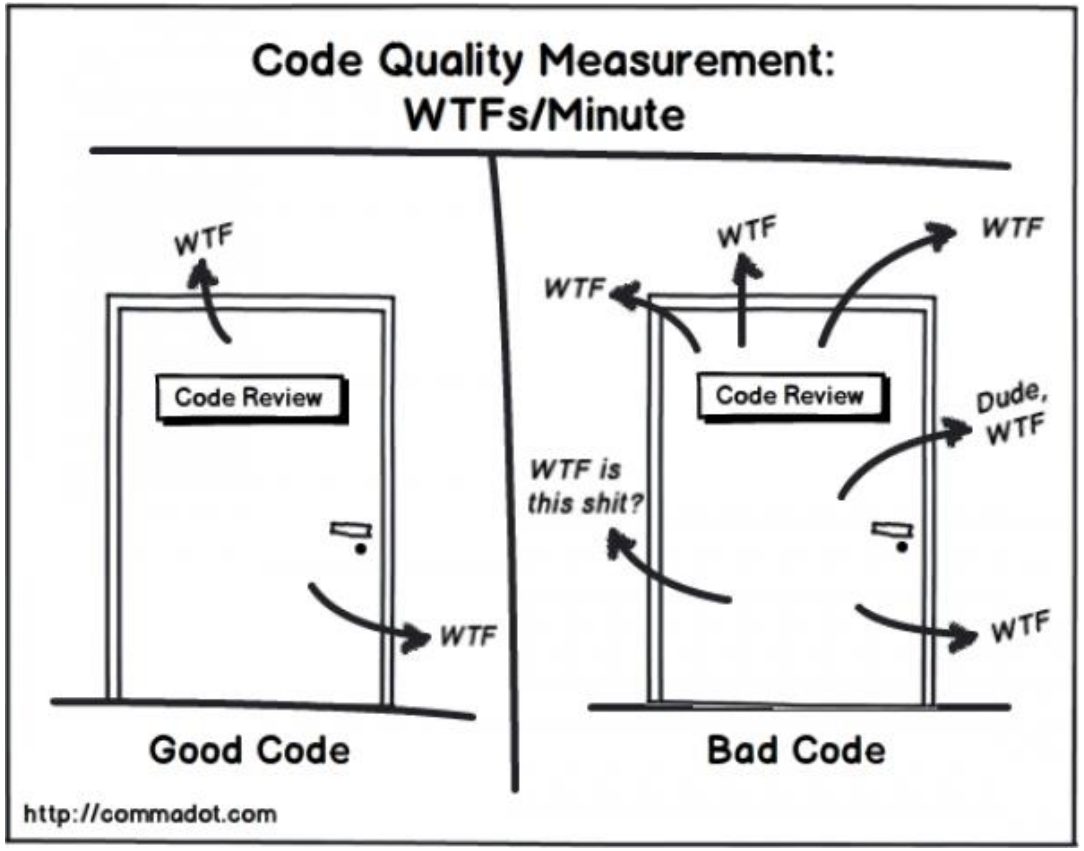
Code quality



Code quality

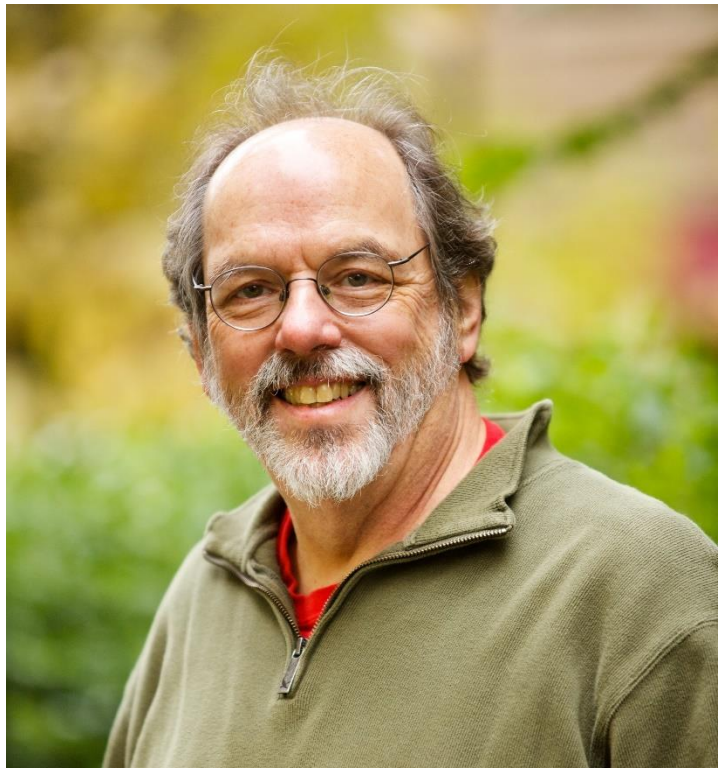


Code quality



Technical debt

Term coined by Ward Cunningham in 1992



Metaphor around the time it takes to work with low quality code :

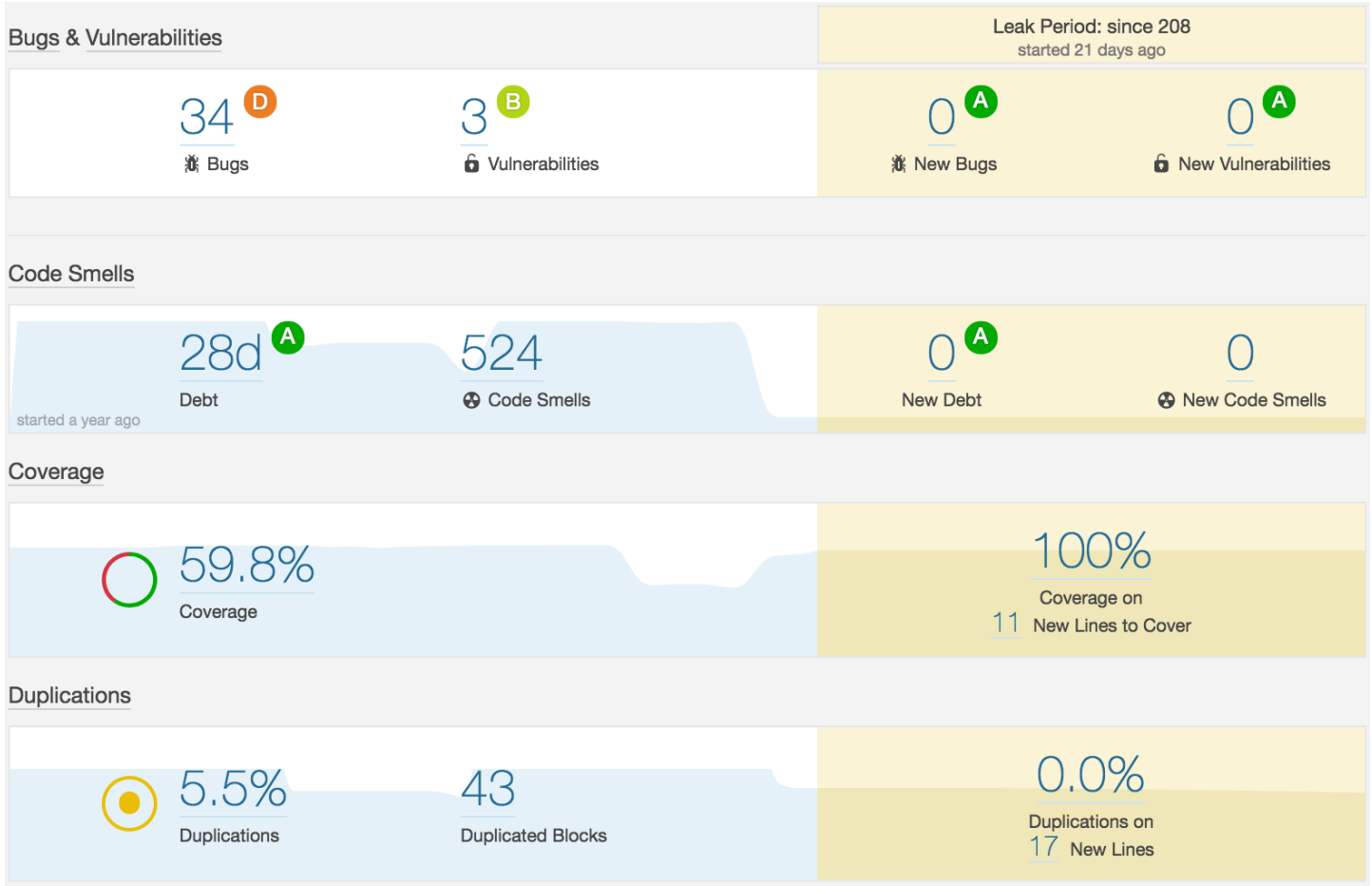
- If technical debt is high, you'll pay high interest (in terms of time spent) each time you work on the project
- Pay down the principal by refactoring code
- Increase the debt if you add quick and dirty code

Audience

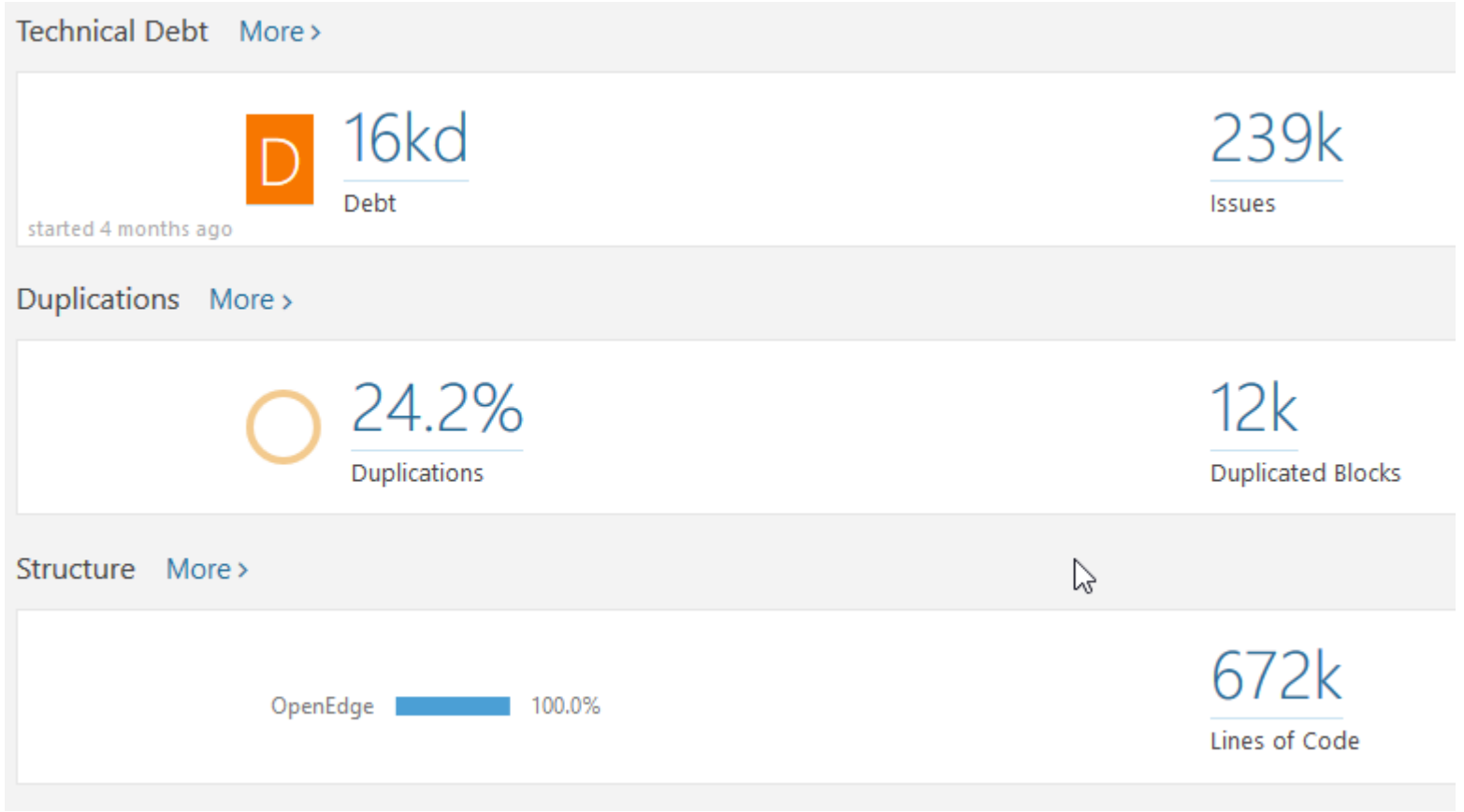
- Code quality management platform
- Open source
- Extensible
- Over 20 languages (from COBOL to Javascript through C++)

sonarqube

sonarsource



First analysis



So what can I do ?

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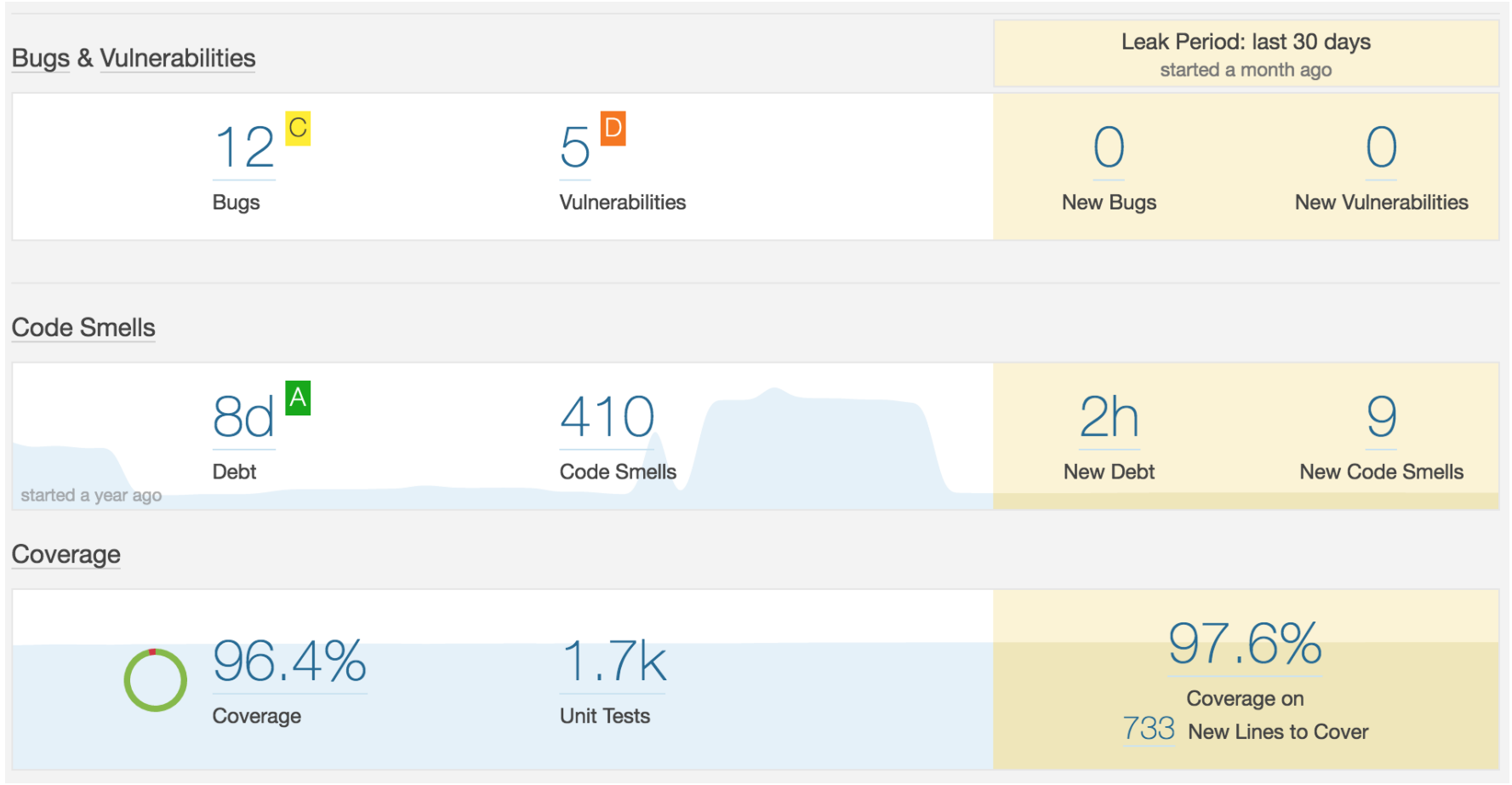
Fix the leak


Bugs & Vulnerabilities
Leak Period: last 30 days
started a month ago
12 C
Bugs
5 D
Vulnerabilities
0
New Bugs
0
New Vulnerabilities
Code Smells
8d A
Debt
410
Code Smells
2h
New Debt
9
New Code Smells
started a year ago
Coverage
96.4%
Coverage
1.7k
Unit Tests
97.6%
Coverage on
733 New Lines to Cover

Quality gates

Quality Gate **Passed**

Metric	Over Leak Period	Operator	Warning	Error	
Blocker Issues	☐	is greater than		0	Update Delete
Coverage on New Code	Always	is less than		80	Update Delete
Critical Issues	☐	is greater than		0	Update Delete
Open Issues	☐	is greater than	0		Update Delete
Reopened Issues	☐	is greater than	0		Update Delete
Skipped Unit Tests	☐	is greater than	0		Update Delete
Unit Test Errors	☐	is greater than		0	Update Delete
Unit Test Failures	☐	is greater than		0	Update Delete

Pull request analysis

When working with GitHub or BitBucket server, SonarQube can push comments on the pull request

Other SCM users have to rely on the usual leak period

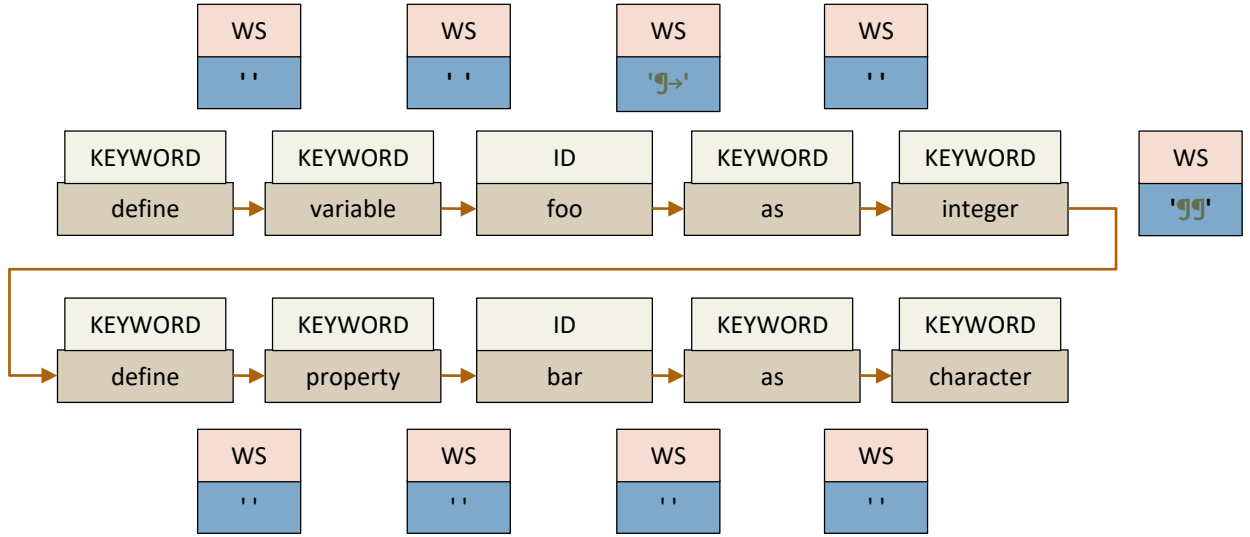
OpenEdge plugin

- Open source plugin written by Riverside Software
- Common metrics (LOC, comments, complexity, …)
- Code duplication
- Code coverage
- XREF and code parsing (based on proparse, much faster than Prolint)
- Extensible

Lexer and parsers

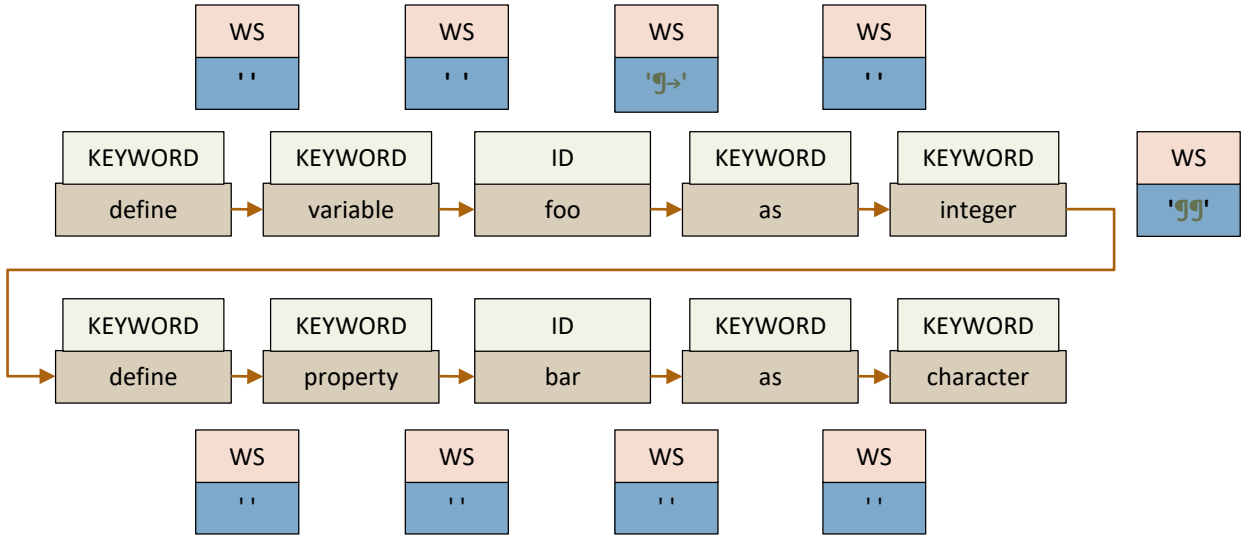
- `KEYWORD : 'define' | 'variable' | 'property' | 'as' | 'character' | 'integer'`
- `WS : (' ' | '\t' | '\n')* -> HIDDEN`
- `ID : [a-zA-z]*`
- `EOS : '.'`

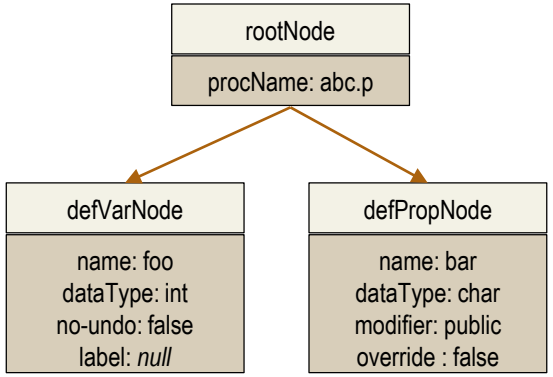
```
define_variable__foo¶
 → as_integer.¶
¶
define_property_bar_as_character.
```



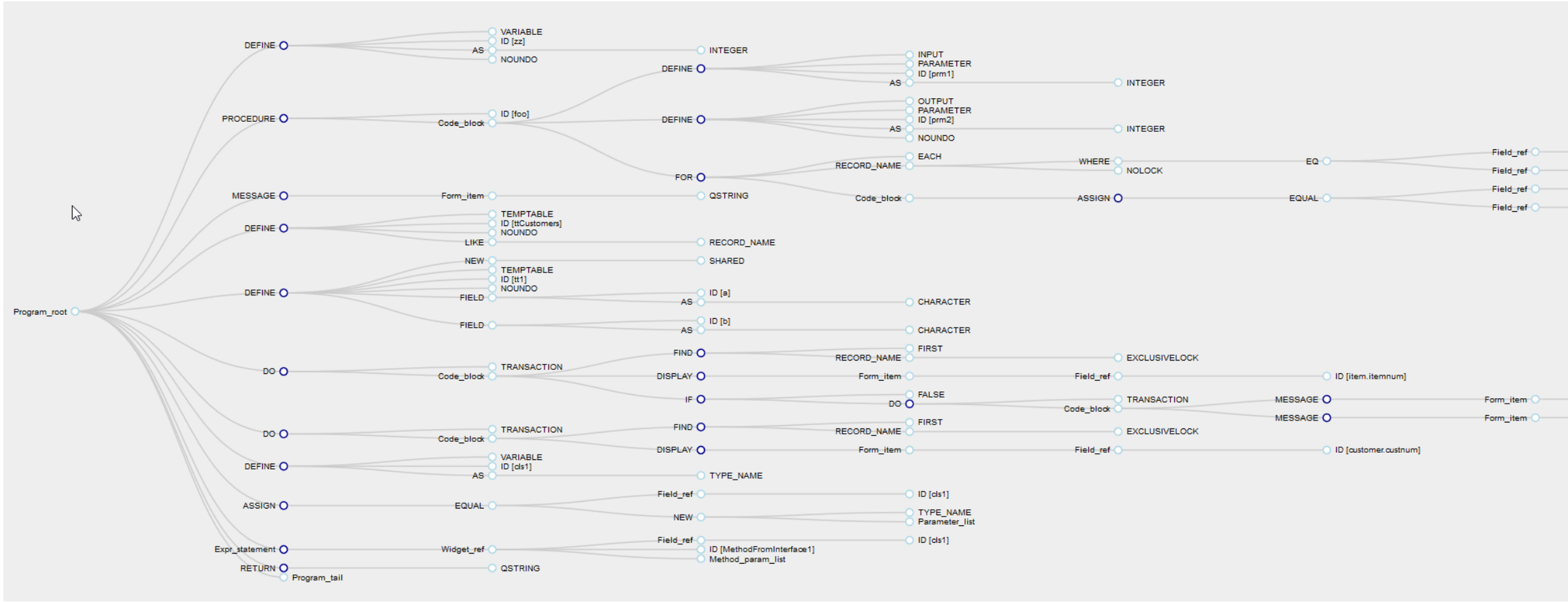
Lexer and parsers

- `defVar: KW_DEFINE KW_VARIABLE ID KW_AS DATATYPE KW_NO_UNDO? (KW_LABEL QUOTED_STRING)?`
- `defProp: KW_DEFINE (KW_PUBLIC | KW_PROTECTED | KW_PRIVATE)? (KW_STATIC | KW_ABSTRACT)? KW_OVERRIDE? KW_PROPERTY ID KW_AS (DATATYPE | CLASSNAME)`





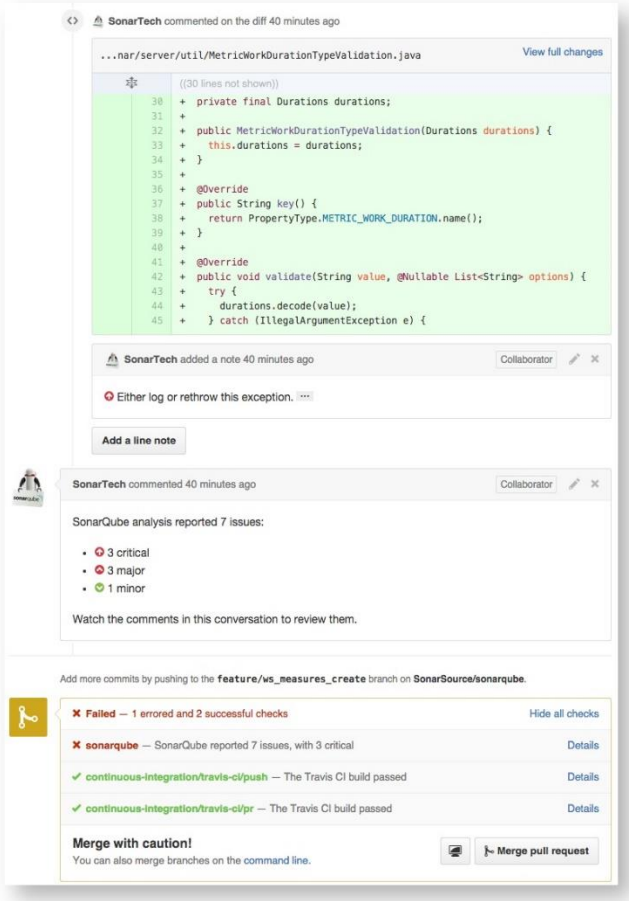
Lexer and parsers

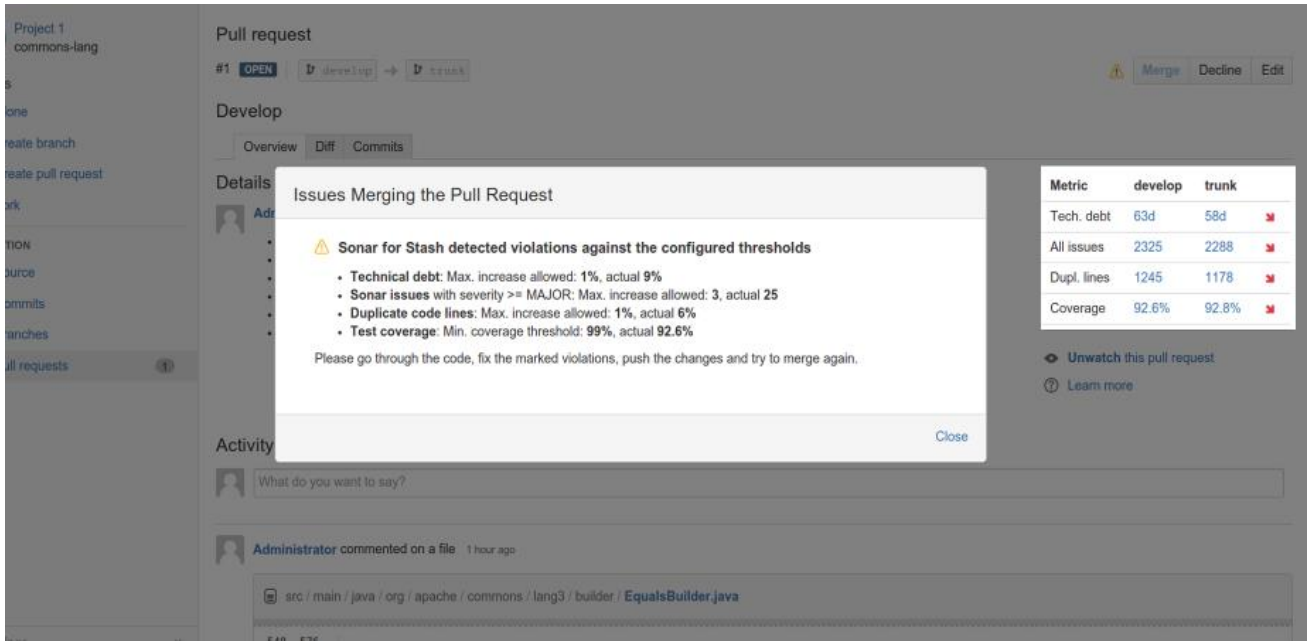


OpenEdge plugin - Requirements

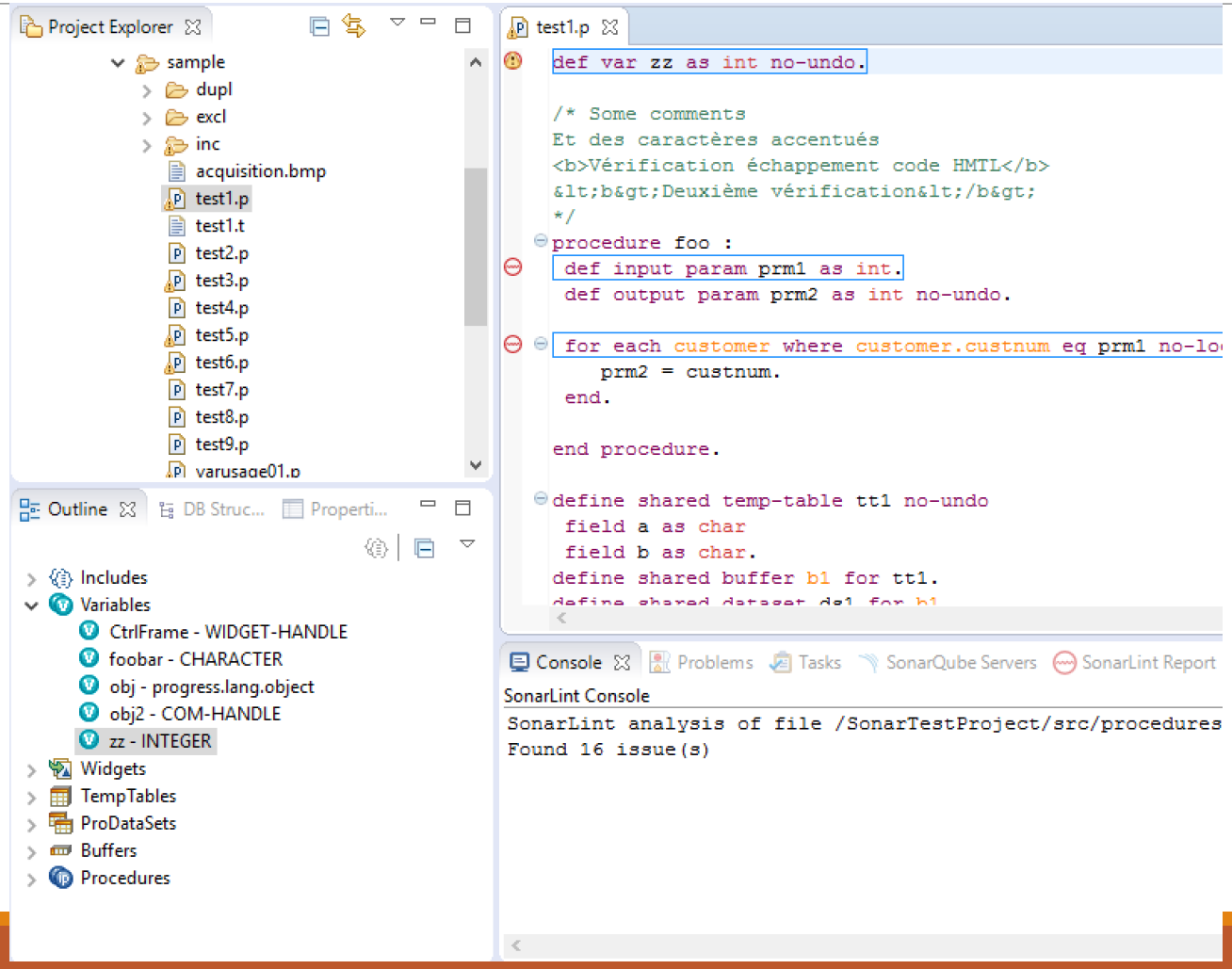
- Automated build process
  - PCT is strongly recommended
- Analysis triggered by Java
  - Continuous integration server is strongly recommended

OpenEdge plugin - Integration





Progress Developer Studio



Demo

Questions ?

Reference ?

- Sonar Source : http://www.sonarsource.com
- Sonar OE plugin demo site : http://sonar.riverside-software.fr

- Riverside Software : http://riverside-software.fr
- Contact : contact@riverside-software.fr