Startup Engineering

Joel Testing, Deployment and CI

Sung Kim

Project presentation tomorrow!

- Show
  - specification: trello, git issues
  - code: pull requests (in PM repos)
  - test results and CI results (today's lecture)
- Demonstrate
  - your web app and android

This part is based on

The Joel Test (by Joel Spolsky), 2000
http://www.joelonsoftware.com/articles/fog0000000043.html

Some slides are borrowed from:
http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Joel on Software

The Joel Test: 12 Steps to Better Code

by Joel Spolsky

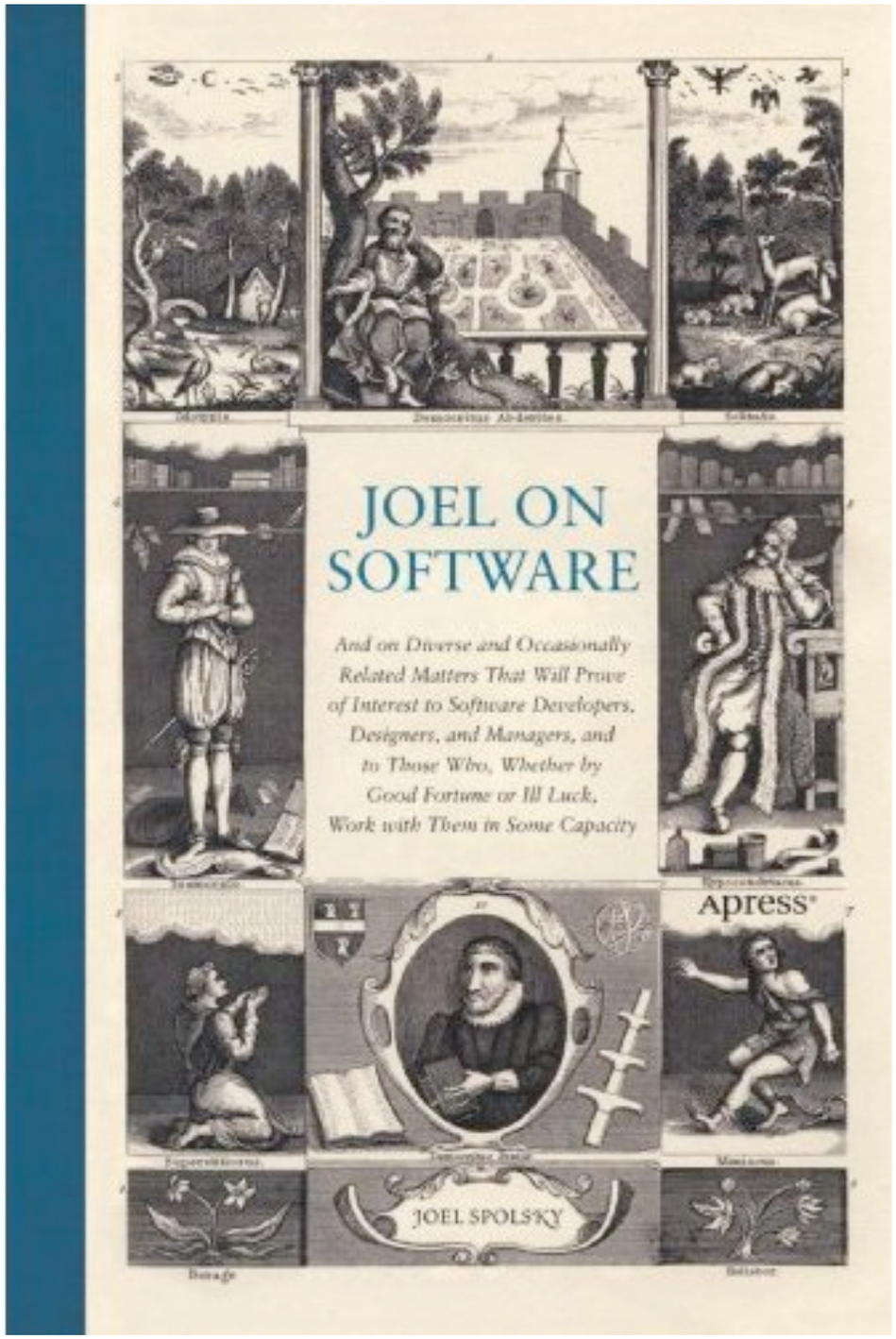
Wednesday, August 09, 2000

Have you ever heard of SEMA? It's a fairly esoteric system for measuring how good a software team is. No, *wait! Don't follow that link!* It will take you about six years just to *understand* that stuff. So I've come up with my own, highly irresponsible, sloppy test to rate the quality of a software team. The great part about it is that it takes about 3 minutes. With all the time you save, you can go to medical school.

The Joel 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?

Joel Spolsky



stackoverflow

Questions | Tags | Users | Badges | Unanswered | Ask Question

Stack Overflow is a community of 4.7 million programmers, just like you, helping each other.

Join them, it only takes a minute:

Sign up

Join the Stack Overflow community to:

Ask programming questions

Answer and help your peers

Get recognized for your expertise

Top Questions

interesting | 419 featured | hot | week | month

0 votes	0 answers	1 view	Ajax not working beyone PhoneGap 3.7 — cordova, phonegap-build — asked 47 secs ago ojsglobal 139
0 votes	0 answers	8 views	ruby shoes “illegal instruction” macbook air but not on imac (./pango-querymodules?) — ruby, shoes, pango — modified 50 secs ago ThatAintWorking 504
8 votes	4 answers	7k views	How to swap DOM child nodes in JavaScript? — javascript, dom, nodes — answered 59 secs ago Chad Mx 71
6 votes	3 answers	197 views	LINQ merge List<IEnumerable<T>> into one IEnumerable<T> by some rule — c#, linq — modified 1 min ago mmix 3,764
0 votes	0 answers	2 views	sbt runtime classPath does not match compile classPath, causes java.lang.NoClassDefFoundError

Jobs near you

Senior Backend Developer
WOW App
Hong Kong
php | mysql

Top Level Web Graphic Designer UX+UI Full Time, Telecommute-EU
Revenviews Limited
Hong Kong Island, Hong Kon… / remote
html | css

More jobs near Central District…

Hot Network Questions

- Make exception for (X) in (Y)
- How can I reach out to my 16-year-old son who has voiced he's

The Joel Test

In general, a score of <= 10 means you're in trouble.

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 you have quiet working conditions?
9. Do you use the best tools money can buy?
10. Do you have testers as part of the team?
11. Do you have interview candidates write code?
12. Do you do hallway usability testing?

http://korean.joelonsoftware.com/Articles/TheJoelTest.html.

Do you use source control?

- What are the benefits?
  - Allows multiple developers
  - Keep project in consistent state
  - Track changes and enable roll-back
  - Manage multiple versions
  - Save data in case of a disaster
  - Authoritative source for “daily build”

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you have a one step build?

- A single script that
  - [does a full checkout from scratch]
  - rebuilds every line of code
  - makes the binary executable files in all versions, languages and #ifdef combinations
  - [creates the installation package]
  - [creates the final media - CDROM, web site, …]
- All steps are *automated* and exercised regularly
- So, why is this valuable?

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you do a daily build and test?

- Build the entire product every day and run a good test suite against the new version
  - build from checked in sources
  - automatic and frequent
  - find out early that you've got problems and fix them before disaster strikes

- Benefits
  - Minimizes integration risk
  - Reduces risk of low quality
  - Supports easier defect diagnosis
  - Improves morale - developers, managers, customers

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you use a bug database?

- You can't keep the bug list in your head
  - Especially with multiple developers and multiple customers

  Moreover, looking at the history of bugs can be insightful!

- To characterize a bug consider:
  - how to reproduce it
  - expected behavior, actual behavior
  - responsible party, status, priority

- Examples: Trac, Bugzilla, text file

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you fix bugs before writing new code

Why not fix them later?

- Familiar with the code now
- Harder to find (and fix) later
- Later code may depend on this code (try building on quicksand…)
- Bugs may reveal fundamental problems
- Leaving all bugs to the end will make it harder to understand and keep the schedule

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you have an up-to-date schedule?

- Keeps expectations realistic
  - For the team, customers, stakeholders
- Allows for more accuracy
  - Use experience to improve estimates
- Helps prevent feature creep
  - Don’t take on anything without checking the schedule first

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you have a spec?

- Easier to fix problems at the design stage
- You know what you are trying to build
  - So do your teammates and customer
- More likely that you build the right thing
  - Pieces fit together
  - Customer is satisfied
- Conceptual integrity for your project
- Undocumented code has no commercial value
  - Joel's example: Netscape Navigator

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Do you have testers?

- “If your team doesn't have dedicated testers, at least one for every two or three programmers, you are either shipping buggy products, or you're wasting money.”

Do you do hallway usability testing?

- “A hallway usability test is where you grab the next person that passes by in the hallway and force them to try to use the code you just wrote. ”
- “If you do this to five people, you will learn 95% of what there is to learn about usability problems in your code.”

The Joel Test

In general, a score of <= 10 means you're in trouble.

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 you have quiet working conditions?
9. Do you use the best tools money can buy?
10. Do you have testers as part of the team?
11. Do you have interview candidates write code?
12. Do you do hallway usability testing?

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

The Joel 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 you have quiet working conditions?
9. Do you use the best tools money can buy? 
10. Do you have testers as part of the team?
11. Do you have interview candidates write code? 
12. Do you do hallway usability testing?

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Today

- Joel Testing
- Deployment
- Continuous Integration (CI)

How would you deploy?

your (backend) programs and fronted (html/css/js)

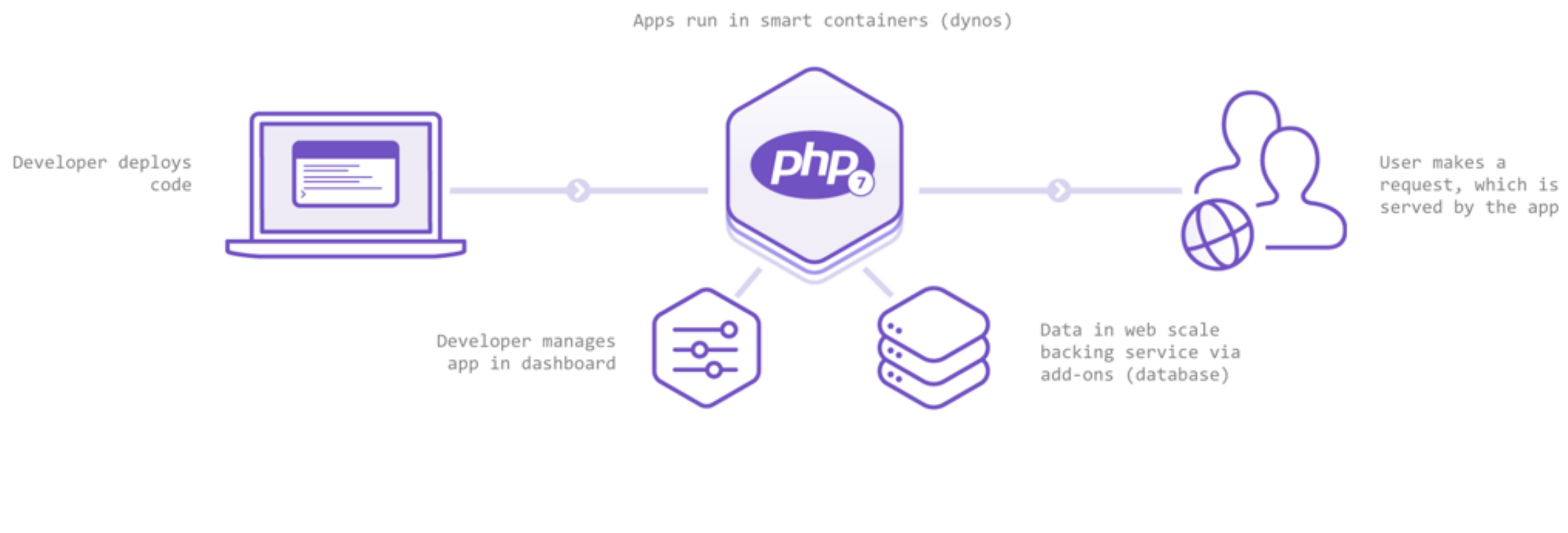
How would you deploy?

your (backend) programs and fronted (html/css/js)

- No deploy: I just code and test on the server
- local coding/testing and do sftp
- git push, ssh login, git pull
- …

heroku

An elegant platform for modern PHP apps



Setup for PHP


```
$ heroku login
Enter your Heroku credentials.
Email: dz@example.com
Password:
...
```

https://devcenter.heroku.com/articles/getting-started-with-php#set-up

heroku toolbelt

everything you need to get started using heroku

Mac OS X | Windows | Debian/Ubuntu | Standalone

```
wget -O- https://toolbelt.heroku.com/install-ubuntu.sh | sh
```

https://toolbelt.heroku.com/

How it works?

- git clone https://github.com/heroku/php-getting-started.git
- cd php-getting-started
- heroku create bookmark-b
- vi web/index.php; commit -m”XX” -a (change and commit)
- git commit -a -m"Updated index.php"
- git push heroku master
- heroku open

How it works?

- git push heroku master
- heroku open

More information at https://devcenter.heroku.com/

Learn about building, deploying and managing your apps on Heroku.


Node.js


Ruby


Java


PHP


Python

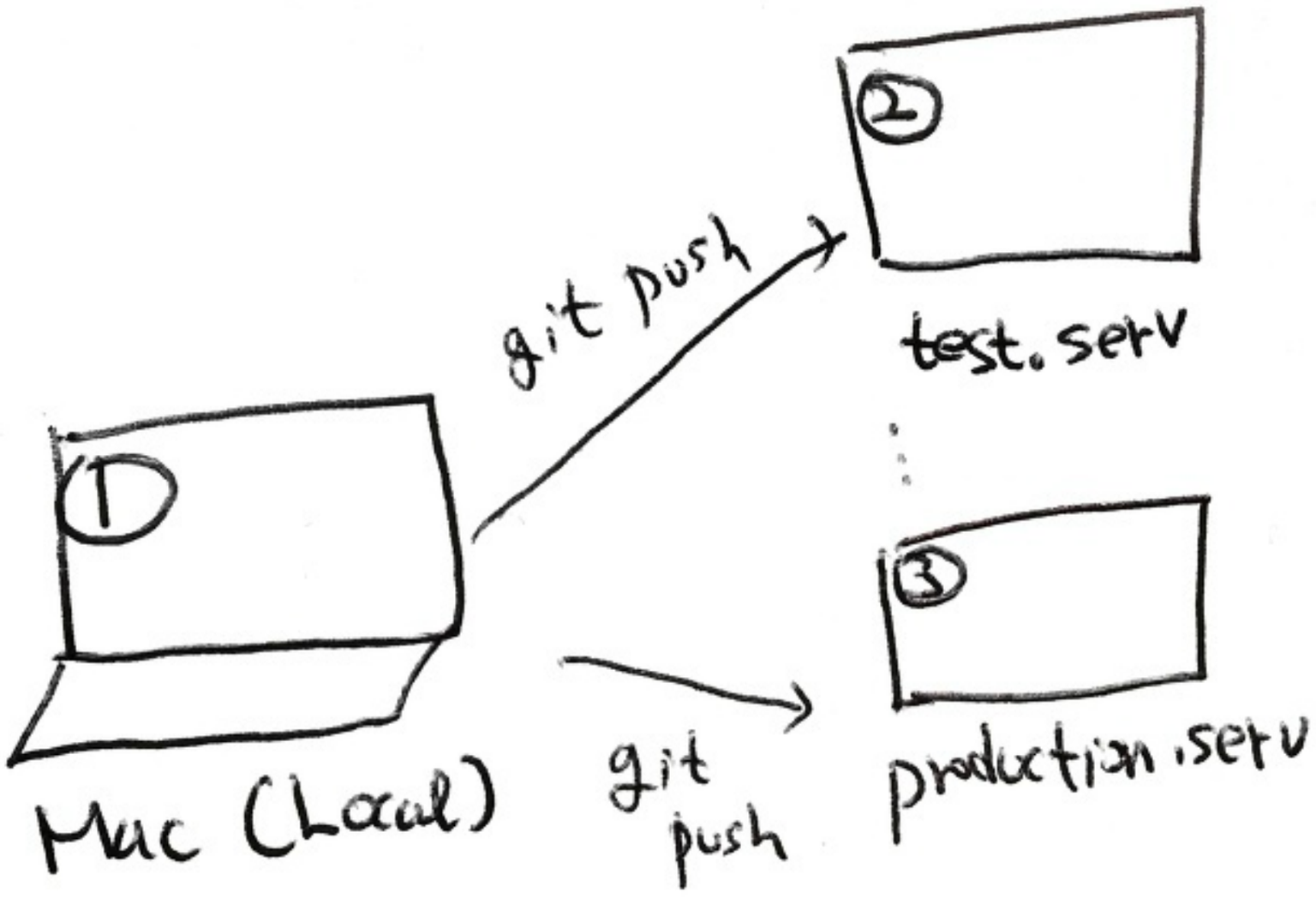

Go


Scala

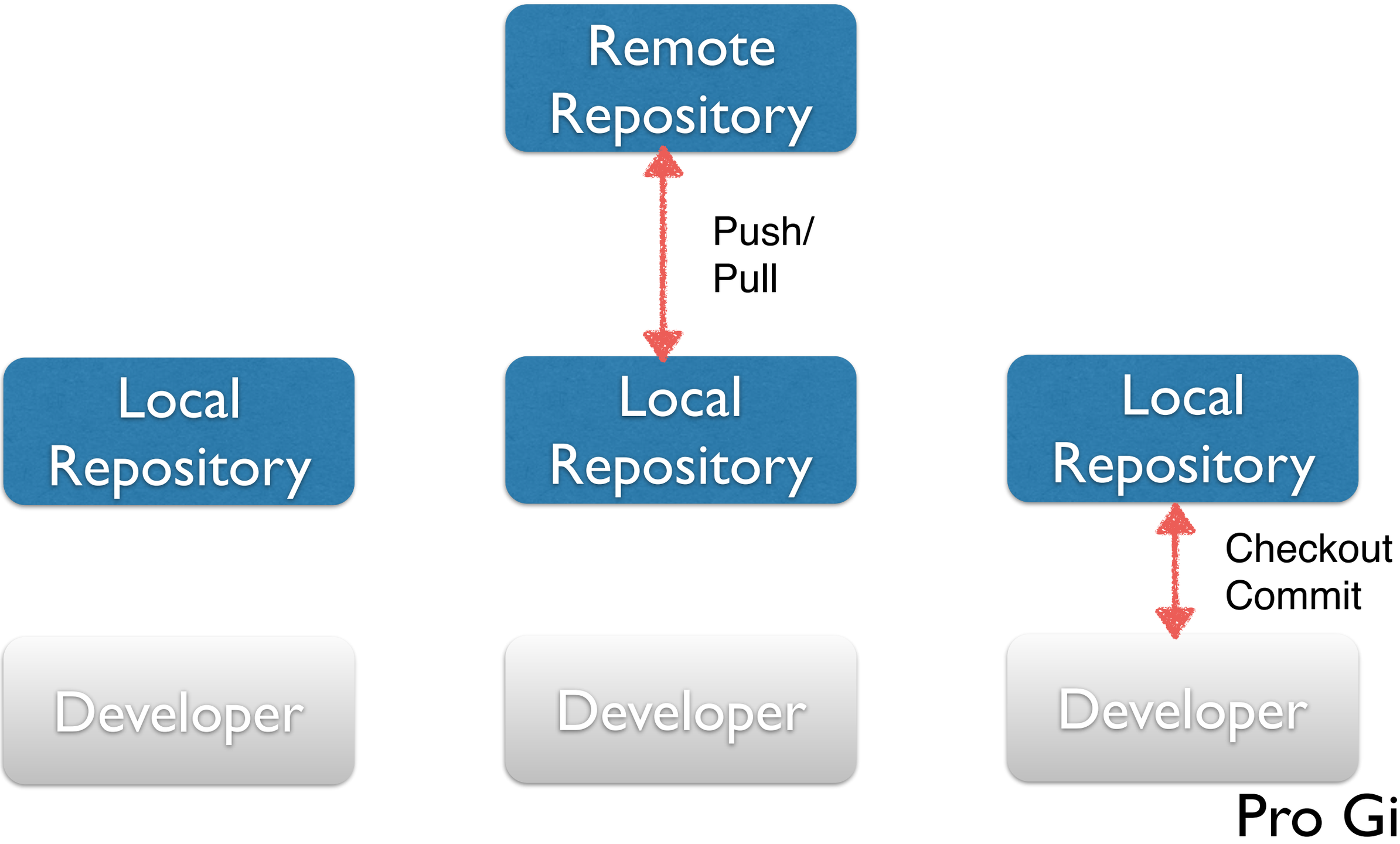

Clojure

Haven't used Heroku yet? Sign up

Easy deployment using git

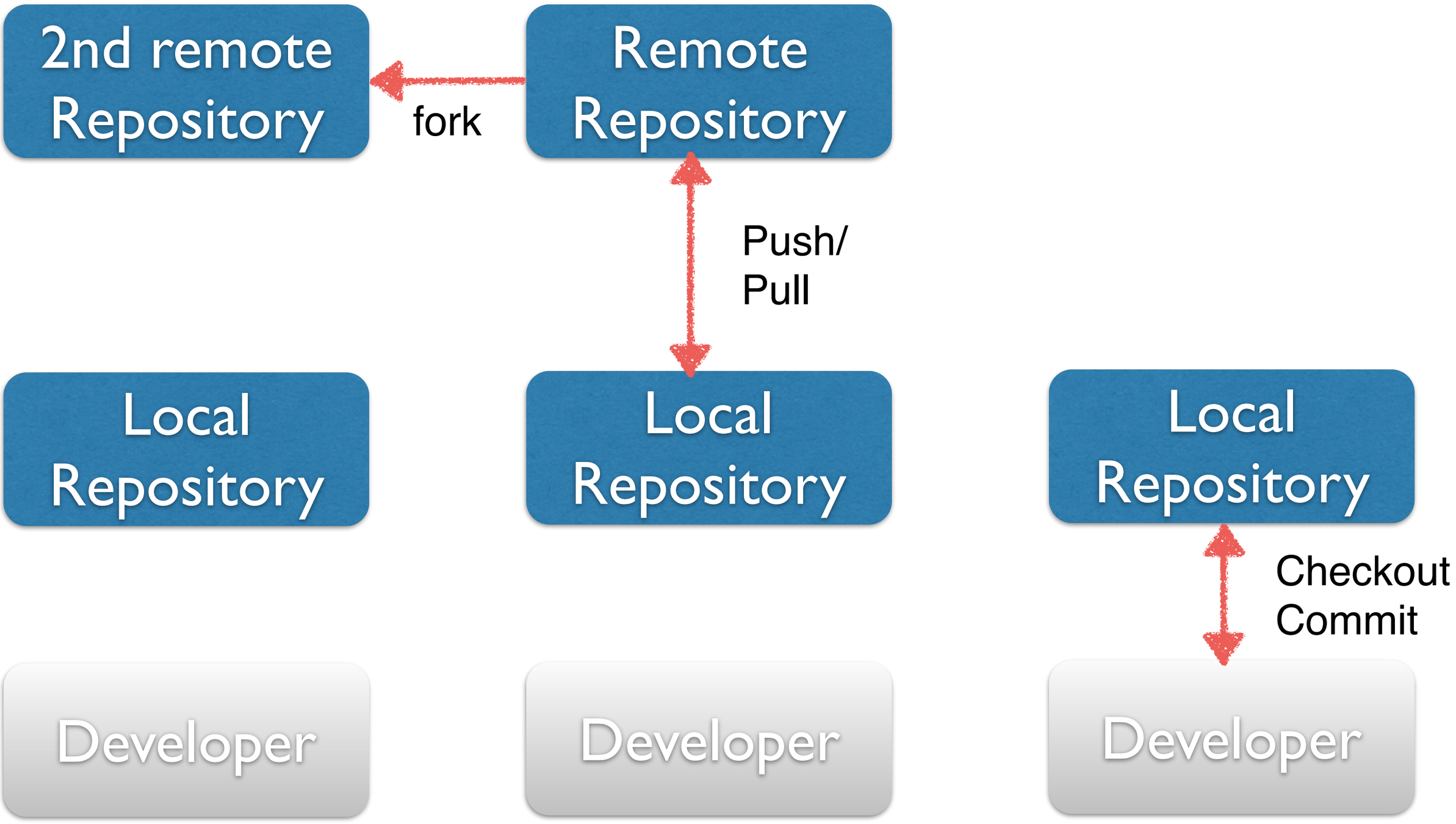


Git basic workflow



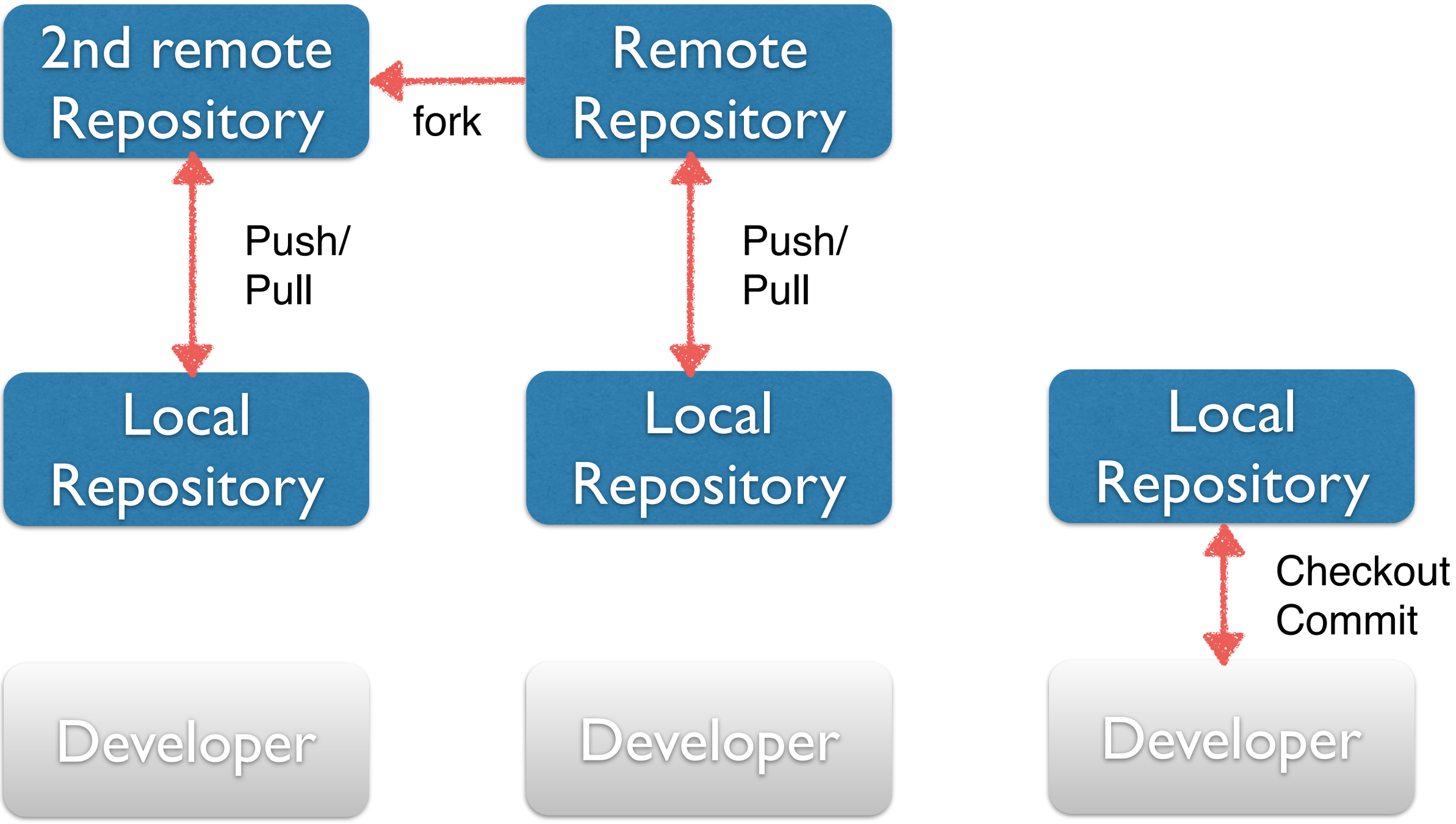
Pro Git

Git workflow



Pro Git

Git workflow



Pro Git

Multiple git servers?
Automatic deploy?

development server

test server

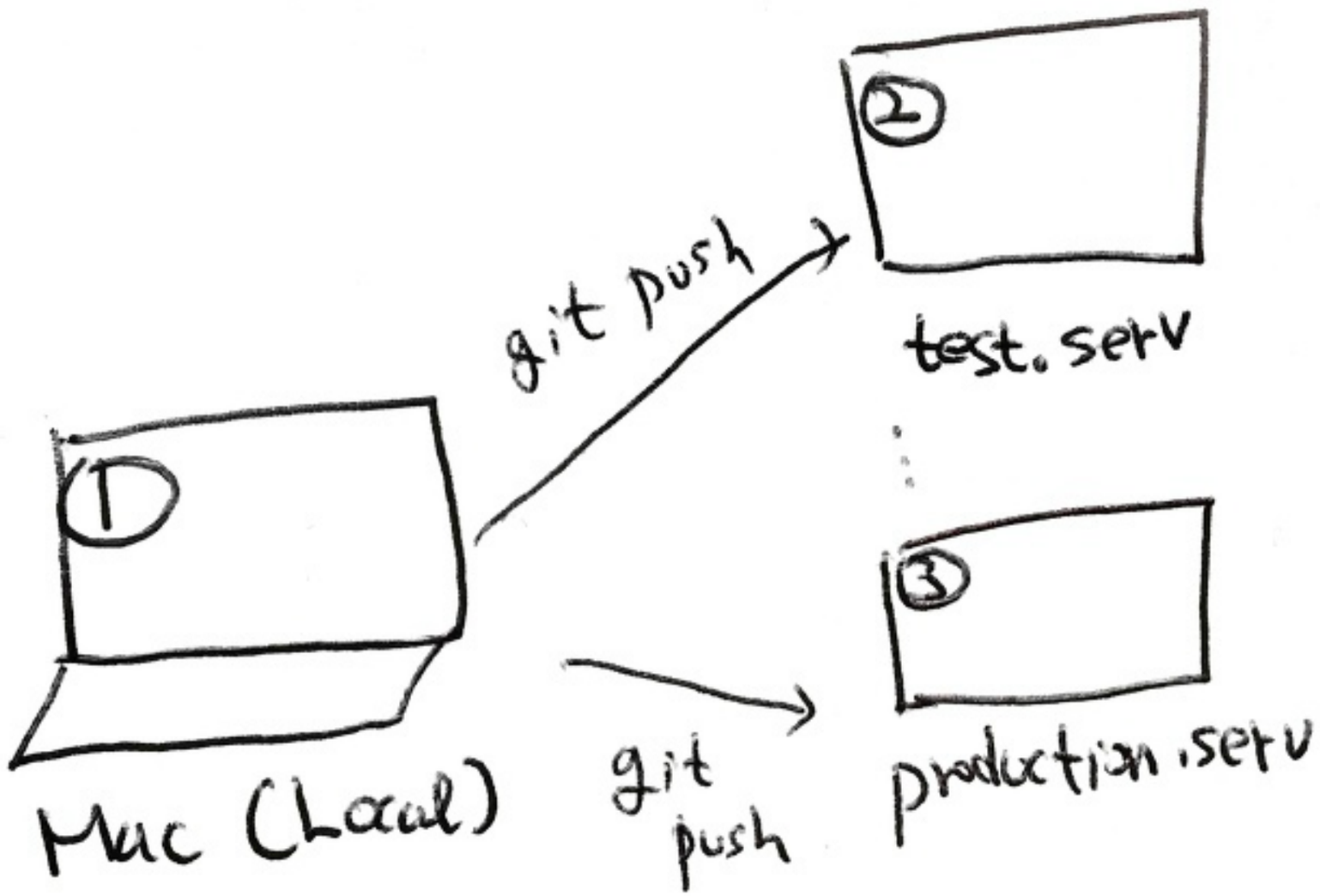
…

production server

Mac/PC
(Local machine)

Demo

- git (bare) + post-receive hook
- http://toroid.org/ams/git-website-howto
- Similar to Heroku
- http://www.se.or.kr/145 (한글설명)


2
git push
test. serv
1
3
Mac (Local)
git
push
production. serv

1. local (pc/mac)

```
$ mkdir website && cd website

$ git init
Initialized empty Git repository in /home/ams/website/.git/

$ echo 'Hello, world!' > index.html

$ git add index.html

$ git commit -q -m "The humble beginnings of my web site."
```

2. Server 1

$ssh ubuntu@test.serv

$ mkdir website.git && cd website.git

$ git init --bare

Initialized empty Git repository in /home/ubuntu/website.git/

$ pwd

/home/ubuntu/website.git

3. post-hook (at server 1)

$ cat > hooks/post-receive

#!/bin/sh

GIT_WORK_TREE=/var/www/html git checkout -f

$ chmod +x hooks/post-receive

4. add the remote at local

$ ssh-add <key>

$ git remote add test ssh://ubutu@test.serv/home/ubuntu/website.git

$ git push test +master:refs/heads/master

5. Add more servers

$ git remote add test2 ssh://ubutu@test2.serv/home/ubuntu/website.git

$ git remote add test3 ssh://ubutu@test3.serv/home/ubuntu/website.git

$ change/work/commit

$ git push test2 +master:refs/heads/master

$ git push test3 +master:refs/heads/master

6. Add multiple servers in one remote name

```
$ git clone git://original/repo.git
$ git remote -v
origin  git://original/repo.git (fetch)
origin  git://original/repo.git (push)
```

```
$ git remote add all git://original/repo.git
$ git remote -v
all git://original/repo.git (fetch)                <-- ADDED
all git://original/repo.git (push)                 <-- ADDED
origin  git://original/repo.git (fetch)
origin  git://original/repo.git (push)
```

http://stackoverflow.com/questions/14290113/git-pushing-code-to-two-remotes

6. Add multiple servers in one remote name

```
$ git remote set-url --add --push all git://another/repo.git
$ git remote -v
all git://original/repo.git (fetch)
all git://another/repo.git (push)                    <-- CHANGED
origin  git://original/repo.git (fetch)
origin  git://original/repo.git (push)
```

```
$ git remote set-url --add --push all git://original/repo.git
$ git remote -v
all git://original/repo.git (fetch)
all git://another/repo.git (push)
all git://original/repo.git (push)                  <-- ADDED
origin  git://original/repo.git (fetch)
origin  git://original/repo.git (push)
```

git push all!

http://stackoverflow.com/questions/14290113/git-pushing-code-to-two-remotes

git push to AWS s3?

- http://www.se.or.kr/153

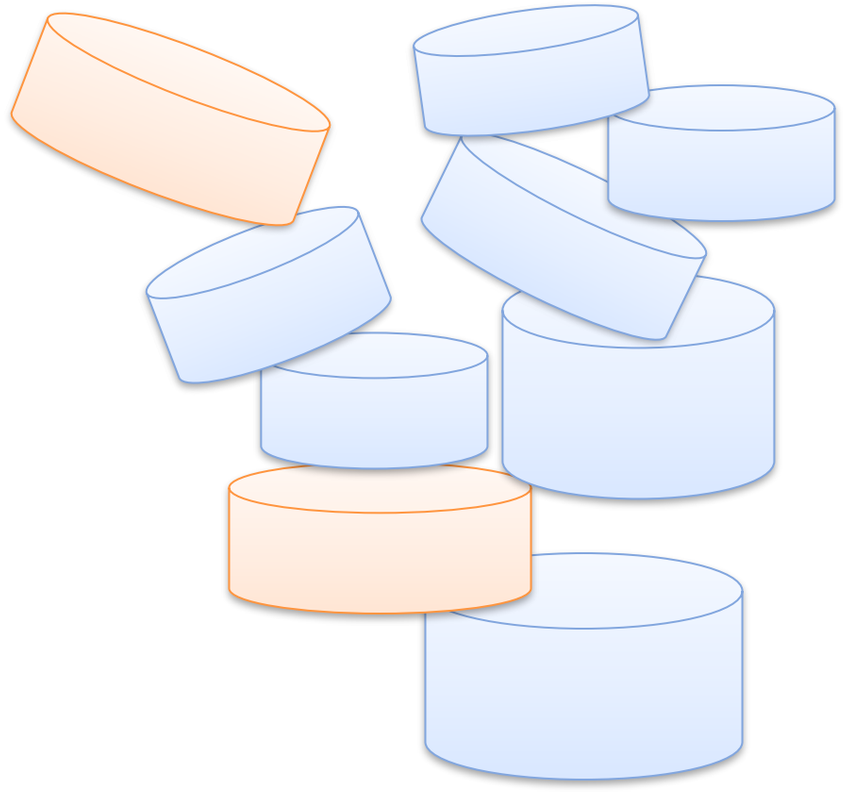
Today

- Joel Testing
- Deployment
- Continuous Integration (CI)

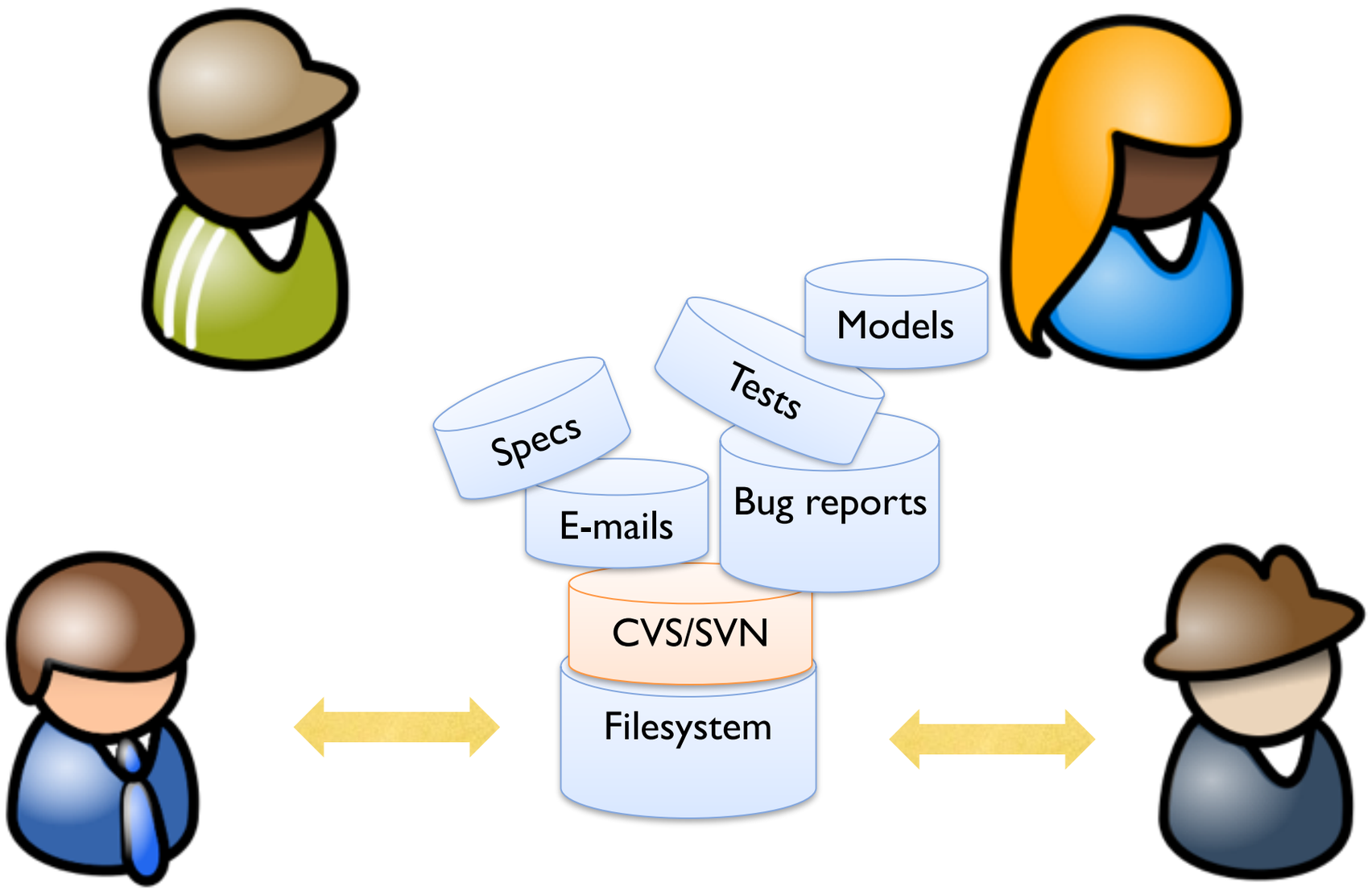
Meet
Jenkins
(hudson)

Sunghun Kim
Hudson/Jenkins (ex)committer

Continues integration

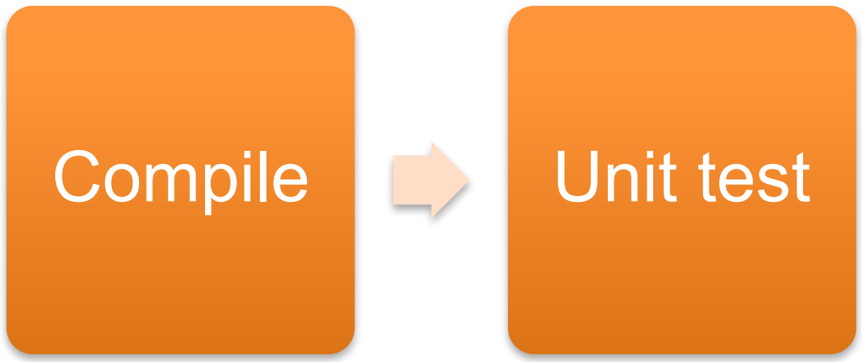


Many team members



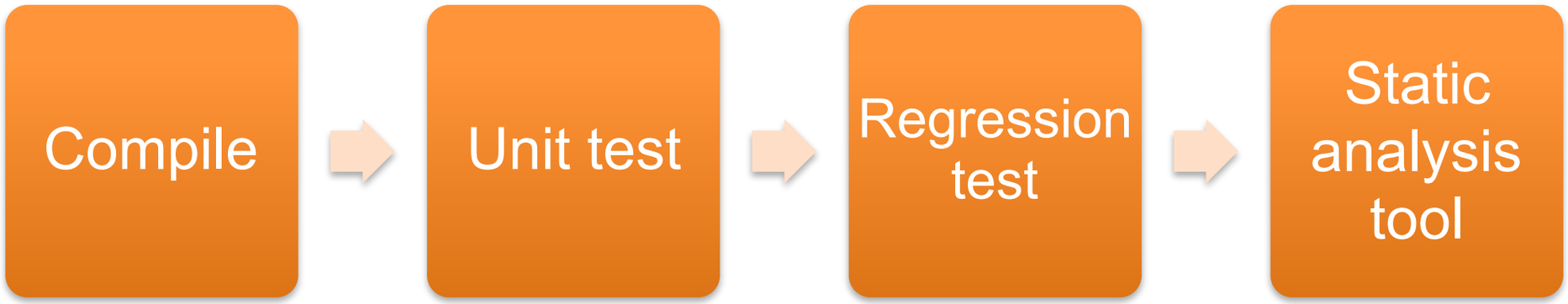
Complicated processes

Complicated processes



Complicated processes

Complicated processes

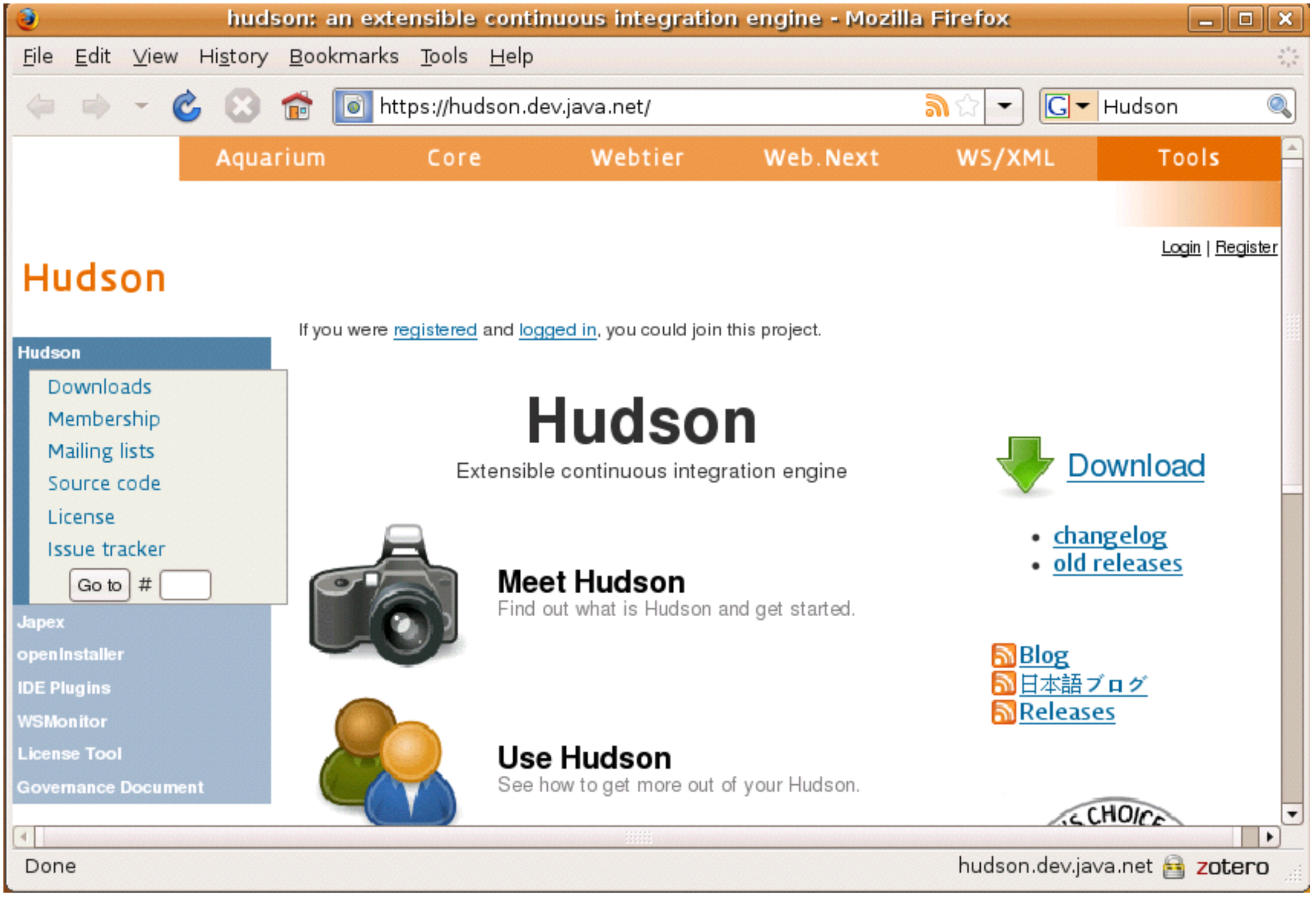


Complicated processes

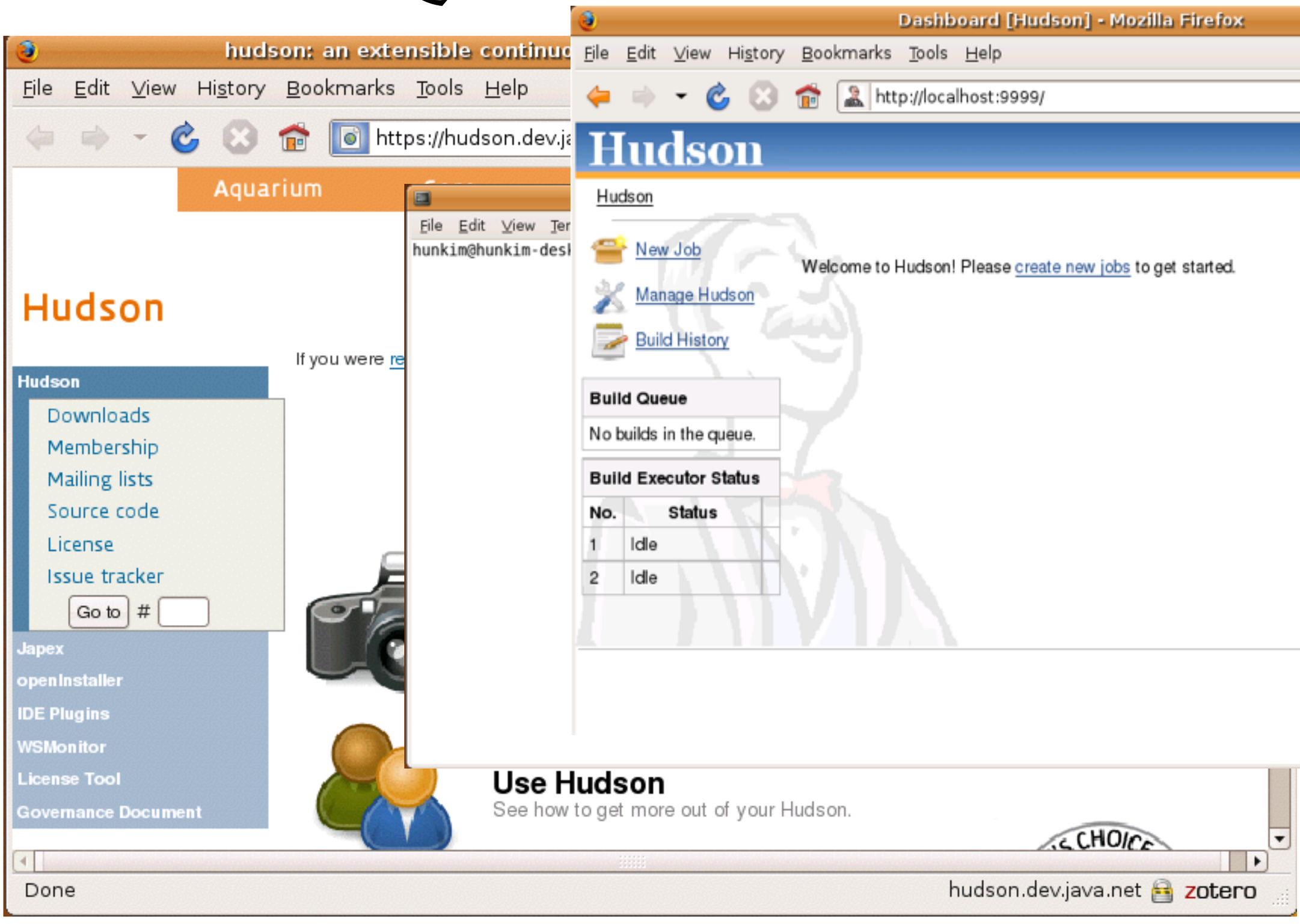
Hudson

- Continues integration framework
- Automatic checking out from SCM
- Supports Ant and almost all other building systems
- Customized building system
- Testing coverage metrics
- Static analysis: FindBugs
- + many plugins

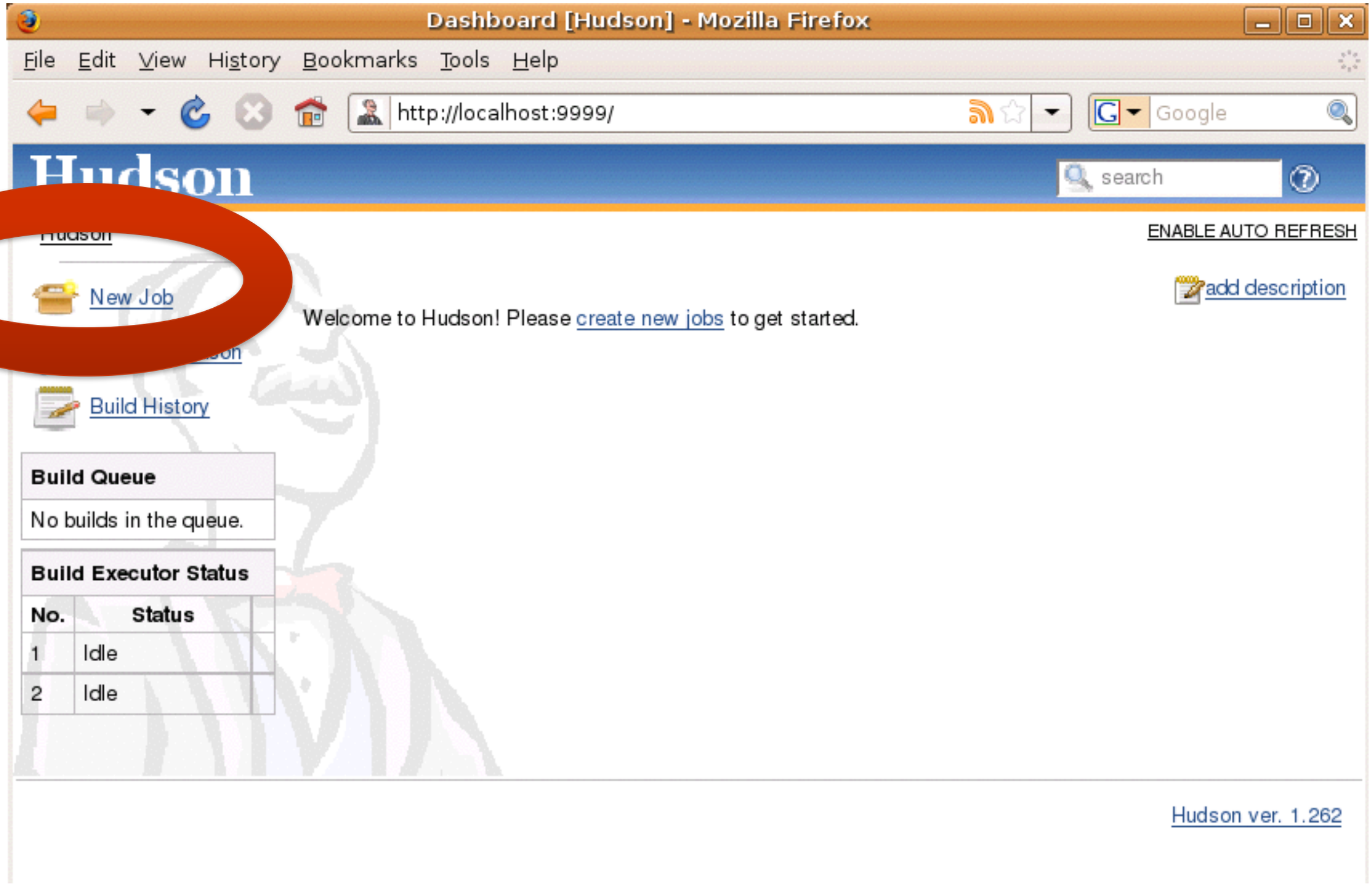
Quick HOWTO


hudson: an extensible continuous integration engine - Mozilla Firefox
File Edit View History Bookmarks Tools Help
https://hudson.dev.java.net/
Hudson
Aquarium Core Webtier Web.Next WS/XML Tools
Login | Register
Hudson
If you were registered and logged in, you could join this project.
Hudson
Downloads
Membership
Mailing lists
Source code
License
Issue tracker
Go to #
Japex
openInstaller
IDE Plugins
WSMonitor
License Tool
Governance Document
Hudson
Extensible continuous integration engine
Download
changelog
old releases
Meet Hudson
Find out what is Hudson and get started.
Blog
日本語ブログ
Releases
Use Hudson
See how to get more out of your Hudson.
Done
hudson.dev.java.net
zotero

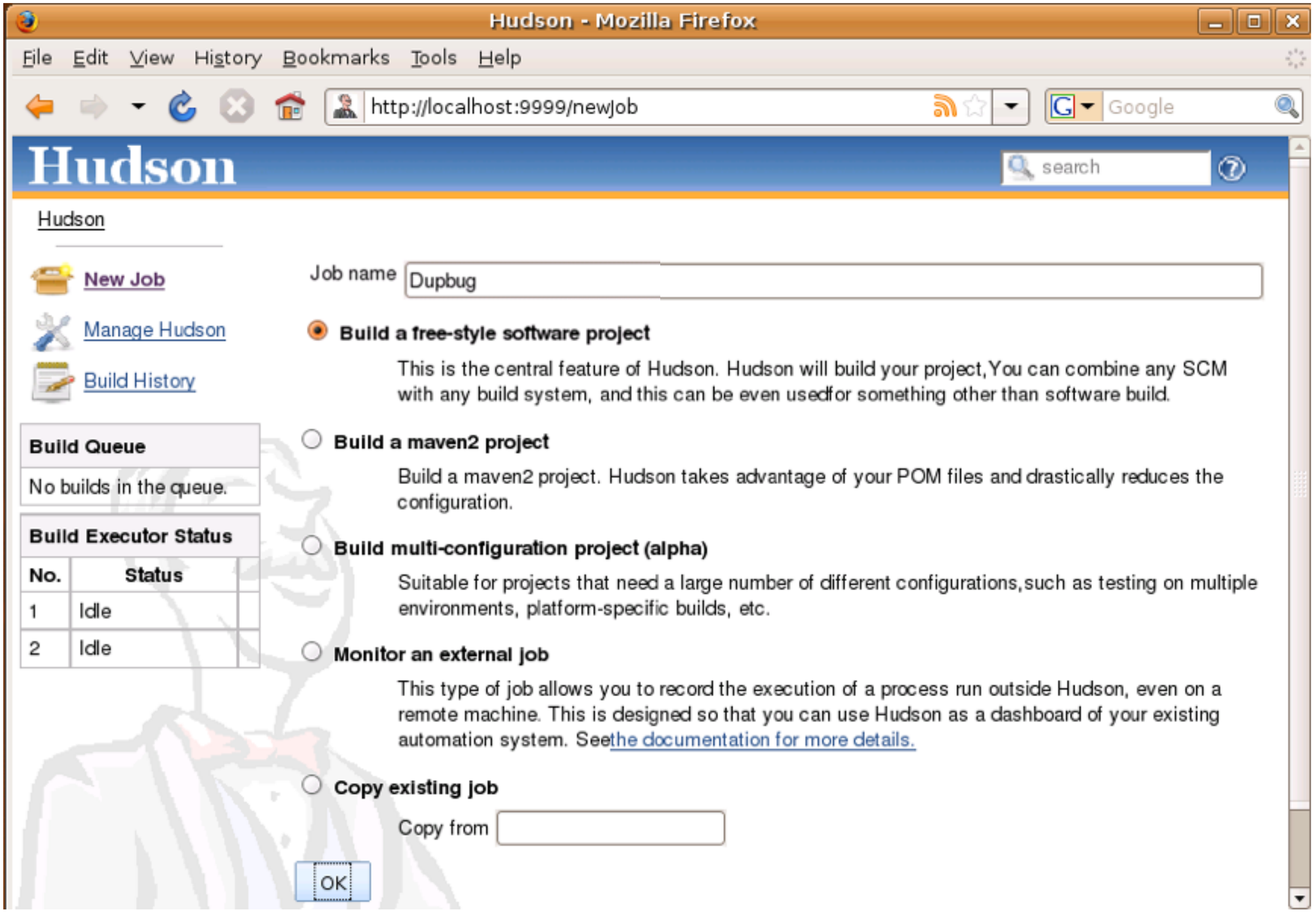
Quick HOWTO


hudson: an extensible continuc
File Edit View History Bookmarks Tools Help
https://hudson.dev.ja
Aquarium
Hudson
If you were re
Hudson
Downloads
Membership
Mailing lists
Source code
License
Issue tracker
Go to #
Japex
openInstaller
IDE Plugins
WSMonitor
License Tool
Governance Document
Use Hudson
See how to get more out of your Hudson.
Done
hudson.dev.java.net
zotero
File Edit View Ter
hunkim@hunkim-desk
Dashboard [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/
Hudson
search
Hudson
New Job
Manage Hudson
Build History
Welcome to Hudson! Please create new jobs to get started.
Build Queue
No builds in the queue.
Build Executor Status
No.
Status
1
Idle
2
Idle

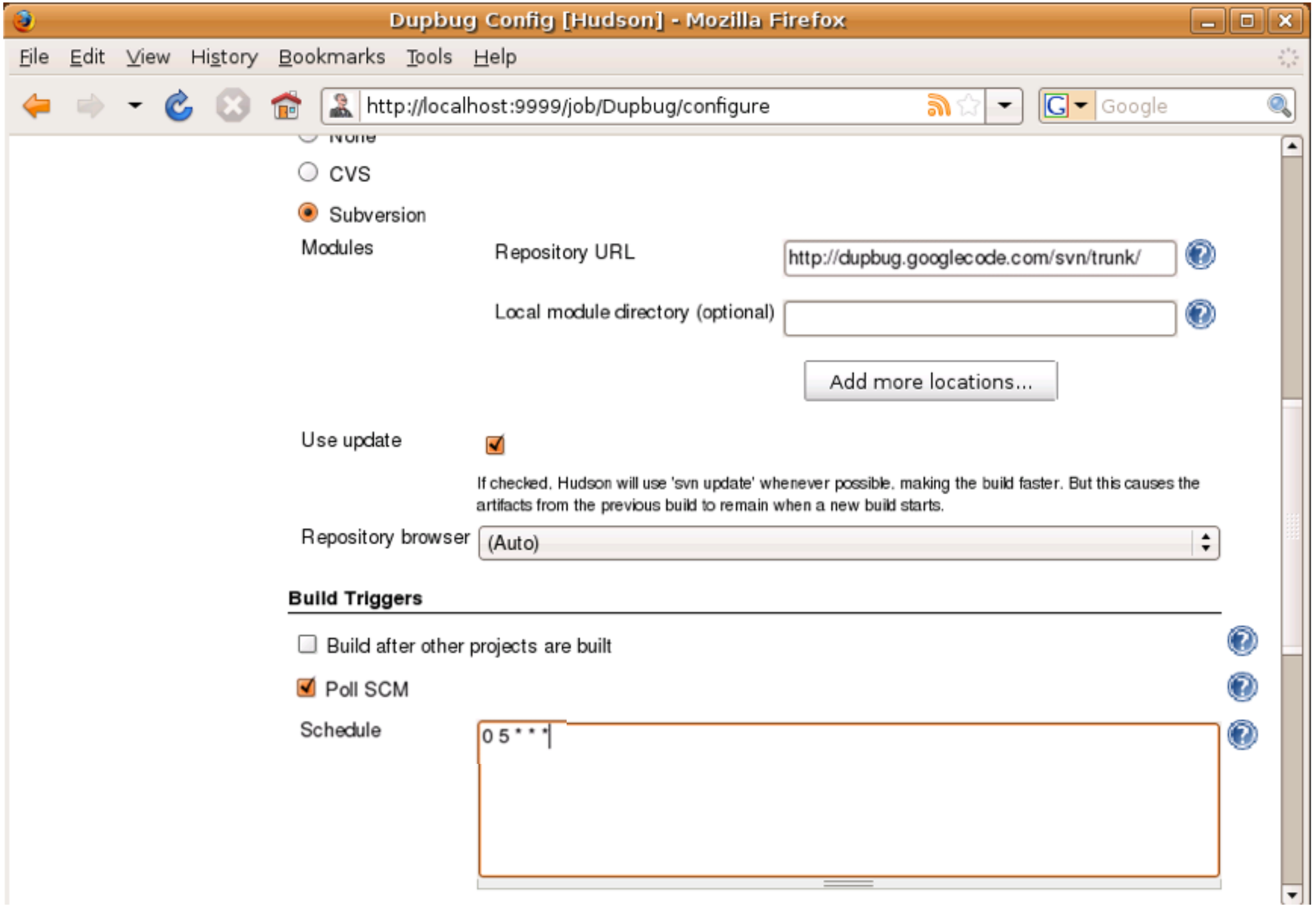
Quick HOWTO


Dashboard [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/
Google
Hudson
search
Hudson
ENABLE AUTO REFRESH
New Job
add description
Welcome to Hudson! Please create new jobs to get started.
Build History
Build Queue
No builds in the queue.
Build Executor Status
No.
Status
1
Idle
2
Idle
Hudson ver. 1.262

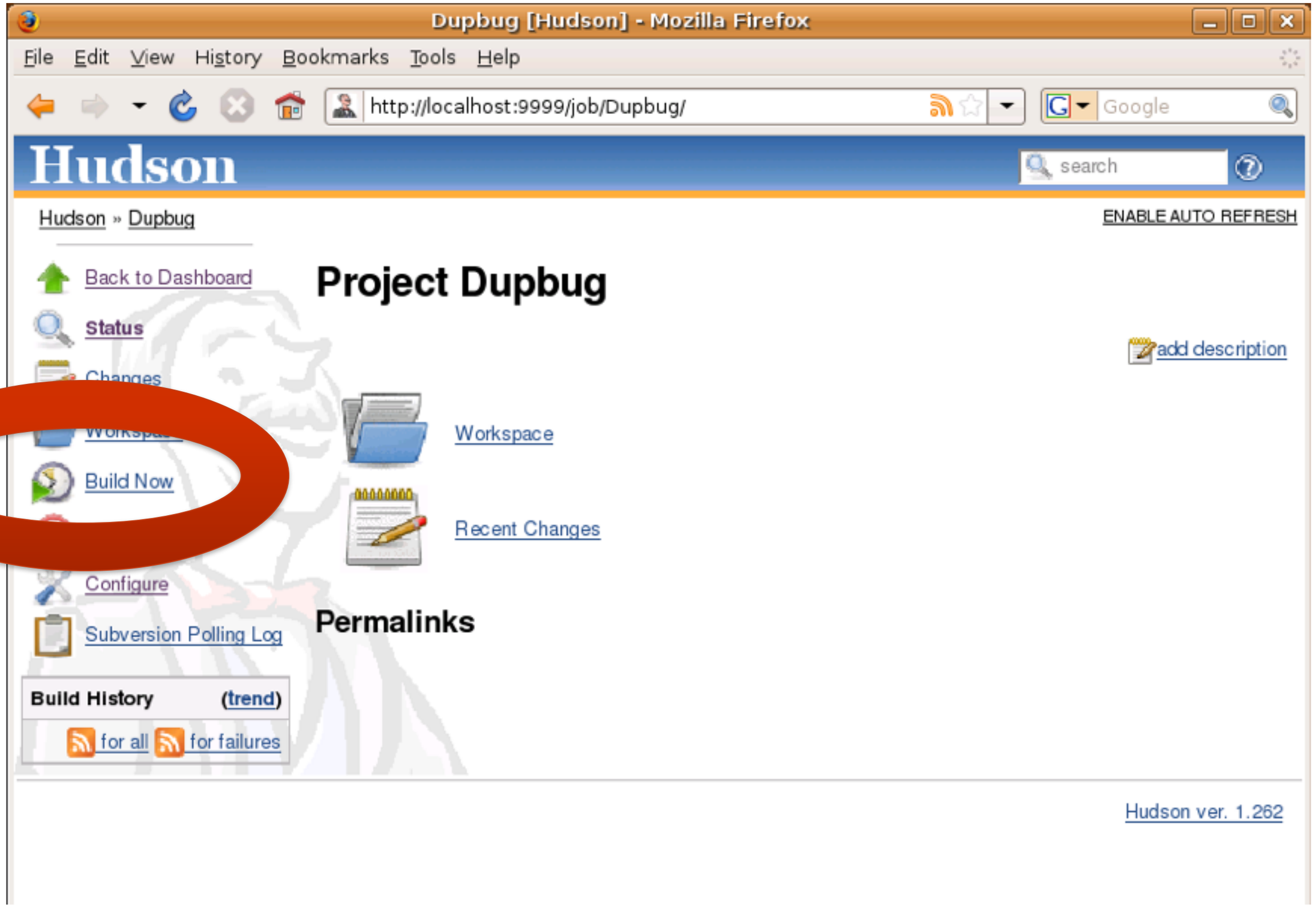
Quick HOWTO


Hudson - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/newJob
Google
Hudson
search
Hudson
New Job
Manage Hudson
Build History
Build Queue
No builds in the queue.
Build Executor Status
No.
Status
1
Idle
2
Idle
Job name
Dupbug
Build a free-style software project
This is the central feature of Hudson. Hudson will build your project,You can combine any SCM with any build system, and this can be even usedfor something other than software build.
Build a maven2 project
Build a maven2 project. Hudson takes advantage of your POM files and drastically reduces the configuration.
Build multi-configuration project (alpha)
Suitable for projects that need a large number of different configurations,such as testing on multiple environments, platform-specific builds, etc.
Monitor an external job
This type of job allows you to record the execution of a process run outside Hudson, even on a remote machine. This is designed so that you can use Hudson as a dashboard of your existing automation system. Seethe documentation for more details.
Copy existing job
Copy from
OK

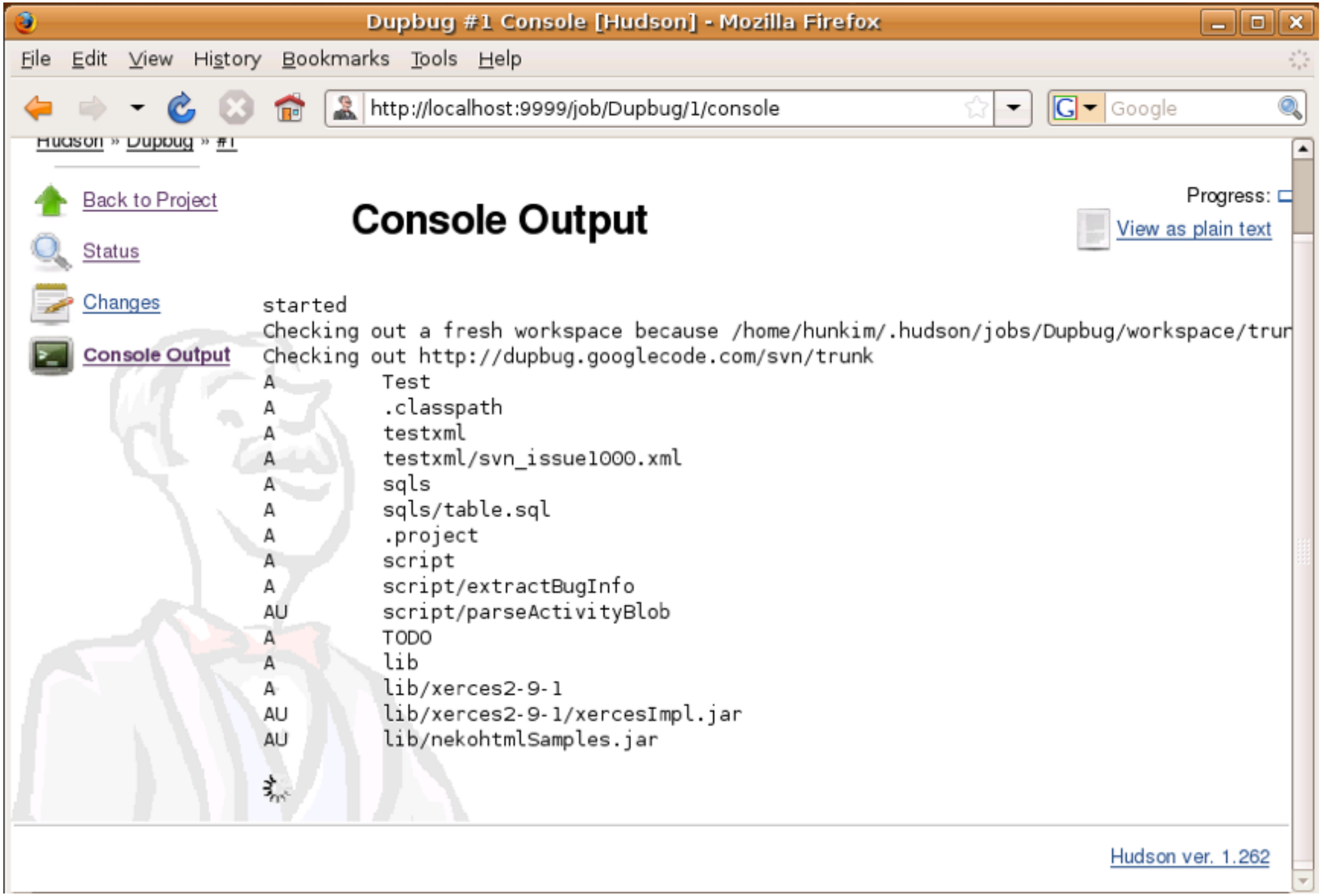
Quick HOWTO


Dupbug Config [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/job/Dupbug/configure
Google
None
CVS
Subversion
Modules
Repository URL
http://dupbug.googlecode.com/svn/trunk/
Local module directory (optional)
Add more locations...
Use update
If checked, Hudson will use 'svn update' whenever possible, making the build faster. But this causes the artifacts from the previous build to remain when a new build starts.
Repository browser
(Auto)
Build Triggers
Build after other projects are built
Poll SCM
Schedule
0 5 * * *

Quick HOWTO


Dupbug [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/job/Dupbug/
Google
Hudson
search
Hudson » Dupbug
ENABLE AUTO REFRESH
Back to Dashboard
Project Dupbug
Status
add description
Changes
Workspace
Build Now
Recent Changes
Configure
Permalinks
Subversion Polling Log
Build History (trend)
for all for failures
Hudson ver. 1.262

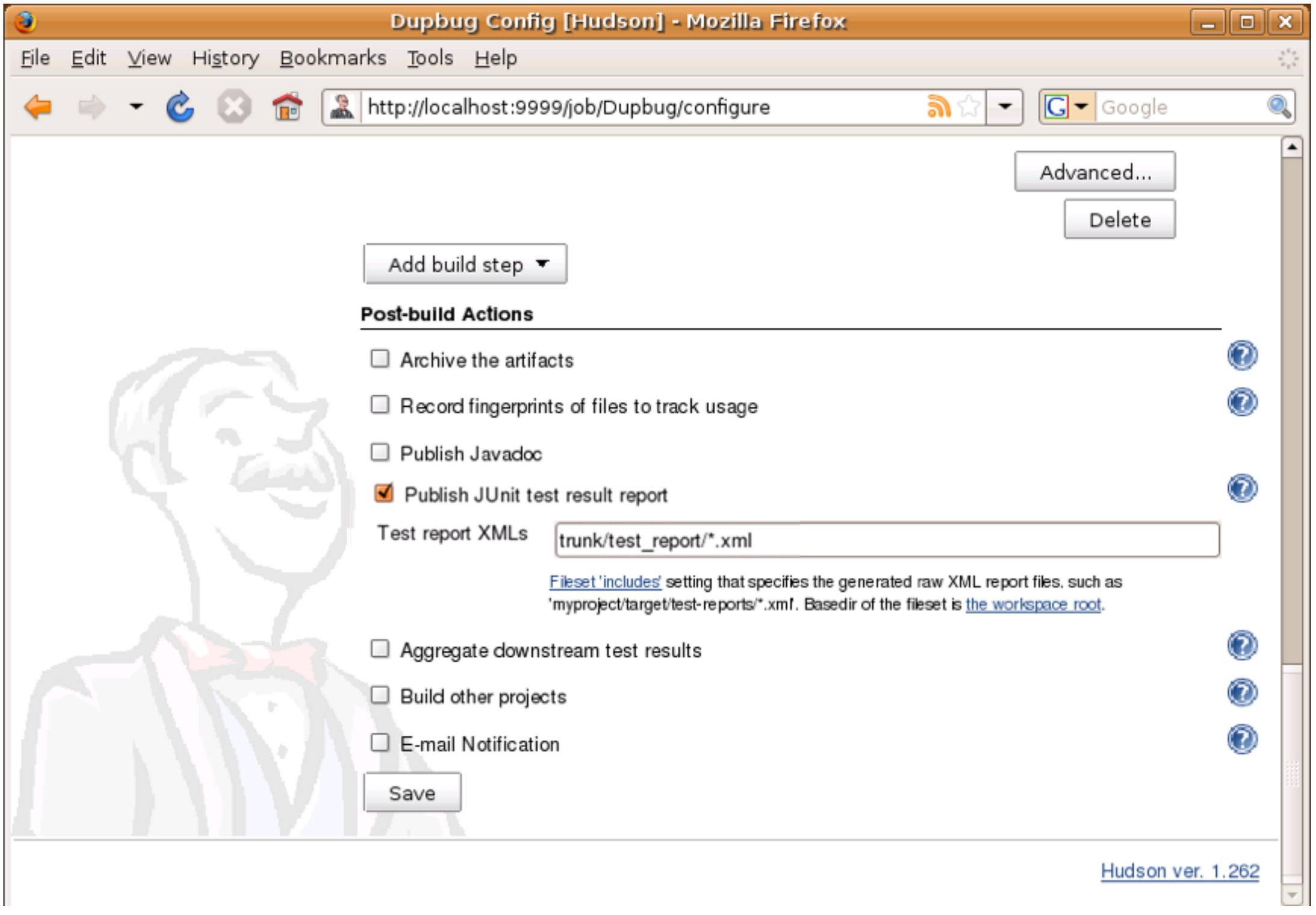
Quick HOWTO


Dupbug #1 Console [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/job/Dupbug/1/console
Google
Hudson » Dupbug » #1
Back to Project
Status
Changes
Console Output
Console Output
Progress:
View as plain text
started
Checking out a fresh workspace because /home/hunkim/.hudson/jobs/Dupbug/workspace/trun
Checking out http://dupbug.googlecode.com/svn/trunk
A Test
A .classpath
A testxml
A testxml/svn_issue1000.xml
A sqls
A sqls/table.sql
A .project
A script
A script/extractBugInfo
AU script/parseActivityBlob
A TODO
A lib
A lib/xerces2-9-1
AU lib/xerces2-9-1/xercesImpl.jar
AU lib/nekohtmlSamples.jar
Hudson ver. 1.262

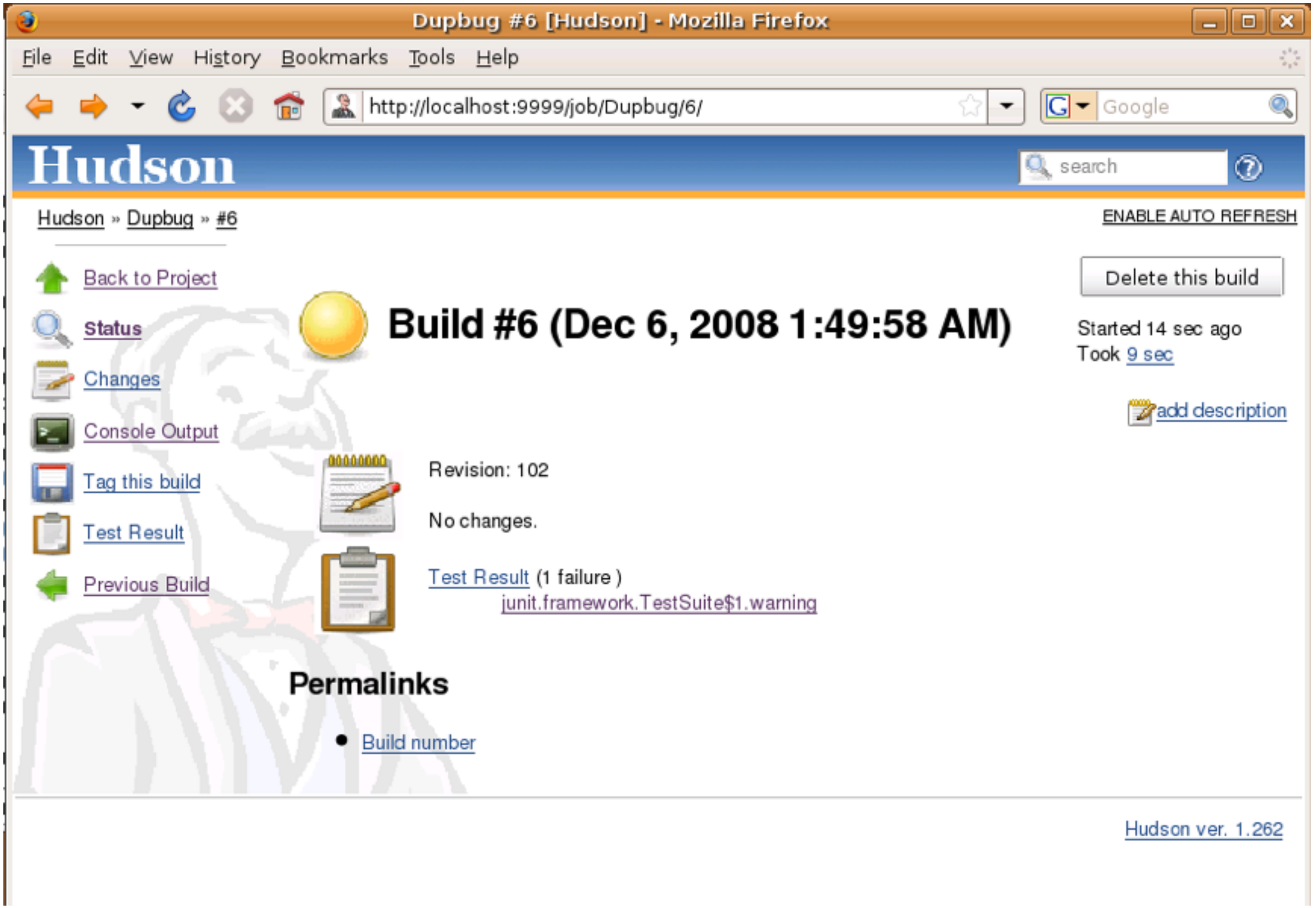
Adding JUnit Test

```
<!-- mv lib/ant-junit-1.7.0.jar /home/hunkim/.ant/lib/ -->
<target name="tests" depends="compile">
        <junit printsummary="yes" haltonfailure="no">
                <classpath refid="classpath" />
                <formatter type="xml" />
                <batchtest fork="yes" todir="${test.report.dir}">
                        <fileset dir="${src.dir}">
                                <include name="**/*Test*.java" />
                                <exclude name="**/AllTests.java" />
                        </fileset>
                </batchtest>
        </junit>
</target>
```

Adding JUnit Test



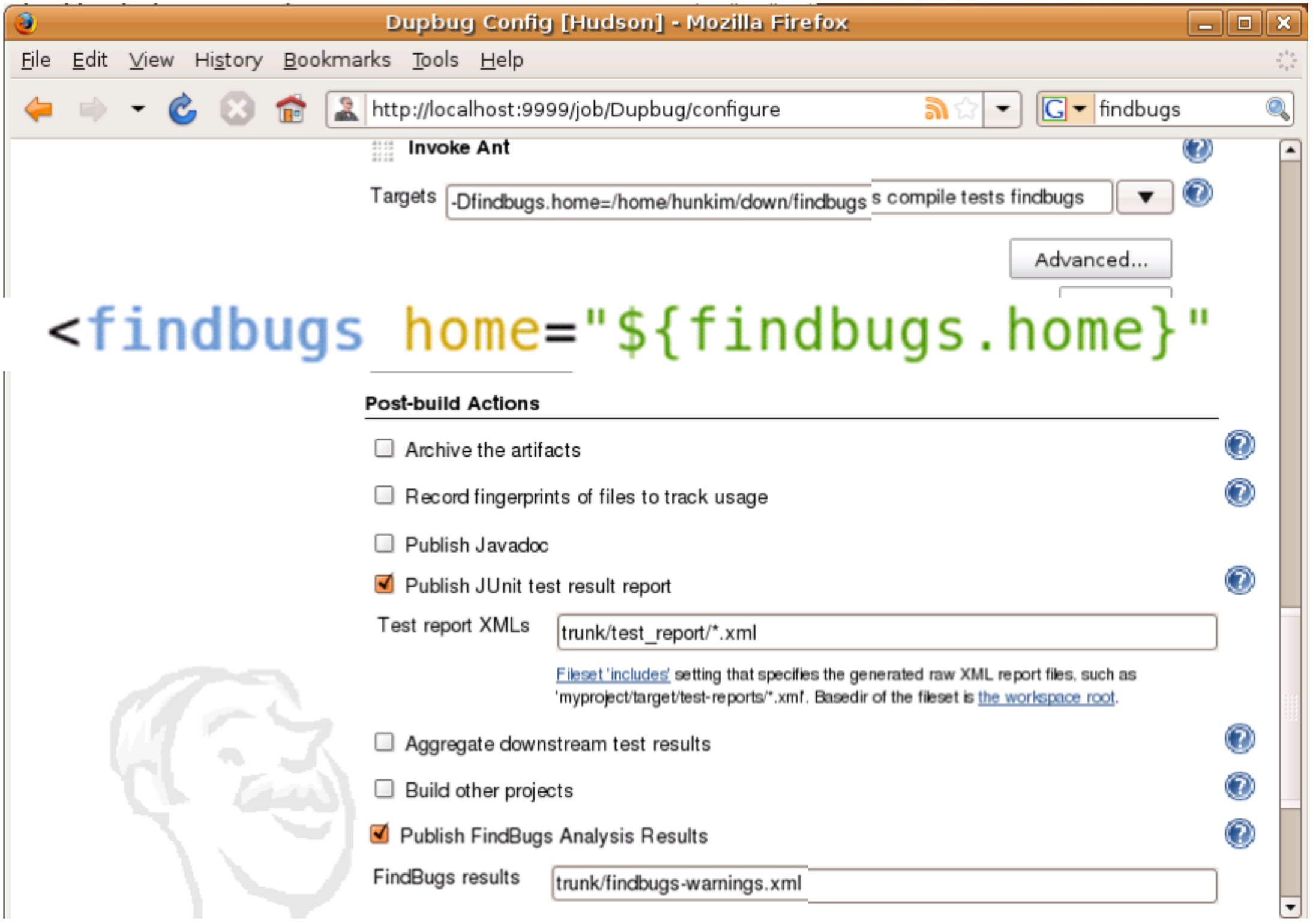
Adding JUnit Test



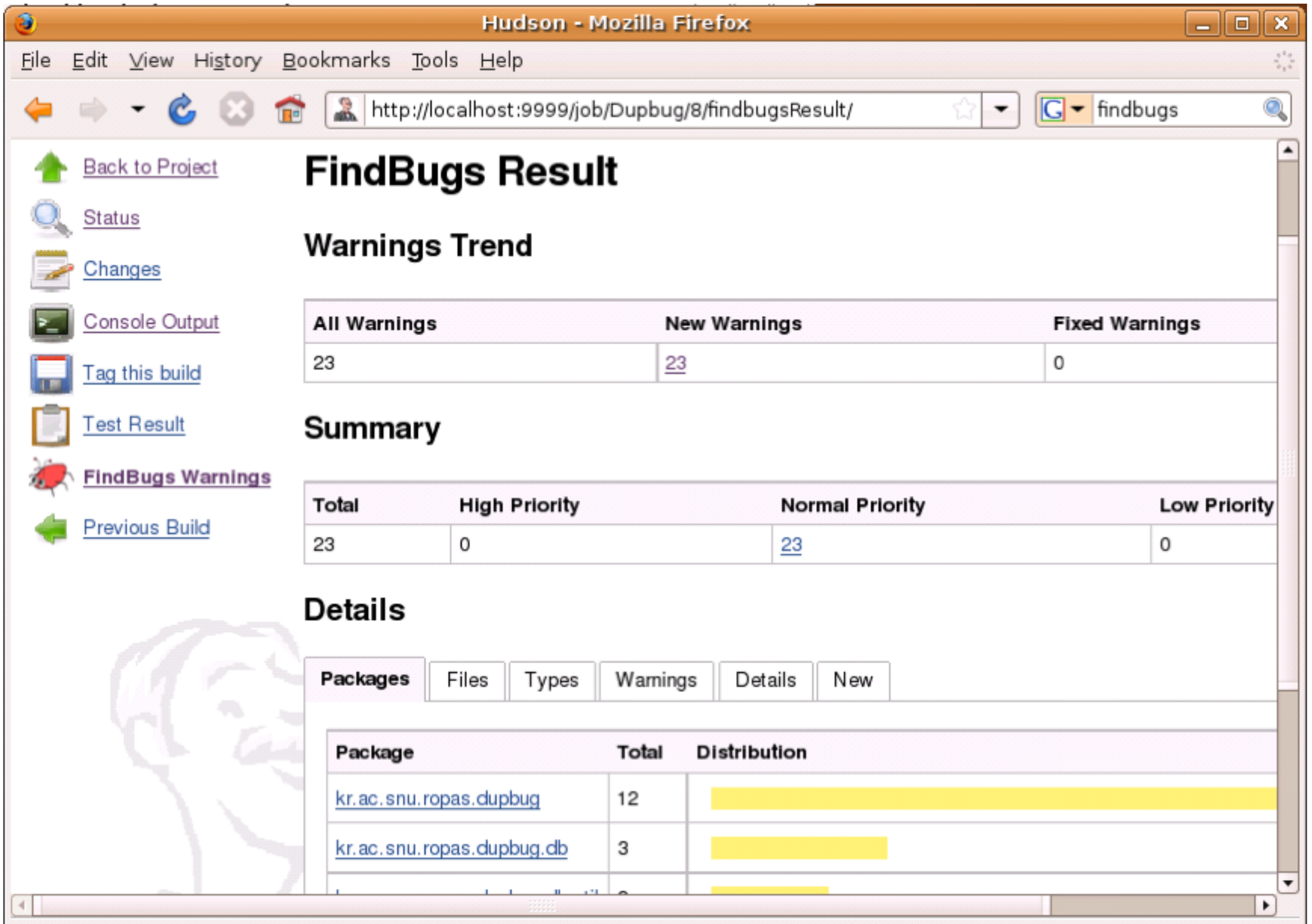
FindBugs

```
<!-- cp lib/findbugs-ant.jar /home/hunkim/.ant/lib/ -->
<target name="findbugs" depends="compile">
        <taskdef name="findbugs"
                 classname="edu.umd.cs.findbugs.anttask.FindBugsTask" />
        <findbugs home="${findbugs.home}"
                  output="xml" outputFile="findbugs-warnings.xml"
                  jvmargs="-Xms512M -Xmx1024M " timeout="1800000">
                <sourcePath path="${src.dir}" />
                <class location="${bin.dir}" />
        </findbugs>
</target>
```

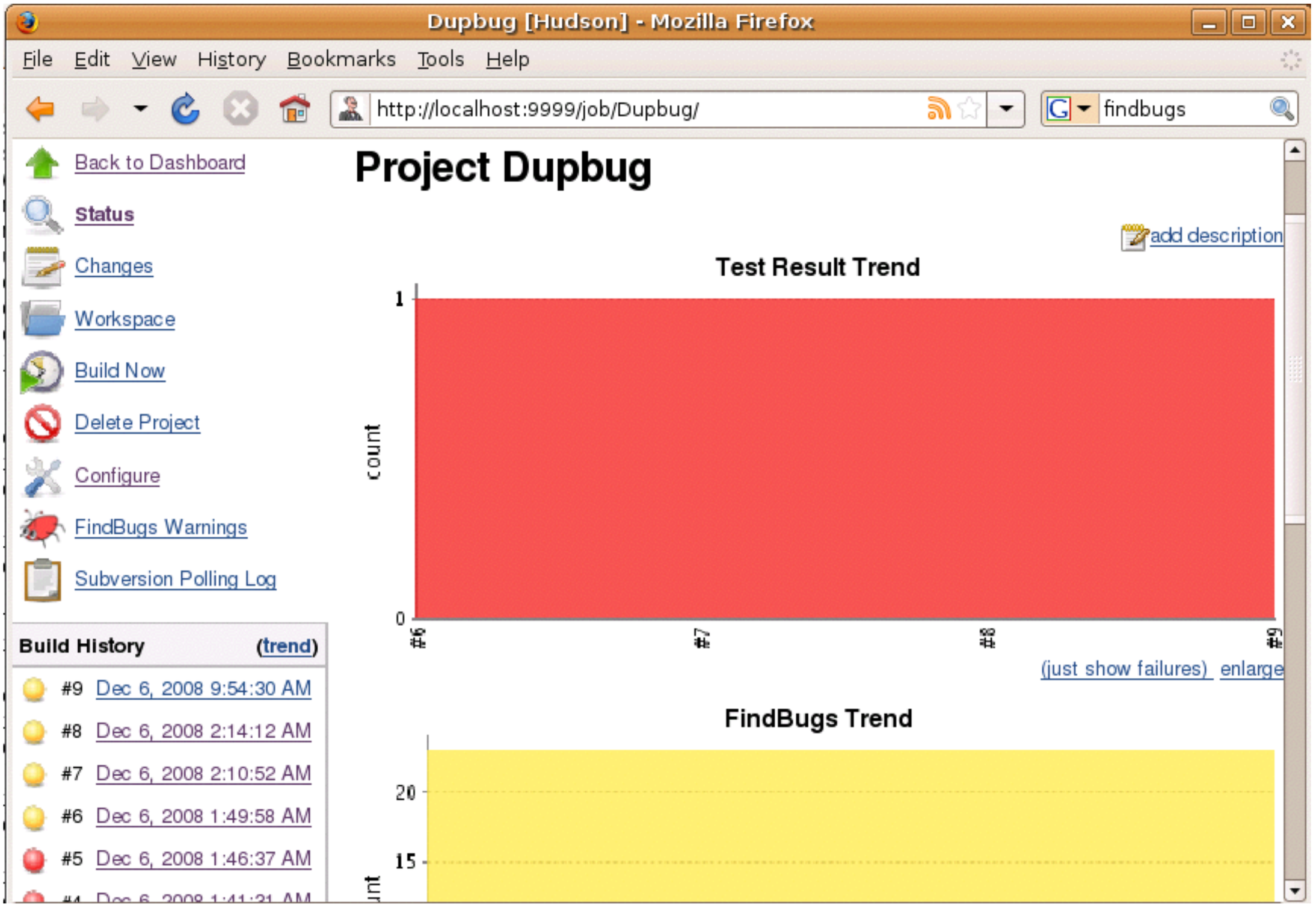
FindBugs


Dupbug Config [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/job/Dupbug/configure
findbugs
Invoke Ant
Targets
-Dfindbugs.home=/home/hunkim/down/findbugs
s compile tests findbugs
Advanced...
<findbugs home="${findbugs.home}"
Post-build Actions
Archive the artifacts
Record fingerprints of files to track usage
Publish Javadoc
Publish JUnit test result report
Test report XMLs
trunk/test_report/*.xml
Fileset 'includes' setting that specifies the generated raw XML report files, such as 'myproject/target/test-reports/*.xml'. Basedir of the fileset is the workspace root.
Aggregate downstream test results
Build other projects
Publish FindBugs Analysis Results
FindBugs results
trunk/findbugs-warnings.xml

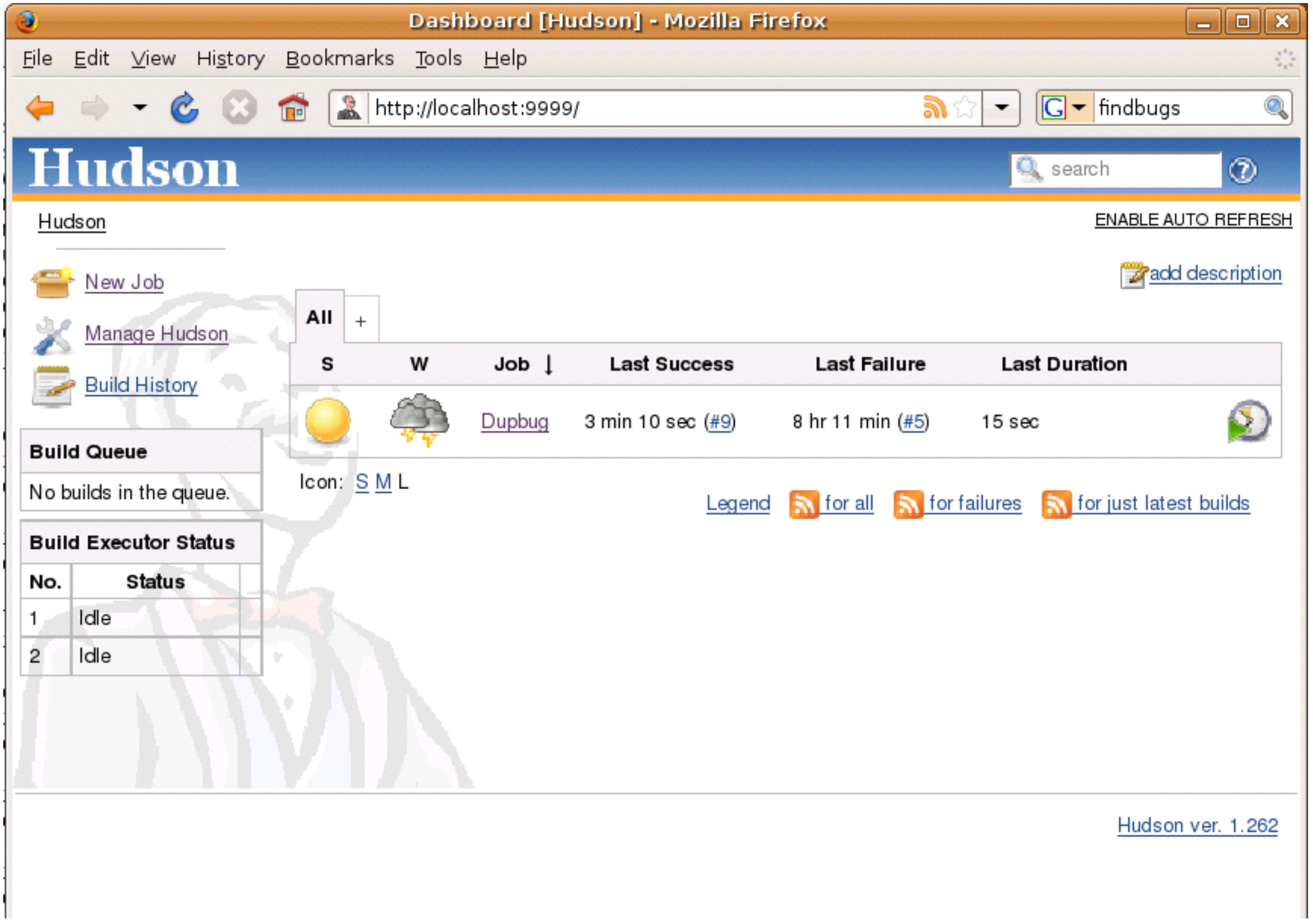
FindBugs


Hudson - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/job/Dupbug/8/findbugsResult/
findbugs
Back to Project
Status
Changes
Console Output
Tag this build
Test Result
FindBugs Warnings
Previous Build
FindBugs Result
Warnings Trend
All Warnings
New Warnings
Fixed Warnings
23
23
0
Summary
Total
High Priority
Normal Priority
Low Priority
23
0
23
0
Details
Packages
Files
Types
Warnings
Details
New
Package
Total
Distribution
kr.ac.snu.ropas.dupbug
12
kr.ac.snu.ropas.dupbug.db
3

Hudson – Dashboard

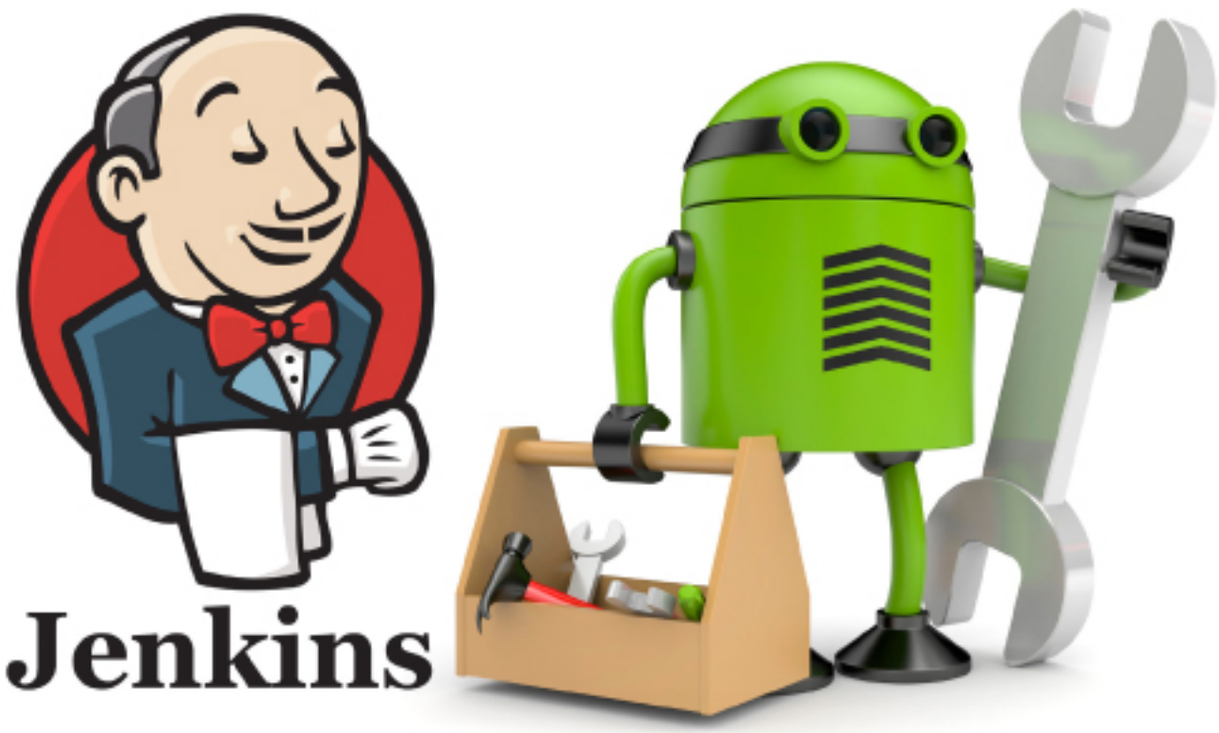


Hudson – Main


Dashboard [Hudson] - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://localhost:9999/
findbugs
Hudson
search
Hudson
ENABLE AUTO REFRESH
New Job
Manage Hudson
Build History
add description
All
+
S
W
Job
Last Success
Last Failure
Last Duration
Dupbug
3 min 10 sec (#9)
8 hr 11 min (#5)
15 sec
Icon: S M L
Legend
for all
for failures
for just latest builds
Build Queue
No builds in the queue.
Build Executor Status
No.
Status
1
Idle
2
Idle
Hudson ver. 1.262

CI with Android?

- Need to run Android SDK/emulator on the server side
- Jenkins Android plugin is unstable
  - Any volunteers to contribute to the project?
- Android SDK (on Linux) is not stable



New Item

Item name QRoom

Freestyle project

This is the central feature of Jenkins. Jenkins will build your project, combining any SCM with any build system, and this can be even build.

Maven project

Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.

External Job

This type of job allows you to record the execution of a process run outside Jenkins, even on a remote machine. This is designed so t of your existing automation system. See the documentation for more details.

Multi-configuration project

Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific b

Copy existing Item

Copy from

OK

Git setting

Source Code Management

- None
- CVS
- CVS Projectset
- Git

Repositories

Repository URL: https://github.com/COMP3111/questionsAndroid.git

Credentials: - none - | Add

Advanced...

Add Repository | Delete Repository

Branches to build

Branch Specifier (blank for 'any'): */master

Add Branch | Delete Branch

Repository browser: (Auto)

Additional Behaviours: Add

Build Triggers

- [ ] Build after other projects are built
- [ ] Build periodically
- [ ] Build when a change is pushed to GitHub
- [ ] GitHub Pull Request Builder
- [x] Poll SCM

Schedule: H * * * *

Would last have run at Monday, November 9, 2015 1:00:18 AM UTC; would next run at Monday, November 9, 2015 2:00:18 AM UTC.

Android Emulator

Build Environment

- [ ] Assign unique TCP ports to avoid collisions
- [ ] SSH Agent
- [x] Run an Android emulator during build
  - ( ) Run existing emulator
  - (•) Run emulator with properties
    - Android OS version: 5.0
    - Screen density: 160
    - Screen resolution: WQVGA
    - Device locale: en_AU
    - SD card size:
    - Target ABI: armeabi-v7a
    - Emulator name suffix:
    - Hardware: Add custom hardware property...

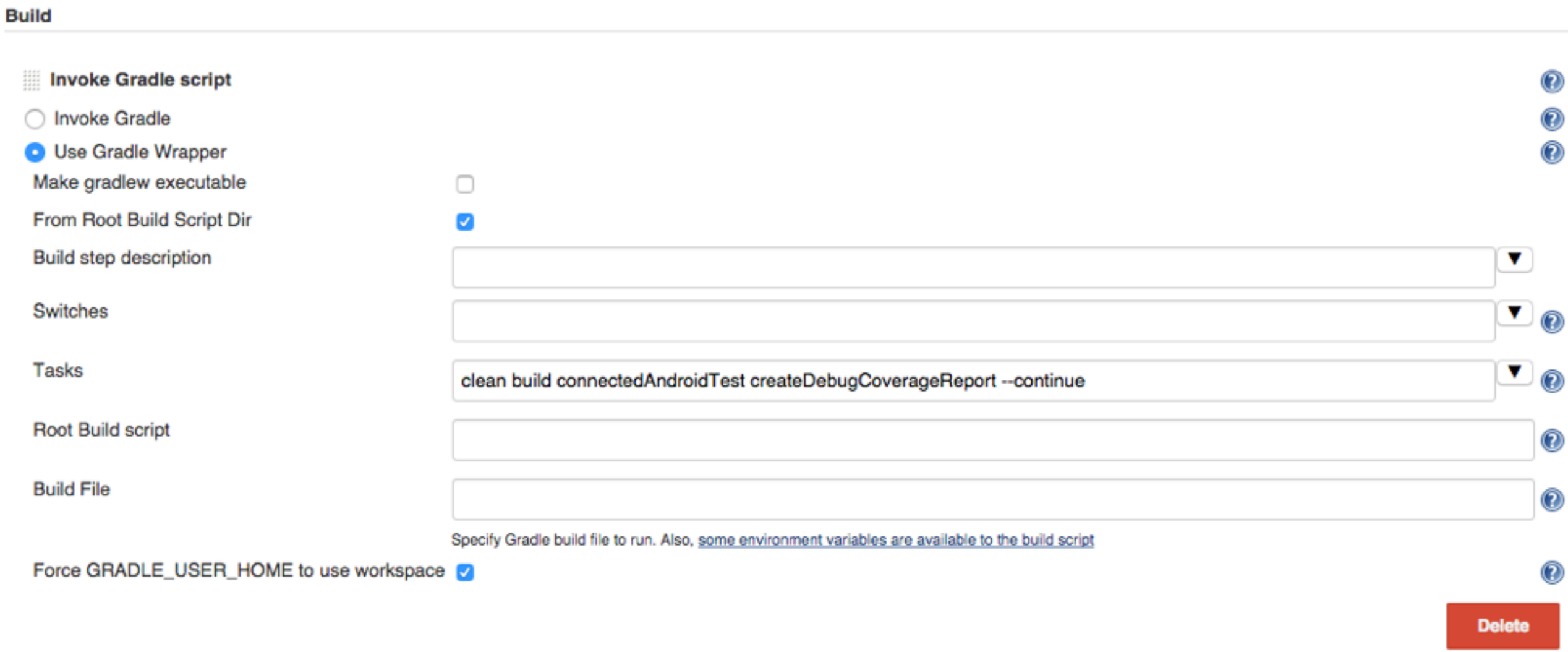
Common emulator options

- [ ] Reset emulator state at start-up
- [ ] Show emulator window
- [ ] Use emulator snapshots

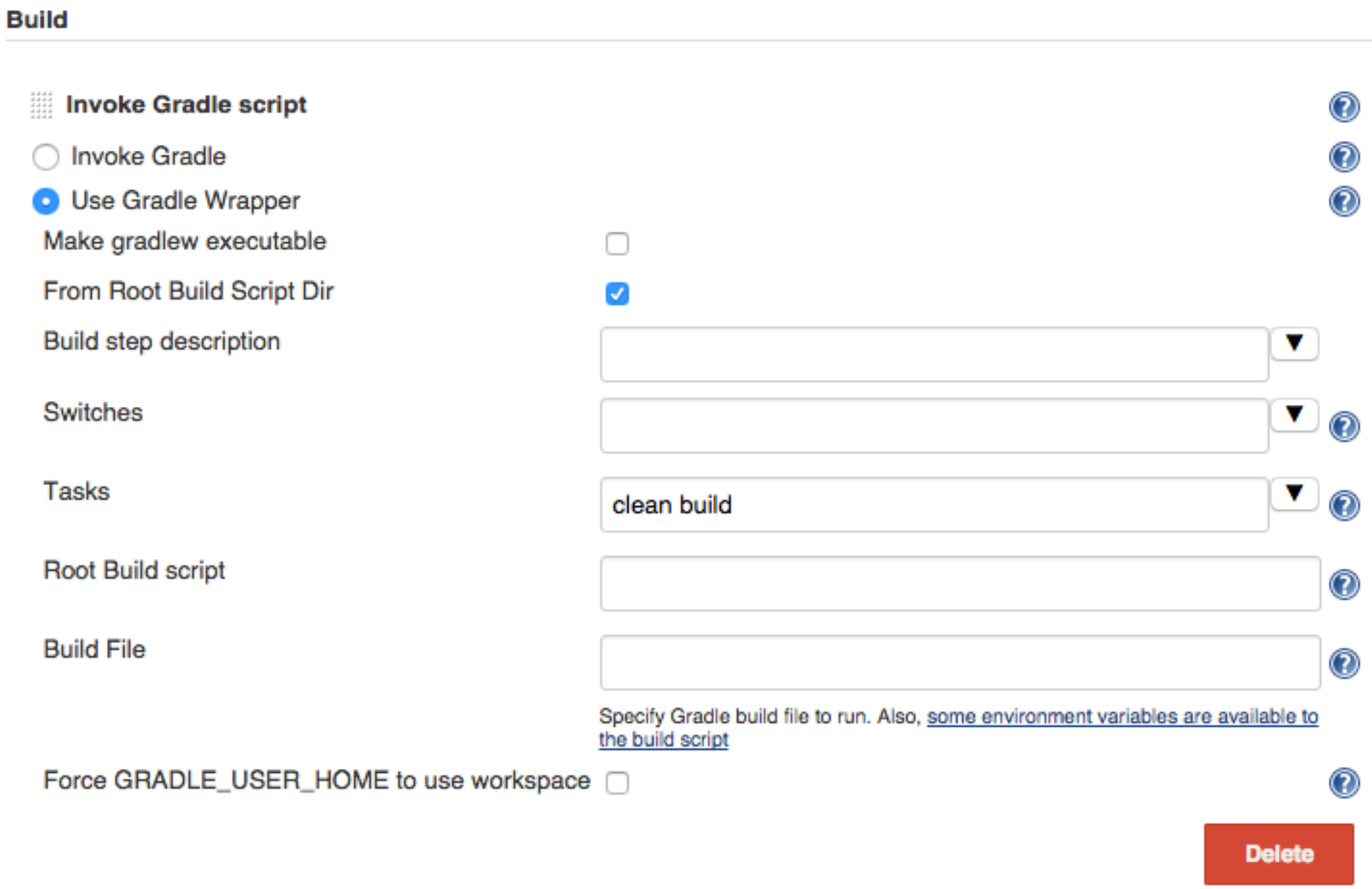
Advanced...

Tasks:

Instrumented testing is not working well (optional)



Task: clean & build



Additional Build Actions

Install Android package

APK file: app/build/outputs/apk/app-debug.apk

Path to an Android package file, within the current workspace, to be installed

☐ Uninstall existing APK first

☑ Fail the build if installation fails

Delete

Run Android monkey tester

Package IDs: hk.ust.cse.hunkim.questionroom

Zero or more Android package IDs to monkey around with. If not specified, all installed packages will be used. Multiple packages can be separated by a comma

Event count: 1000

Number of events the monkey should perform. If not specified, no events will be generated

Delay between events: 5

In milliseconds. If 0 or not specified, events are generated as rapidly as possible

Advanced...

Delete

Uninstall Android package

Package ID: hk.ust.cse.hunkim.questionroom

ID of the Android package to be uninstalled

☑ Fail the build if uninstallation fails

Delete

Post-build Actions

Post-build Actions

Publish Android Lint results

Lint files

Fileset includes setting that specifies the generated Lint XML report files, such as **/lint-results.xml. Basedir of the fileset is the workspace root. If no value is set, then the default **/lint-results.xml is used. Be sure not to include any non-report files into this pattern.

Advanced...

Delete

Publish CCM analysis results

CCM results

Fileset includes setting that specifies the generated raw CCM XML report files, such as **/ccm.xml. Basedir of the fileset is the workspace root. If no value is set, then the default **/ccm.xml is used. Be sure not to include any non-report files into this pattern.

Advanced...

Delete

Archive the artifacts

Files to archive: app/build/outputs/apk/app-debug.apk

Advanced...

Delete

Publish Android monkey tester result

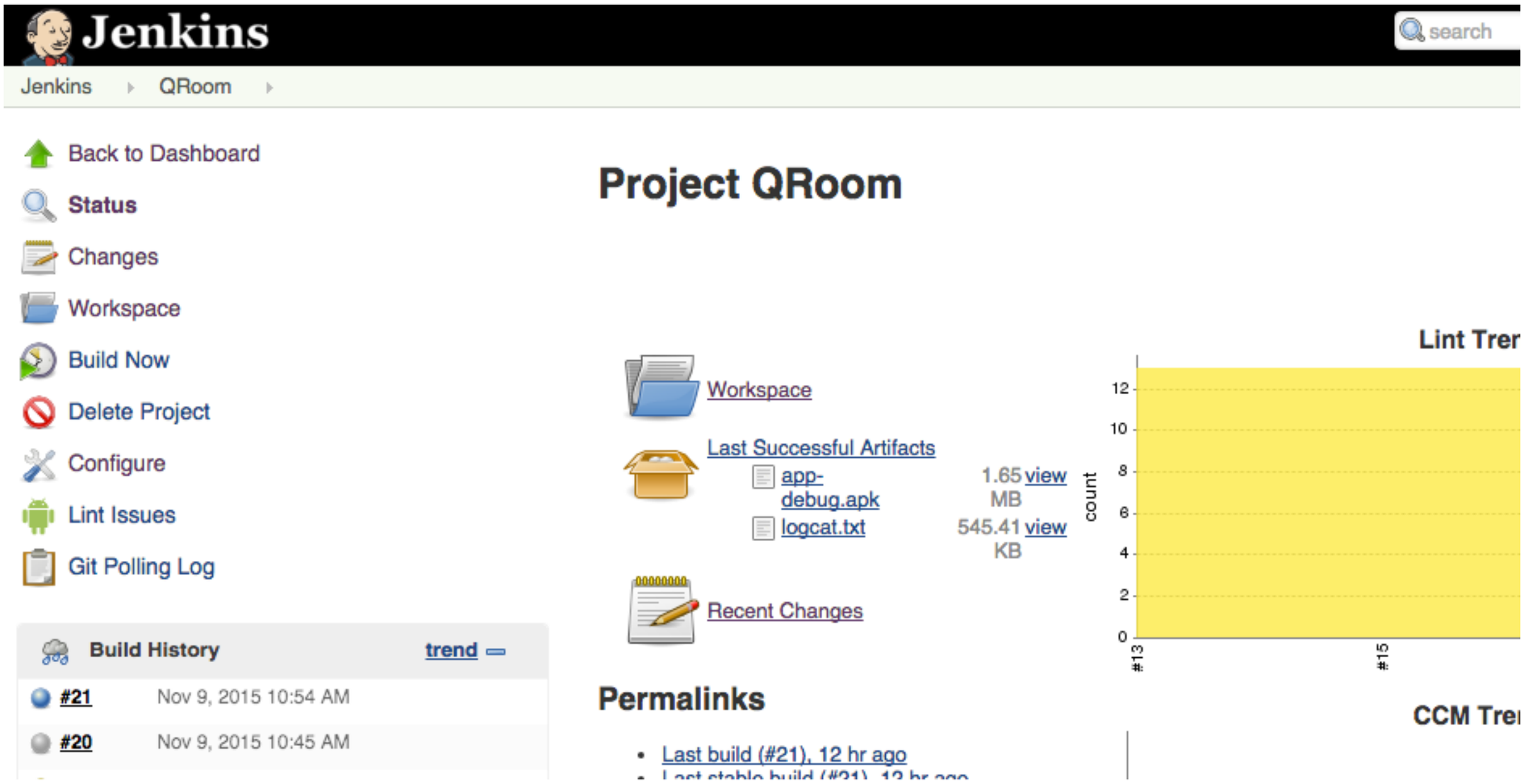
Filename

Optional: Name of a file within the workspace to read monkey output from. Defaults to "monkey.txt" in the root of the workspace

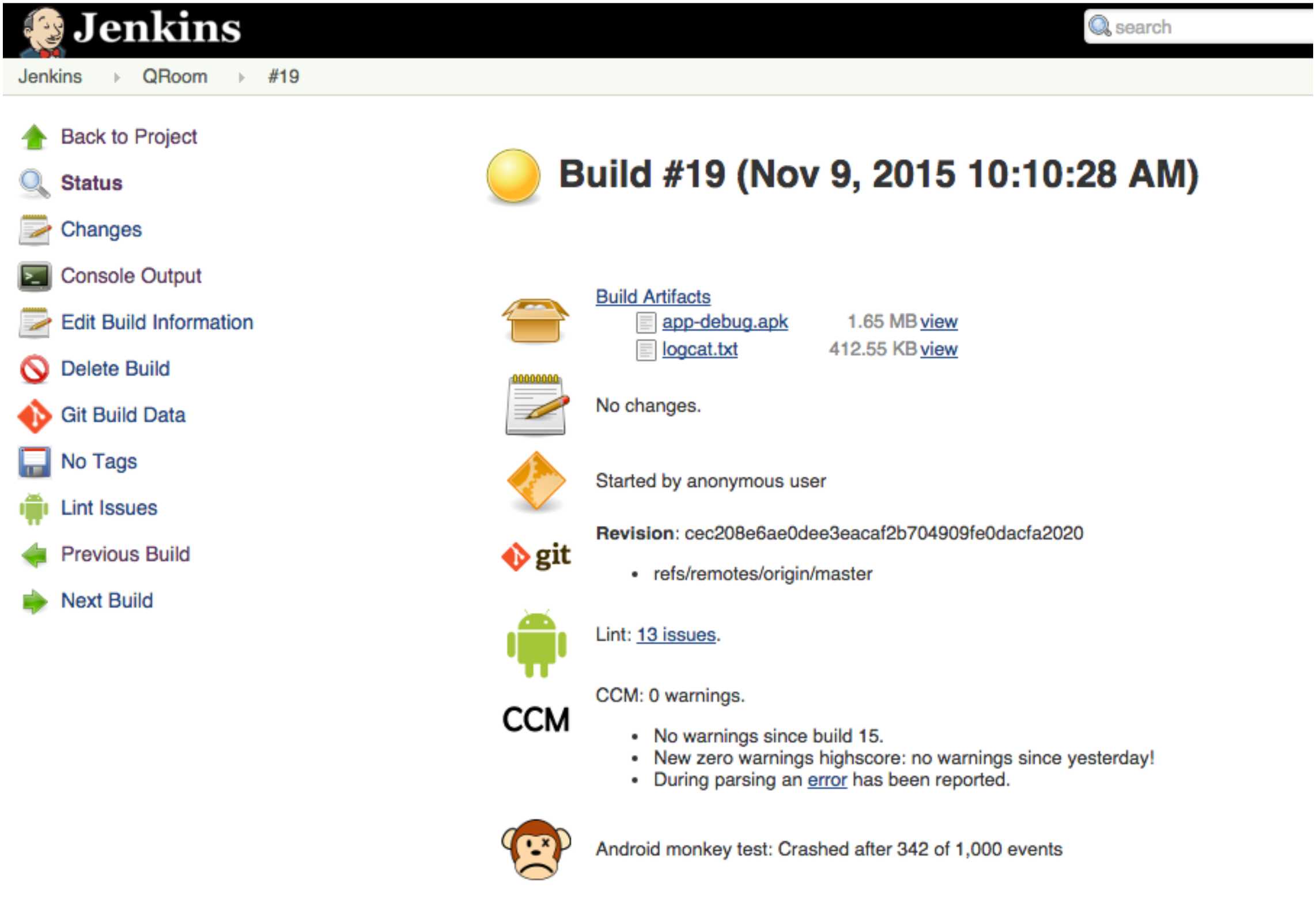
Set build result: Unstable

Sets the result of the build to this value if monkey caused a crash or ANR

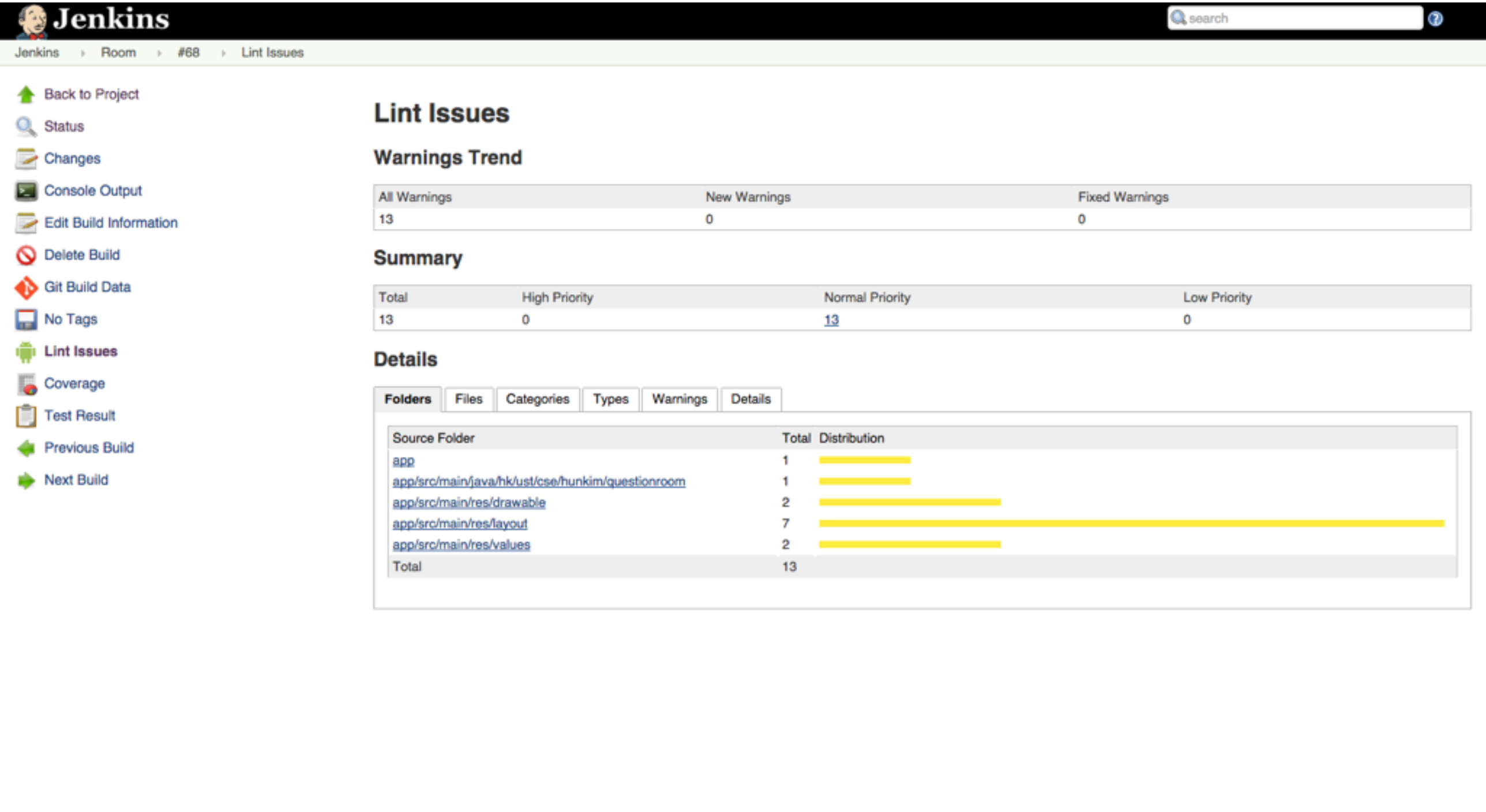
Build Now


Jenkins
search
Jenkins
QRoom
Back to Dashboard
Status
Changes
Workspace
Build Now
Delete Project
Configure
Lint Issues
Git Polling Log
Build History
trend
#21 Nov 9, 2015 10:54 AM
#20 Nov 9, 2015 10:45 AM
Project QRoom
Workspace
Last Successful Artifacts
app-debug.apk 1.65 MB view
logcat.txt 545.41 KB view
Recent Changes
Permalinks
Last build (#21), 12 hr ago
Lint Trer
count
12
10
8
6
4
2
0
#13
#15
CCM Trer

Dashboard


Jenkins
search
Jenkins ▸ QRoom ▸ #19
Back to Project
Status
Changes
Console Output
Edit Build Information
Delete Build
Git Build Data
No Tags
Lint Issues
Previous Build
Next Build
Build #19 (Nov 9, 2015 10:10:28 AM)
Build Artifacts
app-debug.apk 1.65 MB view
logcat.txt 412.55 KB view
No changes.
Started by anonymous user
Revision: cec208e6ae0dee3eacaf2b704909fe0dacfa2020
refs/remotes/origin/master
Lint: 13 issues.
CCM: 0 warnings.
No warnings since build 15.
New zero warnings highscore: no warnings since yesterday!
During parsing an error has been reported.
Android monkey test: Crashed after 342 of 1,000 events

Lint warnings



Test coverage

c.comp3111.xyz:8080/job/Room/68/Coverage/

Back to Room | index

debug

debug

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty	Missed	Lines	Missed	Methods	Missed	Classes
hk.ust.cse.hunkim.questionroom		61%		43%	45	84	90	220	21	55	2	15
hk.ust.cse.hunkim.questionroom.question		76%		46%	10	34	12	56	2	22	0	1
hk.ust.cse.hunkim.questionroom.db		85%		n/a	2	8	5	26	2	8	0	2
Total	479 of 1,381	65%	46 of 82	44%	57	126	107	302	25	85	2	18

https://builds.apache.org

Jenkins

search

Jenkins ▸ ENABLE AUTO REF

- People
- Build History
- Project Relationship
- Check File Fingerprint
- Anonymous View
- Leader board
- Dependency Graph

Build Queue (15)

Qpid-Java-JoramJMSTest » latest1.7,Ubuntu,qpid-amqp-1-0-client-jms
Qpid-Java-JoramJMSTest » latest1.7,Ubuntu,qpid-jms-client
Qpid-Java-Java-Test-JDK1.8
Qpid-Java-Java-BDB-6.0.x-TestMatrix » JDK 1.7 (latest),Ubuntu,java-bdb.0-10
Qpid-Java-Java-MMS-6.0.x-TestMatrix » JDK 1.7 (latest),Ubuntu,java-mms.0-10
Qpid-Java-Java-MMS-TestMatrix » JDK 1.7 (latest),Ubuntu,java-mms.0-9-1
Qpid-Java-Java-BDB-TestMatrix » JDK 1.7 (latest),Ubuntu,java-bdb.0-9-1
bookkeeper-master-find-patches-available

The Apache Software Foundation
http://www.apache.org/

This is a public build and test server for projects of the Apache Software Foundation. All times on this server are UTC.

See the Jenkins wiki page for more information about this service.

All | Groovy | **Most Recent Builds** | Olingo | POI | PreCommit Builds | Tika | XMLGraphics

S	Name ↓	Last Success	Last Failure	Last Duration
	Allura-rat	3 days 16 hr - #44	7 days 17 hr - #37	35 sec
	Apache-Falcon-Pull-Request-Build	2 days 20 hr - #8	3 days 7 hr - #6	29 min
	Aries-Async-Deploy	5 days 10 hr - #3	7 days 1 hr - #1	2 min 5 sec
	Aries-Blueprint-JDK7	6 days 1 hr - #2	N/A	7 min 50 sec
	CouchDB	23 hr - #6	4 days 15 hr - #3	20 min
	Hadoop-ATS-v2	N/A	4 days 15 hr - #2	5 hr 24 min
	HAWQ-build-pullrequest	4 hr 16 min - #159	N/A	1 min 0 sec
	HBase-1.0.3RC1	5 days 15 hr - #2	6 days 10 hr - #1	1 hr 31 min
	incubator-eagle-main	3 days 22 hr - #24	3 days 22 hr - #23	8 min 44 sec

The Joel 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 you have quiet working conditions?
9. Do you use the best tools money can buy? 
10. Do you have testers as part of the team?
11. Do you have interview candidates write code?
12. Do you do hallway usability testing?

http://www.cs.washington.edu/education/courses/403/09sp/calendar403.html.

Jenkins is OK

- But codebase is not so clean
- Need to install + plug-in installation
- Need to set up again and again
- Cloud?

CI is a FOSS, hosted, distributed continuous integration service used to build and test software projects hosted at GitHub.

http://www.slideshare.net/silent1mezzo/travis-ci-and-django

How it works

- Signup with your github account
- Specify git repos
- include .travis.yml file in git repos
- include package.json (for npm)
- Change/commit/push code
- Test runs automatically

http://www.slideshare.net/silent1mezzo/travis-ci-and-django

.travis.yml

```
language: node_js
node_js:
  - '4'
#http://swizec.com/blog/how-to-run-javascript-tests-in-chrome-on-travis/swizec/6647
before_install:
  - export DISPLAY=:99.0
  - sh -e /etc/init.d/xvfb start
```

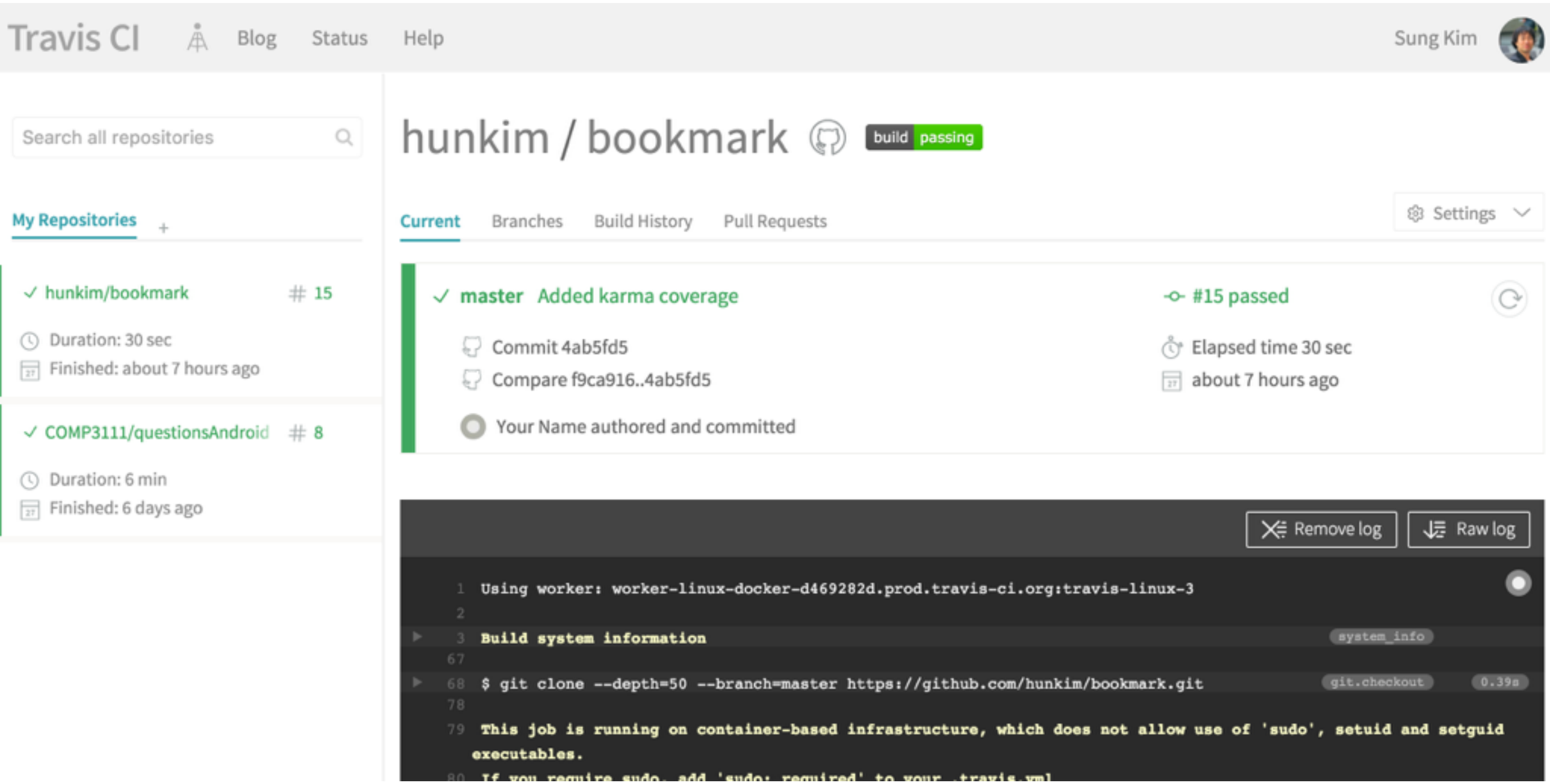
- Travis will do (for node_js)
  - npm install
  - npm test
- Test these commands in local (your computer) and commit/push

package.json (for npm)

```
{
        "devDependencies": {
                "karma": "~0.12",
                "jasmine-core": "~2.4.1",
                "karma-chrome-launcher": "~0.2.2",
                "phantomjs": "~1.9.19",
                "karma-phantomjs-launcher": "~0.2.3",
                "karma-coverage": "~0.5.3",
        "karma-jasmine": "~0.3.6"
        },

        "scripts": {
        "test": "./node_modules/.bin/karma start --single-run --browsers PhantomJS"
        }
}
```

green, green!


Travis CI
Blog
Status
Help
Sung Kim
Search all repositories
hunkim / bookmark
build passing
My Repositories
Current
Branches
Build History
Pull Requests
Settings
hunkim/bookmark # 15
Duration: 30 sec
Finished: about 7 hours ago
COMP3111/questionsAndroid # 8
Duration: 6 min
Finished: 6 days ago
master Added karma coverage
Commit 4ab5fd5
Compare f9ca916..4ab5fd5
Your Name authored and committed
#15 passed
Elapsed time 30 sec
about 7 hours ago
Remove log
Raw log
1 Using worker: worker-linux-docker-d469282d.prod.travis-ci.org:travis-linux-3
3 Build system information system_info
67
68 $ git clone --depth=50 --branch=master https://github.com/hunkim/bookmark.git git.checkout 0.39s
78
79 This job is running on container-based infrastructure, which does not allow use of 'sudo', setuid and setguid executables.

Travis for Android? Why not?

```yaml
language: android
android:
  components:
    # Uncomment the lines below if you want to
    # use the latest revision of Android SDK Tools
    # - platform-tools
    # - tools

    # The BuildTools version used by your project
    - build-tools-22.0.1

    # The SDK version used to compile your project
    - android-22

    # Additional components
    - extra-google-google_play_services
    - extra-google-m2repository
    - extra-android-m2repository
    - addon-google_apis-google-22

    # Specify at least one system image,
    # if you need to run emulator(s) during your tests
    - sys-img-armeabi-v7a-android-22
    - sys-img-x86-android-22
install:
  # Check install section: http://docs.travis-ci.com/user/build-configuration/#install
  # If you'd like to skip the install stage entirely, set it to true and nothing will be run.
  - true
env:
  global:
   # install timeout in minutes (2 minutes by default)
    - ADB_INSTALL_TIMEOUT=8

# Emulator Management: Create, Start and Wait
before_script:
  - echo no | android create avd --force -n test -t android-19 --abi armeabi-v7a
  - emulator -avd test -no-skin -no-audio -no-window &
  - android-wait-for-emulator
  - adb shell input keyevent 82 &

```

https://github.com/COMP3111/questionsAndroid/blob/master/.travis.yml

Todo (Joel & Deployment)

- Joel testing on your project
  - What is your current score?
- Use automatic deployment
  - AWS beanstalk,
  - Heroku,
  - *Or your own git setting for your AngularJS*

Todo (CI)

- Setup Travis CI for your AngularJS and Android
  - see .travis.yml
    - https://github.com/hunkim/bookmark
    - https://github.com/COMP3111/questionsAndroid
  - Show me **greens**!

Project presentation

- Thursday 3PM!
- Show
  - specification: trello, git issues
  - code: pull requests (in PM repos)
  - test results and CI results
- Demonstrate
  - your web app and android