

Sinn und Unsinn statischer Analyse

# Vom Wiegen wird die Sau nicht fett

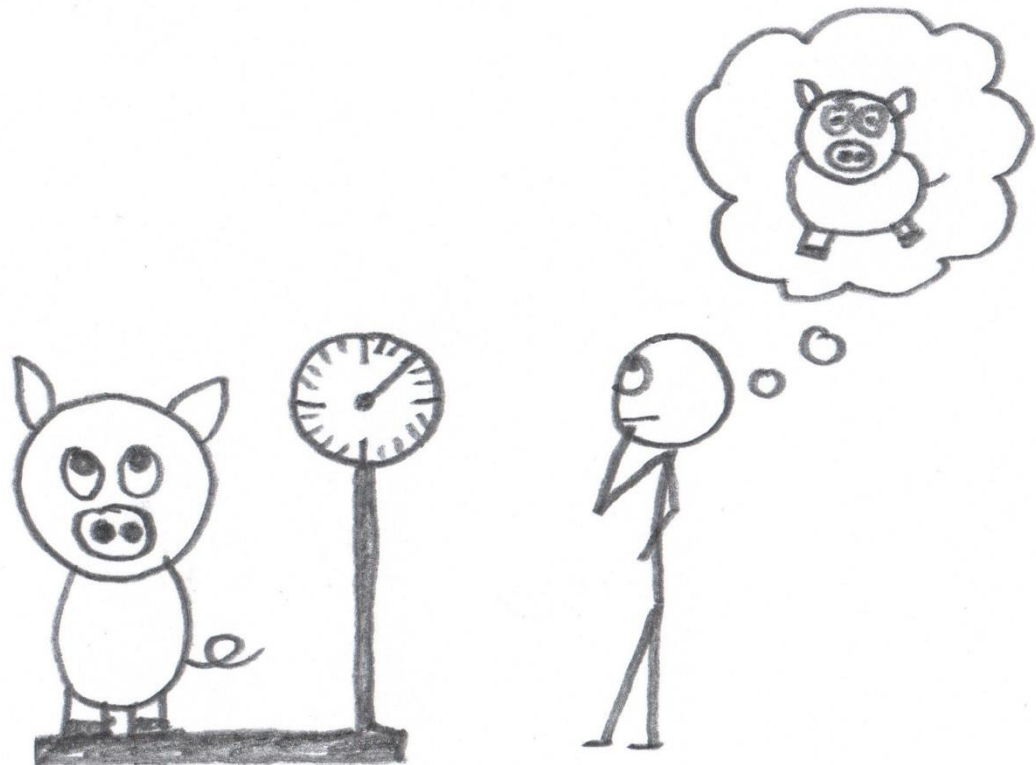
21. November 2016

Dr. Nils Göde

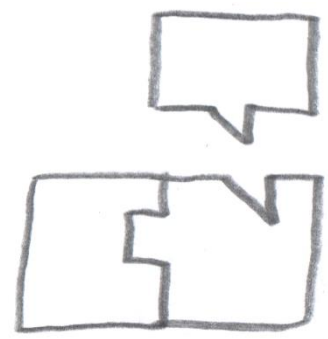
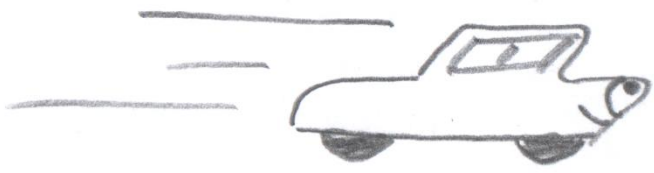
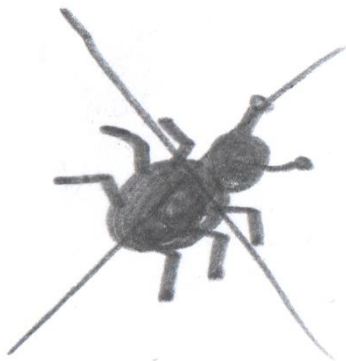
# Vom Wiegen wird die Sau nicht fett

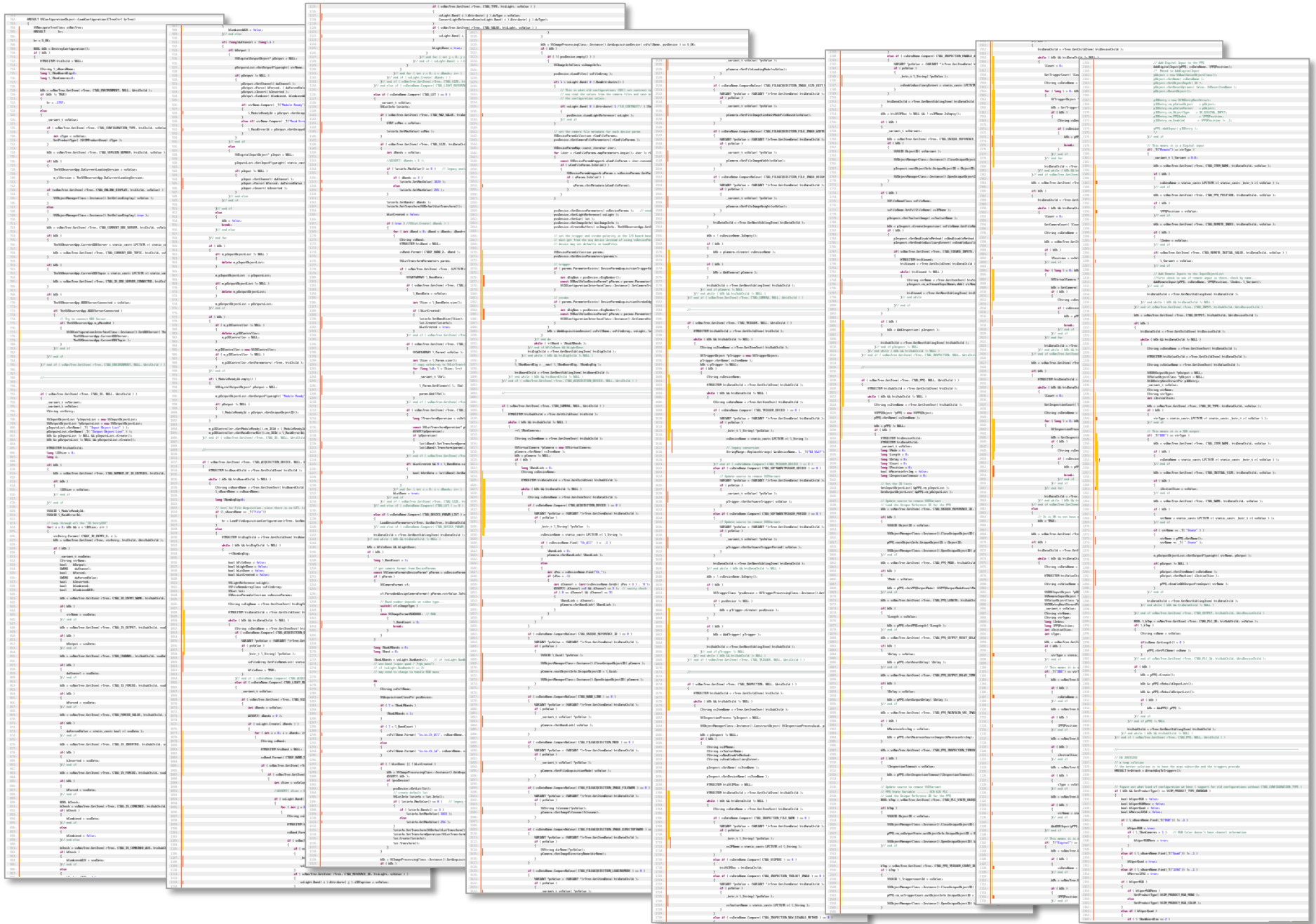
Sinn und Unsinn statischer Analyse

Nils Göde  
CQSE



**Qualität**





```
2586:     }
2587:     if (arr.length == 2) {
2588:
2589:         // If the second dependency is
2590:         // the inverse of the first
2591:         for (int k = 0;
2592:             k < arr.length;
2593:             k++) {
2594:
2595:             // arr[k] is the inverse of arr[0]
2596:             // arr[k] is the inverse of arr[1]
2597:             // arr[k] is the inverse of arr[2]
2598:             // arr[k] is the inverse of arr[3]
2599:             // arr[k] is the inverse of arr[4]
2600:         }
2601:     } else {
2602:         logger.fatal(
2603:             "There can only be either "
2604:             + "one or two dependencies.");
2605:     }
2606: }
2607: }
2608: }
2609: }
2610: } else {
2611:     logger.fatal("Invalid constant: "
2612:                 + "Invalid constant");
2613: }
2614: }
2615: }
2616: }
2617: } else {
2618:     logger.fatal("Invalid constant: " + "Invalid constant");
2619: }
2620: }
2621: }
2622: return arr;
2623: }
```

```

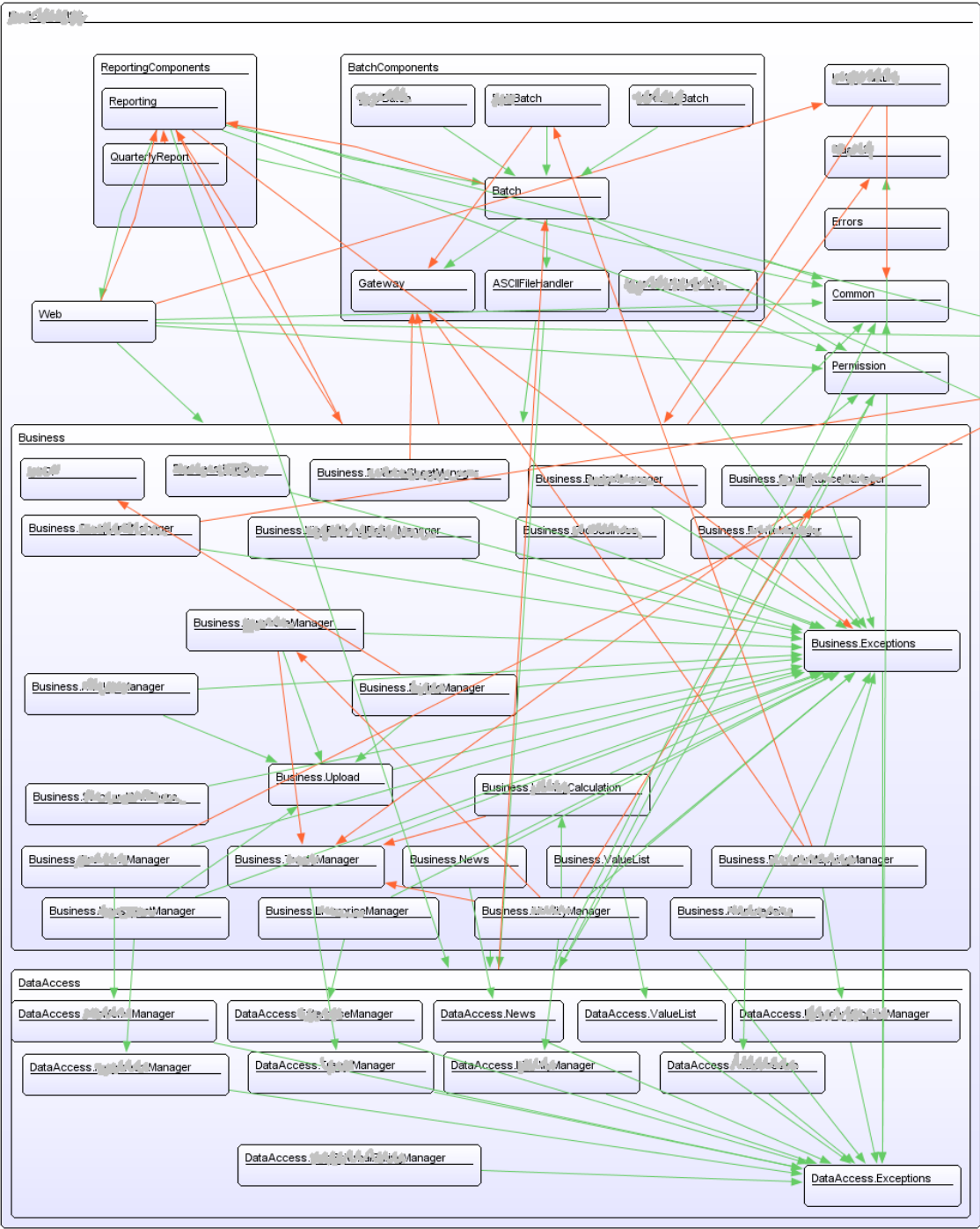
128  * @see AtomicOperation
129  * @see #performOperation(AtomicOperation) */
130  protected AtomicOperation nextOperation;
131  protected boolean isOperating = false;
132
133  /* Default constructor for ibatis/jpa/etc. */
134  public ExecutionImpl() {
135  }
136
137  public ExecutionImpl(ActivityImpl initial) {
138      startingExecution = new StartingExecution(initial);
139  }
140
141  // lifecycle methods //////////////////////////////////////
142
143  /** creates a new execution. properties processDefinition, processInstance
144  public ExecutionImpl createExecution() {
145      // create the new child execution
146      ExecutionImpl createdExecution = newExecution();
147
148      // manage the bidirectional parent-child relation
149      ensureExecutionsInitialized();
150      executions.add(createdExecution);
151      createdExecution.setParent(this);
152
153      // initialize the new execution
154      createdExecution.setProcessDefinition(getProcessDefinition());
155      createdExecution.setProcessInstance(getProcessInstance());
156      createdExecution.setActivity(getActivity());
157
158      return createdExecution;
159  }

```

```

211  */
212  protected String superExecutionId;
213
214  protected boolean forcedUpdate;
215
216  protected List<VariableInstanceEntity> queryVariables;
217
218  public ExecutionEntity() {
219  }
220
221  public ExecutionEntity(ActivityImpl activityImpl) {
222      this.startingExecution = new StartingExecution(activityImpl);
223  }
224
225  /** creates a new execution. properties processDefinition, processInstance
226  public ExecutionEntity createExecution() {
227      // create the new child execution
228      ExecutionEntity createdExecution = newExecution();
229
230      // manage the bidirectional parent-child relation
231      ensureExecutionsInitialized();
232      executions.add(createdExecution);
233      createdExecution.setParent(this);
234
235      // initialize the new execution
236      createdExecution.setProcessDefinition(getProcessDefinition());
237      createdExecution.setProcessInstance(getProcessInstance());
238      createdExecution.setActivity(getActivity());
239
240      if (log.isDebugEnabled()) {
241          log.debug("Child execution {} created with parent ", createdExecution);
242      }
243

```





```
621
622 public boolean isMatch()
623 {
624     return Boolean.TRUE.equals(isMatch());
625 }
```

```
626
627 /**
628  *
629  *
```

```
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631     " "
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```

~~isMatch~~: Nur mit äußerster Vorsicht benutzen, da dieses Attribut nicht selten via JavaScript gesetzt wird und dies nicht immer korrekt !!!  
'~~isMatch~~' arbeitet zuverlässiger

~~isMatch~~ (06/2010): so nicht mehr richtig, weil die ~~isMatch~~ inzwischen ebenfalls eine ~~isMatch~~ hat.

```
641
642
643 public int getMatchCount()
644 {
645     return getMatchCount();
646 }
```

## Sicherheitslücke "goto fail": Was Apple-Nutzer jetzt tun müssen

```
if ((err = ReadyHash(&SSLHashSHA1, &hashCtx)) != 0)
    goto fail;
if ((err = SSLHashSHA1.update(&hashCtx, &clientRandom)) != 0)
    goto fail;
if ((err = SSLHashSHA1.update(&hashCtx, &serverRandom)) != 0)
    goto fail;
if ((err = SSLHashSHA1.update(&hashCtx, &signedParams)) != 0)
    goto fail;
if ((err = SSLHashSHA1.update(&hashCtx, &signedParams)) != 0)
    goto fail;
if ((err = SSLHashSHA1.final(&hashCtx, &hashOut)) != 0)
    goto fail;
```

Fotos ▶

```
err = sslRawVerify(ctx,
                  ctx->peerPubKey,
                  dataToSign,
```

```
/* plaintext */
```

SPIEGEL ONLINE

**iPhones sind gefährdet, iPads und Mac-Rechner ebenfalls: Der Großteil der Apple-Geräte hat eine gravierende Sicherheitslücke. Für iPhone und iPad gibt es schon Updates, Mac-Nutzer müssen warten und höllisch aufpassen.**

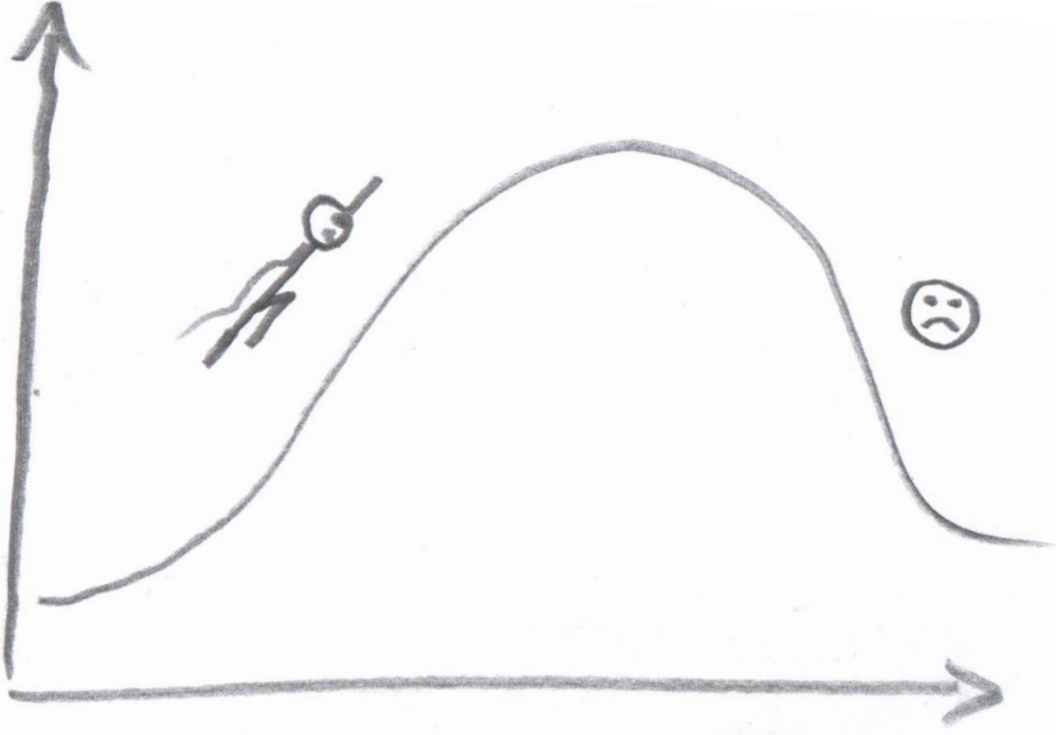
Montag, 24.02.2014 - 11:53 Uhr

Drucken | Versenden | Merken

Nutzer von Apple-Geräten sind in großer Gefahr: In den Betriebssystemen des Konzerns für Tablets und Smartphones (iOS) sowie Mac-Rechner (OSX) klafft eine [gravierende Sicherheitslücke](#).

Hier die Antworten auf die wichtigsten Fragen zum Apple Lock:

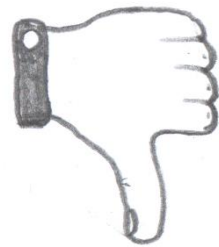
Aufmerksamkeit



Zeit

# Analysen und Metriken

$$171 - 5,2 \times \ln(\text{avg HV}) - 0,23 \times \text{avg CC}(g') - 16,2 \times \ln(\text{avg LOC}) + 50 \times \sin(\sqrt{2,4 \times \text{per CM}'}) = ?$$

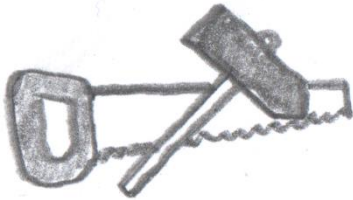


$$M = e^{-n + 2p}$$

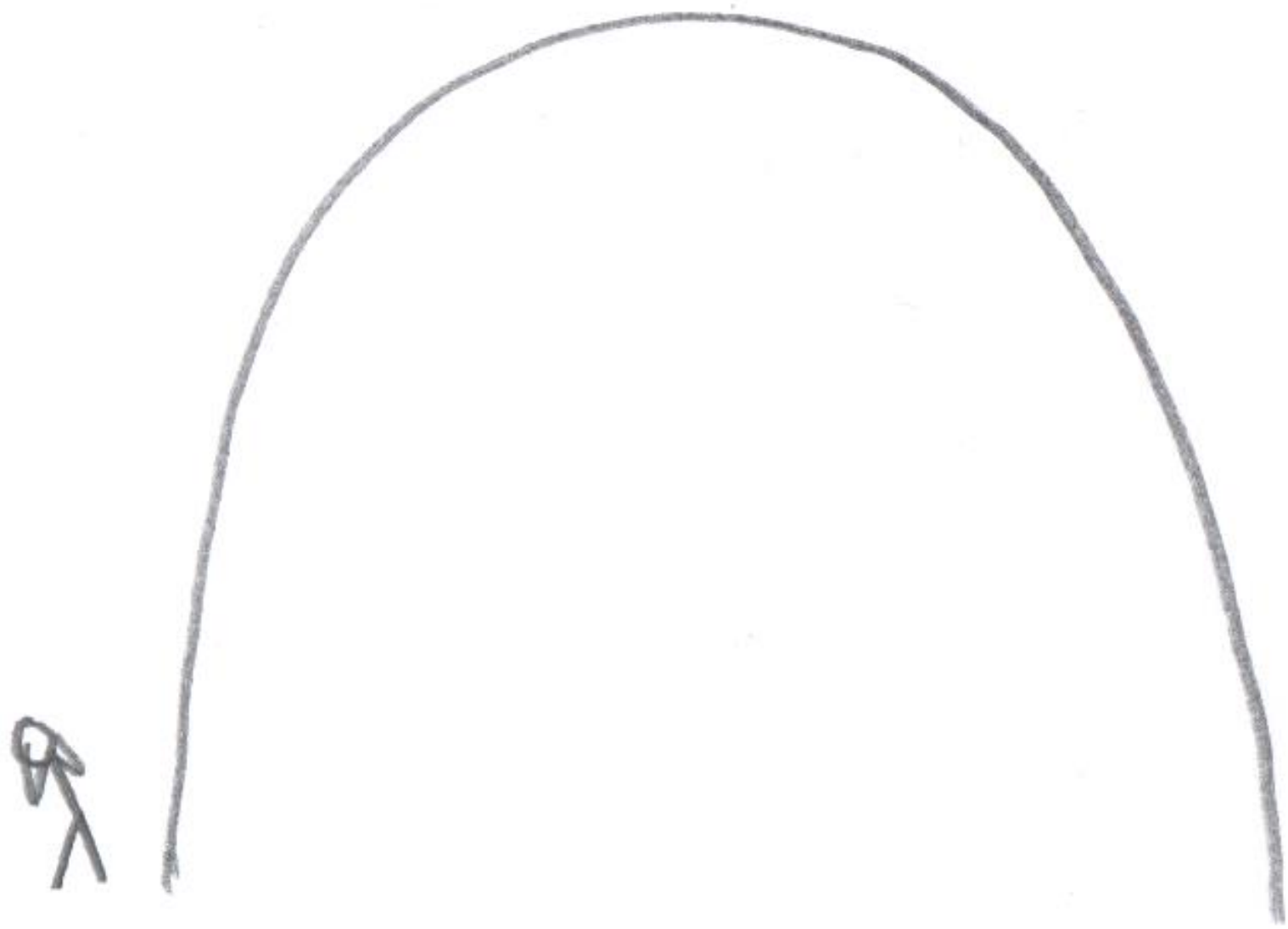
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€

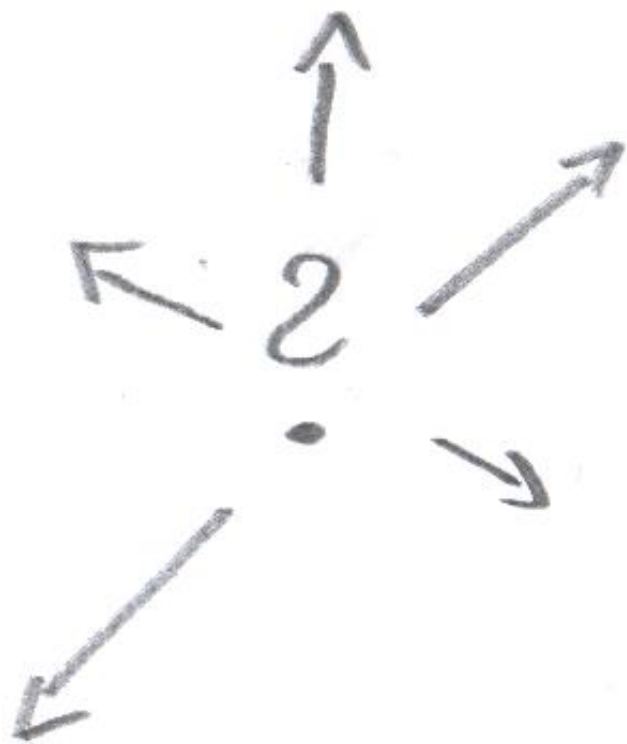


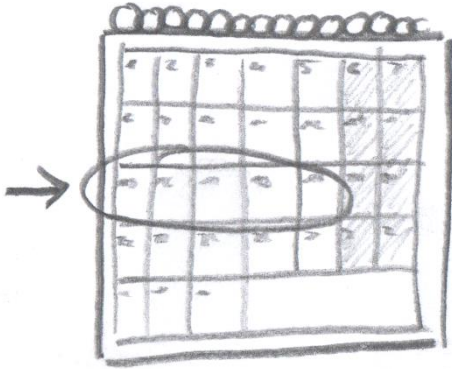
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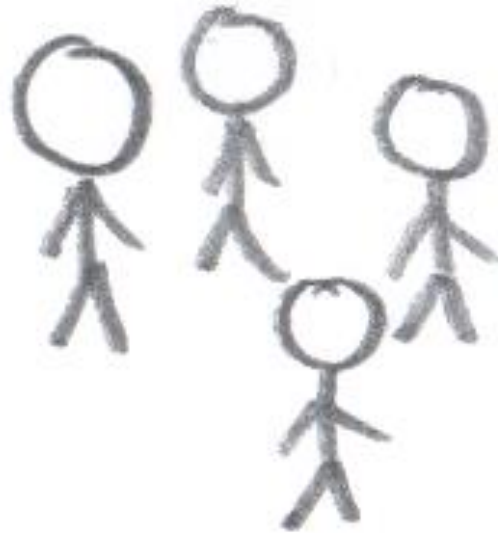


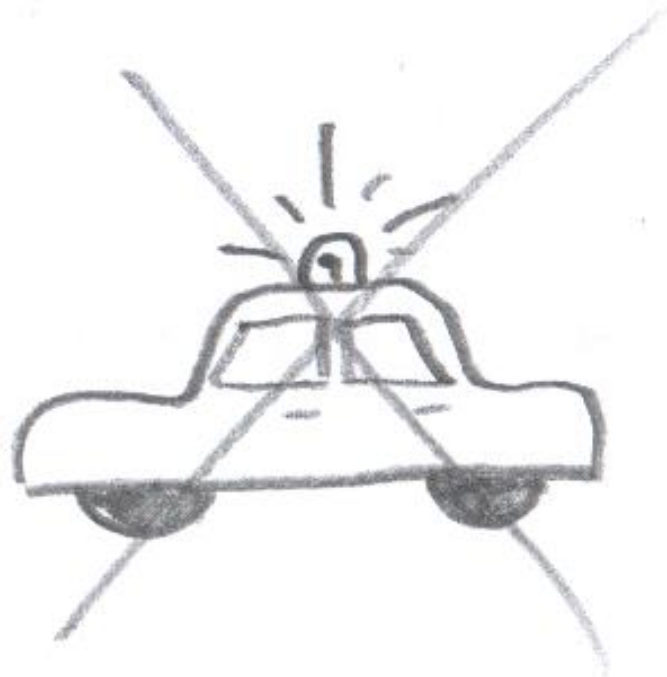


# Vorgehensweise

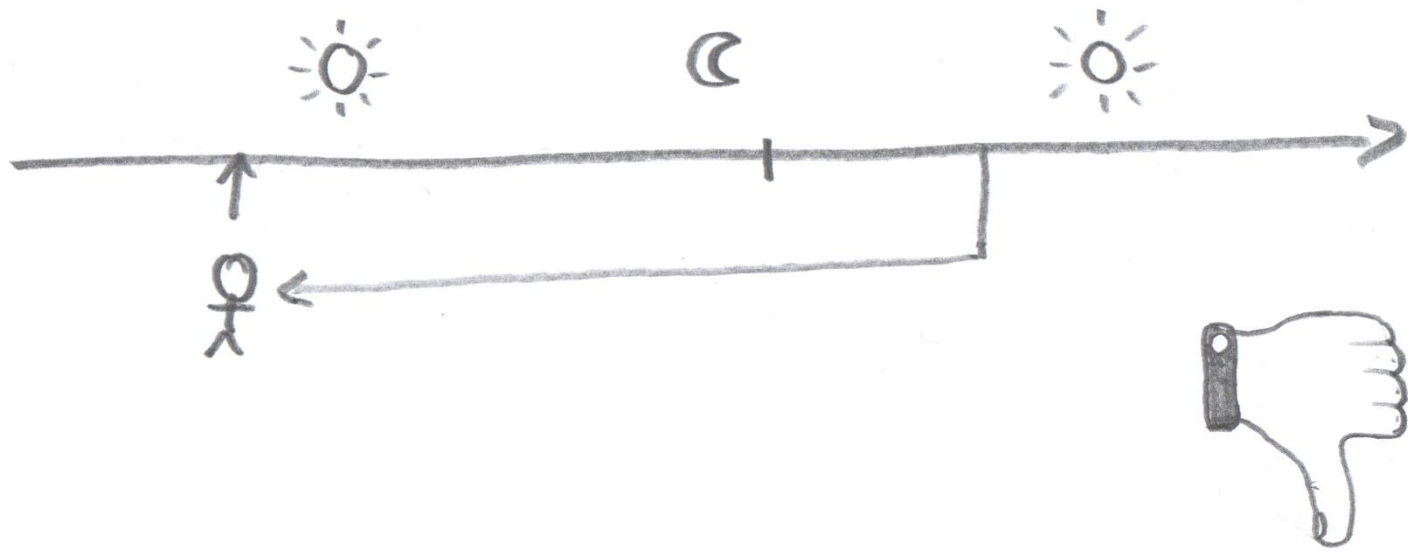


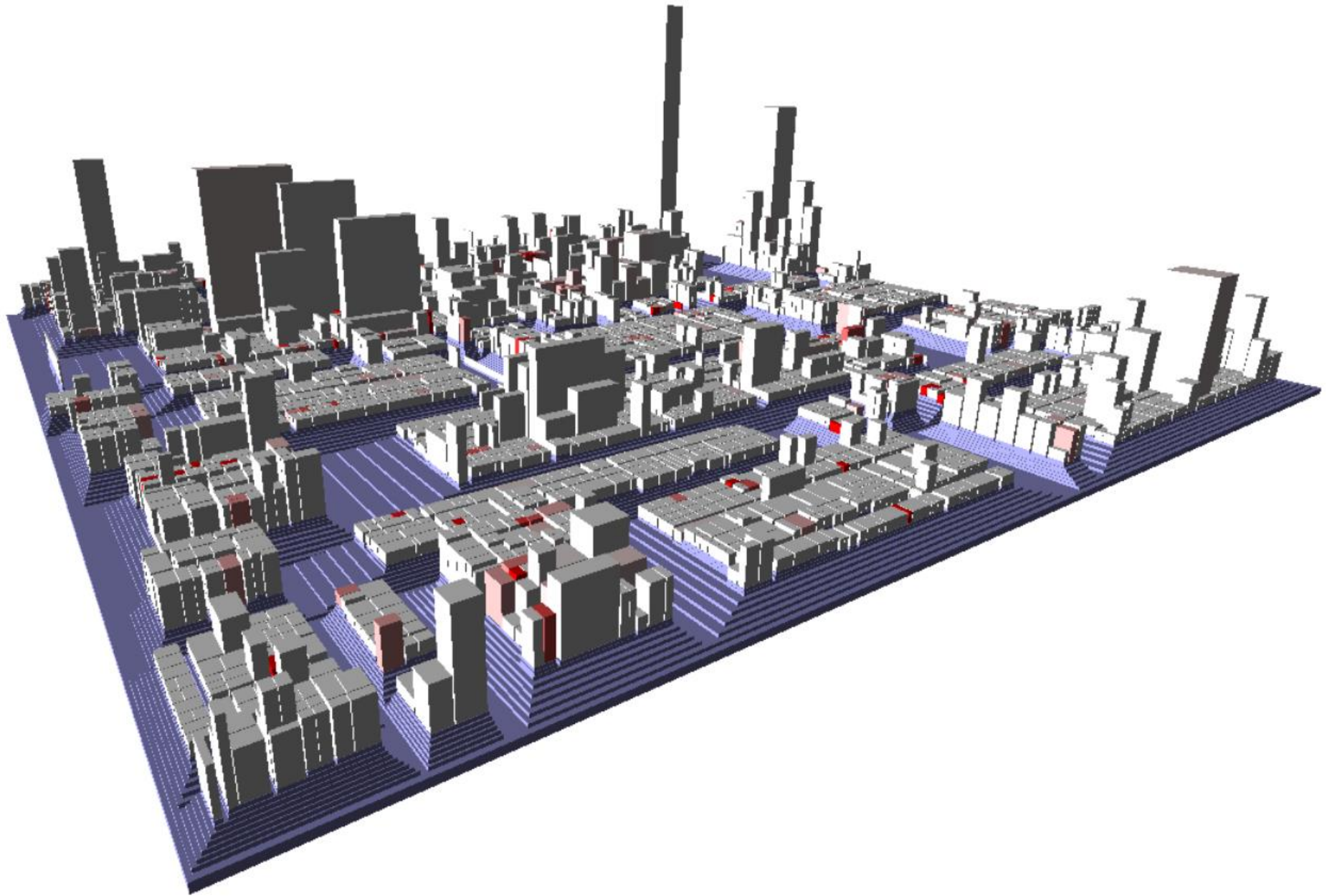






**Werkzeug**







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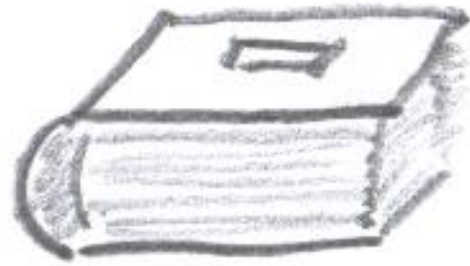
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14 findings in cqse-all since Aug 25 2016 16:00 (0 blacklisted)

Message	Location	Finding Group	Introduction date
Unread field	engine/com.teamscale.core/.../github/GitHubUtils.java	Code Anomalies / Performance (Findbugs)	Today 00:50
May expose internal representation by returnin...	engine/org.conqat.engine.index/.../instance/EvaluatedMetricThreshold.java:62	Code Anomalies / Malicious code vulnerability (Findbugs)	Today 00:50
Unrelated Member Comment	engine/com.teamscale.index/.../service/EMetricThresholdConfigurationVersion.java:63	Documentation / Comment quality	Aug 26 2016 10:50
TODO: REPLACE_AT_MERGE (specified in	engine/com.teamscale.index/.../service/EMetricThresholdConfigurationVersion.java:54	Documentation / Task tags	Aug 26 2016 10:50
TODO (BH): I do not agree, as this class does not d...	engine/org.conqat.engine.index/.../project/TriggerBuilder.java:52	Documentation / Task tags	Aug 26 2016 12:04
TODO (BH): see before	engine/org.conqat.engine.index/.../project/TriggerBuilder.java:71	Documentation / Task tags	Aug 26 2016 12:04
TODO (BH): see before	engine/org.conqat.engine.index/.../project/TriggerBuilder.java:79	Documentation / Task tags	Aug 26 2016 12:04
Unrelated Member Comment	engine/org.conqat.engine.index/.../migration/EStorageSystemVersion.java:145-149	Documentation / Comment quality	Aug 29 2016 16:49
Unrelated Member Comment	engine/org.conqat.engine.index/.../migration/EStorageSystemVersion.java:140-142	Documentation / Comment quality	Aug 29 2016 16:49
TODO (BH): Don't understand the bebefit. We reth...	engine/org.conqat.engine.index/.../run/TeamscaleSpecificationLoader.java:76	Documentation / Task tags	Aug 26 2016 12:04
TODO (BH): Why? Makes the code more complicate...	engine/org.conqat.engine.index/.../run/TeamscaleSpecificationLoader.java:51	Documentation / Task tags	Aug 26 2016 12:04
Violation of file size threshold (source lines of code...	lib/eu.cqse.check/.../util/EntitySelectionPredicates.java	Structure / File Size	Aug 29 2016 11:12
TODO (BH): Don't agree. We need the Matlab pars...	lib/eu.cqse.check/.../util/ShallowParsingUtils.java:158	Documentation / Task tags	Aug 26 2016 11:23
TODO (BH): Agreed, but not in this ticket. Created t...	lib/eu.cqse.check/.../util/ShallowParsingUtils.java:129	Documentation / Task tags	Aug 26 2016 11:22

**Quality Goal Settings**

Showing findings since Aug 25 2016 16:00

[Change](#) [Clear](#)

Include findings in changed code

**Finding Filter Settings** [Apply](#)

**Regex**

**Show Assessments**

- Red
- Yellow

**All** **14**

**Code Anomalies** **2**

Malicious code vulnerability (Findbugs) **1**

Performance (Findbugs) **1**

**Documentation** **11**

Comment quality **3**

Task tags **8**

**Structure** **1**

File Size **1**

[Apply](#)



by [Rainer Niedermayr](#) in revision [e549c6263b9dfe0acbb185325f6b2514bdacb221](#) (teamscale-git) 16:49

Files: 2 changed  
Findings: 0 2



**CR#9591: GREEN**  
by [Thomas Kinnen](#) in revision [208526624863d04fab650d4abe48dd3f2756066b](#) (teamscale-git) Aug 29 2016 12:54

Files: 9 changed  
Issue: [9591](#)  
Findings: 1



Merge branch 'cr/10277\_comment\_analysis\_language\_selector' # Conflicts: # lib/eu.cqse.check/src/eu/cqse/check/framework/shallowparser/util/EntitySelectionPredicates.java # lib/eu.cqse.check/test-src/eu/cqse/check/framework/shallowparser/util/EntitySelectionPredicatesTest.java  
by [Thomas Kinnen](#) in revision [0bab4034403215e32a1915a0bf22296b8f899edd](#) (teamscale-git) Aug 29 2016 11:12

Files: 2 changed  
Findings: 1 2



**Nightly Build: Findbugs Analysis**  
by [Build User](#) in revision [EA8694](#) (external analysis) Aug 27 2016 00:50

Files:  
Findings: 1



**CR#9766: YELLOW**  
by [Benjamin Hummel](#) in revision [97e3e681ff27a5edb5a4fb9516e6879a7e05a9a8](#) (teamscale-git) Aug 26 2016 12:04

Files: 14 changed  
Issue: [9766](#)  
Findings: 5 2 7



**CR#9783: Fixed test**  
by [Benjamin Hummel](#) in revision [b00b4f16fd4177ccc8a72c3e8d4528e7c3267b3c](#) (teamscale-git) Aug 26 2016 11:40

⌵ Filters

**Commit Filter**

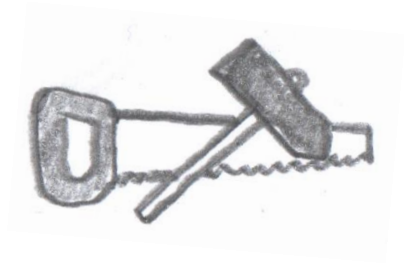
- Hide commits without findings churn
- Hide external upload commits

**User Filter**

Enter Username

⌵ Repository Details

- h*
- w*
- a*
- u*
- s*
- m*



# Kontakt

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