

A tall, grey concrete tower with a white section in the middle. The white section has the CPQD logo in blue. The top of the tower is a dark, multi-tiered structure with a sunburst effect emanating from behind it. The background is a clear blue sky with some light clouds. The tower is positioned on the right side of the image, with a large, stylized graphic element on the left that consists of a grey and blue shape that tapers into a white and orange shape, with several thin lines radiating from the junction.

CPqD Developer Suite

3º Cinfotec - Unicamp
07/maio/2014

*TRANSFORMANDO
EM REALIDADE*



Gustavo Chaves
about.me/gnustavo

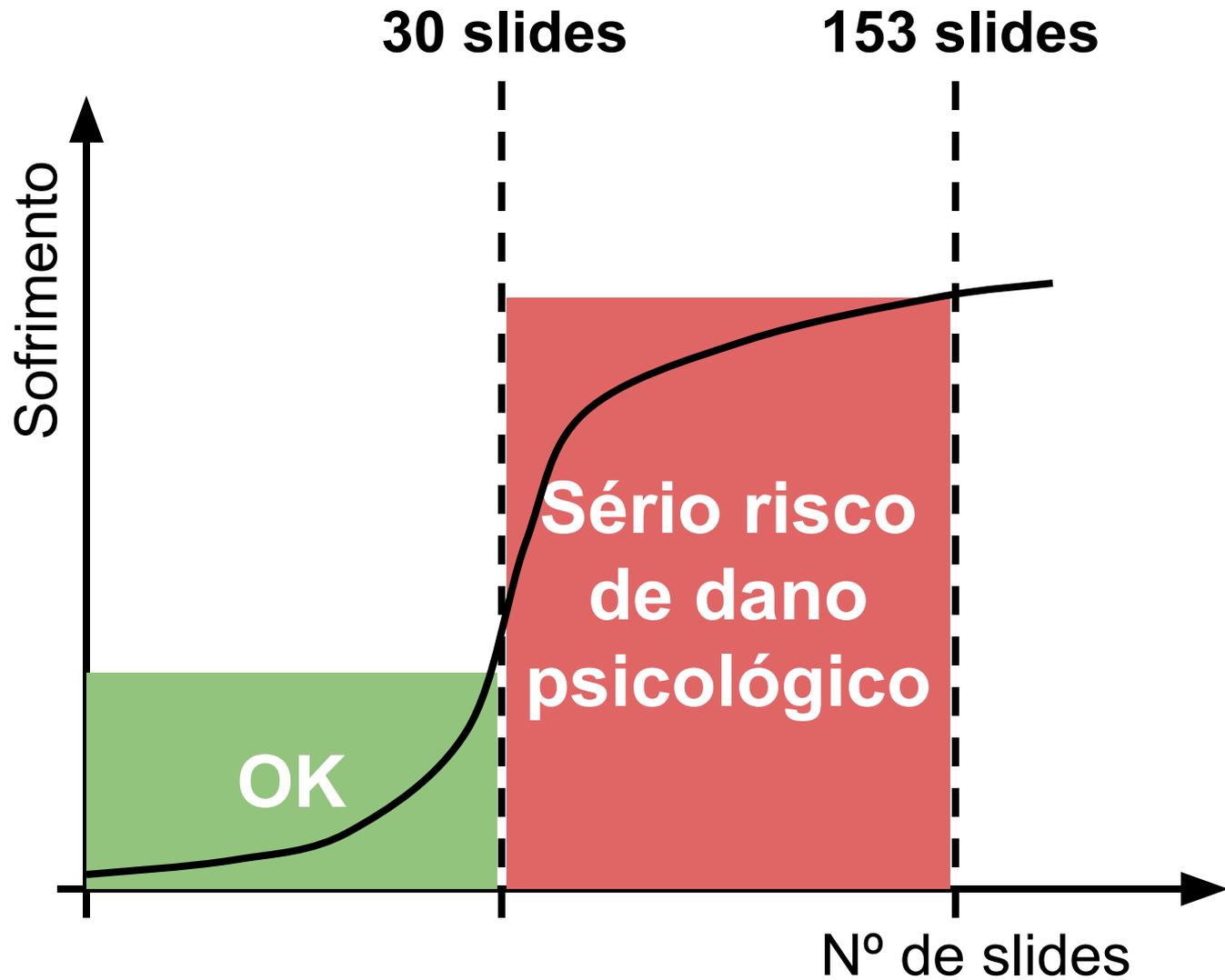
CPqD



- Maior centro de pesquisa da America Latina
- Localizado em Campinas/SP
- Fundado em 1976 na TELEBRÁS
- Privatizado em 1998
- Atua nos setores de telecomunicações, financeiro, elétrico, industrial, corporativo e administração pública
- 1.500+ colaboradores
- 700+ envolvidos em desenvolvimento de software



**Danger
Will Robinson!**

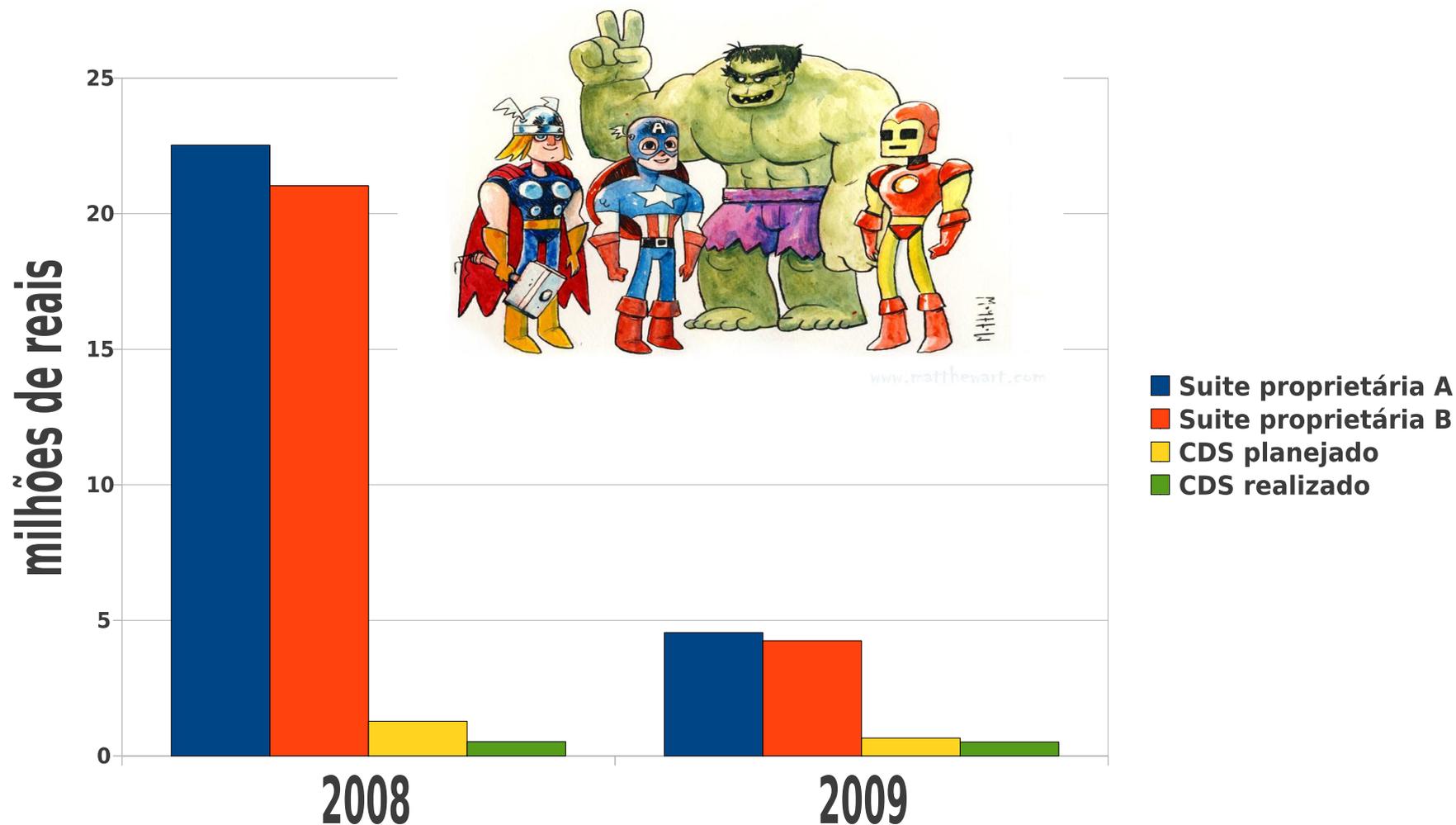


CPqD Developer Suite

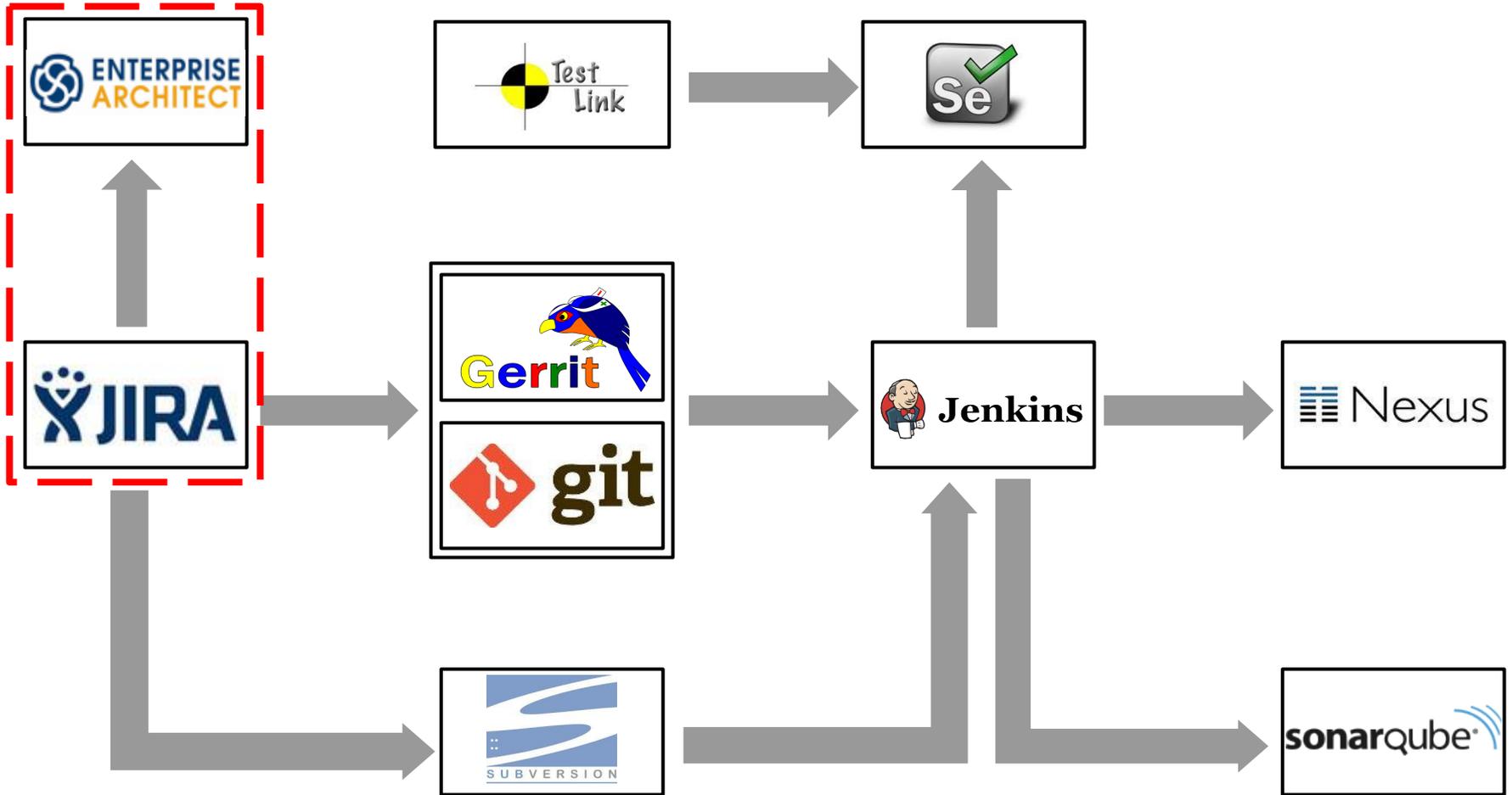
Conjunto de ferramentas usadas pelo CPqD para desenvolvimento de software:

- software livre e de baixo-custo,
- líderes de mercado em suas categorias,
- integradas para propiciar o
- desenvolvimento eficiente de
- software de qualidade.

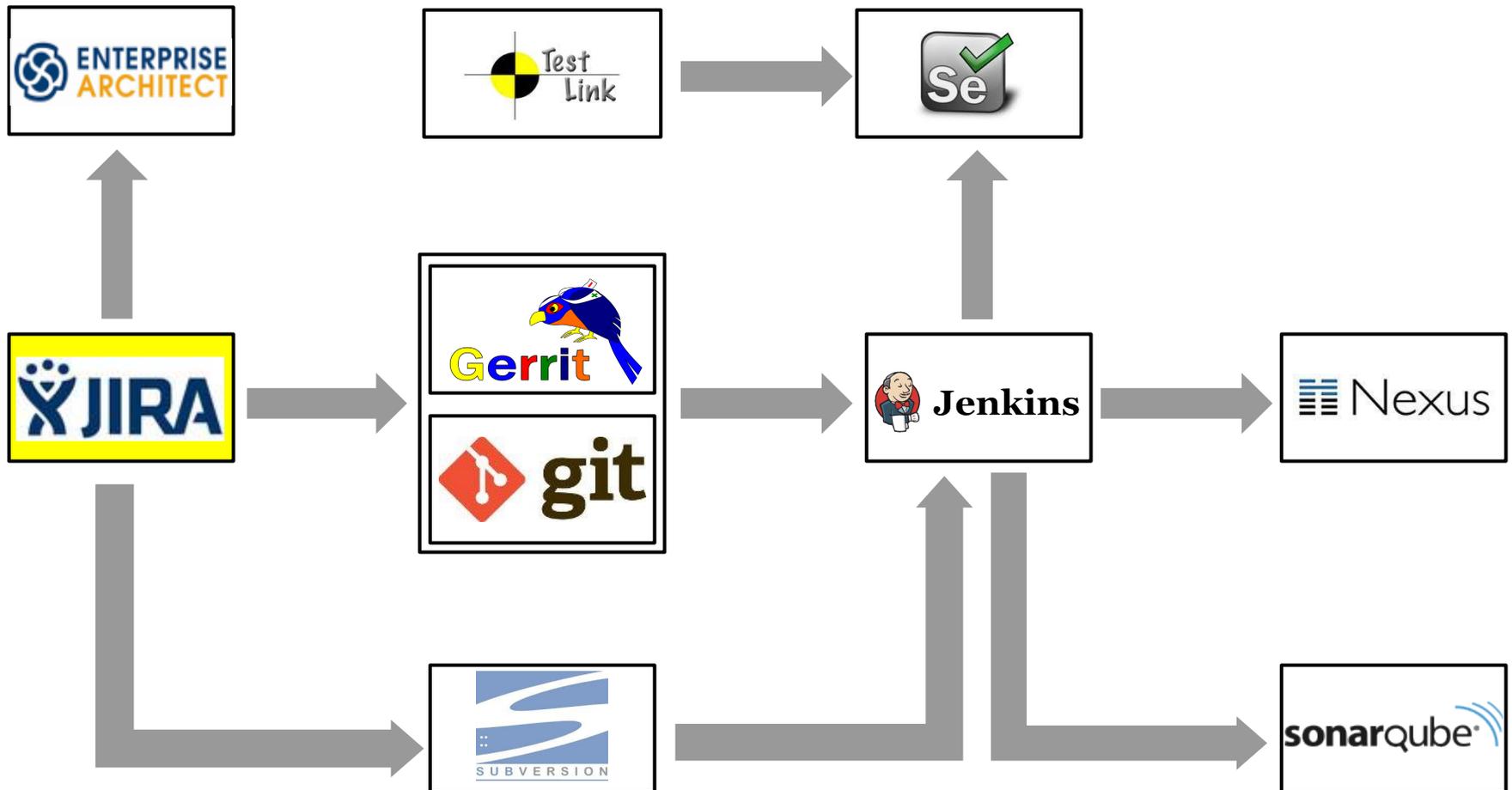
CDS - custo



CPqD Developer Suite



Gestão de Mudanças e Projetos Ágeis



The Jira logo is centered on the page. It features a stylized blue icon on the left, which is a simplified human figure with its arms raised, holding three small circles above its head. To the right of this icon, the word 'JIRA' is written in a large, bold, blue, sans-serif font.

atlassian.com/jira

Gestão de Mudanças

Gestão de Projetos Ágeis

Workflow



JIRA



Projeto A

PA-101

PA-102

PA-103

PA-104

Projeto B

PB-25

PB-26

PB-27

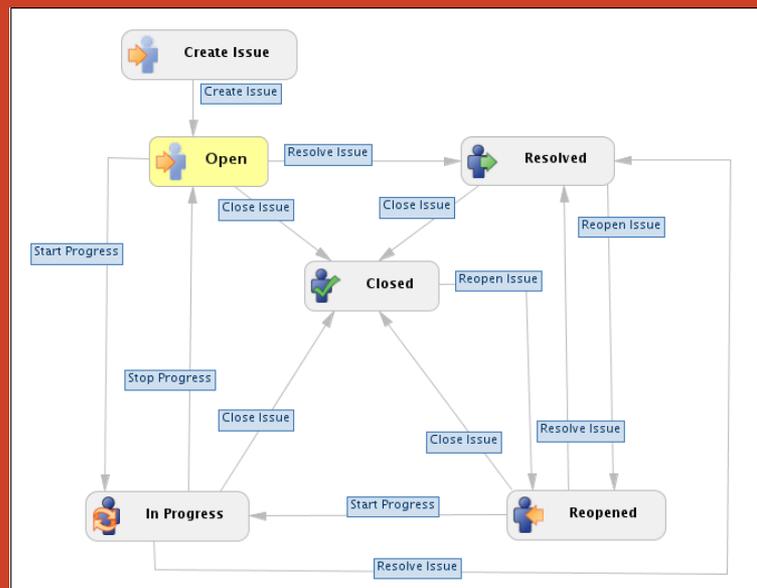
Tíquetes totalmente customizáveis

PA-101

- **Resumo**
- **Descrição**
- **Criador**
- **Responsável**
- **Componentes**
- **Versões**
- ...
- **Campos customizados...**

Defeito
Melhoria
Tarefa

Estória
Requisito



JIRA Ágil

Para Fazer

- CDS-1594 4 Simulação do Upgrade do Nexus
- CDS-1602 Ambiente de simulação (8h)
- CDS-1603 Teste do ambiente de simulação (24h)
- CDS-1604 Elaborar RDM (4h)

Em Progresso

Concluído

- CDS-1604 Estudo do release notes

JIRA

Painéis | Pr

CDS 9

QUICK

VERSIONS

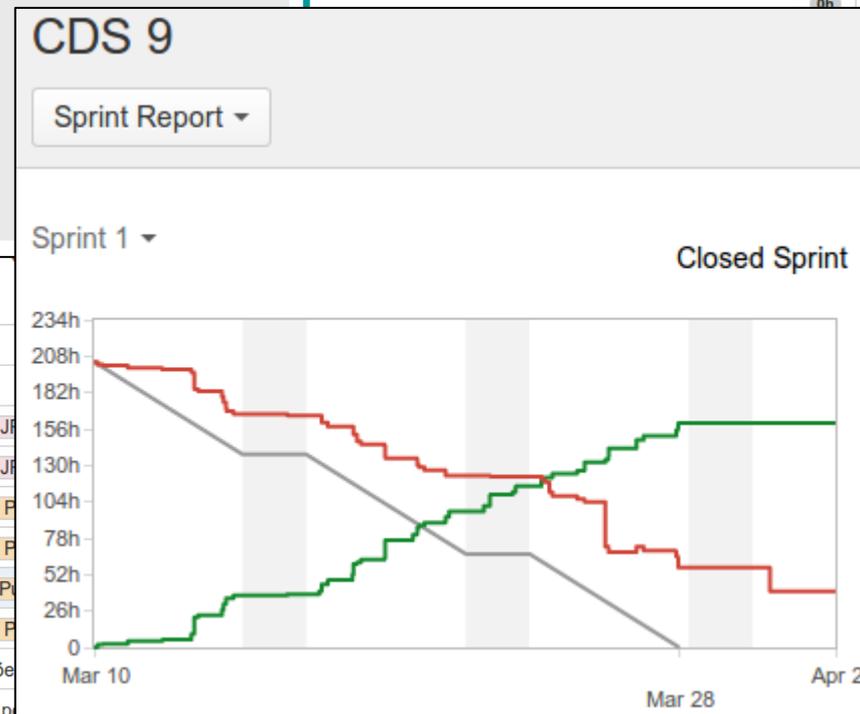
EPICS

- All issues
- Demo
- Puppet
- JRebel
- JVM
- Issues without epics

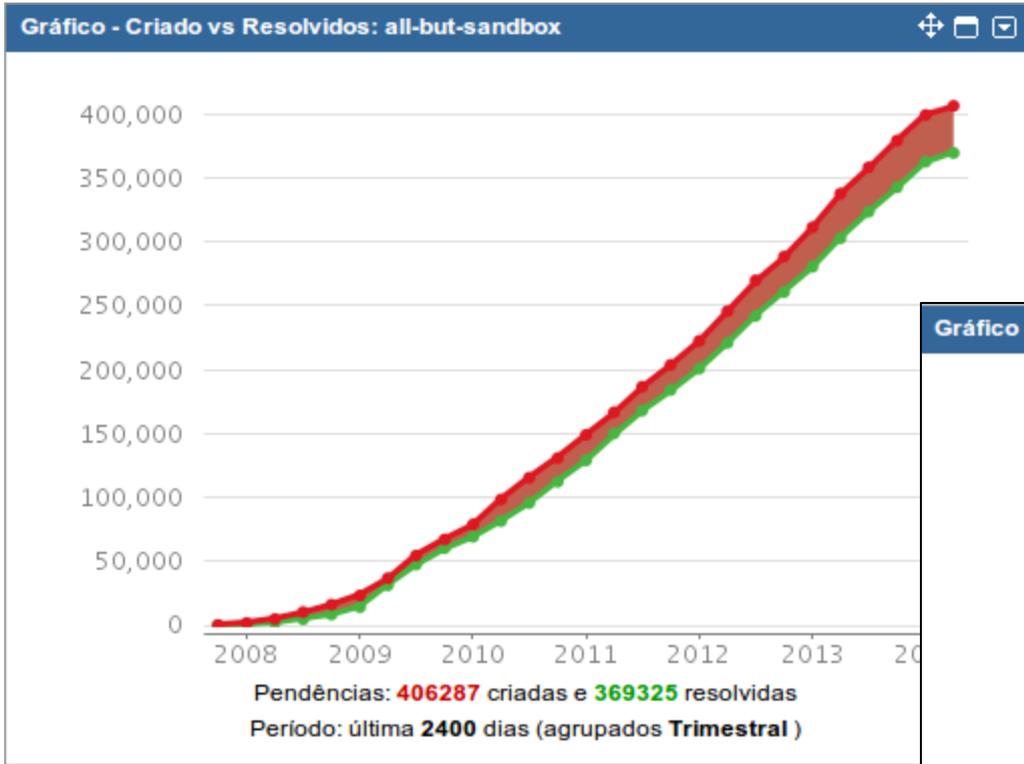
05/Mai/14 8:00 AM • 23/Mai/14 5:00 PM

- CDS-1621 Implementação do Gerenciador de licenças
- CDS-1594 Simulação do Upgrade do Nexus
- CDS-1619 Planejamento JRebel
- CDS-1620 Planejamento VDI
- CDS-1622 Definir os tópicos que serão apresentador sobre Vagrant
- CDS-1623 Preparar o ambiente de demonstração para a apresenta
- CDS-1624 Montar a apresentação
- CDS-1625 Fazer apresentação Vagrant/Puppet para o time
- CDS-1613 Identificar consultas SQL para obter dados sobre execução
- CDS-1614 Implementar job pra gerar relatório de métricas de testes p
- CDS-1615 Implementar job para gerar relatório de bugs por caso de teste em (8h)
- CDS-1618 Especificar os scripts de monitoração no Nagios (JVM 8h)

Sprint 4 2 Start Sprint

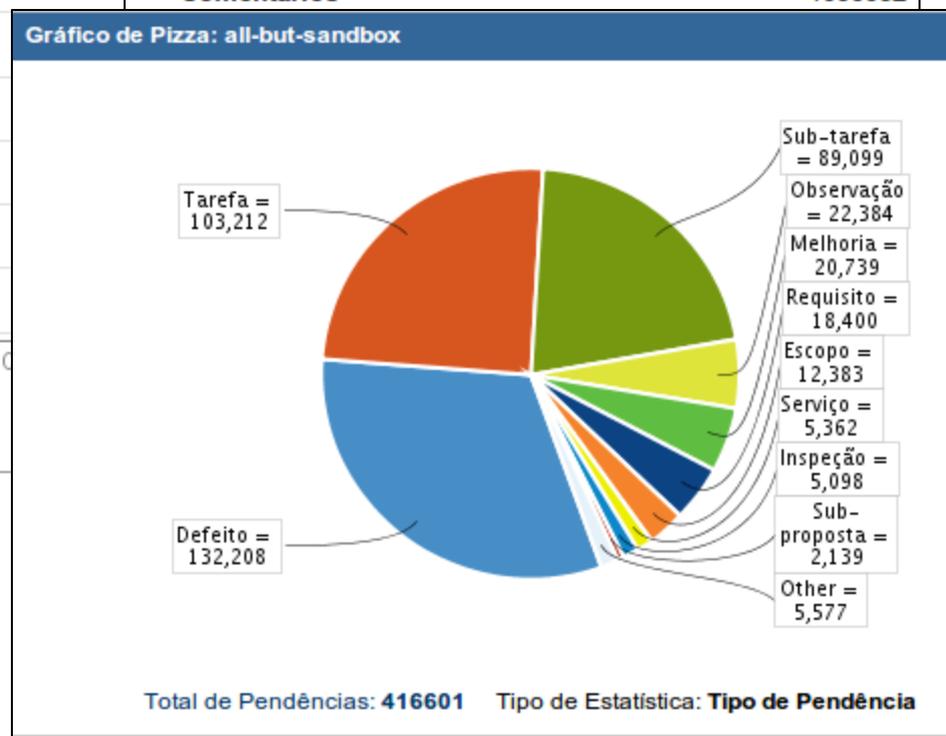


JIRA no CPqD



Database Statistics

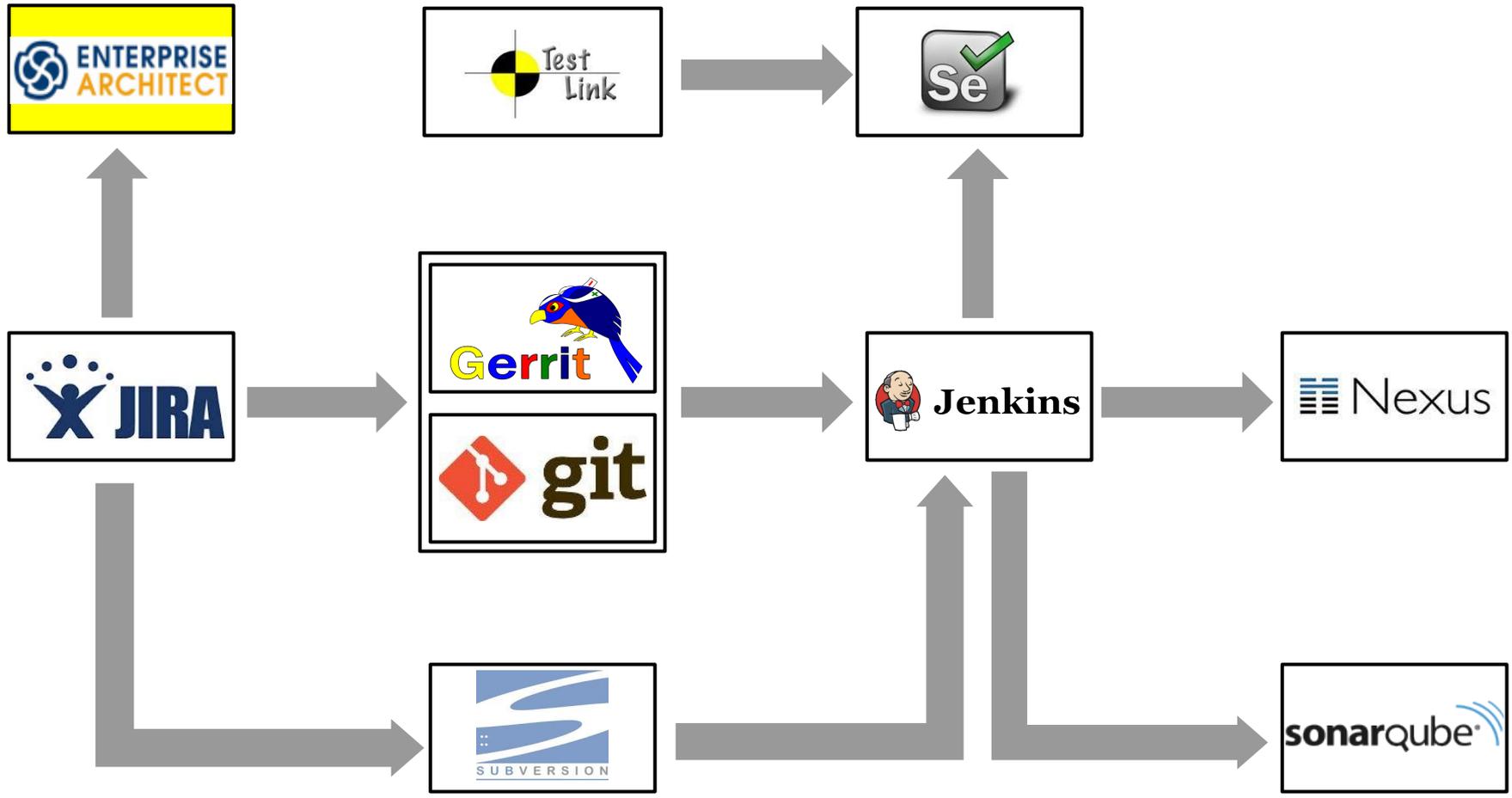
Issues	421272
Produtos	457
Campos Personalizados	339
Workflows	40
Attachments	227119
Comentários	1056082



**900 usuários ativos
por mês!**



Modelagem





ENTERPRISE ARCHITECT

sparxsystems.com/products/ea



Toolbox

Project Browser

Barra de Ferramentas

Área de Desenho

The screenshot displays the CPD software interface for creating a Use Case Model. The main workspace contains a diagram with several use cases and their relationships. Callout boxes provide detailed information about actors, use cases, and packages. The interface includes a 'Toolbox' on the left with various modeling tools, a 'Barra de Ferramentas' (toolbar) at the top, and a 'Project Browser' on the right showing the project structure. The status bar at the bottom indicates the current model type as 'Use Case Model'.

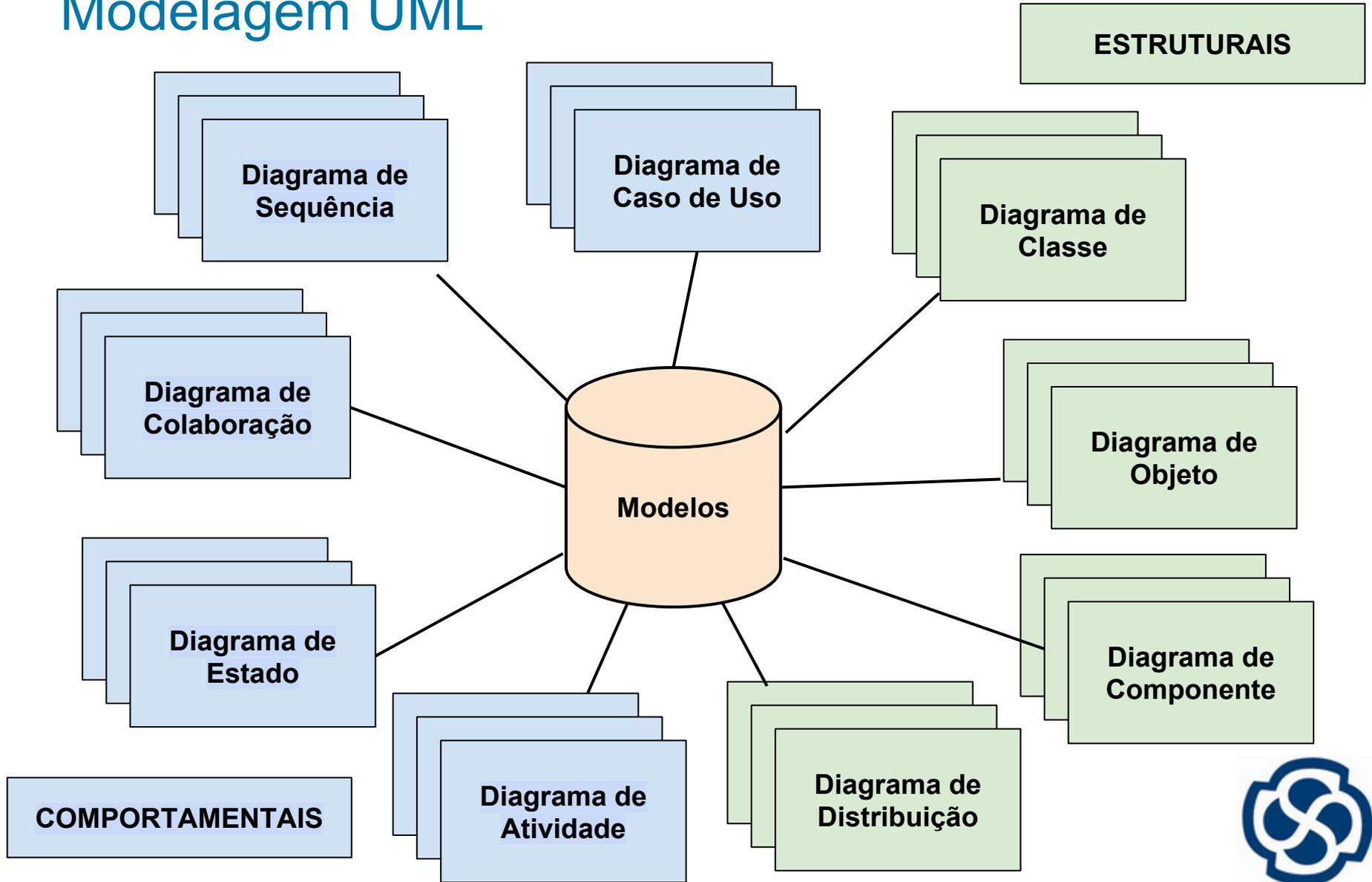
Use Case Model Description:

- Actors:** Actors are the users of the system being modeled. Each Actor will have a well-defined role, and in the context of that role have useful interactions with the system. A person may perform the role of more than one Actor, although they will only assume one role during one use case interaction. An Actor role may be performed by a non-human system, such as another computer program.
- Use Case:** The Use Case model is a case described using UML Use Case. It represents a single, repeatable interaction experience when using the system. A Use Case typically includes a description of the interaction between the Actor and the System, and of exceptions that occur from the user's perspective. Use Cases may include other Use Cases as part of a larger pattern of interaction and may also be extended by other use cases to handle exceptional conditions.
- Package:** This package contains use cases which define how an Actor will interact with the proposed system. Each interaction may be specified using scenarios, sequence diagrams, communication diagrams and other dynamic diagrams or textual descriptions which together show how the system when viewed as a "black-box" interacts with a user.

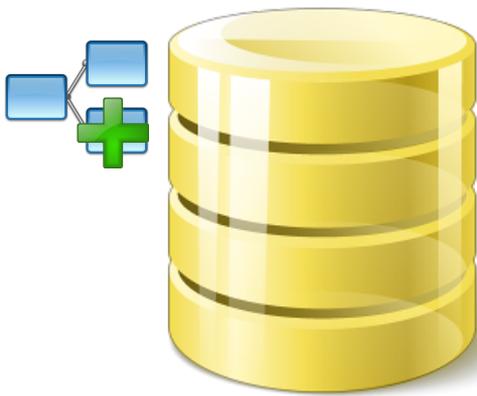
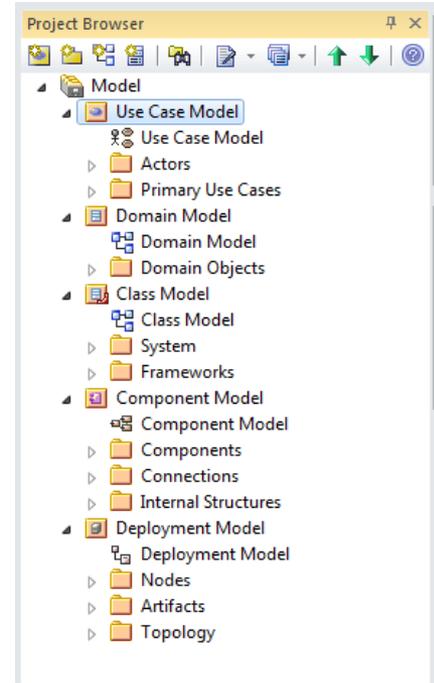
Project Browser Structure:

- Model
 - Use Case Model
 - Actors
 - Primary Use Cases
 - Domain Model
 - Domain Model
 - Domain Objects
 - Class Model
 - Class Model
 - System
 - Frameworks
 - Component Model
 - Component Model
 - Components
 - Connections
 - Internal Structures
 - Deployment Model
 - Deployment Model
 - Nodes
 - Artifacts
 - Topology

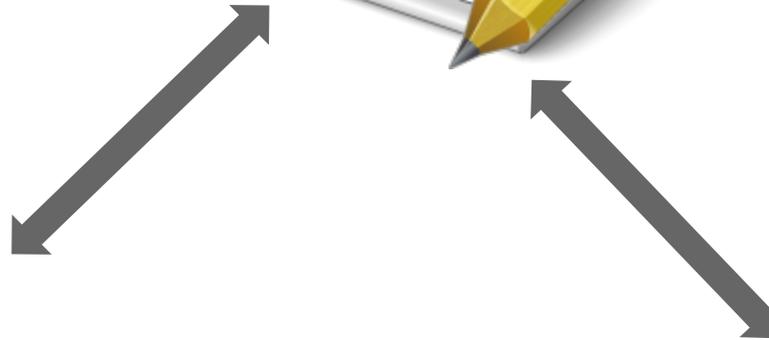
Modelagem UML



Edição simultânea e versionamento

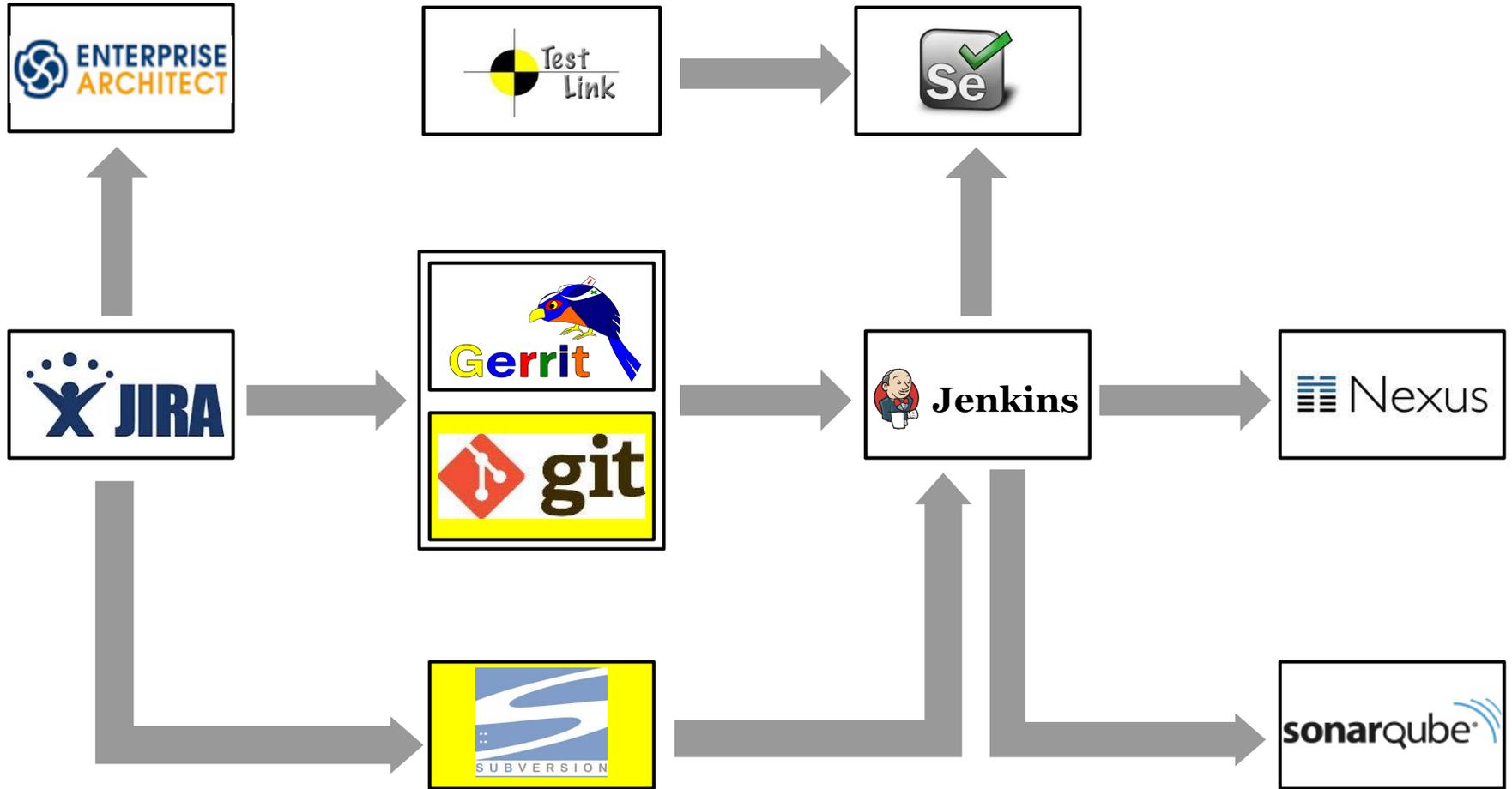


Banco de Dados



Subversion

Controle de Versões





subversion.apache.org

Controle de Versões Convencional

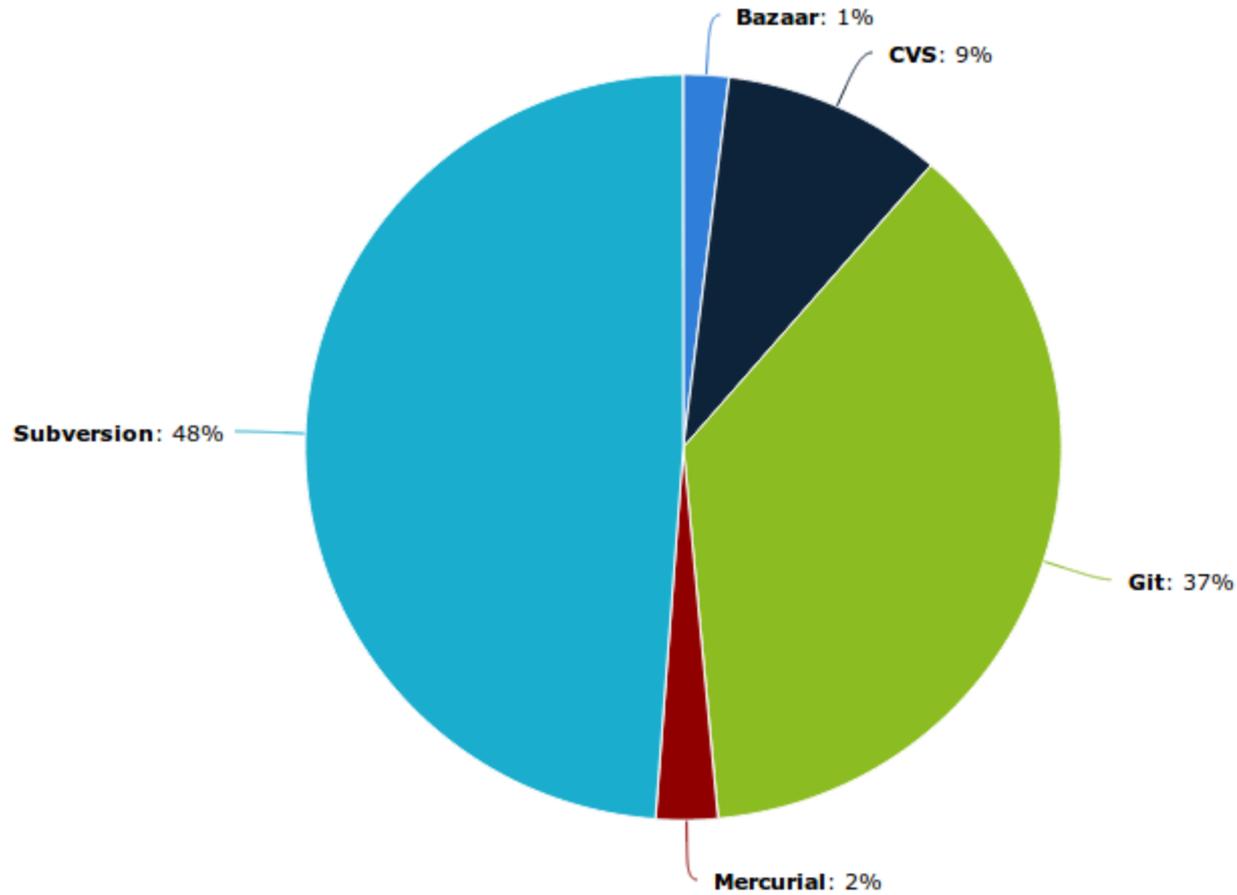
Centralizado

Robusto

Simple

Se você não
abusa de
branches e
merges 😊

ohloh.net/repositories/compare



Subversion no CPqD

+700 repositórios

+1.000 usuários

+50.000 commits por mês

metacpan.org/release/SVN-Hooks

meta::cpan

 Search

16 results (0.003 seconds)

Gustavo Leite de Mendonça Chaves / ▾ SVN-Hooks-1.25

APR 13, 2014

[Browse \(raw\)](#)

[Changes](#)

[Homepage](#)

[Clone repository](#)

[Issues \(0\)](#)

★★★★★ (2 reviews)

[Testers \(205 / 1 / 0\)](#)

[Kwalitee](#)

License: perl_5

ACTIVITY



TOOLS

[Download \(48.12Kb\)](#)

[MetaCPAN Explorer](#)

Modules

SVN::Hooks - A framework for implementing Subversion hooks.

SVN::Hooks::AllowLogChange - Allow changes in revision log messages.

SVN::Hooks::AllowPropChange - Allow changes in revision properties.

SVN::Hooks::CheckCapability - Check the svn client capabilities.

SVN::Hooks::CheckJira - Integrate Subversion with the JIRA ticketing system.

SVN::Hooks::CheckLog - Check log messages in commits.

SVN::Hooks::CheckMimeType - Require the svn:mime-type property.

SVN::Hooks::CheckProperty - Check properties in added files.

SVN::Hooks::CheckStructure - Check the structure of a repository.

SVN::Hooks::DenyChanges - Deny some changes in a repository.

SVN::Hooks::DenyFileNames - Deny some file names.

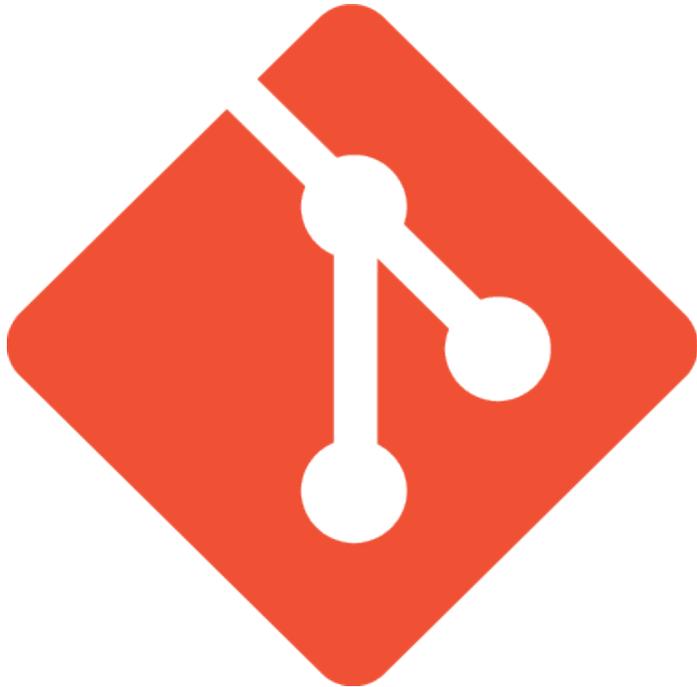
SVN::Hooks::Generic - Implement generic checks for all Subversion hooks.

SVN::Hooks::JiraAcceptance - Integrate Subversion with the JIRA ticketing system.

SVN::Hooks::Mailer - Send emails after successful commits.

SVN::Hooks::Notify - Subversion activity notification.

SVN::Hooks::UpdateConfFile - Maintain the repository configuration versioned.



git

git-scm.com

“For those of you that have been living under a rock, the single biggest change in developers’ lives in the last decade is Distributed Version Control.”



-- Joel Spolsky

<http://www.joelonsoftware.com/items/2013/03/11.html>



Controle de Versões Distribuído

leve e rápido

**trabalhe
desconectado**

**revise e
publique**

**merges são
simples**

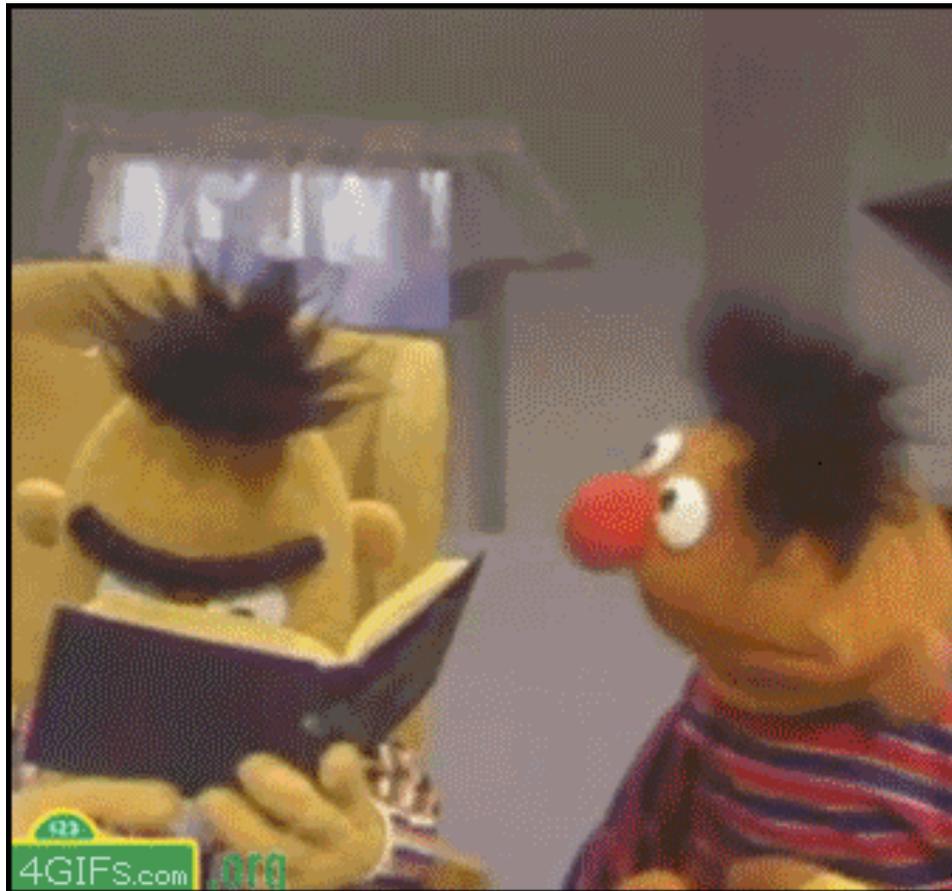
**visualização
da história**



“Initial git training”



“After reading the ‘Pro Git’ book”



metacpan.org/release/Git-Hooks

meta::cpan

 Search

11 results (0.11 seconds)

Gustavo Leite de Mendonça Chaves / **Git-Hooks-0.047** 2 ++

JAN 29, 2014

[Browse \(raw\)](#)

[Changes](#)

[Homepage](#)

[Clone repository](#)

[Issues \(1\)](#)

[Testers \(128 / 0 / 7\)](#) 

[Kwalitee](#)

[License: perl_5](#)

ACTIVITY



Documentation

[TODO.pod](#)

[TUTORIAL.pod](#)

Modules

[Git::Hooks](#) - A framework for implementing Git hooks.

[Git::Hooks::CheckAcls](#) - Git::Hooks plugin for branch/tag access control.

 [Git::Hooks::CheckJira](#) - Git::Hooks plugin which requires citation of JIRA issues in commit messages.

[Git::Hooks::CheckLog](#) - Git::Hooks plugin to enforce commit log policies.

 [Git::Hooks::CheckRewrite](#) - Git::Hooks plugin for checking against unsafe rewrites

 [Git::Hooks::CheckStructure](#) - Git::Hooks plugin for ref/file structure validation.

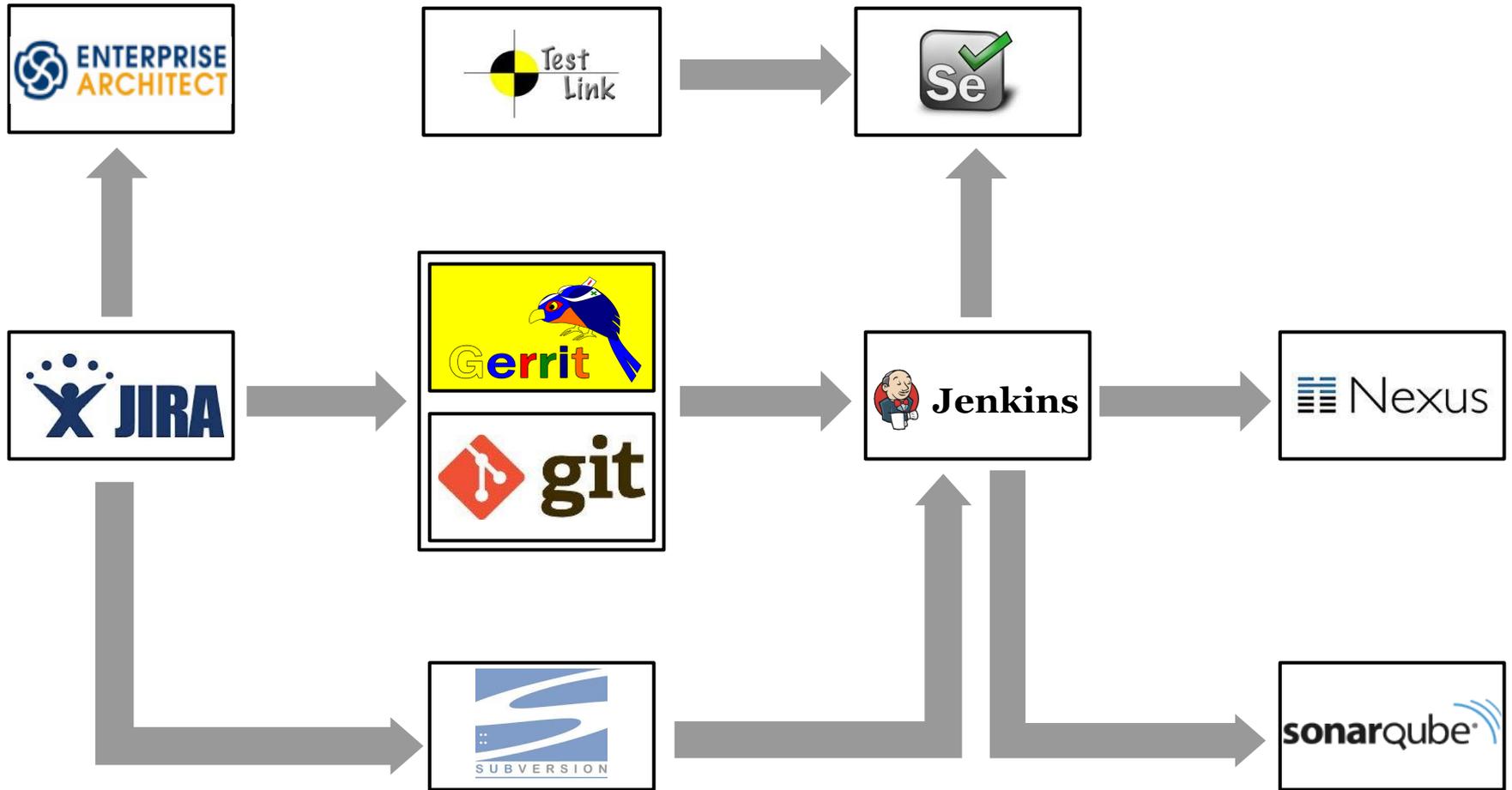
[Git::Hooks::GerritChangeld](#) - Git::Hooks plugin to insert a Change-Id in a commit message.

[Git::More](#) - A Git extension with some goodies for hook developers.

[Git::More::Message](#) - A Git commit message



Revisão de Código





gerrit
Gerrit Code Review



gerrit.googlecode.com

Gerrit Code Review

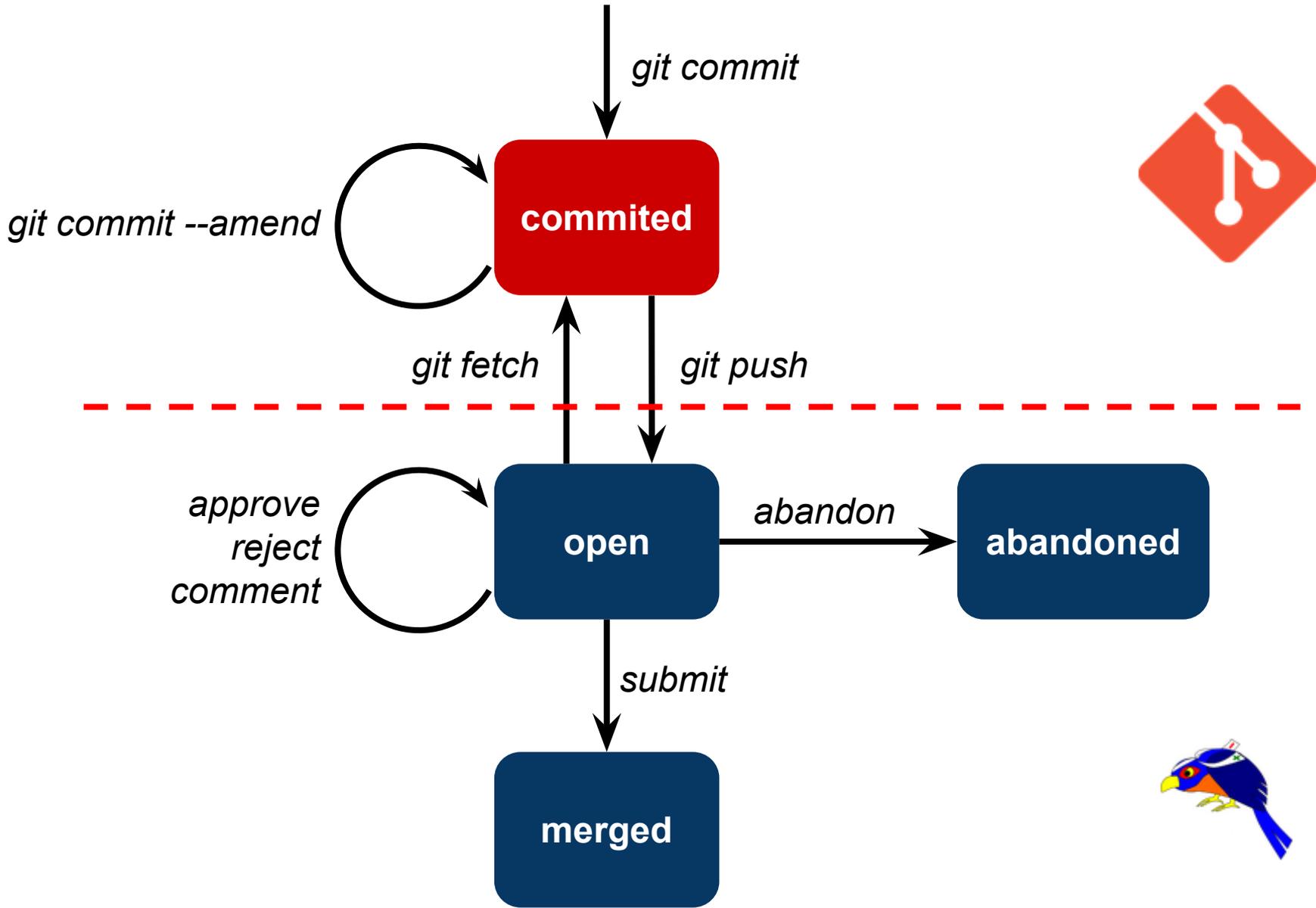
Revisão de Código

Baseado no JGit

Administração de repositórios

Controle de acesso





— *Entendo que a revisão de código ajuda a encontrar bugs mais cedo. Mas ela não atrasa o processo de desenvolvimento?*

— *Sim. A revisão de código gasta 5% do tempo que se leva pra desenvolvê-lo.*

— *5%, ok?*

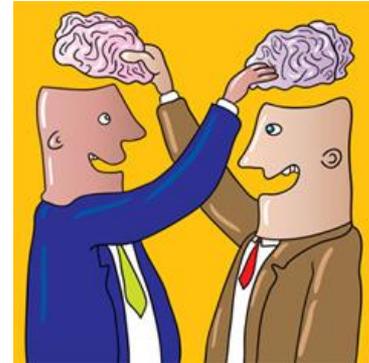
— **Só 5%, OK?!**



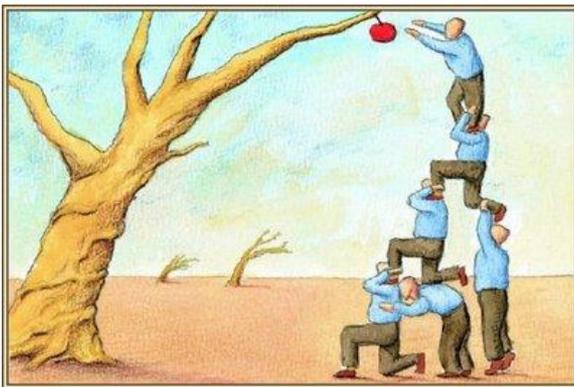
Ganhos da revisão de código



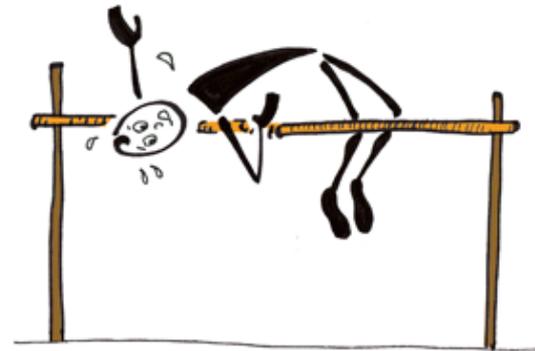
mentoring



peering



collaboration



pride



“Perdas” da revisão de código



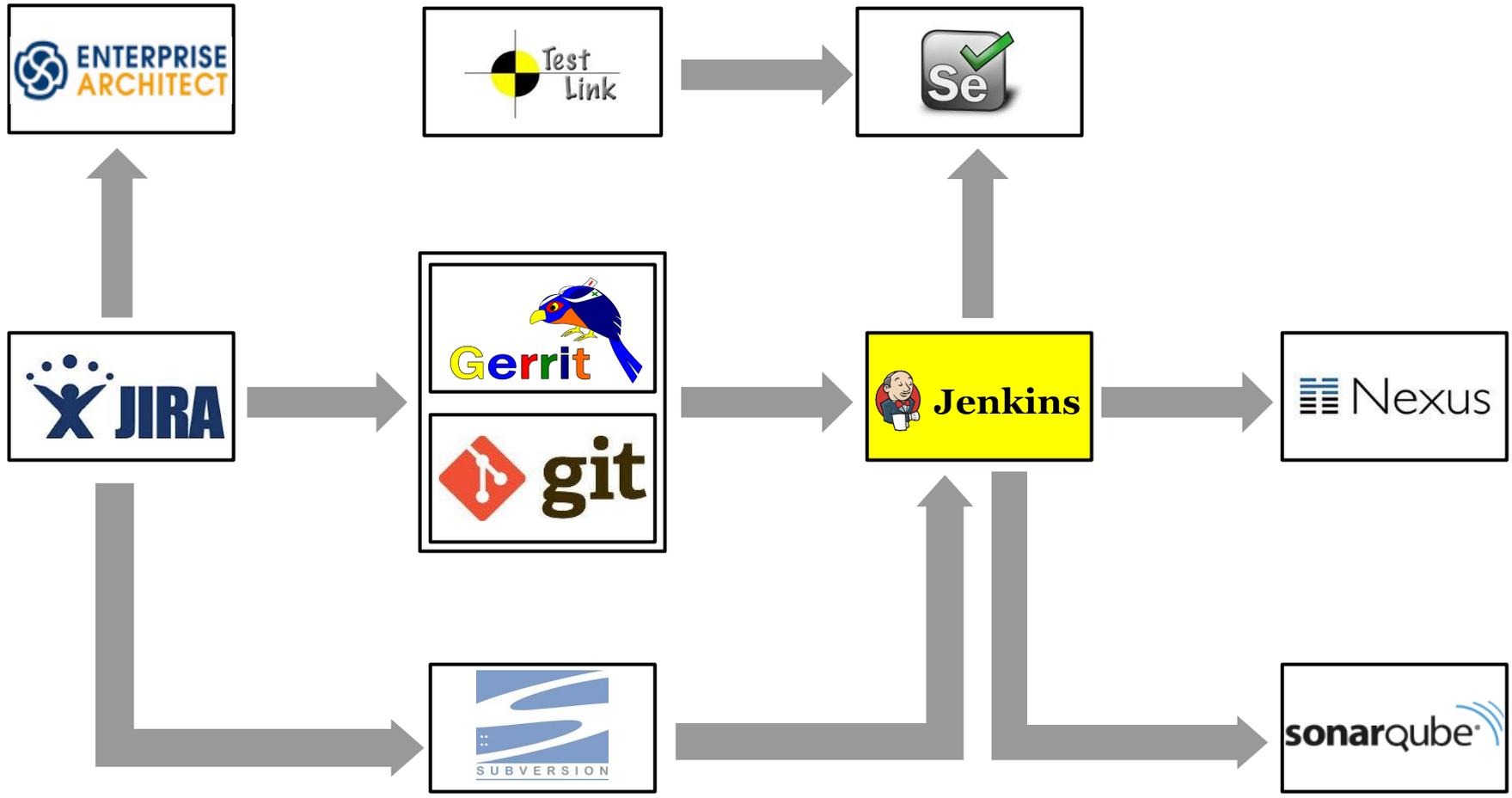
Commits mal feitos



Commits mal-intencionados



Integração contínua





Jenkins

jenkins-ci.org

Jenkins

Jenkins GMun 3.5

- [New Job](#)
- [Build History](#)
- [Edit View](#)
- [Delete View](#)
- [Project Relationship](#)
- [Check File Fingerprint](#)
- [Manage Jenkins](#)
- [Query and Trigger Gerrit Patches](#)
- [My Views](#)
- [Job Config History](#)
- [Dependency Graph](#)

Build Queue
No builds in the queue.

Build Executor Status

begonia

1	Idle	
2	Idle	
3	Idle	
4	Idle	

calisto (offline)
cpqd036279

Servidor corporativo de Integração Continua

Saiba mais sobre o Jenkins em nosso [wiki](#).
Acompanhe as novidades nos blogs da [Equipe de Ferramentas](#) e do [Projeto CDS](#).
Em caso de dúvidas ou problemas procure o [Help Desk](#).
Saiba mais sobre as versões e horários das compilações em:
[Planilha Produtos x versões x periodicidade](#)

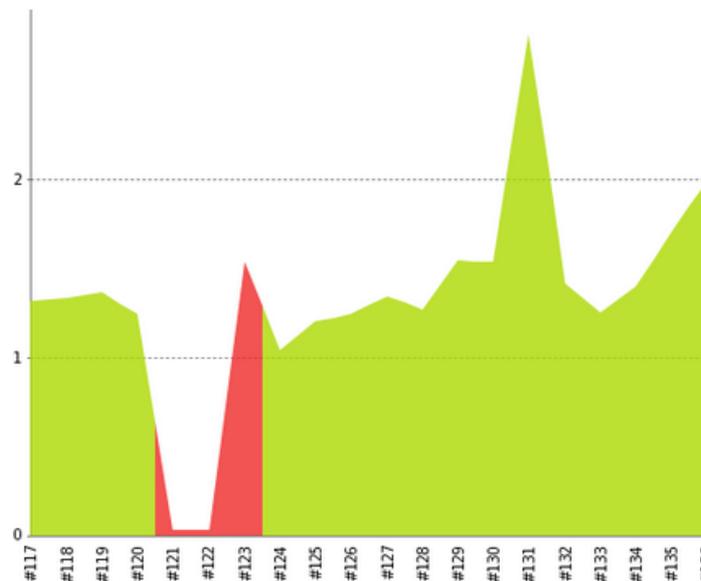


1 - Folder's	2 - Falhas	6.10	6.12	8.10	8.11	8.11.15-WB	8.13	8.14	8.15	8.15-wm	8.15.0-1
S				W							Name ↓
											eai-3.5.x
											qcfta-3.5.x
											qmun-3.5.x-IS-clients
											qmun-qcfta-3.5.x
											qmun-parent-3.5.x
											qmun-public-3.5.x
											qsa-3.5.x
											landbase-3.5.x
											siqsec-3.5.x

Informações sobre a execução do Job

- Histórico das builds

Build History (trend)		
	#136	Aug 5, 2013 11:27:56 AM
	#135	Aug 2, 2013 5:50:40 PM
	#134	Aug 1, 2013 9:58:02 AM
	#133	Jul 31, 2013 5:42:38 PM
	#132	Jul 31, 2013 5:37:02 PM
	#131	Jul 31, 2013 4:47:50 PM
	#130	Jul 30, 2013 5:14:05 PM
	#129	Jul 30, 2013 9:04:07 AM
	#128	Jul 29, 2013 11:24:36 AM
	#127	Jul 26, 2013 4:56:43 PM
	#126	Jul 24, 2013 12:34:40 PM
	#125	Jul 23, 2013 2:50:00 PM
	#124	Jul 23, 2013 10:44:02 AM
	#123	Jul 23, 2013 10:34:18 AM
	#122	Jul 23, 2013 10:33:51 AM
	#121	Jul 23, 2013 10:33:19 AM
	#120	Jul 23, 2013 8:44:45 AM



[Console Output](#)



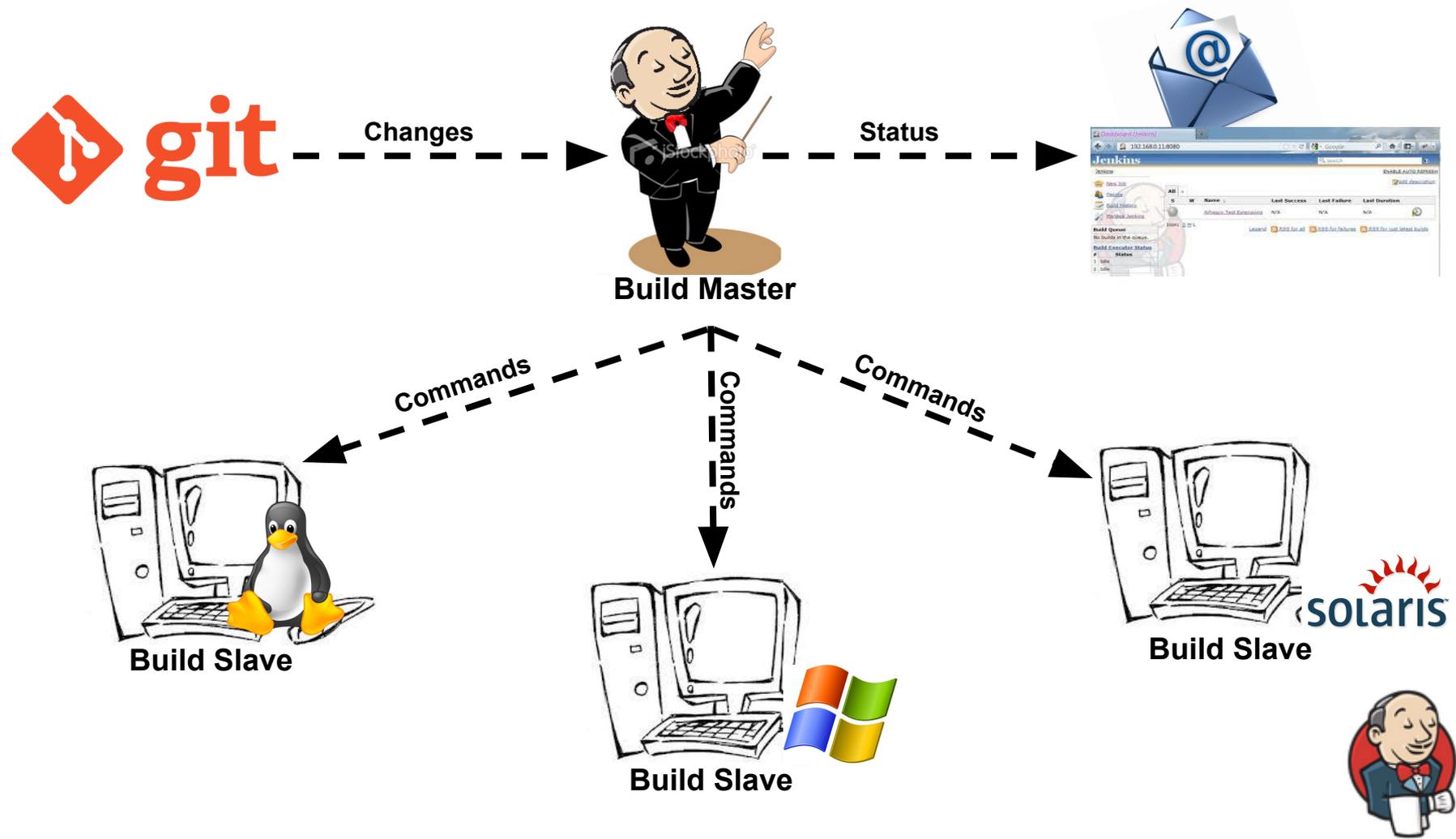
Console Output

```

11:27:56 Triggered by Gerrit: https://gerrit.cpqd.com.br/895 in silent mode.
11:27:56 Building remotely on vmmerak in workspace /L/disk0/jenkins-slave/workspace/moura-build-master
11:27:56 Checkout: moura-build-master / L/disk0/jenkins-slave/workspace/moura-build-master - hudson.remoting
11:27:56 Using strategy: Default
11:27:57 Last Built Revision: Revision e0b48ded7f8e1dd575e7ec37eda8c8f9c80044c3 (origin/master)
11:27:57 Fetching changes from 1 remote Git repository
11:27:57 Fetching upstream changes from origin
11:28:00 Commencing build of Revision f3c57bc2c875429b784e7cf80d5301851058bf4a (origin/master)
11:28:00 Checking out Revision f3c57bc2c875429b784e7cf80d5301851058bf4a (origin/master)
11:28:02 Parsing POMs
11:28:03 Modules changed, recalculating dependency graph
11:28:03 [moura-build-master] $ /opt/jdk/jdk1.7.0_10/bin/java -cp /L/disk0/jenkins-slave/maven:
org.jvnet.hudson.maven3.agent.Maven3Main /L/disk0/jenkins-slave/tools/hudson.tasks.Maven_Maven
11:28:04 <==[JENKINS REMOTING CAPACITY]==>channel started
11:28:05 log4j:WARN No appenders could be found for logger (org.apache.commons.beanutils.conver
11:28:05 log4j:WARN Please initialize the log4j system properly.
11:28:07 Executing Maven: -B -f /L/disk0/jenkins-slave/workspace/moura-build-master/pom.xml c\
11:28:09 [INFO] Scanning for projects...
11:28:09 [INFO] -----
  
```



Arquitetura



Jenkins no CPqD

11 servidores

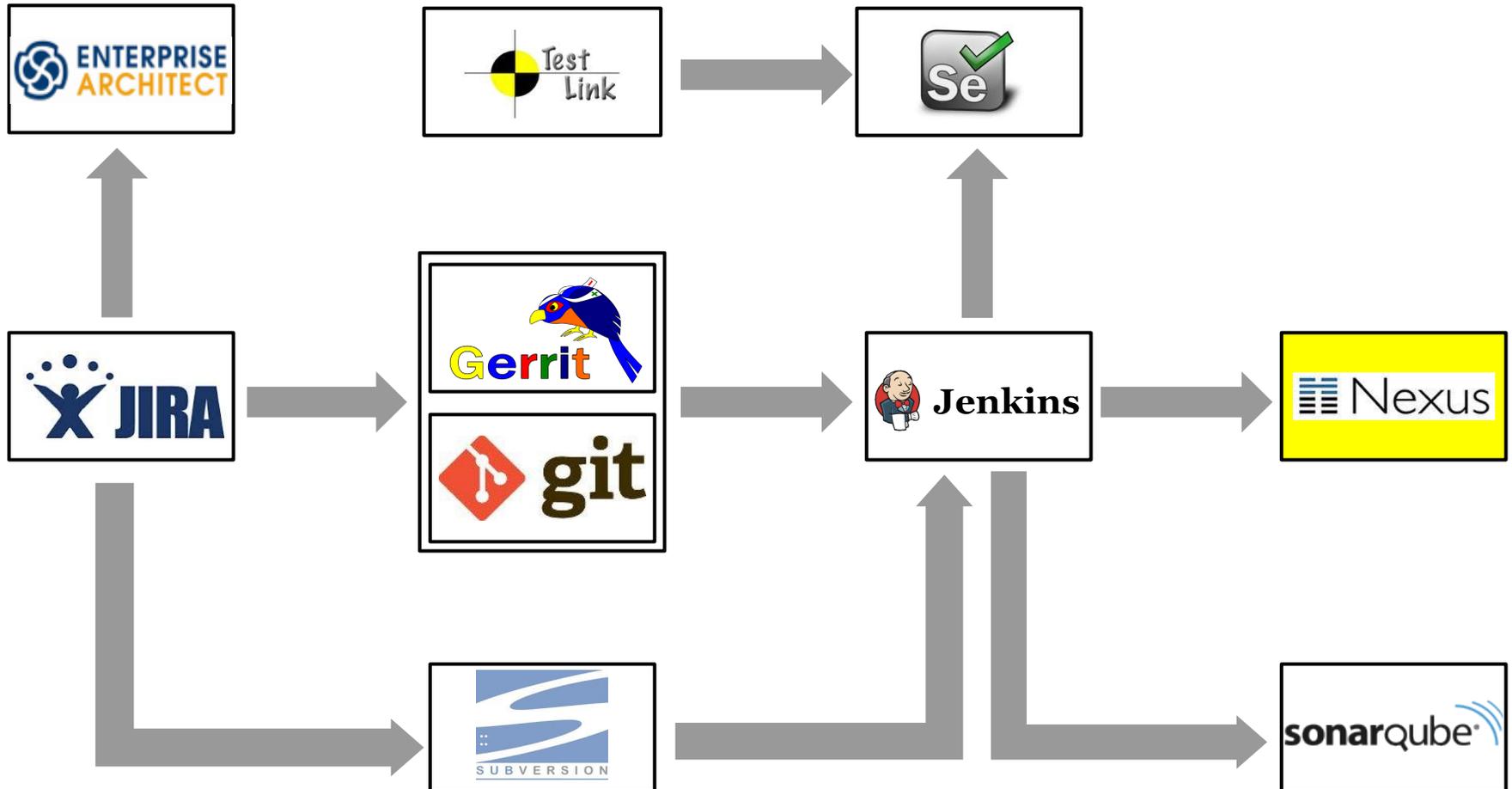
90 slaves

2.500 jobs

24 mil builds por mês



Repositório de artefatos

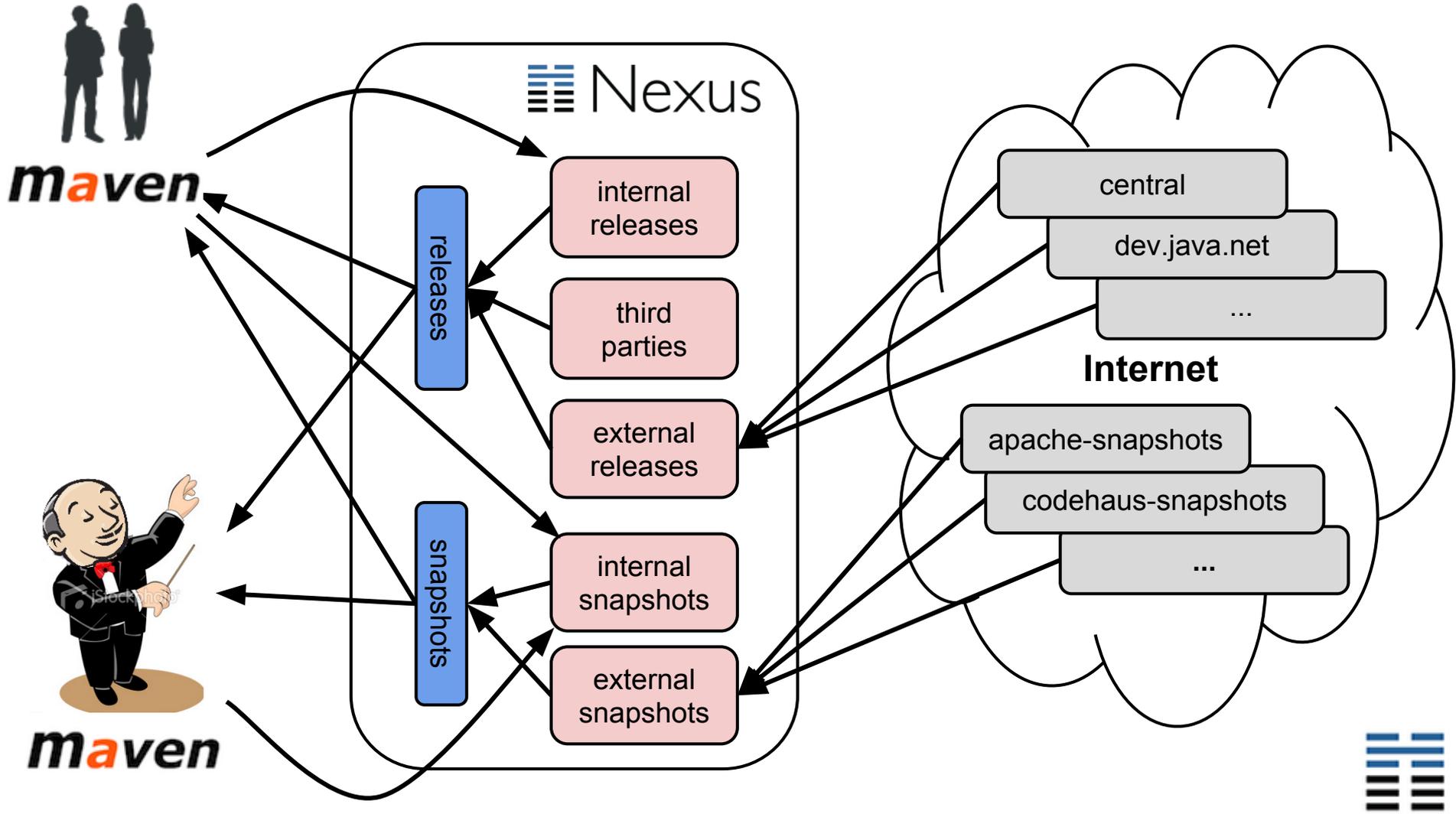


The Nexus logo is a stylized representation of a hexagram, specifically the hexagram for 'Nexus' (Hexagram 11, 'The Mountain over the Lake'). It consists of two vertical columns of three horizontal bars each. The top bar in each column is blue, and the bottom two bars are black.

Nexus

sonatype.org/nexus

Maven style dependency management



Nexus

Sonatype™ Nexus gustavo ▾
Sonatype Nexus™ 2.8.0-05

Welcome Search Repositories

Keyword Search ⓧ 🔍 ⚠️ Too many results, please refine the search

Group	Artifact	Version	Most Popular Version	Download
junitperf	junitperf	Show All Versions	i	pom, jar
junit-addons	junit-addons	Show All Versions	i	pom, jar
junit	junit-dep	Show All Versions	i	pom
junit	junit	Show All Versions	i	pom, jar, sources.jar, javadoc.jar
com.atlassian.junit	atlassian-junit	Show All Versions	i	pom, jar, javadoc.jar
ora.junit	com.springsource.o...	Show All Versions	i	pom, iar, sources.iar

Displaying Top 32 records ✕ Clear Results

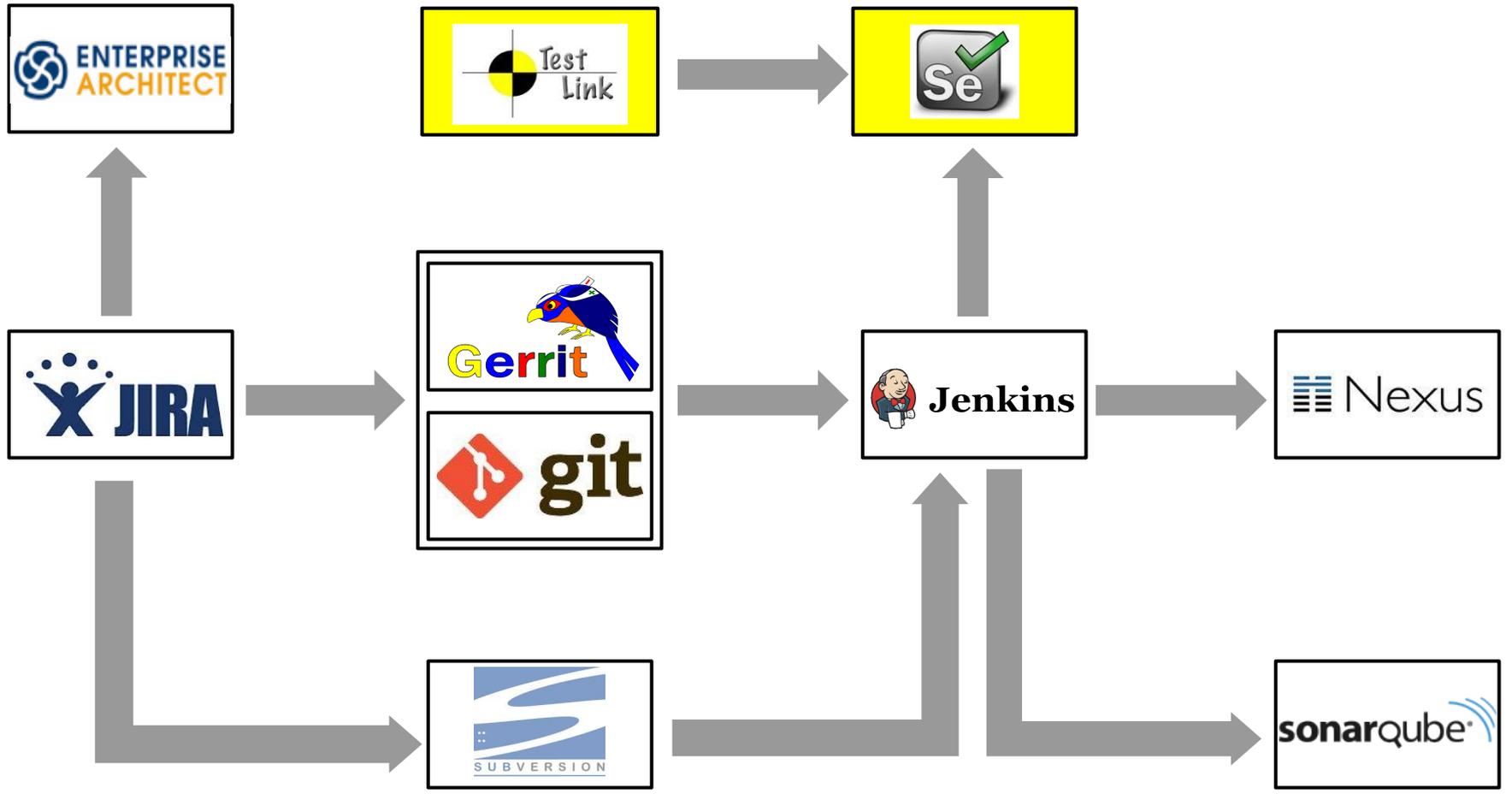
Maven **Artifact**

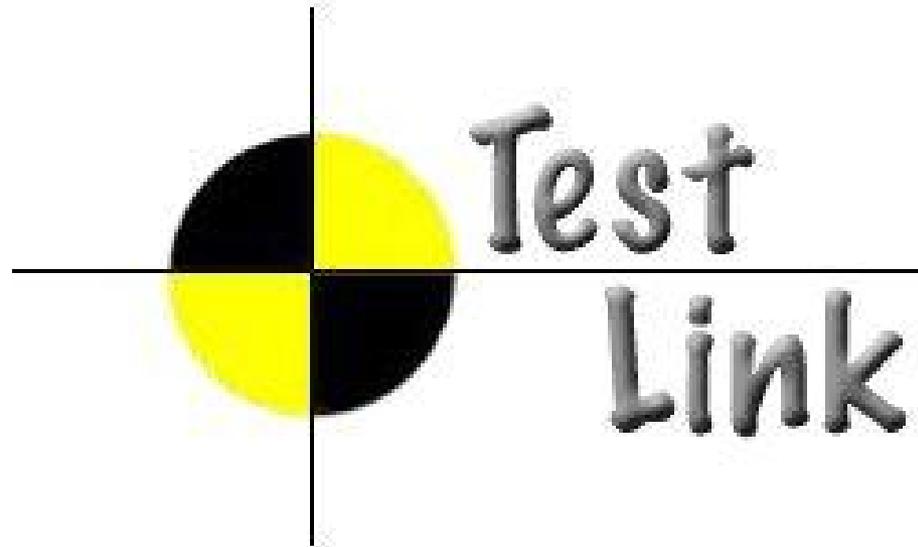
Group: junit
 Artifact: junit
 Version: 4.11
 Extension: jar
 XML:

```
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.11</version>
```



Testes





Organização dos Testes

TestLink

Usuários



Papéis

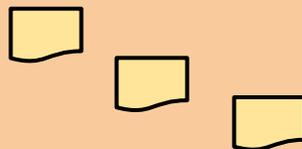
- admin
- leader
- tester
- guest

Projeto

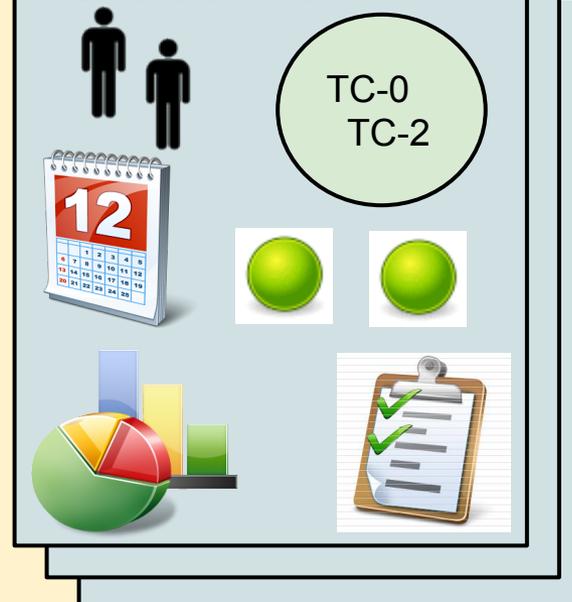
Especificação de Teste

- Suite A
 - TC-0
 - TC-1
- Suite B
 - TC-2

Requisitos



Plano de Teste



TC-0
TC-2



seleniumhq.org

Selenium IDE

The image shows the Selenium IDE 1.0.8 interface. On the left, a Firefox browser window displays the Mozilla Firefox Start Page. The Selenium IDE window is overlaid on top, showing a menu bar (File, Edit, Options, Help), a Base URL field, and a toolbar with playback controls (Fast, Slow, Play, Stop, Refresh). Below the toolbar is a table with columns for Command, Target, and Value. At the bottom of the IDE window are tabs for Log, Reference, UI-Element, and Rollup, along with Info and Clear buttons. A large black arrow points from the Selenium IDE window to a list of supported languages on the right. A circular arrow highlights the Firefox browser window.

Command	Target	Value
---------	--------	-------

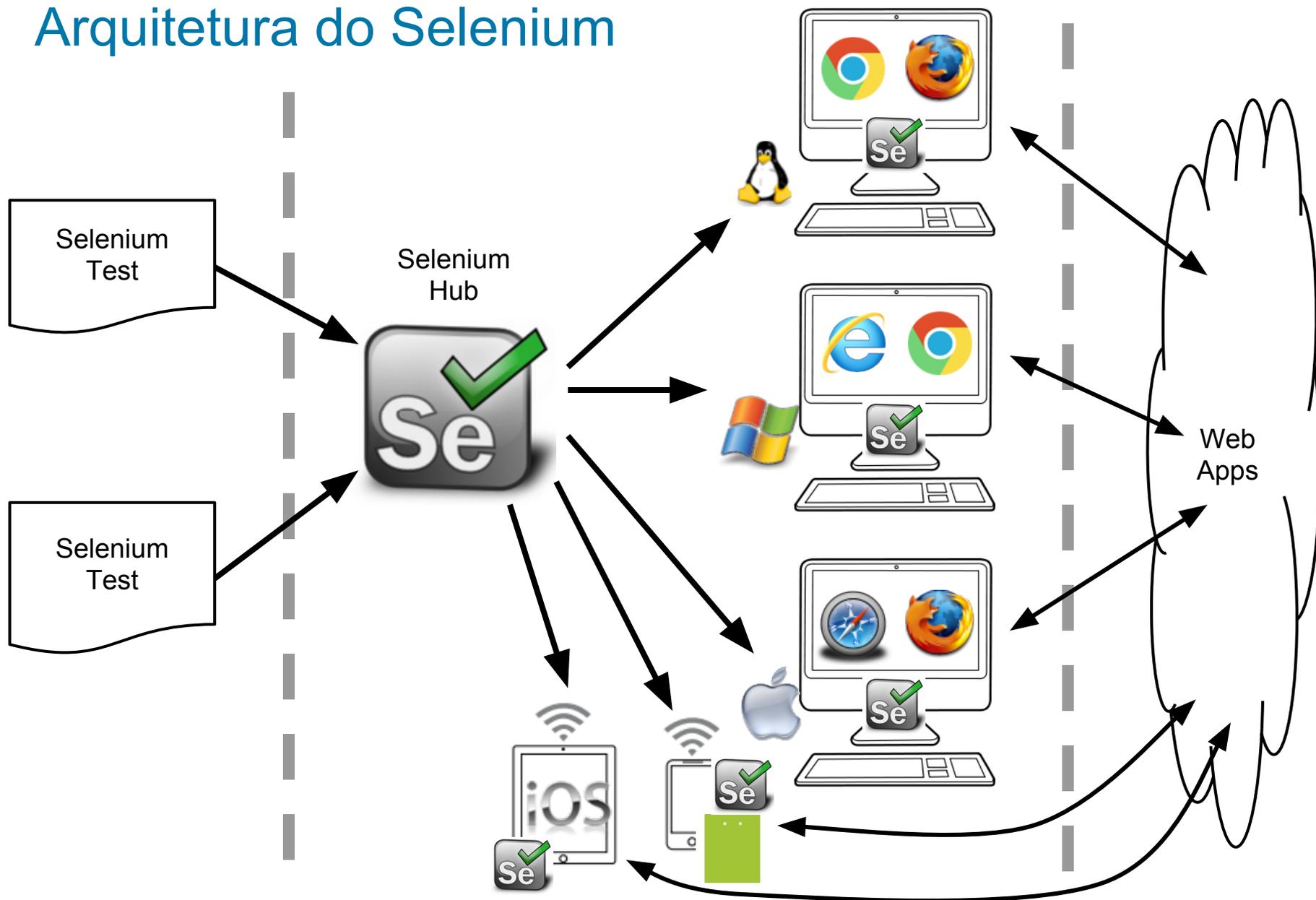
Command
Target Find
Value

Log Reference UI-Element Rollup Info Clear

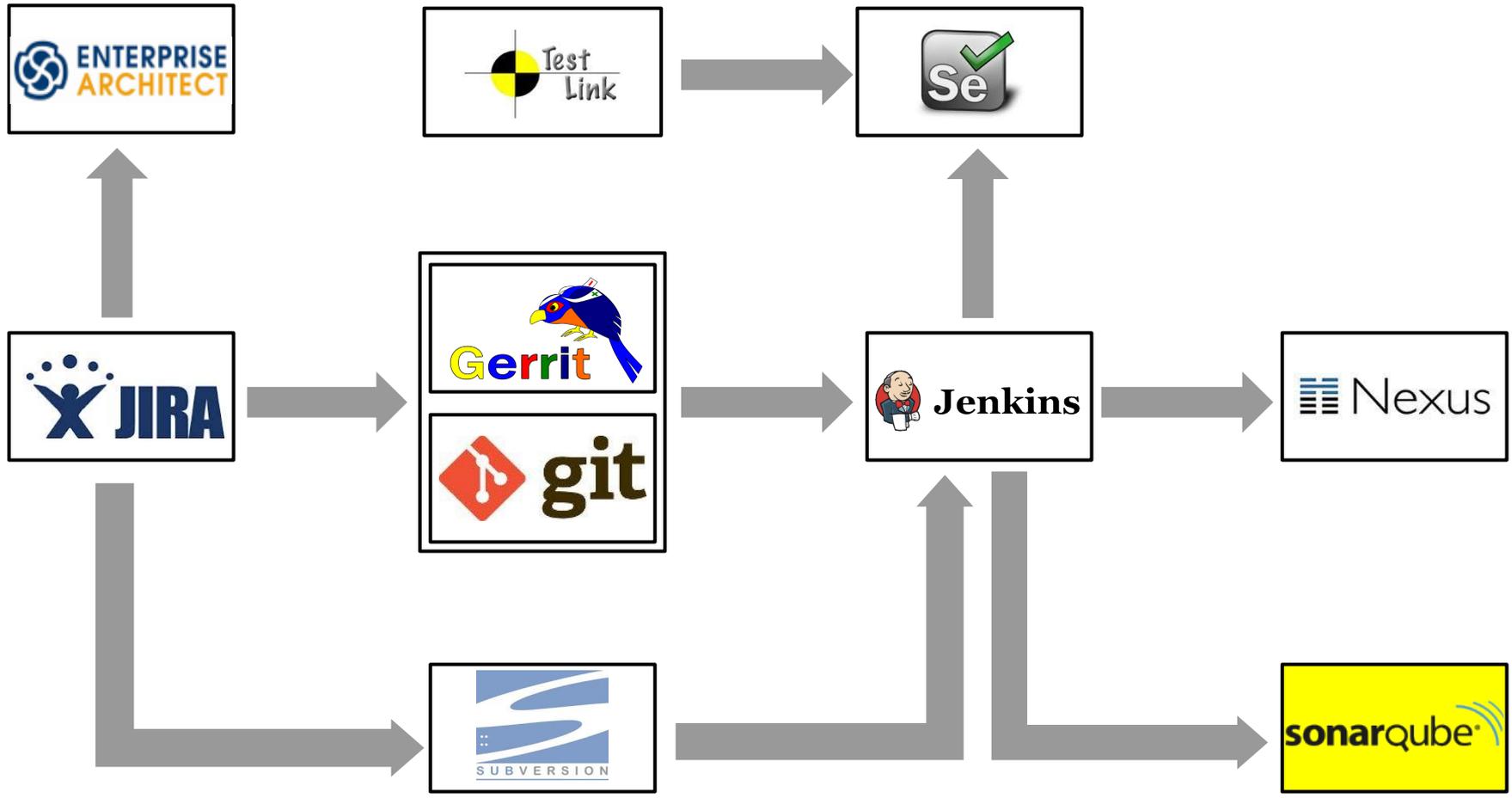
Supported Languages:

- <HTML>
- Java
- PHP
- Perl
- Python
- Ruby
- C#

Arquitetura do Selenium



Inspeção contínua



Continuous Inspection

sonarqube



sonarqube.org

Inspeção contínua

- Análise estática automatizada de código
 - Disparada pelo Jenkins
 - Java, C/C++, C#, PHP, Javascript, XML, etc.
- Dezenas de métricas de qualidade
 - Complexidade, documentação, cobertura de testes, duplicação de código, *coding standards*, etc.
 - Métrica fora dos limites aceitáveis quebra a *build*.

Dashboard e tendências

Lines of code
164.950 ▲
 309.287 lines ▲
 77.170 statements ▲
 2.264 files ▲

Classes
3.021 ▲
 230 packages
 7.415 methods ▲
 1.528 accessors ▲

Violations
7.875 ▲

Rules compliance
85,3%

Blocker	0
Critical	791 ▲
Major	6.666 ▲
Minor	373
Info	45

Comments
23,6%
 51.015 lines ▲
 54,7% docu. API
 4.510 undocu. API

Duplications
11,9%
 36.702 lines ▲
 2.432 blocks ▲
 528 files ▲

Technical Debt ⓘ
15,5%
 \$ 790.571 ▲
 1.581 man days ▲

Complexity
3,9 /method
9,5 /class
12,7 /file
 Total: 28.707 ▲

● Methods ○ Files

Security violations
41
 99,9% compliance
 10/17 rules activated

PDF Report
 Get quality info in a pdf document
[Download](#)

Code coverage
0,2%
 0,2% line coverage
 0,1% branch coverage

Unit test success
100,0%
 0 failures
 0 errors
 18 tests
 2.7 sec ▲

LCOM4
1,0 /class
 1,4% files having LCOM4>1

Response for Class
18 /class

Events All ▼

Issue Drilldown

The screenshot illustrates the process of drilling down into a SonarQube issue. It is divided into three main sections:

- Dashboard (Top Left):** Shows overall project metrics.
 - Lines of code: 62,419
 - Classes: 1,300
 - Comments: 7.7%
 - Violations: 1,165
 - Rules compliance: 96.5%
 A red arrow labeled "Click 1" points to the "Violations" count.
- Violations Drilldown (Middle):** A table showing violations across different components.

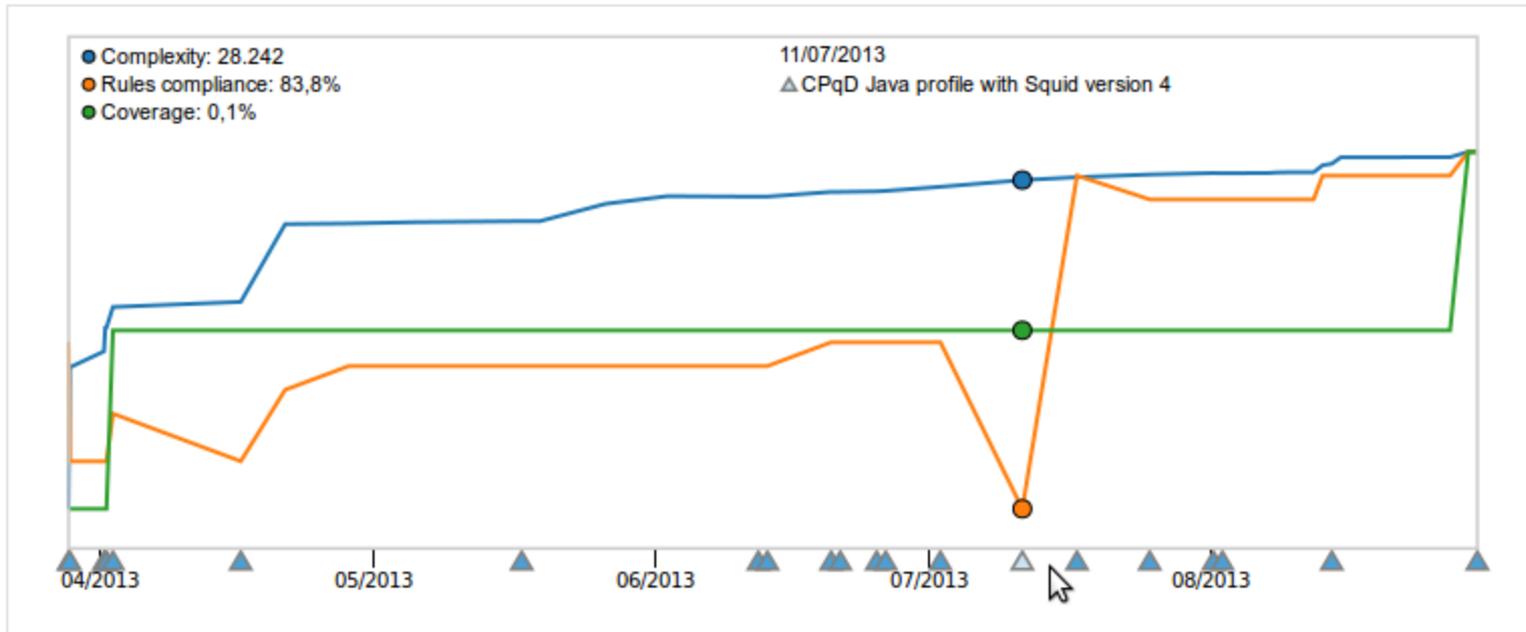
Component	Violations
Sonar :: Web Service Client	46
Sonar :: Plugin API	18
Sonar :: Server	12
Sonar :: Core	11
Sonar :: Batch	3
Sonar :: Graph	1
org.sonar.wsclient.services	46
org.sonar.api.database.model	9
org.sonar.server.ui	7
org.sonar.api.batch	4
org.sonar.com.dashboard	4
org.sonar.api.measures	2
ViewProxy	7
ResourceQuery	6
Resource	6
ViolationQuery	6
ReviewQuery	6
Snapshot	6

 A red arrow labeled "Click 2" points to the "ViewProxy" component.
- Issue Detail (Bottom):** Shows the details of a specific violation.
 - Severity: Major (7)
 - Rule: Malicious code vulnerability - May expose internal representation by returning reference to mutable object
 - Code Snippet:


```
return widgetPropertiesByKey.get(propertyKey);
}

public String[] getWidgetCategories() {
    return widgetCategories;
}
```
 - Violation Description: Malicious code vulnerability - May expose internal representation by returning reference to mutable object | 8 months
 - Message: org.sonar.server.ui.ViewProxy.getWidgetCategories() may expose internal representation by returning ViewProxy.widgetCategories
 A red arrow labeled "Click 3" points to the "ViewProxy" component in the table above.

Timeline

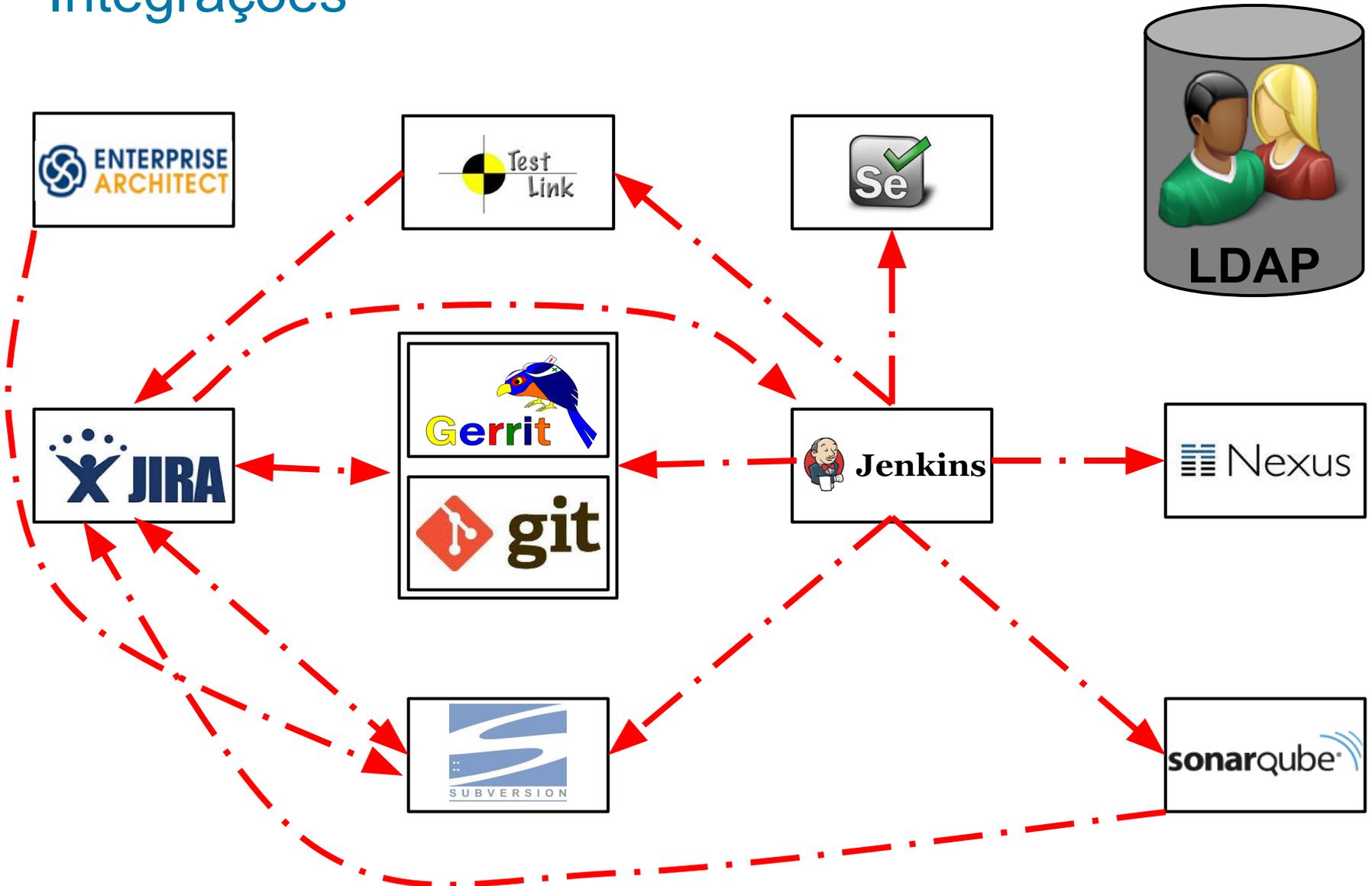


Sonar no CPqD

144 projetos ativos

11 milhões de linhas de código

Integrações



serendipidade

padronização

disponibilidade



produtividade

atualização



qualidade

treinamentos

evolução



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Obrigado!

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