

# Continuous Integration mit ~~Hudson~~ Jenkins

(Noch) fauler in 10 Schritten

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22.02.2011, Bern





## Continuous Integration Builds for NetBeans Projects [\(machine\)](#)

All  Community ML Builds  Push To main-silver builds

S	W	Job ↓	Letzter Erfolg
		<a href="#">analytics-server</a>	1 Monat 6 Tage ( <a href="#">#1049</a> )
		<a href="#">apitest</a>	2 Stunden 4 Minuten ( <a href="#">#410</a> )
		<a href="#">javascript-tests</a>	3 Monate 18 Tage ( <a href="#">#242</a> )
		<a href="#">karelnb</a>	21 Stunden ( <a href="#">#154</a> )
		<a href="#">NB-Core-Build</a>	3 Stunden 3 Minuten ( <a href="#">#2832</a> )
		<a href="#">nb-javac</a>	3 Stunden 42 Minuten ( <a href="#">#118</a> )
		<a href="#">l10nkit</a>	8 Monate 3 Tage ( <a href="#">#471</a> )
		<a href="#">latex</a>	9 Stunden 56 Minuten ( <a href="#">#10</a> )



## Build #805 (06.05.2009 12:52:45)



Revision: 1759

Changes

1. BUGFIX: Now all Attachments are at least listed. #4030 ([detail](#))

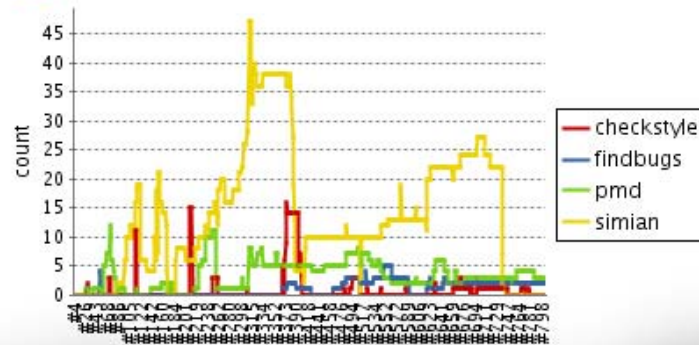


[Testergebnis](#) (1 fehlgeschlagener Test / +1)

[facade.impl.DownloadServiceTest.testGetProductFileList](#)



☀ checkstyle 0 ☀ findbugs 2 ☀ pmd 3 ☀ simian 0



## Testergebnis : org.netbeans.modules.javascript.editing

Fehlschläge (-1)

Tests (±0)

### Alle fehlgeschlagenen Tests

Testname	Dauer	Alter
<a href="#">org.netbeans.modules.javascript.editing.JsCodeCompletionTest.testAutoQuery2</a>	0.0020	1
<a href="#">org.netbeans.modules.javascript.editing.HtmlCompletionTest.test1</a>	3.131	28
<a href="#">org.netbeans.modules.javascript.editing.HtmlCompletionTest.test6</a>	0.118	28
<a href="#">org.netbeans.modules.javascript.editing.JsTypeAnalyzerTest.testGetType</a>	2.797	43
<a href="#">org.netbeans.modules.javascript.editing.JsTypeAnalyzerTest.testGetType2</a>	0.106	43
<a href="#">org.netbeans.modules.javascript.editing.JsKeystrokeHandlerTest.testDeleteContComment</a>	0.018	44
<a href="#">org.netbeans.modules.javascript.editing.JsKeystrokeHandlerTest.testNoDeleteContComment</a>	0.024	44
<a href="#">org.netbeans.modules.javascript.editing.JsKeystrokeHandlerTest.testNoMatchInComments</a>	0.11	44
<a href="#">org.netbeans.modules.javascript.editing.JsKeystrokeHandlerTest.testdeleteWord2</a>	0.019	44
<a href="#">org.netbeans.modules.javascript.editing.JsIndexerTest.testIndexPrototypeNew</a>	0.565	104
<a href="#">org.netbeans.modules.javascript.editing.JsIndexerTest.testWindow</a>	0.707	104


### Alle Tests

Klasse	Dauer	Fehlgeschlagen	(Veränderung)	Summe	(Veränderung)
<a href="#">AstOffsetTest</a>	4.1 Sekunden	0		25	
<a href="#">AstUtilitiesTest</a>	5.7 Sekunden	0		1	
<a href="#">ElementUtilitiesTest</a>	2.5 Sekunden	0		1	
<a href="#">EmbeddedFormatterTest</a>	4.7 Sekunden	0		4	
<a href="#">HtmlCompletionTest</a>	4.2 Sekunden	2		10	
<a href="#">JsAnalyzerTest</a>	4.7 Sekunden	0		17	
<a href="#">JsCodeCompletionTest</a>	2 ms	1		1	
<a href="#">JsCommentFormatterTest</a>	2.4 Sekunden	0		3	



checkout/src/main/java/controller/impl/AbstractProductFeaturesController.java

**findbugs 1 violation**

296  instanceof will always return true

**simian 1 violation**

309  Duplication of 9 lines from [line 692 in ShoppingCartActionsController.java](#).

File: AbstractProductFeaturesController.java Lines 287 to 319

```
287     List<FeatureGroupDto> result = new ArrayList<FeatureGroupDto>();
288     IPimLocale locale = pbLocaleService.getByIsoCodeWithFallback(deeplinkView.getLocale());
289
290     //Build List of excluded IPimFeature.
291     List<IPimFeature> excludedFeatures = getCFGExcludedPimFeatures();
292
293     //Iterate over the FGs in the list.
294     for (IPimObject fgFsSObject : fgFsSnList) {
295         //Ignoring Objects which are not: IPimFeatureGroupFeatureSetStructureNode.
296         if (!(fgFsSObject instanceof IPimFeatureGroupFeatureSetStructureNode)) {
297             continue;
298         }
299         IPimFeatureGroupFeatureSetStructureNode fgFsSN = (IPimFeatureGroupFeatureSetStructureNode) fgFsSObject;
300         IPimFeatureGroup featureGroup = fgFsSN.getSource();
301         FeatureGroupDto featureGroupDto = null;
302         String fgName = this.localizedTextService.getLocalizedName(featureGroup);
303         if (lifecycleService.isLifecycleFeatureGroup(featureGroup)) {
304             //Generate lifecycle feature group dto.
305             featureGroupDto = getFeatureGroupDtoLifecycle(pimObject);
306         } else {
307             //Generate normal feature group dto.
308             featureGroupDto = getFeatureGroupDtoNormal(pimObject);
309         }
310         result.add(featureGroupDto);
311     }
312     return result;
```





## Build-Verlauf

([Trend](#))

-  #10 [28.10.2008 15:01:33](#)
-  #9 [28.10.2008 14:37:55](#)
-  #8 [28.10.2008 14:31:34](#)
-  #7 [28.10.2008 14:01:33](#)
-  #6 [28.10.2008 12:02:51](#)
-  #5 [28.10.2008 12:01:34](#)
-  #4 [27.10.2008 16:10:35](#)
-  #3 [27.10.2008 16:08:15](#)
-  #2 [27.10.2008 15:55:44](#)
-  #1 [27.10.2008 15:52:09](#)

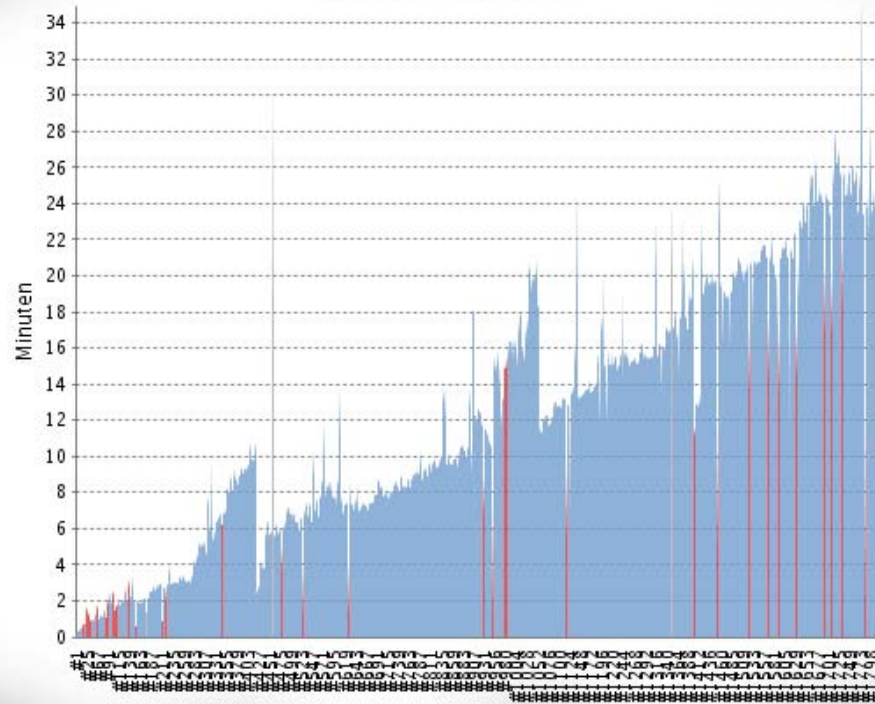


[Alle Builds](#)



[Nur Fehlschläge](#)

### Build-Zeit (Trend)





Übersicht [Hudson] - Mozilla Firefox

http://deadlock.netbeans.org/hudson/

# Hudson

Benutzer Build-Verlauf Projektbeziehungen Fingerabdruck überprüfen

**Geplante Builds**

- rubytests
- PHP-build
- nb6.1 web-110n
- validate-project-xmls

**Build-Prozessor Status**

No.	Status
1	Baue NB-Core-Build #1345
2	Baue trunk #3750
3	Baue profiler-main #153

## Continuous Integration Builds for NetBeans Projects

Services on this machine are described at: [DeadlockMachine](#)

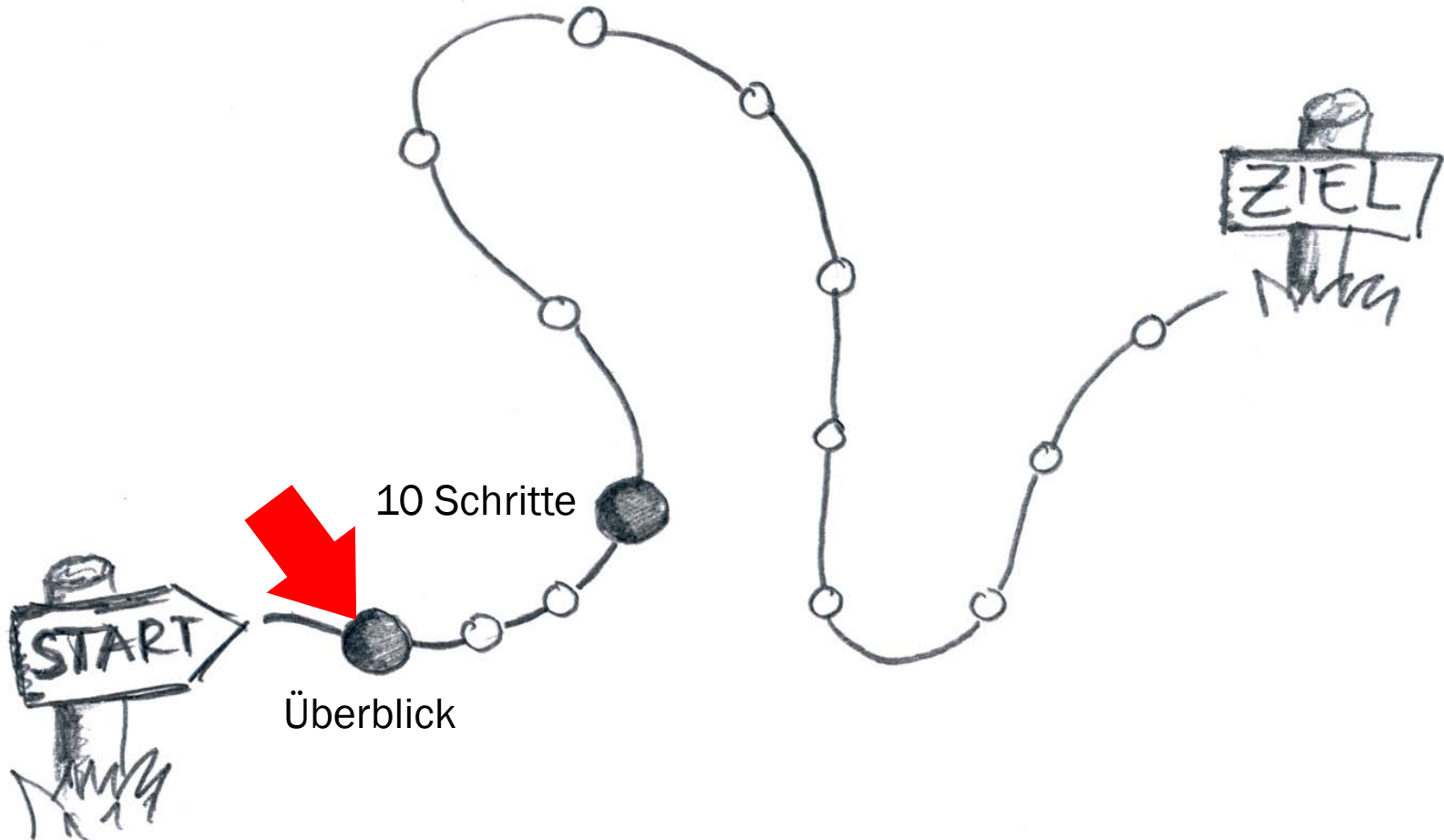
S	W	Job ↓	Letzter Erfolg	Letzter Fehlschlag	Letzte Dauer
☐	☀	<a href="#">analytics-server</a>	4 Tage 9 Stunden (#789)	Unbekannt	48 Minuten
☐	☀	<a href="#">apitest</a>	1 Stunde 24 Minuten (#118)	3 Monate 12 Tage (#1)	5 Minuten 1 Sekunde
☐	☀	<a href="#">fagsuck</a>	6 Stunden 33 Minuten (#432)	Unbekannt	3 Minuten 21 Sekunden
☐	☀	<a href="#">FindBugs</a>	10 Monate (#35)	Unbekannt	2 Stunden 41 Minuten
☐	☁	<a href="#">javadoc-nbms</a>	2 Monate 4 Tage (#3)	2 Monate 4 Tage (#2)	6 Sekunden
☐	☀	<a href="#">JavaFX_NB_daily</a>	10 Stunden (#159)	Unbekannt	5 Minuten 8 Sekunden
☐	☀	<a href="#">javascript-tests</a>	7 Stunden 3 Minuten (#54)	Unbekannt	30 Minuten
☐	☀	<a href="#">l10nkit</a>	16 Stunden (#422)	6 Tage 15 Stunden (#416)	1 Stunde 21 Minuten
☐	☁	<a href="#">latex</a>	8 Stunden 32 Minuten (#280)	2 Tage 8 Stunden (#277)	3 Minuten 27 Sekunden
☐	☀	<a href="#">laziness</a>	1 Stunde 33 Minuten (#131)	Unbekannt	42 Minuten
☐	☐	<a href="#">macpkg</a>	Unbekannt	Unbekannt	Unbekannt

Fertig



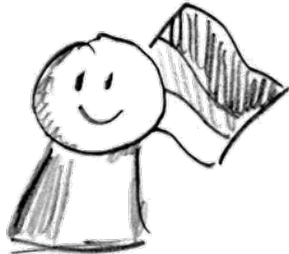
**Gestatten, Jenkins.**

# Agenda



# Über den Referenten: Dr. Simon Wiest

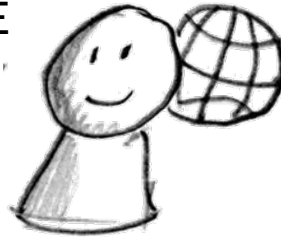
## Privat: Jenkins-Committer



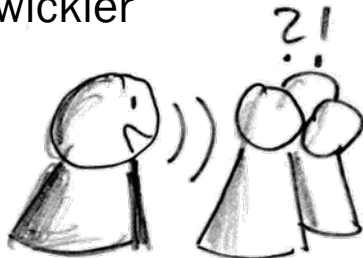
Lokalisierung DE



Plug-In Entwickler



Internationalisierung

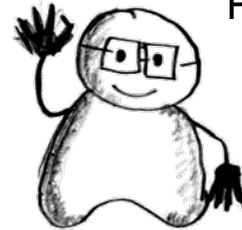


Support & Evangelisierung

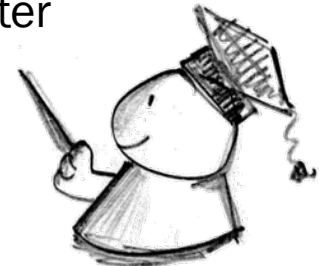
## Beruflich: Jenkins-Anwender



Projektleiter



Java Architekt

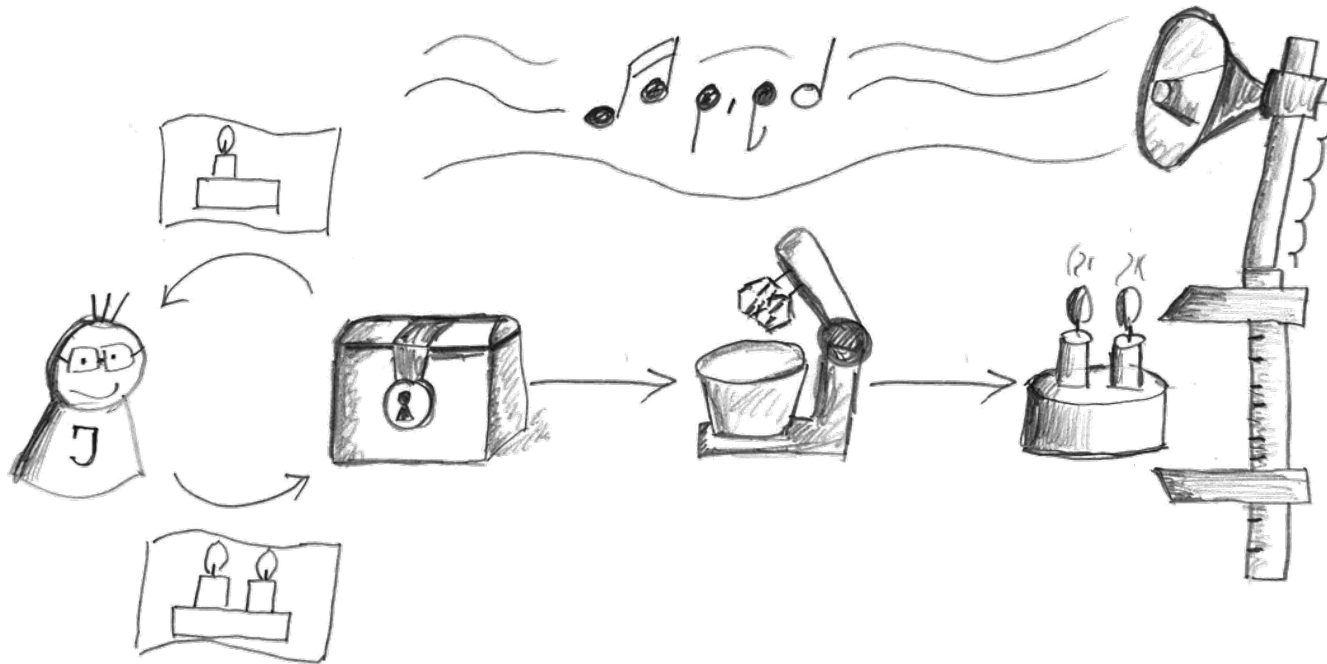


CI-Coach



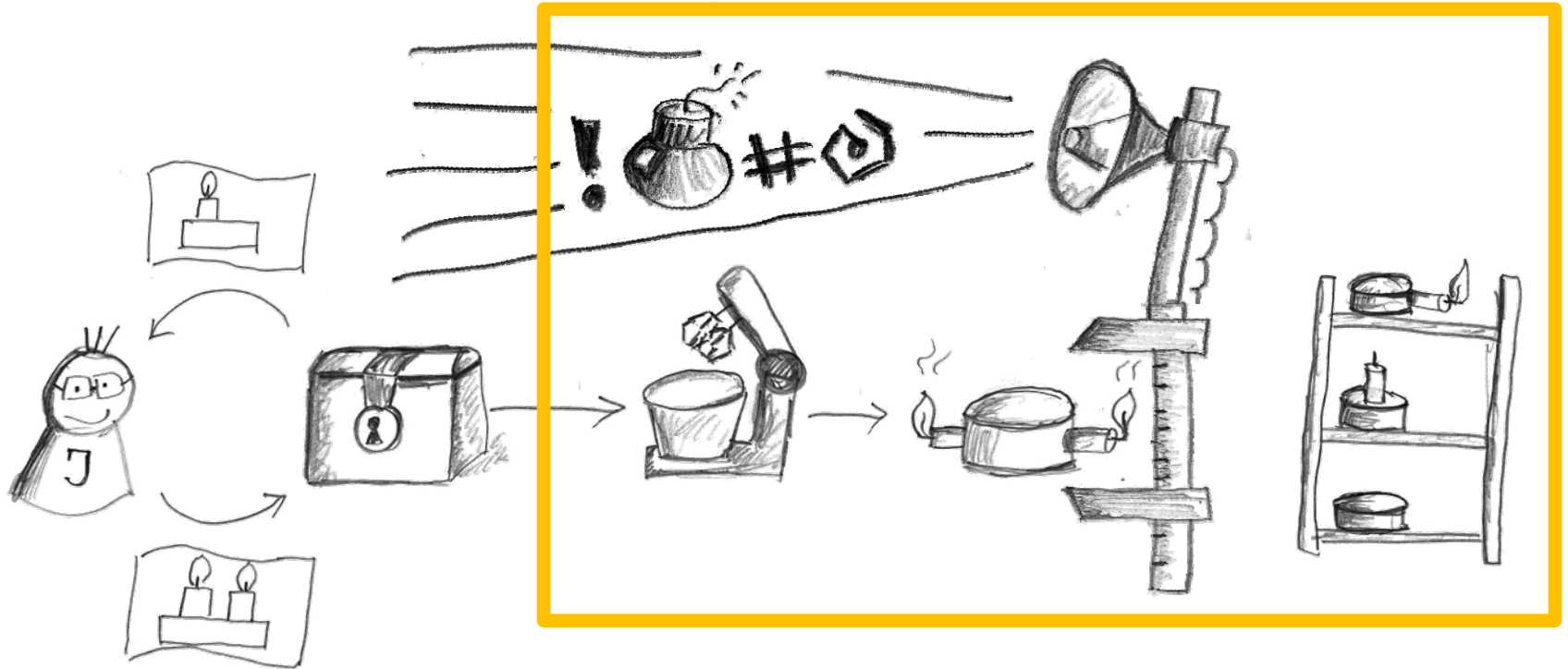
IT-Freiberufler

# Was ist kontinuierliche Integration (CI)?

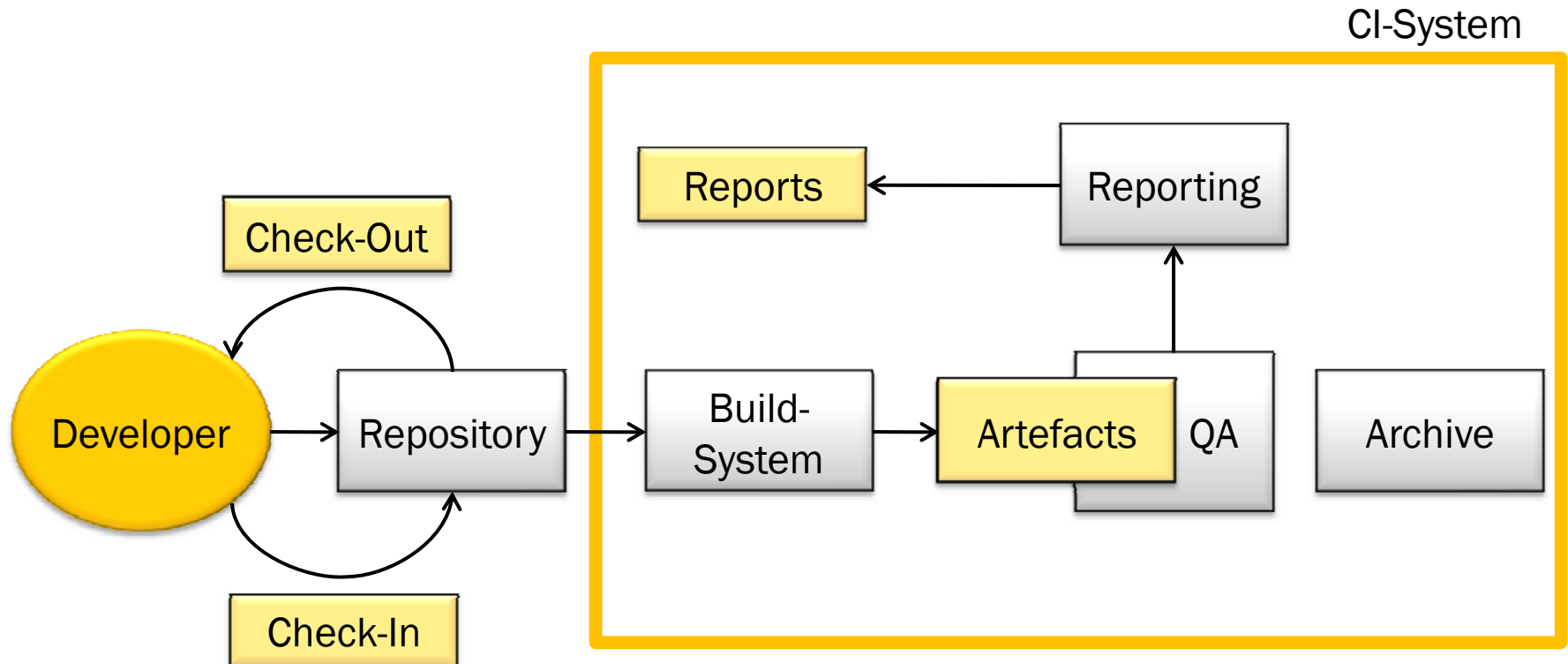


# Was ist kontinuierliche Integration (CI)?

orchestriert durch CI-System



# Was ist kontinuierliche Integration (CI)?



- Subversion
- CVS
- Perforce
- Git
- ...

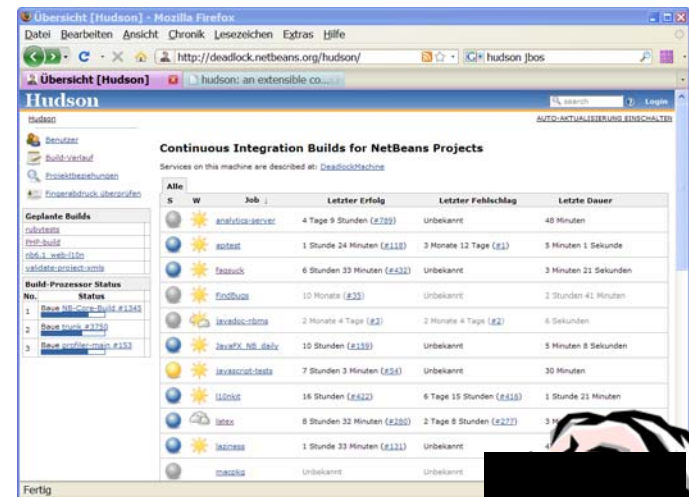
- Ant
- Maven
- Shell-Skript
- Batch-Datei
- ...

- JUnit
- TestNG
- CheckStyle
- PMD
- ...



# Jenkins auf einen Blick

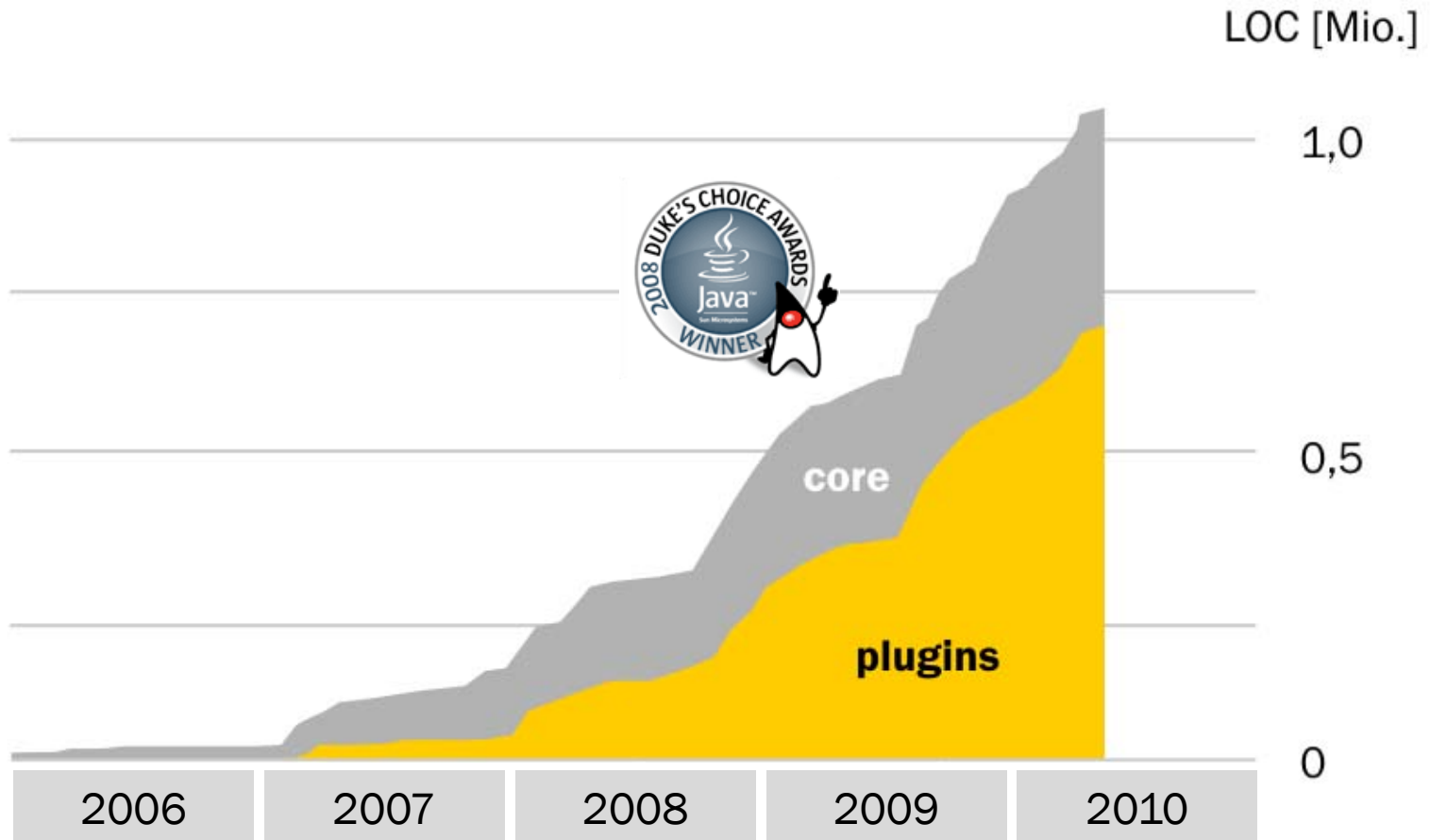
- Java-basierte Web-Anwendung
- Initiiert 2006/2007 als „Hudson“ von K. Kawaguchi
- Fortführung seit 2011 als Projekt „Jenkins“
- Open Source (MIT Lizenz)
- 1,24 Mio. LOC (mit Plugins)
- Zur Zeit ca. 300 Plug-Ins
- 200+ Beitragende



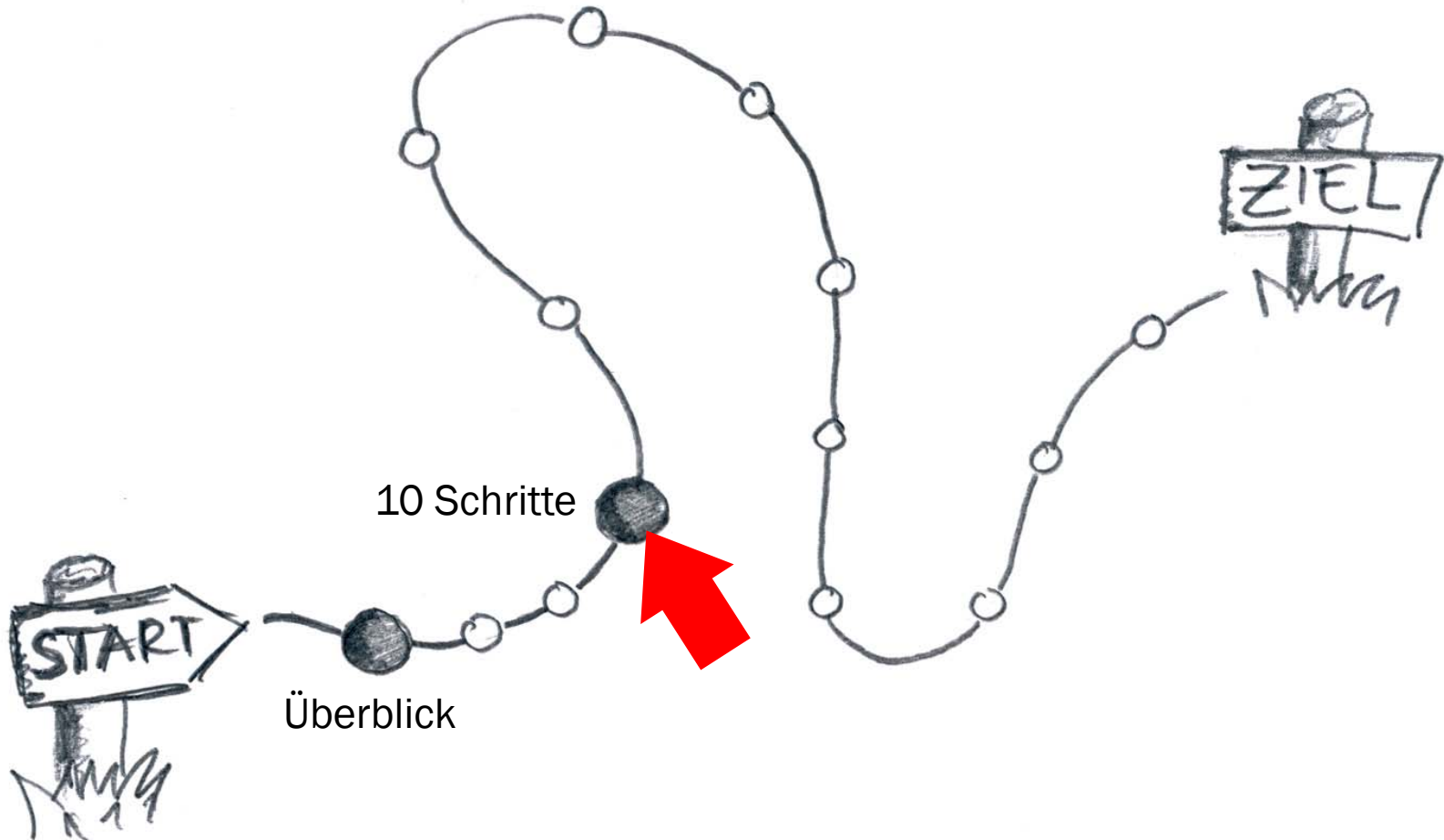
# Wer verwendet Hudson/Jenkins (und darf es zugeben)?



# Hudson/Jenkins: Ein Projekt in voller Fahrt.



# Agenda

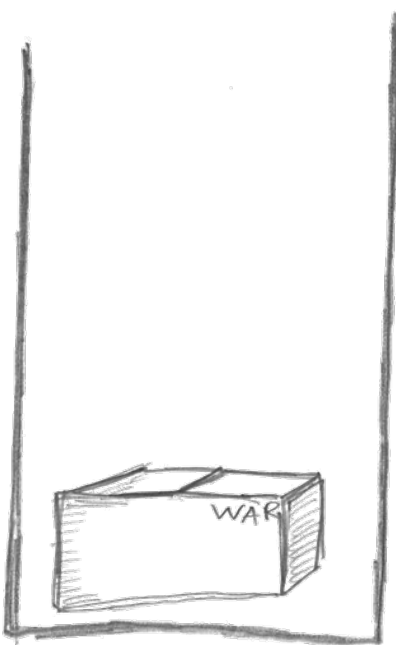


# 1. Installation: Denkbar einfach.

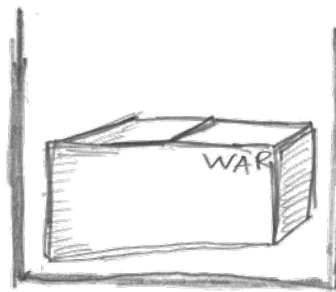


Download als  
WAR-Datei

Ca. 35 MB



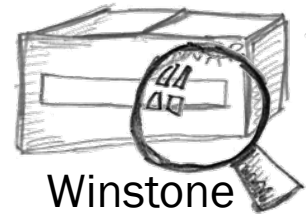
WebSphere



Tomcat



Jetty



Winstone  
(Eingebettet)

## 2. Konfiguration: Komfortabel und übersichtlich.

The screenshot shows the Hudson web interface configuration page. The top navigation bar includes links for 'Neuen Job anlegen', 'Hudson verwalten', 'Benutzer', and 'Build-Verlauf'. The main content area is divided into several sections: 'Geplante Builds' (showing no builds planned), 'Build-Prozessor Status' (a table with 2 ready builds), 'Globale Eigenschaften' (with checkboxes for environment variables and security), 'Maven' (with a table for installed versions, including 'Maven 2.1.0'), and 'JDK' (with a table for installed versions, including 'JDK 1.6.0\_11'). Each input field and checkbox has a help icon. The interface is clean and organized.

**Web-Interface**

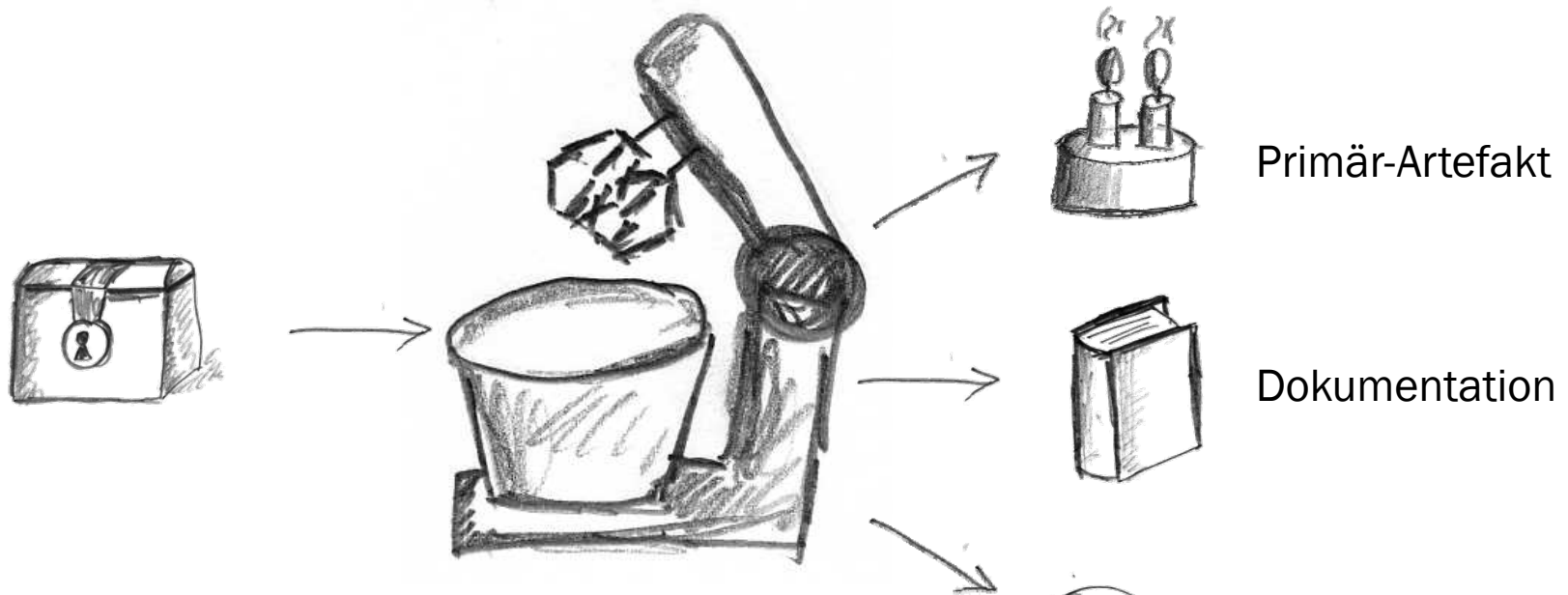
```
1 <?xml version='1.0' encoding='UTF-8'?>
2 <hudson>
3   <version>1.313</version>
4   <numExecutors>2</numExecutors>
5   <mode>NORMAL</mode>
6   <authorizationStrategy class="hudson.security.AuthorizationStrategy$Unsecured">
7     <securityRealm class="hudson.security.SecurityRealm$None"/>
8   <systemMessage>&lt;h1&gt; Willkommen auf dem JFS-Demo-Hudson-Server!&lt;/h1&gt;
9     Bei Supportanfragen zu diesem System, kontaktieren Sie bitte Ihren
10    &lt;a href="mailto://papierkorb@foobar.de"&gt;freundlichen Administrat
11  </systemMessage>
12  <jdks>
13    <jdk>
14      <name>JDK 1.6.0_11</name>
15      <home>C:\Programme\Java\jdk1.6.0_11</home>
16      <properties/>
17    </jdk>
18  </jdks>
19  <clauses/>
20  <slaves/>
21  <quietPeriod>5</quietPeriod>
22  <scmCheckoutRetryCount>0</scmCheckoutRetryCount>
23  <views>
24    <hudson.model.AllView>
25      <owner class="hudson" reference="../../../../"/>
26      <name>Alle</name>
27    </hudson.model.AllView>
28  </views>
29  <primaryView>Alle</primaryView>
30  <slaveAgentPort>0</slaveAgentPort>
31  <label></label>
32  <nodeProperties/>
33  <globalNodeProperties/>
34  <disabledAdministrativeMonitors/>
35 </hudson>
```

**XML-Konfigurationsdateien**

Wann immer möglich, werden Konventionen oder sinnvolle Vorgabewerte verwendet.



### 3. Build-Systeme: Java – und darüber hinaus!



#### Eingebaut

- Ant
- Maven
- Shell Skript
- Windows Batch

#### Über Plug-Ins

- Gant, Groovy
- MSBuild, Nant
- Rake, Ruby
- und viele mehr!

Primär-Artefakt

Dokumentation

Testergebnisse

# 4. Berichten: Grenzenlos durch Plugins.

**Hudson** 100.4-gspim-server

**Projekt 100.4-gspim-server**  
Server-Back End der PIM-Komponente aus der GIANTsuite.

Verfügbare Online-Dokumentationen:

- javadoc API
- Package-Schemata
- Javadoc
- classycle.xml

Documentations: Arbeitsbereich, Letzte Änderungen, Letztes Testergebnis (Kein Test fehlergeschlagen.)

**Build-Verlauf (Trend)**

Build ID	Time
#948	10.09.2008 17:31:40
#947	10.09.2008 17:01:40
#946	10.09.2008 16:31:40
#945	10.09.2008 14:28:33
#944	10.09.2008 13:31:40
#943	10.09.2008 13:01:40
#942	10.09.2008 12:01:40
#941	09.09.2008 17:55:25
#940	09.09.2008 16:26:07
#939	09.09.2008 16:01:58
#938	09.09.2008 15:05:18
#937	09.09.2008 14:51:32
#936	09.09.2008 14:31:59
#935	09.09.2008 14:01:58
#934	09.09.2008 11:01:59
#933	09.09.2008 10:38:53
#932	09.09.2008 09:28:52
#931	09.09.2008 18:01:58
#930	09.09.2008 17:01:58
#929	09.09.2008 17:31:58
#928	09.09.2008 17:01:58
#927	09.09.2008 16:01:58
#926	09.09.2008 13:57:19
#925	09.09.2008 12:01:58
#924	09.09.2008 09:31:59
#923	04.09.2008 17:03:49
#922	04.09.2008 16:02:25
#921	04.09.2008 14:31:50
#920	04.09.2008 13:31:50
#919	04.09.2008 12:05:49

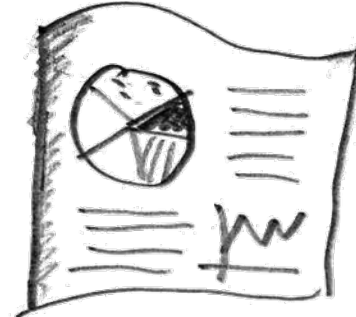
**Trend der Testergebnisse**

checkstyle 3 findbugs 1 pmd 3 (+1) simian 44 (+2)

**Offene Punkte Trend**

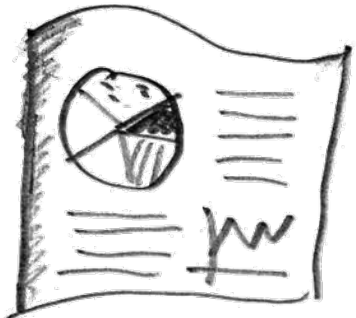
**FindBugs Trend**

Hudson ver. 1.252



## Eingebaut

- JUnit
- TestNG



## Über Plug-Ins

- CheckStyle
- PMD
- FindBugs
- Simian
- u.v.m.

# 5. Source Code Repositories: Mehr als nur „Auschecken“.

**Hudson** 100.4-asmim-server #950

**Änderungen**

**Zusammenfassung**

1. Added addFile method (#1926).
2. Change: Adjustments to the Calculators concerning selection data values.
3. Change: Refactorings for the Calculators concerning precision formatting.
4. CHANGE: #247 Replaced hard-coded Sub-Root ExplorerNode appending.
5. Change: Refactorings for the Calculators concerning data value conversion from the profile.

**Revision 2183 by Andreas Schack:**  
Added addFile method (#1926).  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/client/flex/controller/ExplorerController.java \(diff\)\)](#)

**Revision 2181 by Phatthana Sithideth:**  
Change: Adjustments to the Calculators concerning selection data values.  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/CalculatorTest.java \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/Calculator.java \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/CalculatorTest.java \(diff\)\)](#)

**Revision 2180 by Phatthana Sithideth:**  
Change: Refactorings for the Calculators concerning precision formatting.  
[\(trunk/asmim/asmim-server/src/test/resources/de/netzggarten/gantsuite/asmim/persistence/rules/valid/feature-rule-set-ctrl.xml \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/Calculator.java \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/test/java/de/netzggarten/gantsuite/asmim/core/domain/rules/CalculatorTest.java \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/CalculatorTest.java \(diff\)\)](#)  
[\(trunk/asmim/asmim-server/src/main/java/de/netzggarten/gantsuite/asmim/core/domain/rules/Calculator.java \(diff\)\)](#)

**Polarion SVN Web Client**

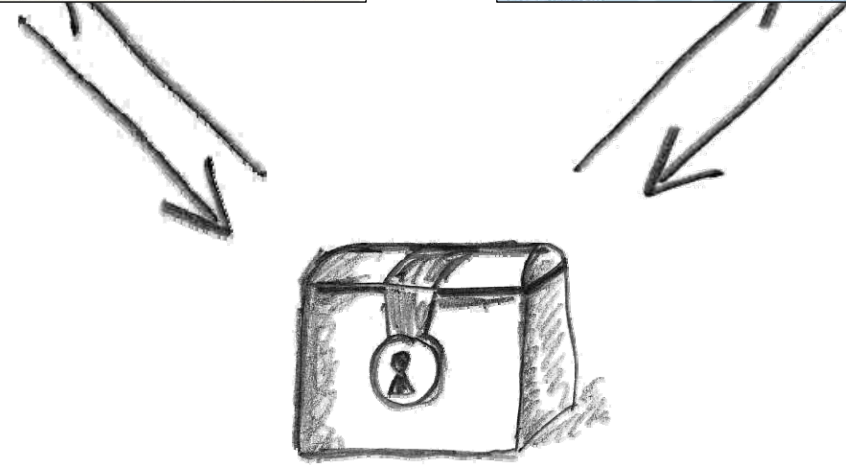
Path: gantsuite/trunk/gpmi/gpmi-server/src/main/java/de/netzggarten/gantsuite/gpmi/client/flex/controller/ExplorerController.java

Revision: 1764 Age: 4 weeks Author: mstransfeldt  
Revision: 2183 [HEAD] Age: 3 hours 20 minutes Author: aschack

Comment: CHANGE: Refactored signatures of several ExplorerController methods (UI-Locale expected).  
Comment: Added addFile method (#1926).

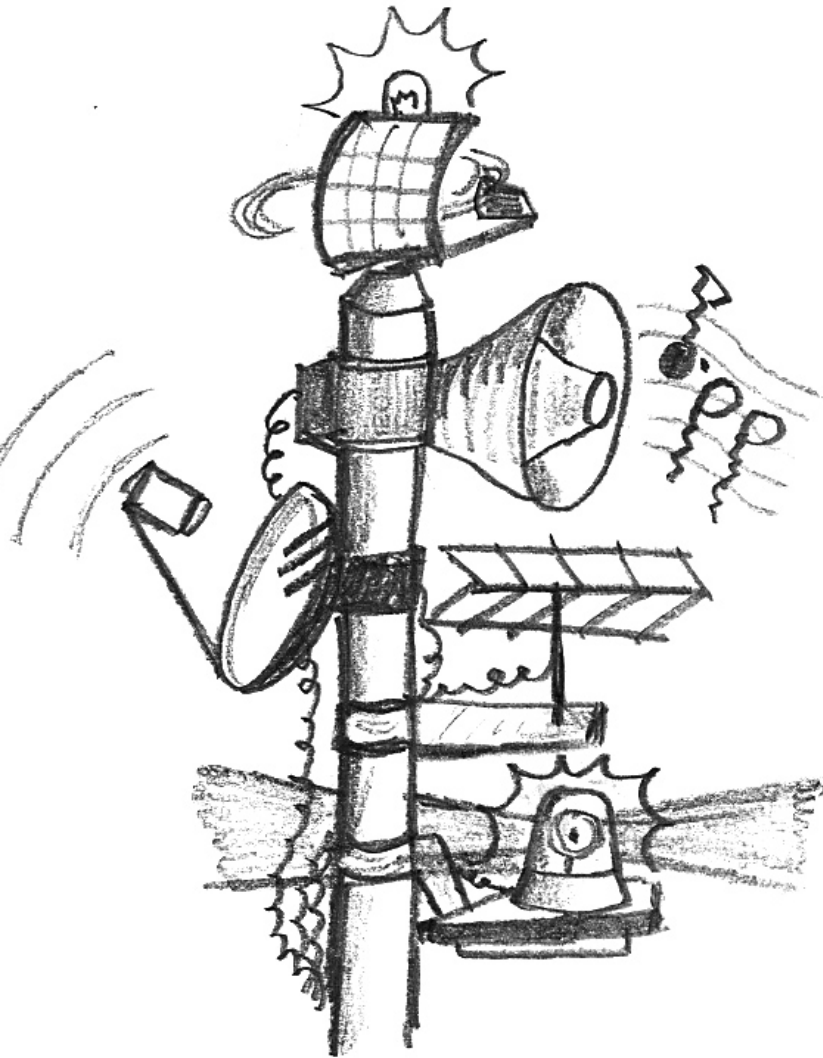
Added: 1 Changed: 0 Deleted: 0

```
1  * Copyright 2008
2  *
3  *
4  * Netzggarten GmbH
5  * Gerokstraße 8
6  * 70188 Stuttgart
7  * Deutschland
8  *
9  * Tel: +49-711-24922-166
10 * Fax: +49-711-24922-22
11 *
12 * http://www.netzggarten.de
13 *
14 * Geschäftsführende Gesellschafter: Volker L. Essing, Erik U.
15 * Amtsgericht Stuttgart HRB 21614, USt-ID: DE 213172974
16 *
17 package de.netzggarten.gantsuite.gpmi.client.flex.controller;
18
19 import java.util.List;
```



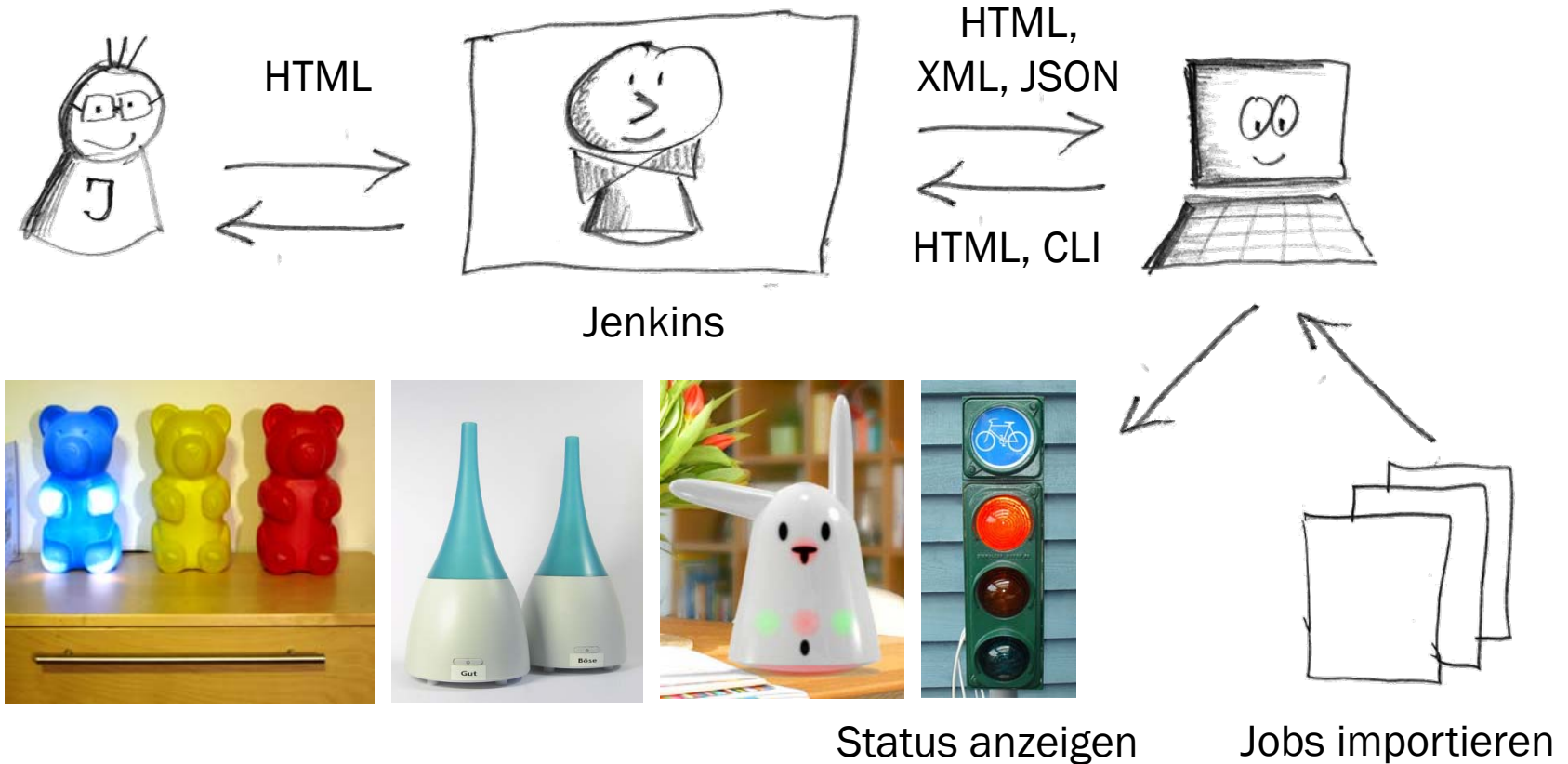
Repository

## 6. Benachrichtigungen: Viele Kanäle stehen offen.

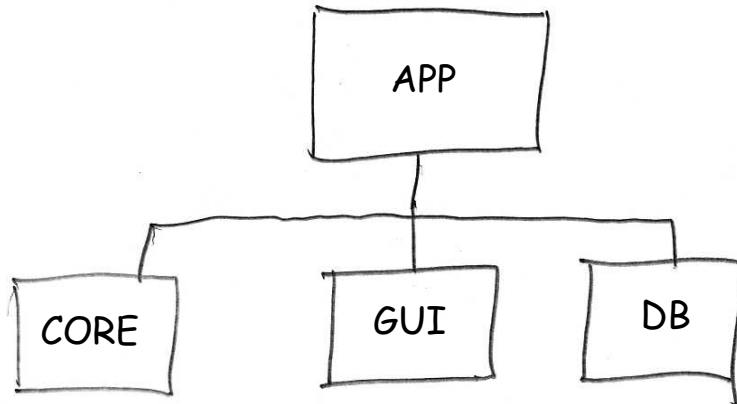


- E-Mail
- RSS-Feeds
- Instant Messenger
- Twitter
- Plugins für IDEs & Browser
- Desktop-Gadgets

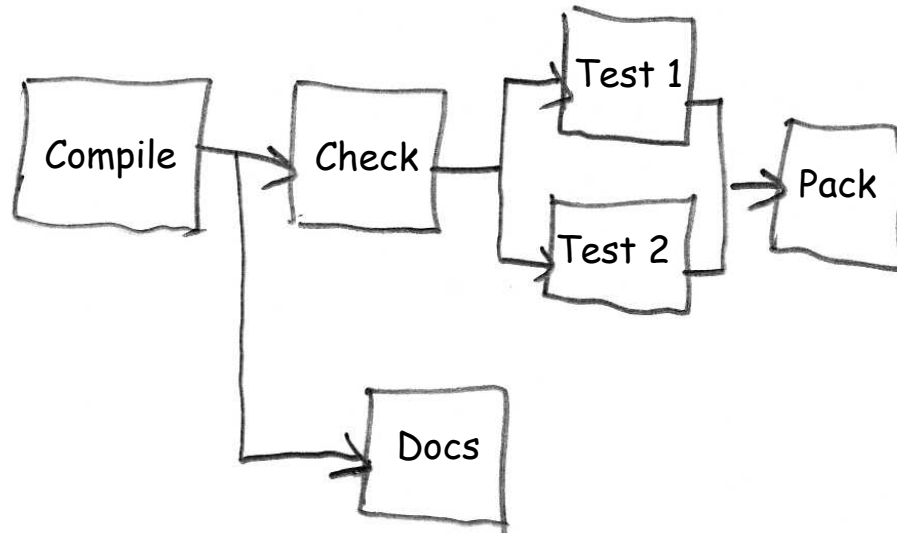
## 7. Remote API: Hudson lässt sich einfach automatisieren.



## 8. Abhängigkeiten zwischen Jobs: Intelligentes Bauen.



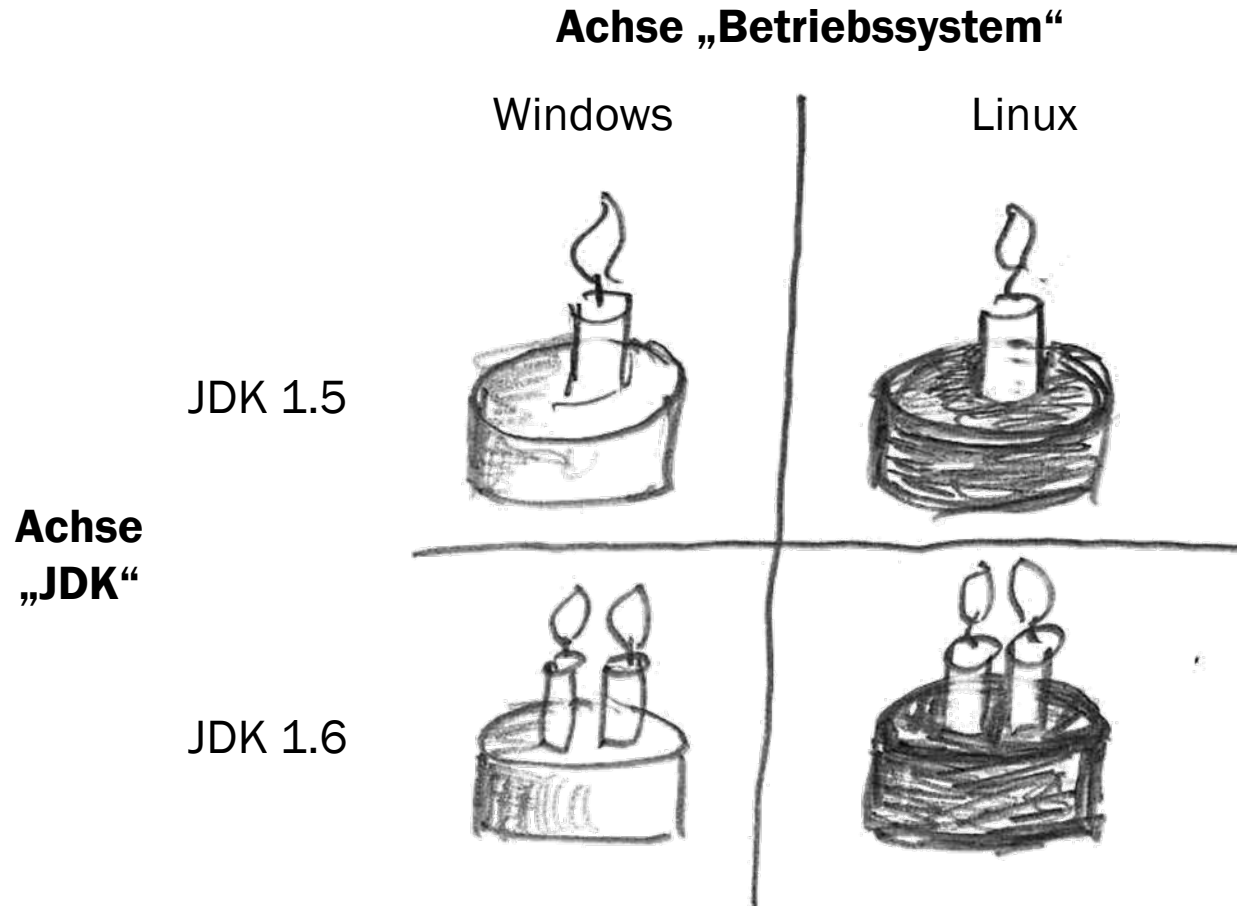
Abhängigkeiten  
zwischen  
**Komponenten**



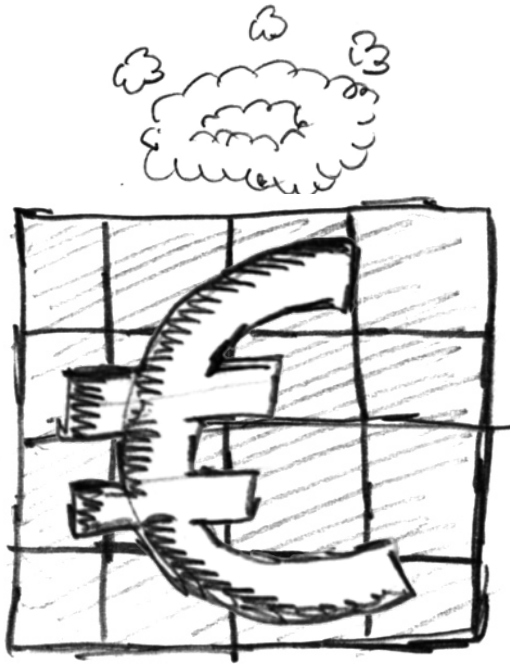
Abhängigkeiten  
zwischen  
**Build-Schritten**



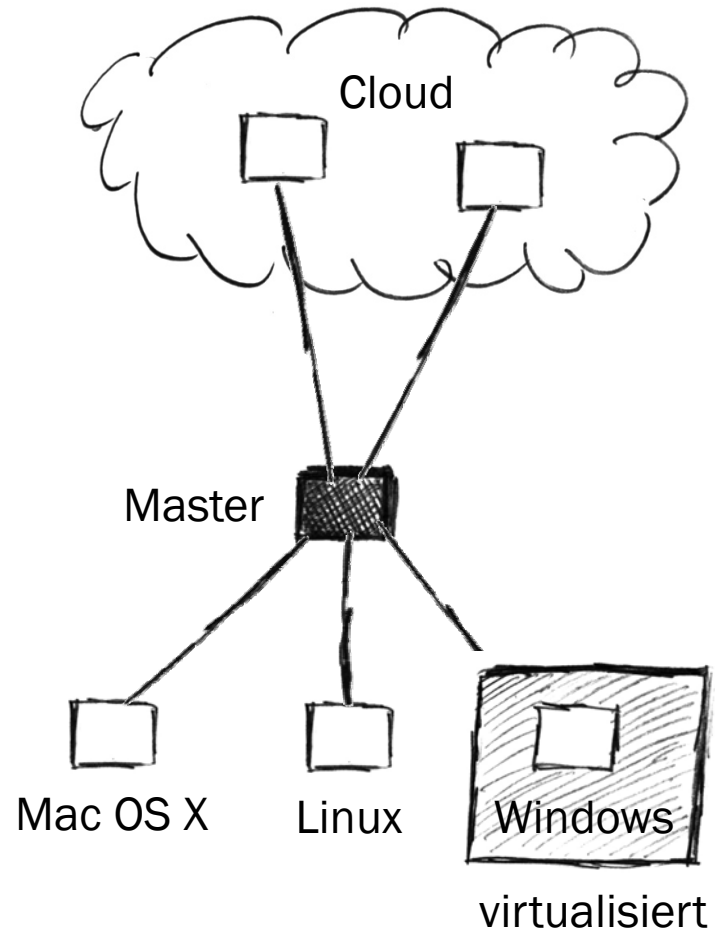
## 9. Matrix-Builds: Jenkins übernimmt die Fleißarbeit.



# 10. Verteilte Builds: Skalierbare Leistung mit OS-Vielfalt.



**lokale Builds**

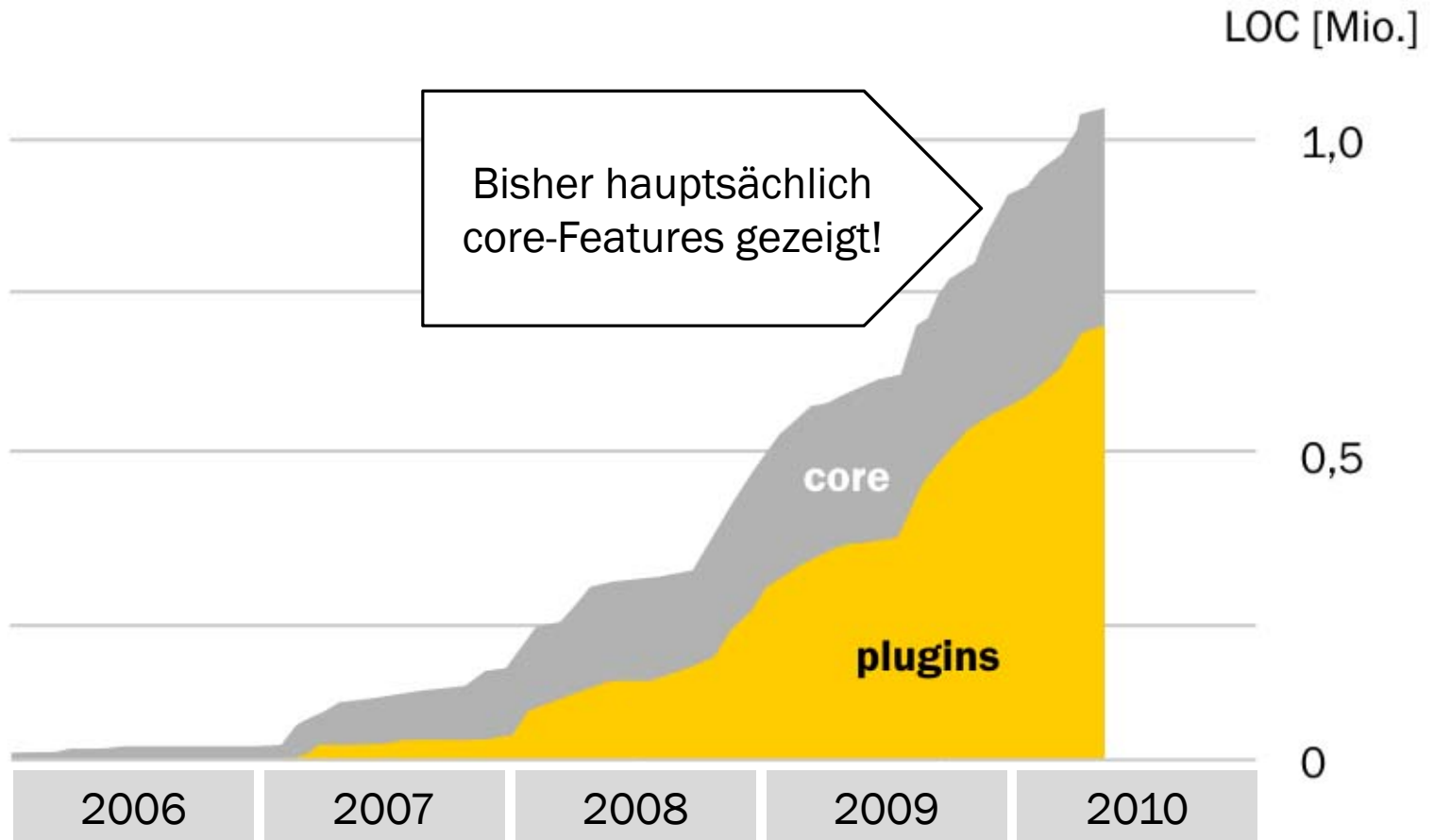


**verteilte Builds**

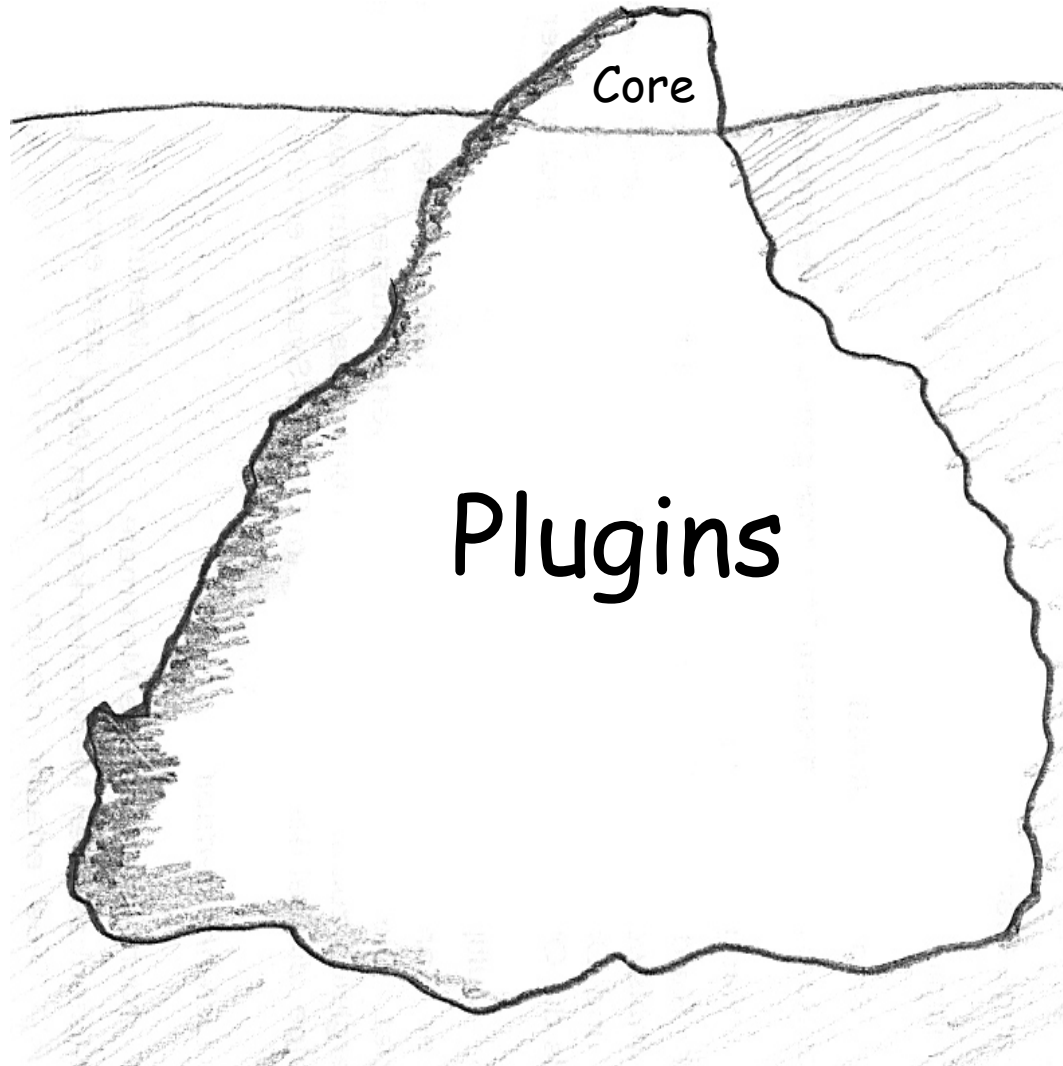
## Zusammenfassung: Alle 10 Schritte auf einen Blick

- Installation
- Konfiguration
- Build-Support
- Berichte
- SCM-Integration
- Kommunikation
- Remote-API/CLI
- Abhängige Jobs
- Matrix-Builds
- Verteilte Builds

# Haben wir da nicht etwas vergessen?

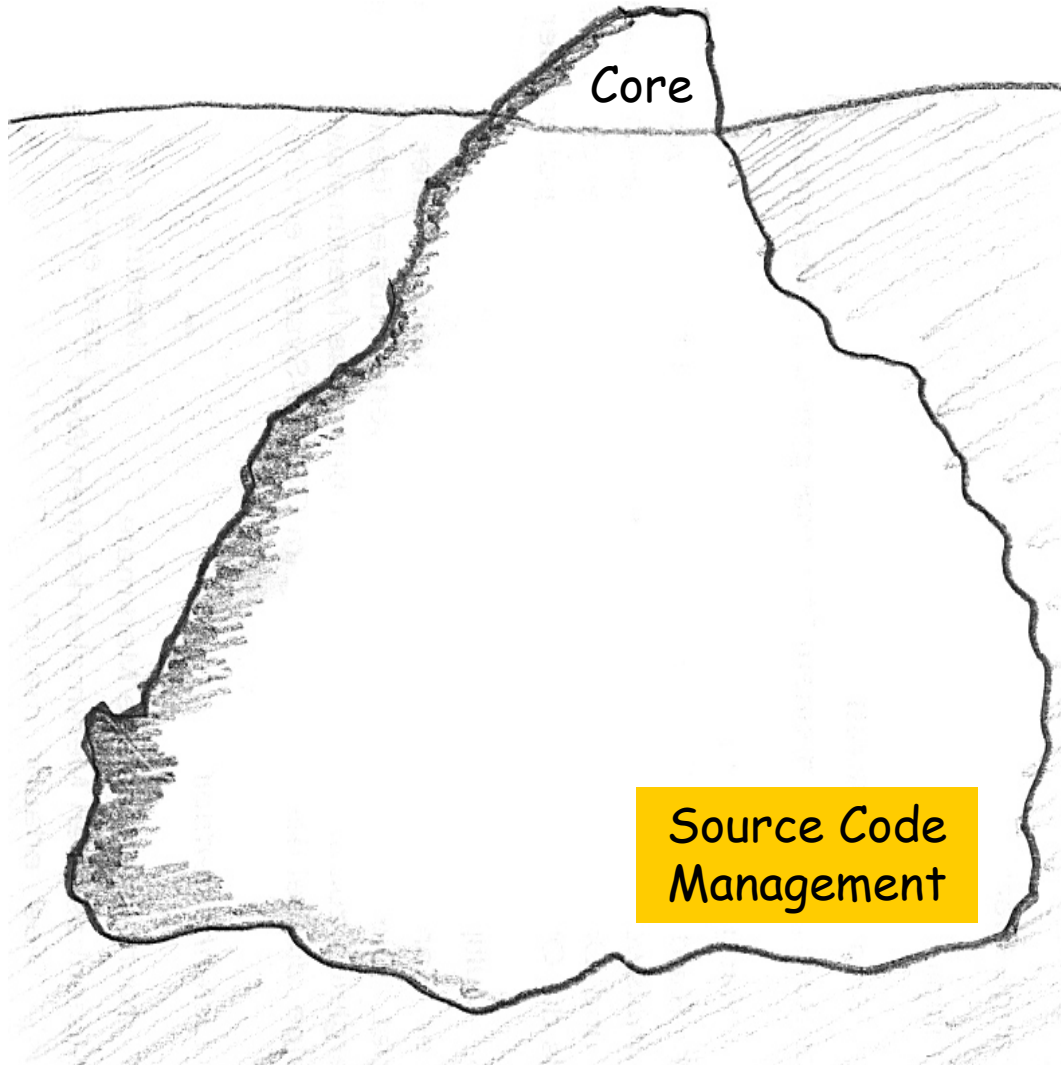


# Über 300 Plugins erweitern den Core!



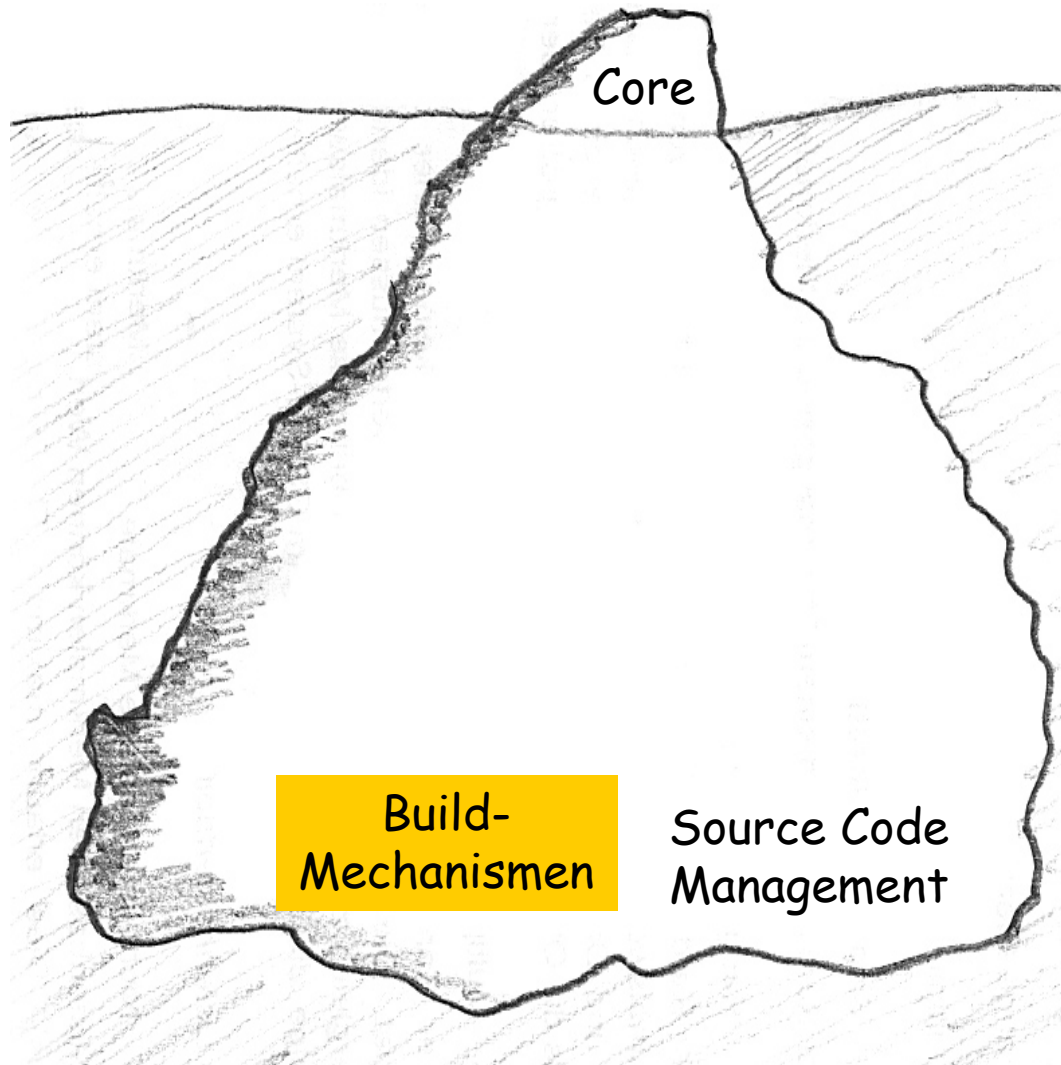
- Update-Center für einfache Installation und Aktualisierung
- 1-2 neue Plugins pro Woche(!)
- Maven-Tools für Plugin-Entwicklung
- Gute Unterstützung durch Developer-Mailingliste

# Über 300 Plugins erweitern den Core!



Accurev  
Bazaar  
BitKeeper  
ClearCase  
CMVC  
**CVS**  
File System SCM  
Git  
Harvest  
Mercurial  
Perforce  
PVCS  
**Subversion**  
Synergy  
Team Foundation Server  
Template Project  
URL  
Visual SourceSafe

# Über 300 Plugins erweitern den Core!



## **Ant**

## **Batch File**

Buckminster

Gant

Gradle

Grails

Groovy

Kundo

## **Maven**

MSBuild

Nant

PowerShell

Rake

Ruby

SCons

SCTMExecutor

## **Shell script**

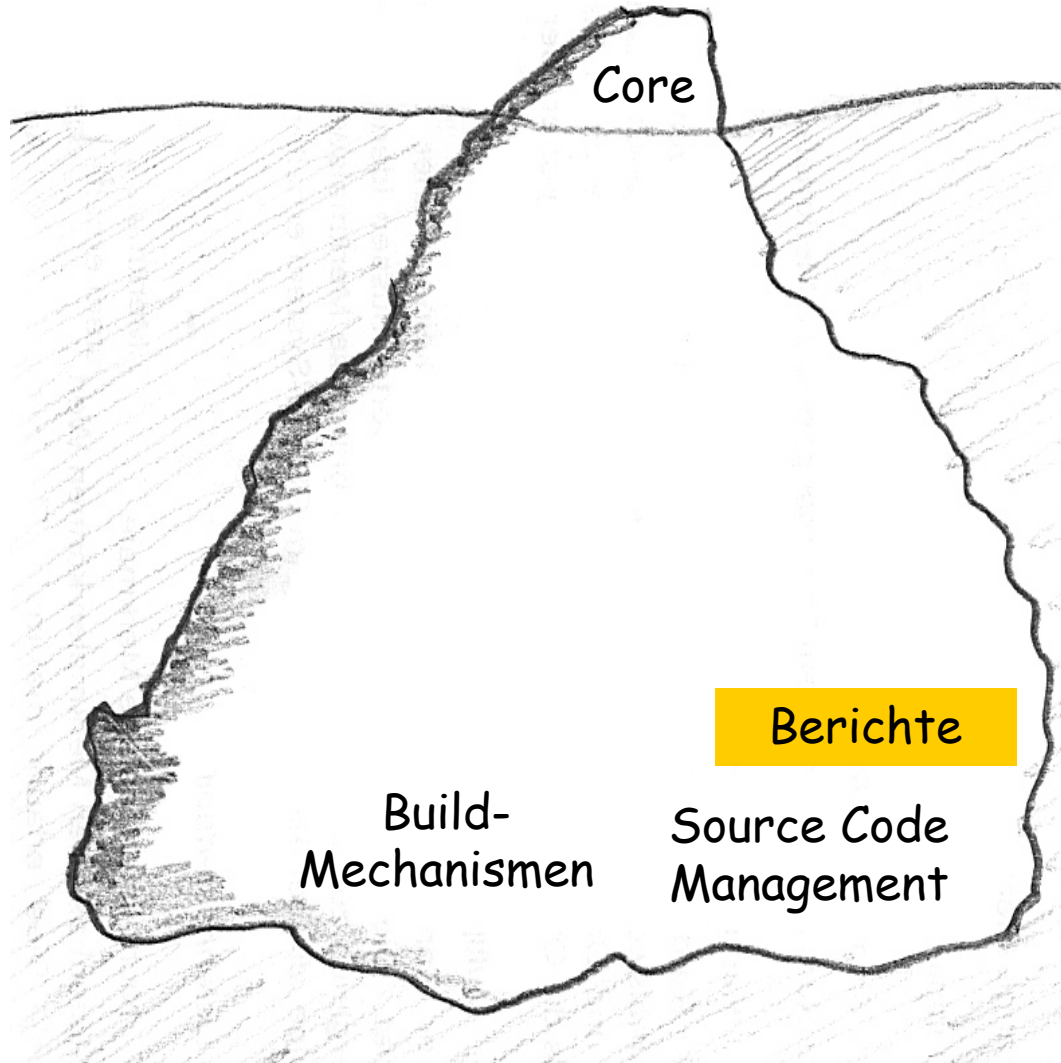
Selenium AES

Seleniumhq

(und weitere)

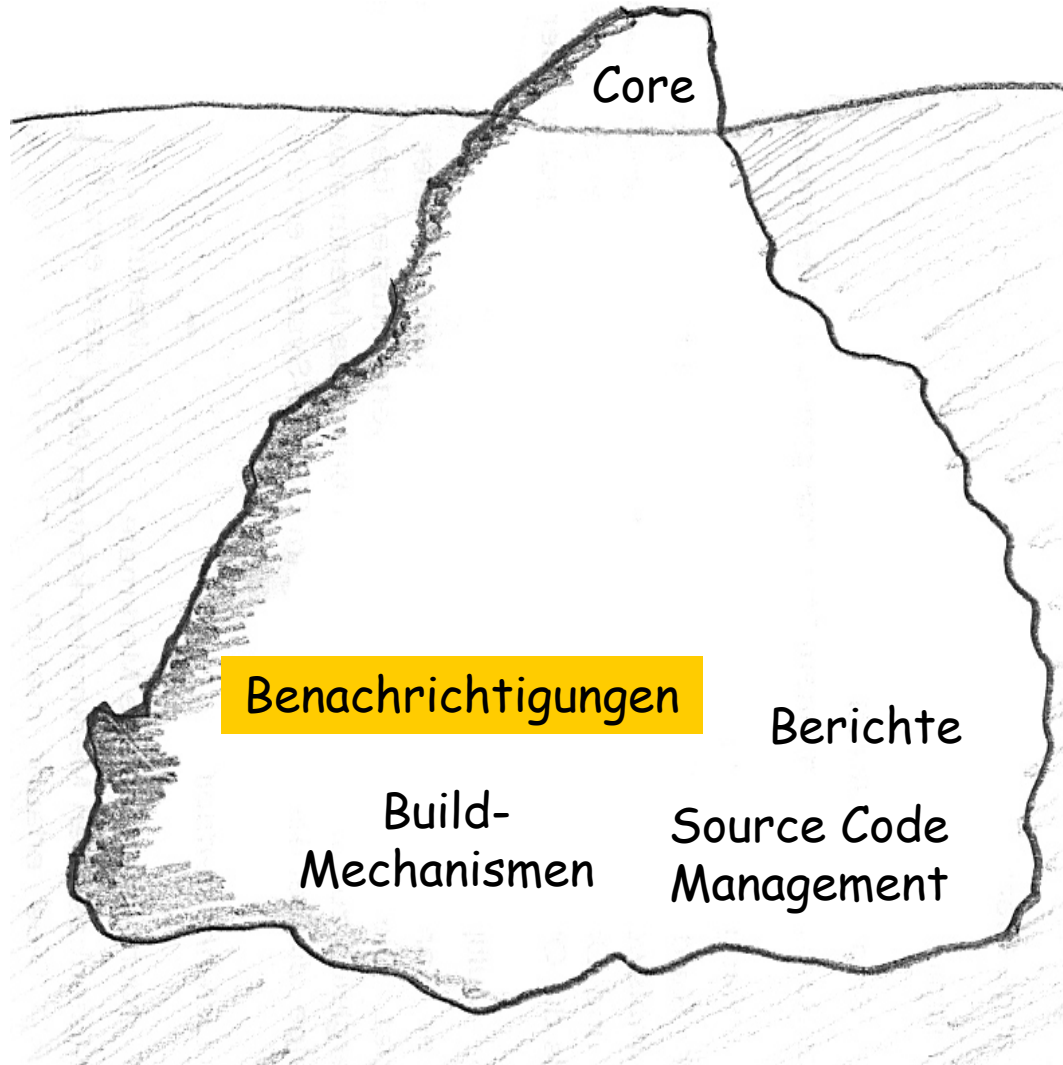


# Über 300 Plugins erweitern den Core!



CCCC	NCover
Checkstyle	NUnit
Clover	Plot
Cobertura	PMD Plugin
CppUnit	PureCoverage
Crap4J	Ruby metrics
Doxygen	Selenium AES
DRY	Seleniumhq
Emma	Serenitec
FindBugs	SLOCCount
Gallio	Task Scanner
Gnat	Testability
Grinder	Explorer
Japex	Violations
<b>Javadoc</b>	Warnings
JavaNCSS+	WebTest
JavaTest Rprt.	Presenter
<b>JUnit</b>	
MSTest	

# Über 300 Plugins erweitern den Core!



Campfire

## **Email**

Google Calendar

hudsonTracker

IRC

Jabber

Nabaztag

SameTime

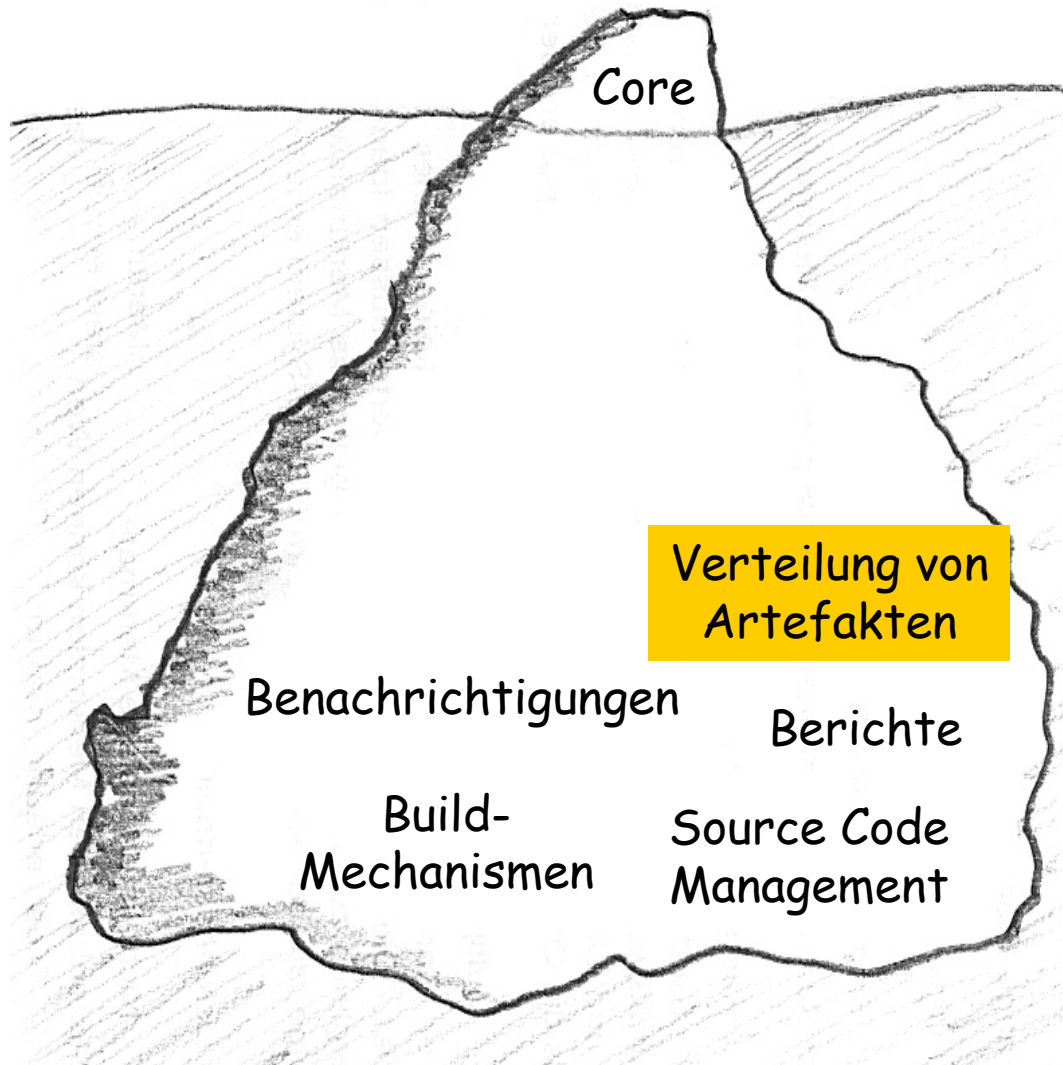
Status Monitor

## **RSS**

TuxDroid

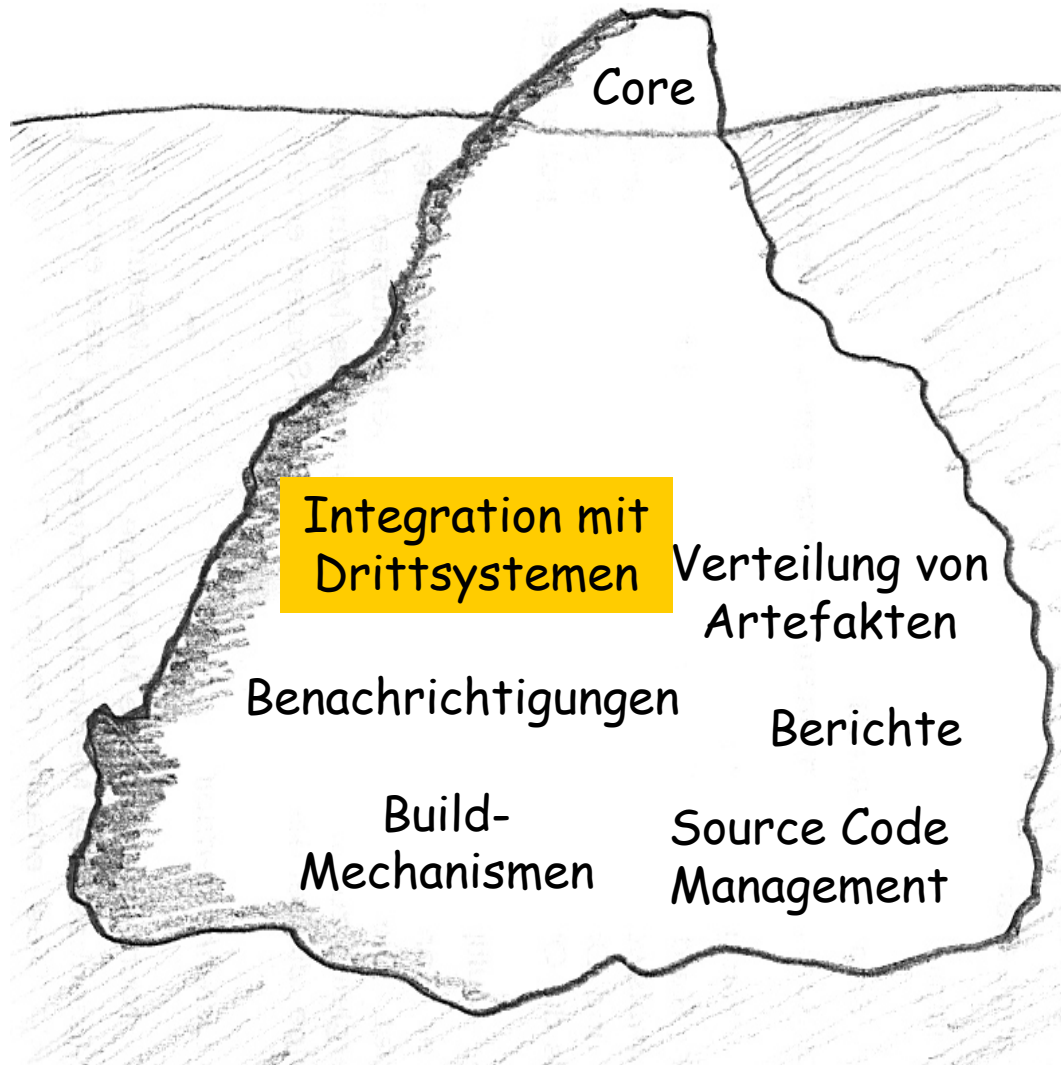
Twitter

# Über 300 Plugins erweitern den Core!



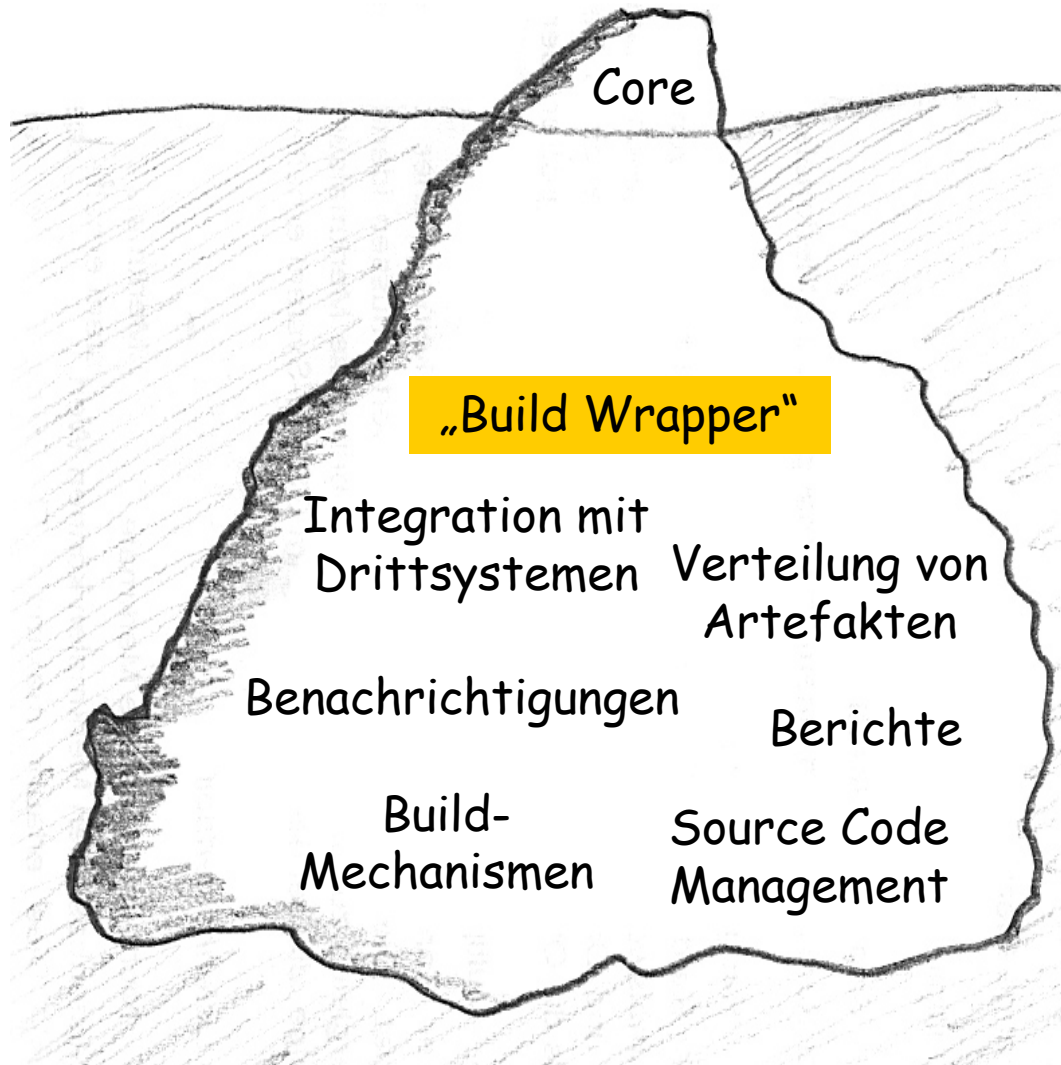
FTP Publisher  
java.net Uploader  
SCP  
SFEE  
SVN

# Über 300 Plugins erweitern den Core!



Active Directory Mantis  
Android App PXE  
Audit Trail Polarion  
Backlog Redmine  
Bugzilla RegEx Email  
Cluster mgmt. SFEE  
Crowd Selenium  
Firefox Add-on Sonar  
Github Swarm  
Google Calend. Trac  
Google Code Windows Tray  
Google Desktop  
HGCA  
Hadoop  
iPhone App  
JIRA  
Java.net  
Kagemai  
LDAP Email

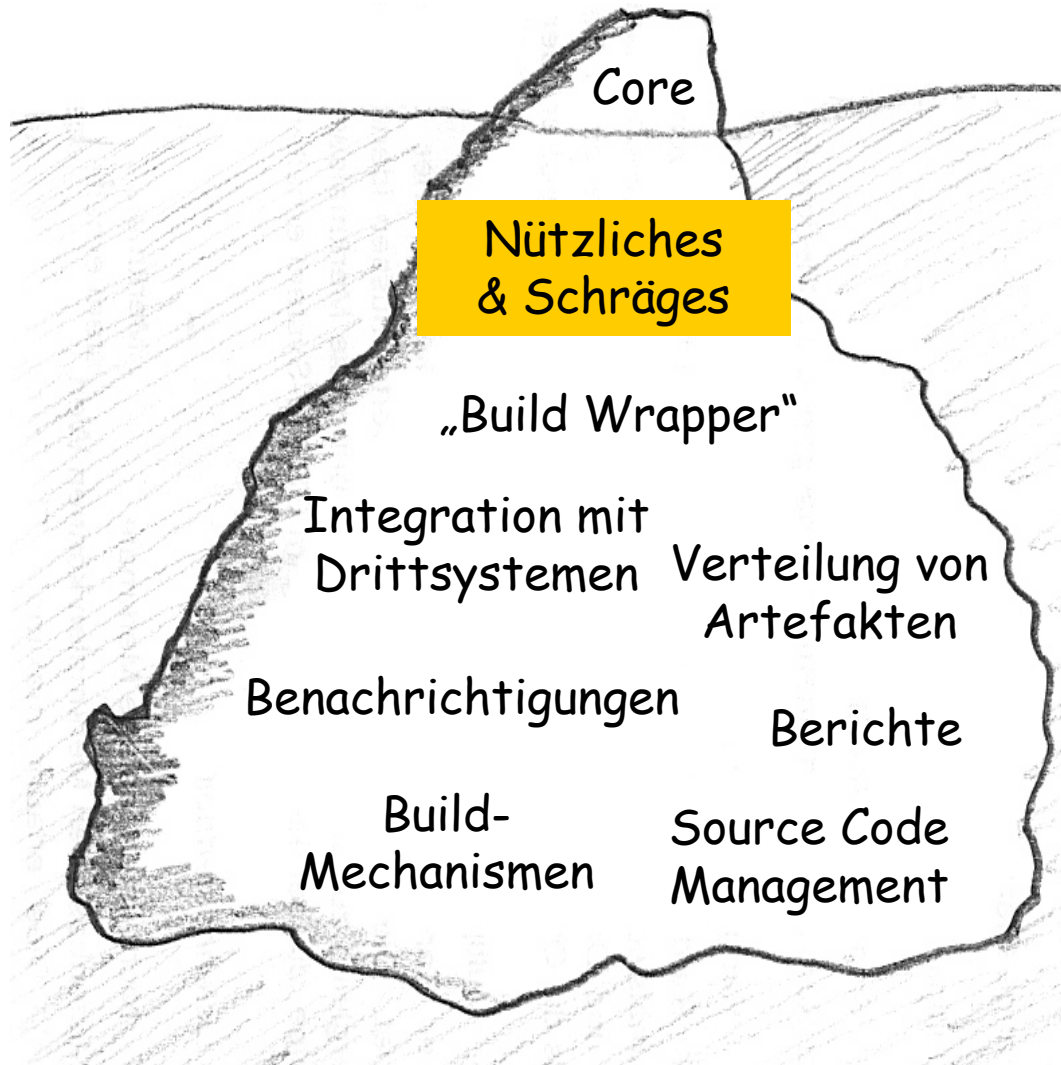
# Über 300 Plugins erweitern den Core!



Hudson Central. Job(Re)Action  
Hudson Distr. Workspace Clean  
Locks and Latches  
M2 Extra Steps  
M2 Release  
Release  
Template Project  
VMware  
Xvnc  
ZenTimestamp

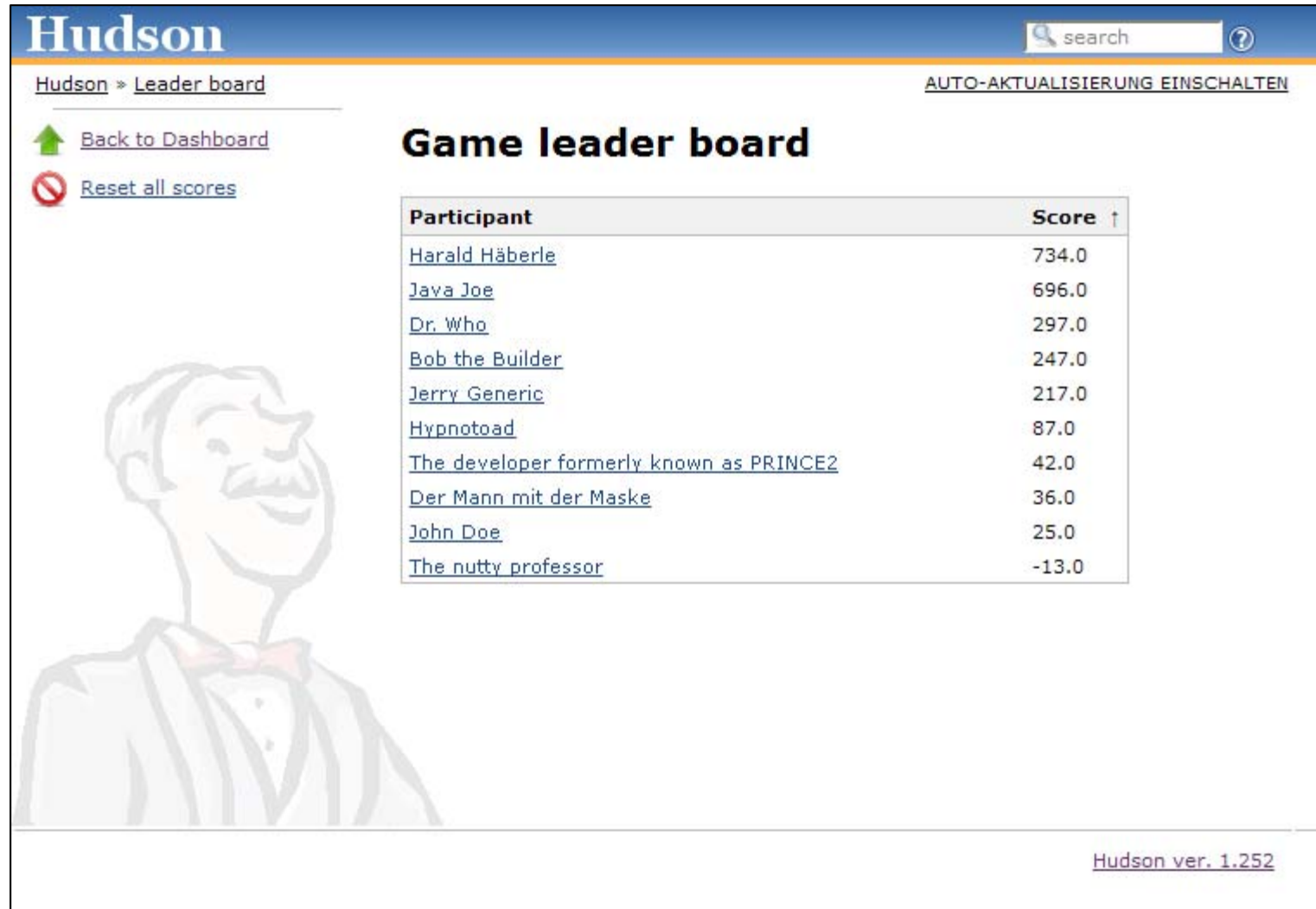


# Über 300 Plugins erweitern den Core!



- Build-timeout
- Change Log History
- Claim
- Configuration Slicing
- Cygnus
- Emotional Hudson
- Google Analytics
- Green Balls
- JBPM
- Locale
- Port Allocator
- Promoted Builds
- Radiator View
- Retry Failed Builds
- Sectioned View
- Sidebar-Link
- Slave-status
- Continuous Integration Game

# Plugin „Continuous Integration Game“



The screenshot shows the Hudson CI Game Leaderboard interface. At the top left, the word "Hudson" is displayed in a large blue font. To its right is a search bar with the text "search" and a question mark icon. Below the header, the breadcrumb "Hudson > Leader board" is visible on the left, and "AUTO-AKTUALISIERUNG EINSCHALTEN" is on the right. On the left side, there are two links: "Back to Dashboard" with a green arrow icon and "Reset all scores" with a red prohibition sign icon. The main content area is titled "Game leader board" in a large, bold, black font. Below the title is a table with two columns: "Participant" and "Score". The table lists ten participants with their respective scores. On the left side of the table, there is a faint, stylized illustration of a man with a mustache, wearing a suit and a red bow tie. At the bottom right of the page, the text "Hudson ver. 1.252" is displayed.

Hudson

search ?

Hudson > Leader board

AUTO-AKTUALISIERUNG EINSCHALTEN

Back to Dashboard

Reset all scores

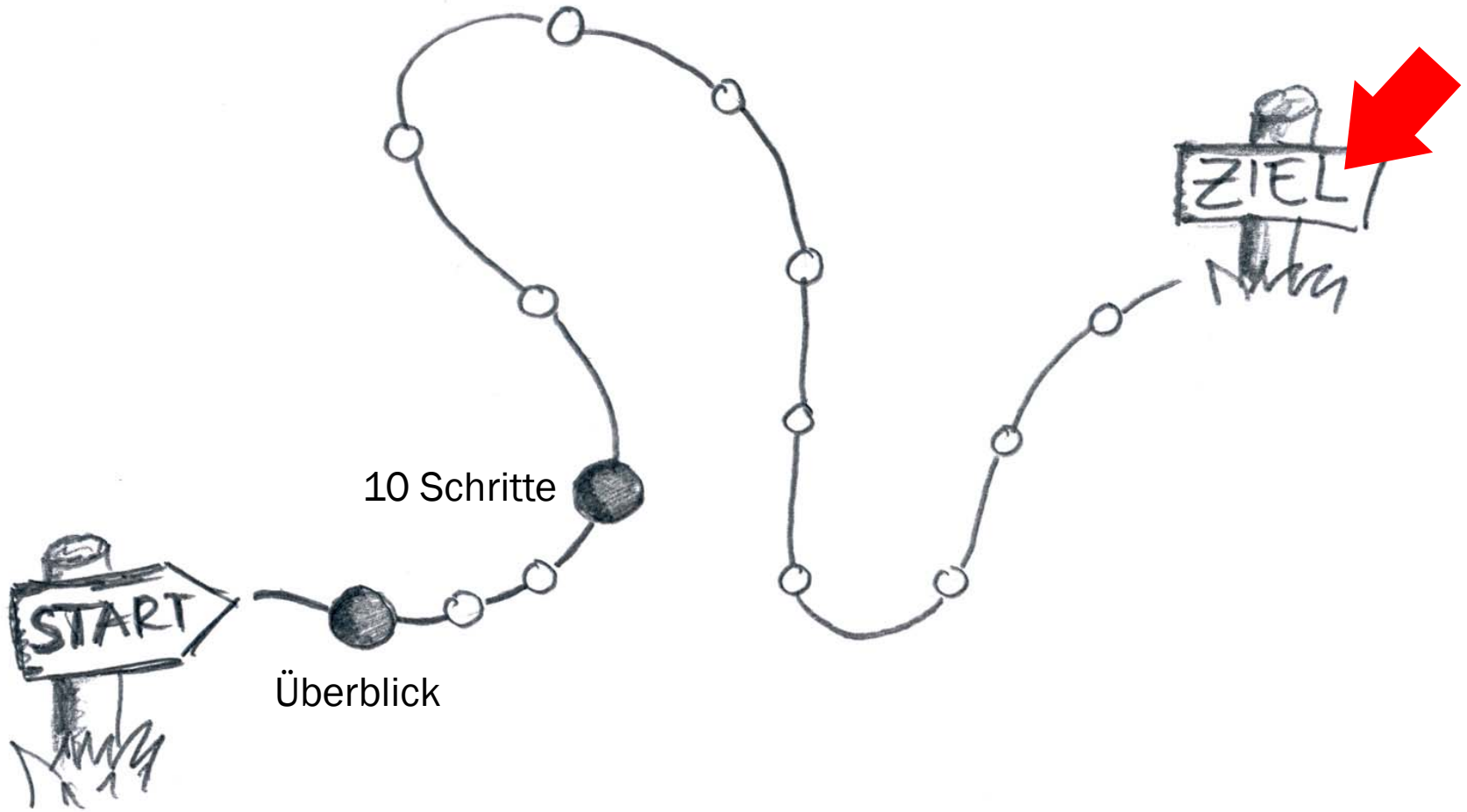
## Game leader board

Participant	Score ↑
<a href="#">Harald Häberle</a>	734.0
<a href="#">Java Joe</a>	696.0
<a href="#">Dr. Who</a>	297.0
<a href="#">Bob the Builder</a>	247.0
<a href="#">Jerry Generic</a>	217.0
<a href="#">Hypnotoad</a>	87.0
<a href="#">The developer formerly known as PRINCE2</a>	42.0
<a href="#">Der Mann mit der Maske</a>	36.0
<a href="#">John Doe</a>	25.0
<a href="#">The nutty professor</a>	-13.0

Hudson ver. 1.252



# Agenda



**HERUNTERLADEN**

**EINSETZEN**

**WEITERSAGEN**

**MITMACHEN**

# jenkins-ci.org



Vortrag



Buch



**Dr. Wiest – Ingenieurbüro für Softwaretechnik**

[simon.wiest@simonwiest.de](mailto:simon.wiest@simonwiest.de)

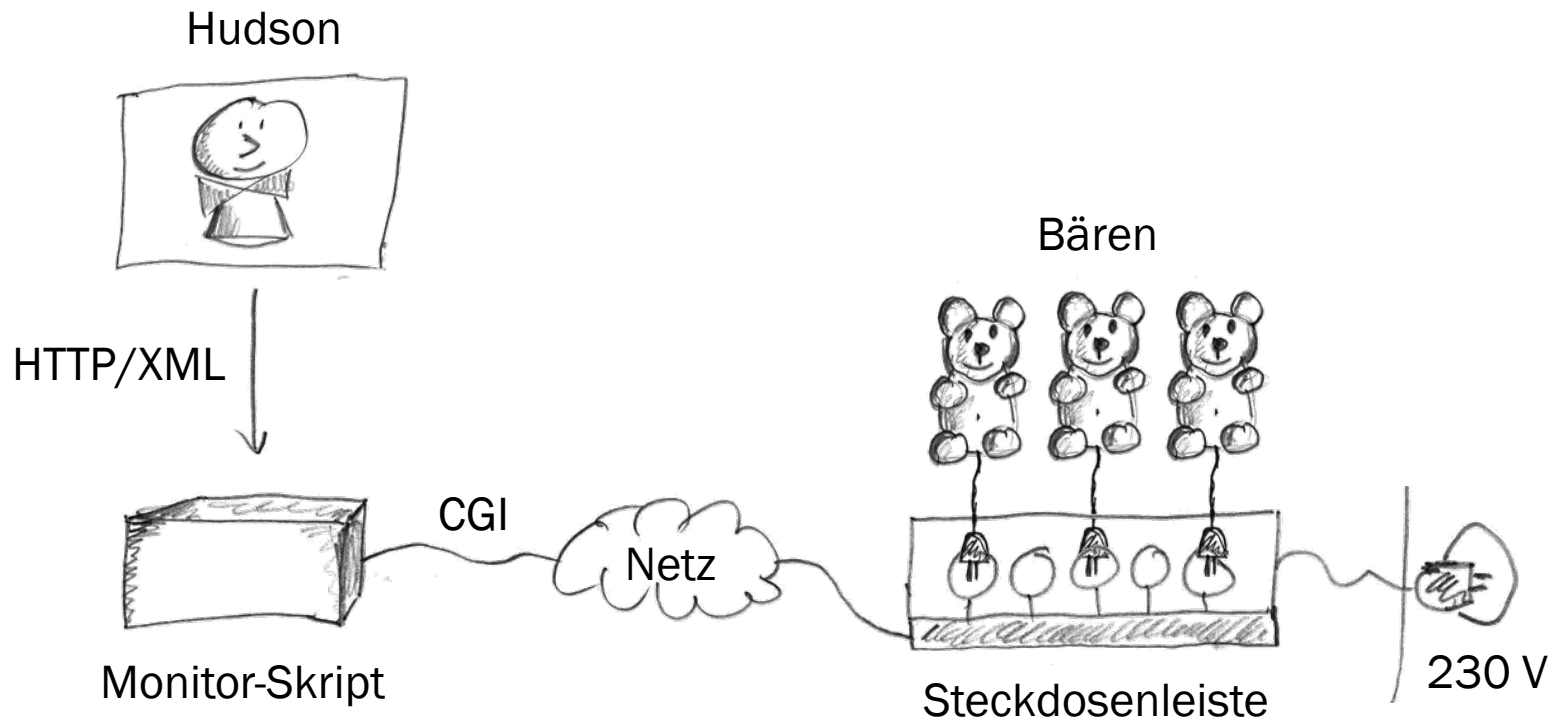
[www.simonwiest.de](http://www.simonwiest.de)

**BACKUP**



# Wie funktionieren die Bären?

Mehr dazu im Hudson Wiki  
[wiki.hudson-ci.org//x/AQA1AQ](http://wiki.hudson-ci.org//x/AQA1AQ)

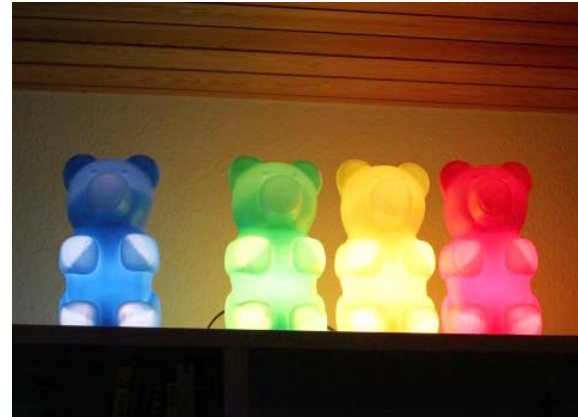


# Wie funktionieren die Bären?



last.fm, London/UK

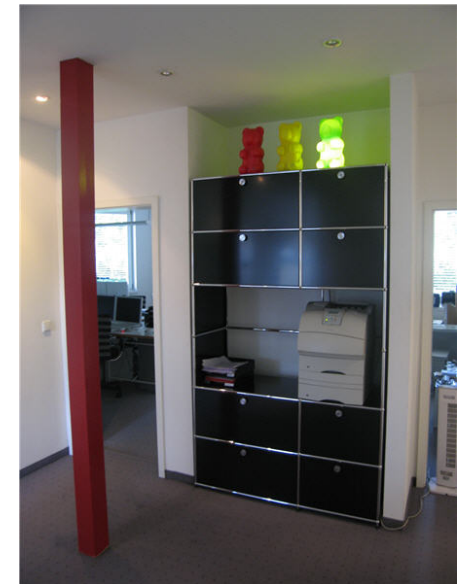
Ingenieurbüro Dr. Wiest  
Gomaringen



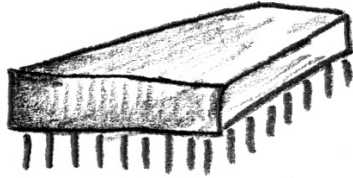
cedarsoft GmbH  
Gomaringen



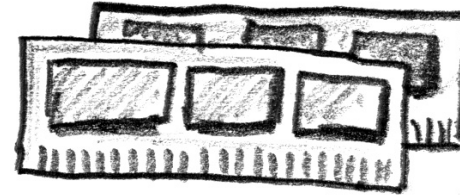
Netzgiganten GmbH  
Stuttgart



## Bonus-Folie: Hardware aufrüsten lohnt.



CPU



Hauptspeicher

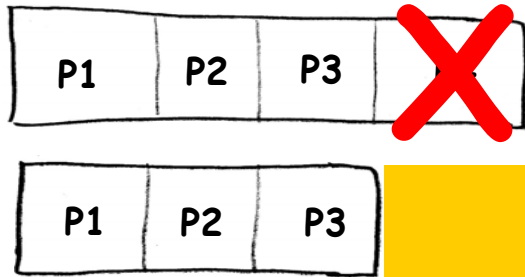


Festplatte

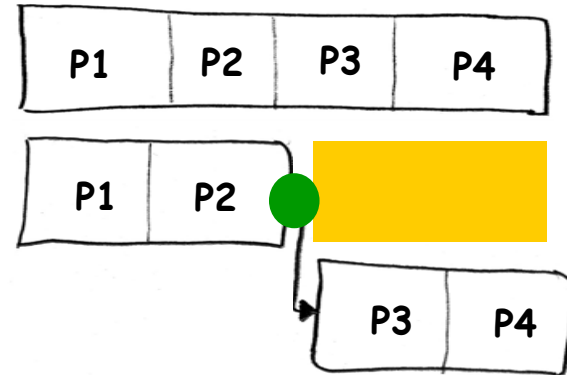


Netzwerk

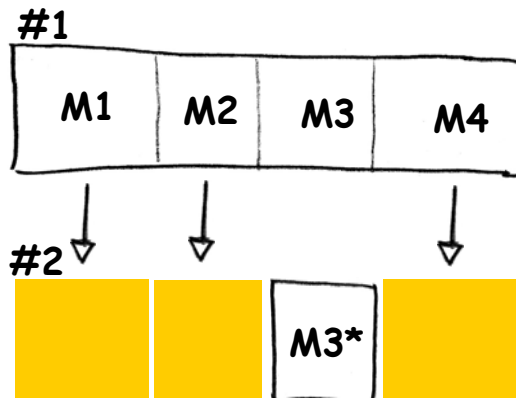
# 4 Strategien für schnellere Builds



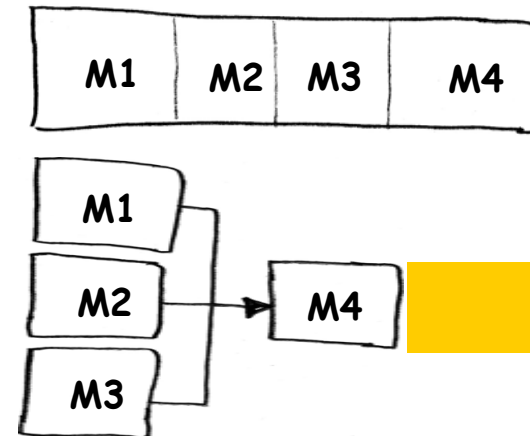
Streichen



Staffeln

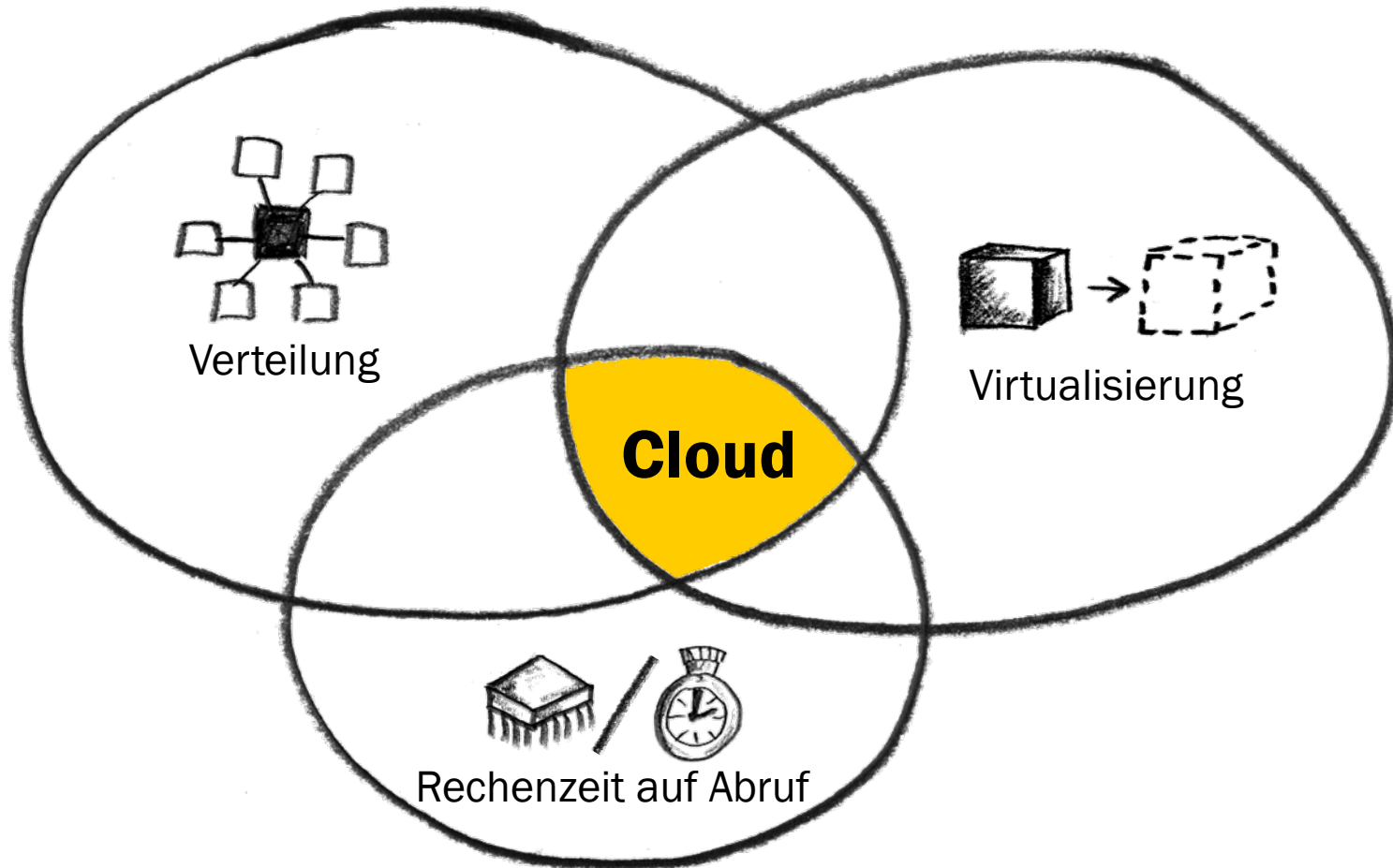


Modularisieren



Parallelisieren

# Cloud: Verteilung, Virtualisierung und Rechenzeit auf Abruf



# The Joel (Spolsky) Test

1. Do you use **source control**?
2. Can you make a **build in one step**?
3. Do you make **daily builds**?
4. Do you have a **bug database**?
5. Do you **fix bugs before writing new code**?
6. Do you have an **up-to-date schedule**?
7. Do you have a **spec**?
8. Do programmers have **quiet working conditions**?
9. Do you use the **best tools money can buy**?
10. Do you have **testers**?
11. Do new **candidates write code** during their interview?
12. Do you do **hallway usability testing**?