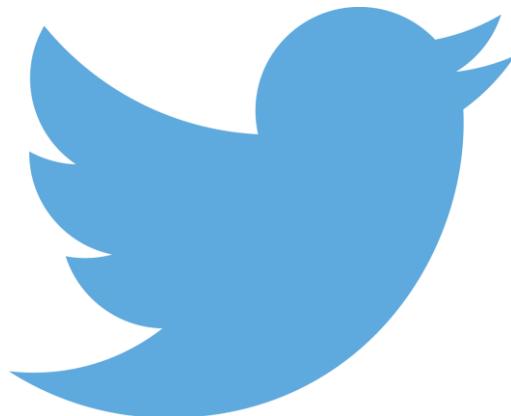




Please let people know what's going on at the conference using the **#jenkinsconf** hashtag

*“What are you doing at work when you could have been at the #jenkinsconf!?”*





# Jenkins State of Union

Kohsuke Kawaguchi

Creator of Jenkins / CTO, CloudBees

@kohsukekawa / kk@kohsuke.org

#jenkinsconf

Thank you for  
being here today

## Thank You To Our Sponsors

### Platinum



### Gold

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THE LOAD TESTING CLOUD®

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Last 12 months



# THE 2014 LEADERBOARD OF JAVA TOOLS & TECHNOLOGIES



**82.5%**  
**JUnit\***

TOP TESTING  
FRAMEWORK  
USED BY  
DEVELOPERS



**70%**  
**Jenkins°**

MOST USED CI SERVER  
IN THE INDUSTRY

**64%**  
**Maven**

MOST USED  
BUILD TOOL  
IN JAVA

**64%**  
**Nexus°**

THE MAIN  
REPOSITORY  
USED BY  
DEVELOPERS

**67.5%**  
**Hibernate\***<sup>°</sup>

THE TOP  
ORM  
FRAMEWORK  
USED

**65%** **Java 7**

THE INDUSTRY LEADER FOR  
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**56%**

**MongoDB°**  
THE NOSQL  
TECHNOLOGY OF CHOICE

**69%** **Git\***

#1 VERSION CONTROL  
TECHNOLOGY OUT THERE

**55%**  
**FindBugs\***<sup>°</sup>

MOST-USED STATIC  
CODE ANALYSIS TOOL

**50%**  
**Tomcat°**

THE MOST POPULAR  
APPLICATION SERVER

**49%**  
**Java EE 6°**

FOUND IN THE MOST  
ENTERPRISES

**48%**  
**Eclipse**

THE IDE USED MORE  
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**40%** **Spring MVC\***<sup>°</sup>

MOST COMMONLY USED WEB FRAMEWORK

**32%** **MySQL°**

THE MOST POPULAR SQL TECHNOLOGY



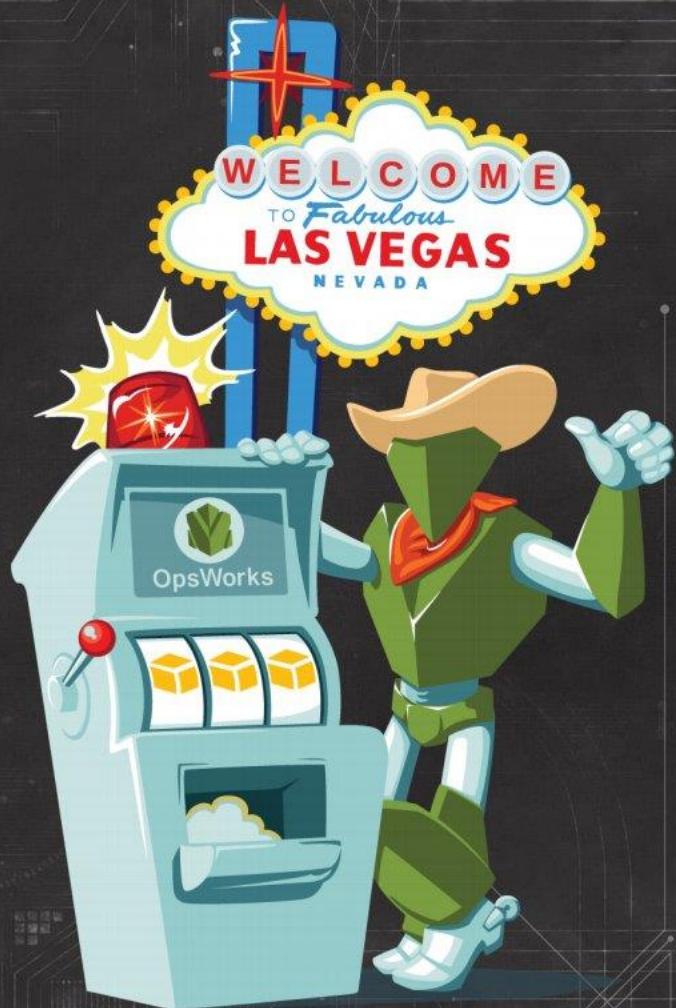
## DMG202 - Zero to Sixty: AWS OpsWorks

Thomas Metschke, Amazon

November 13<sup>th</sup>, 2013



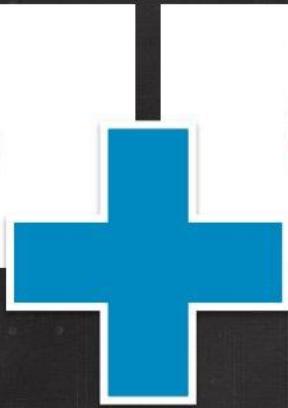
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# Jenkins & AWS OpsWorks to the Rescue



**OpsWorks**



**Jenkins**



Currently watching Stage 2

STAGE ONE STAGE TWO

Chrome File Edit View History Bookmarks Window Users Help

23.251.149.151:8080/#

Apps Fluttery Bird Developers Console gcloud SDK GitHub swift-catfish-511

## Jenkins

New Item People Build History Manage Jenkins Credentials My Views

All S W Name Last Success Last Failure Last Duration

Icon	W	Name	Last Success	Last Failure	Last Duration
		myjob	2 hr 32 min - #36	7 min 27 sec - #32	1 min 13 sec

Icon: [Add description](#)

Build Queue: No builds in the queue.

Build Executor Status:

#	Status
1	Idle
2	Idle

[Help us localize this page](#)

Page generated: Mar 25, 2014 8:30:54 PM [REST API](#) [Jenkins ver. 1.551](#)

|| 3:22:11 Live

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**Logan Nedo** this is why you're supposed to do a dry run before a presentation



**Rudy Marca** audio

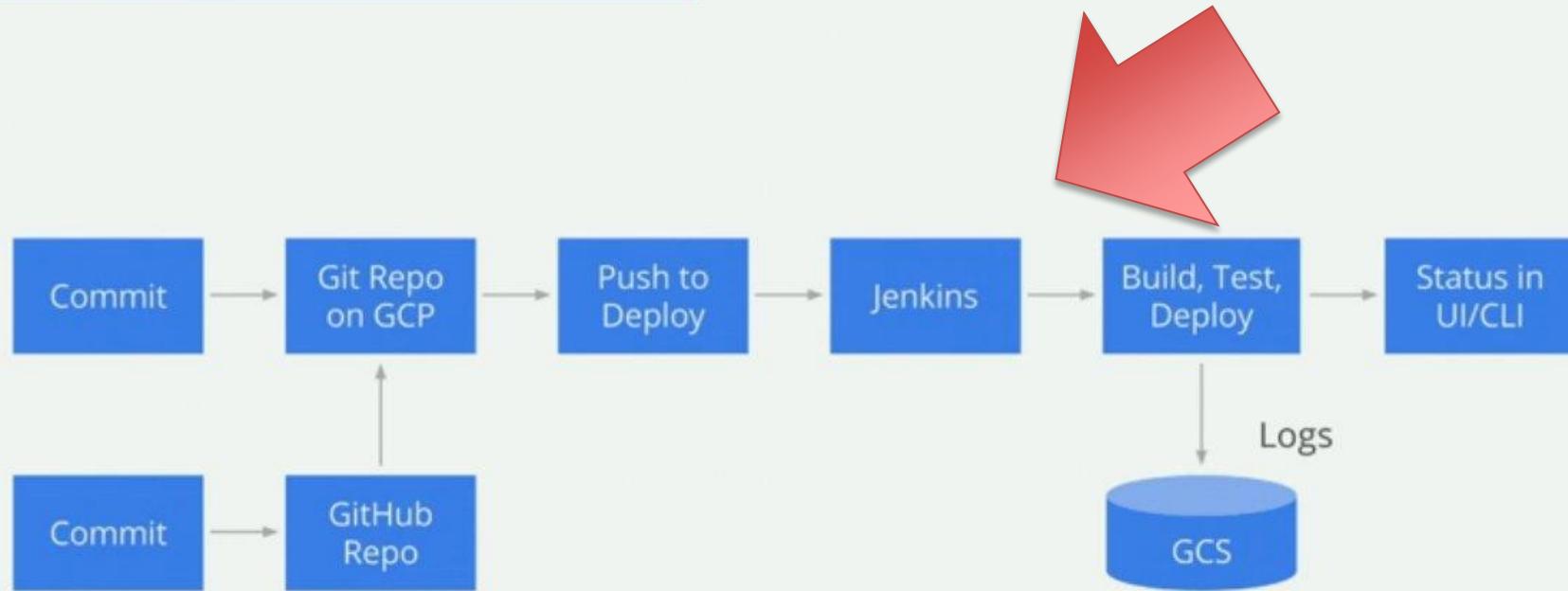


**TvDnbDrive** Good Jobs :] Dj Borys .. Szczecin Poland



**John Paul Sandall** oi

## Deploy Your App: Demo



Integration Tests



Docker Hub

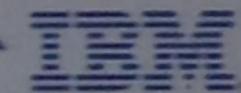
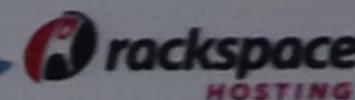


Revision Control



boot2docker

Deployment  
Platforms



# Dockercon keynote



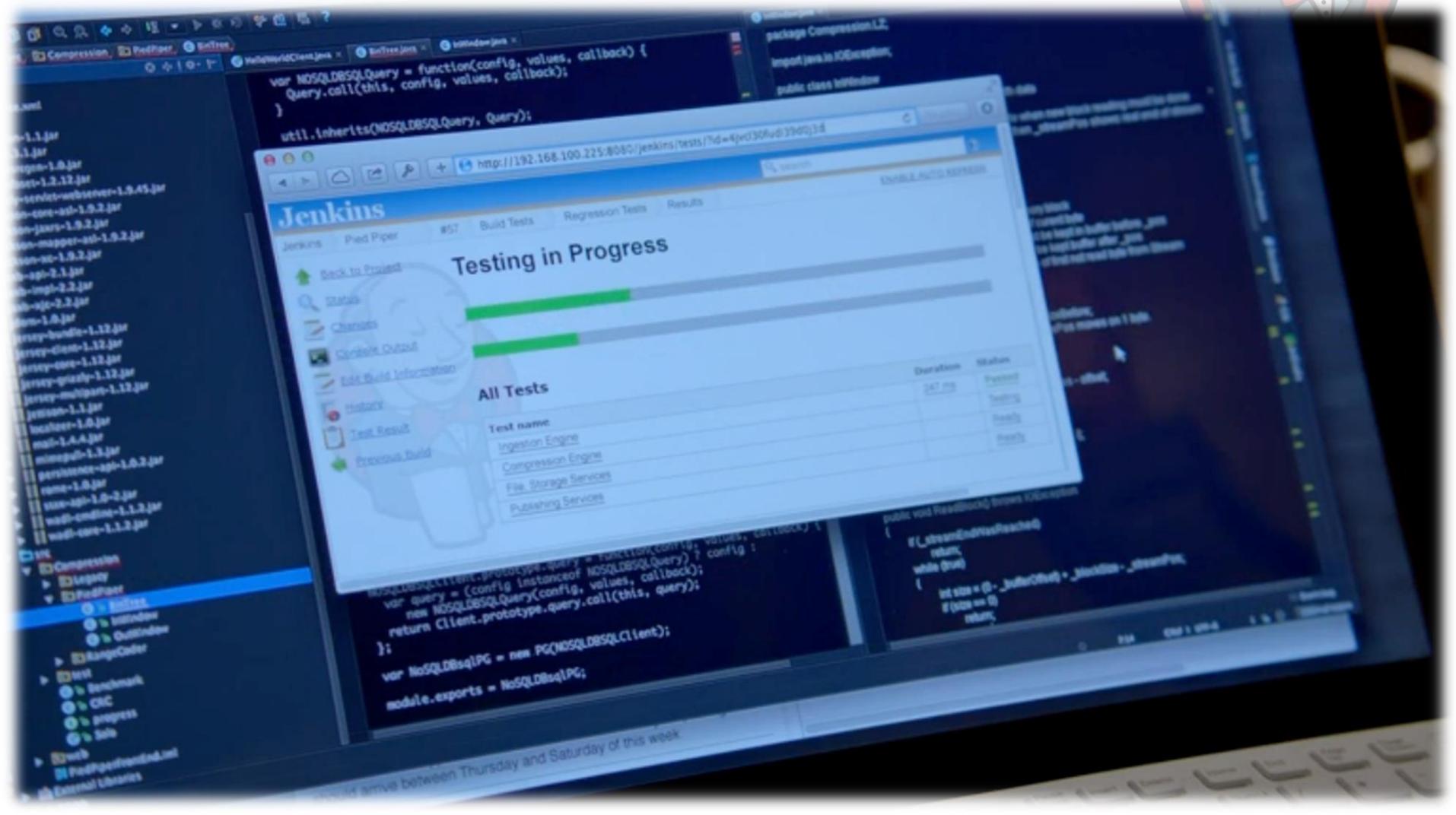
#dockercon

con1  
San Francisco

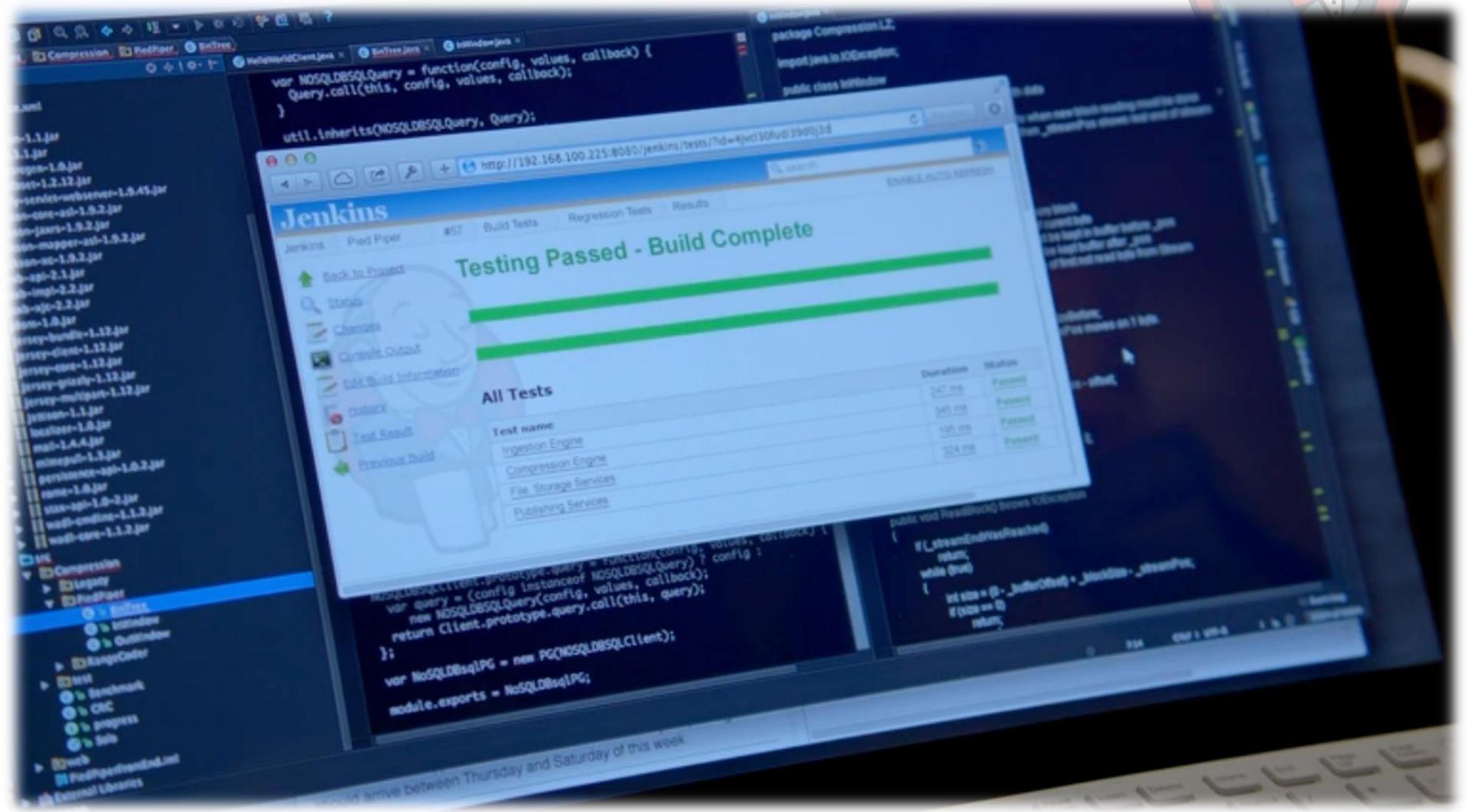


Copyright HBO

## Even on a TV show



## Even on a TV show





Kohsuke Kawaguchi @kohsukekawa · Oct 13

Aaand **#JenkinsCI** now has 1000 plugins.  
That was quick. Still working on finding out  
which plugin was the 1000th.

The image shows a screenshot of the Jenkins website. At the top, a dark banner reads "WHAT IS JENKINS?". Below it, a text box states: "In a nutshell, Jenkins CI is the leading open-source continuous integration server. Built with Java, it provides 1000 plugins to support building and testing virtual projects." A large red circle highlights the "1000 plugins" text. Below this, a red button says "Download Jenkins". Underneath the button are two tabs: "Release" and "Long-Term Support Releases". A large button at the bottom says "Java Web Archive (.war)".



28

9

...

View more photos and videos





# DotCi



## DotCi Highlights

- GitHub specific opinionated flavor of Jenkins
- 1 repository = 1 build
- Configuration via source file: `.ci.yaml`
- Docker
- MongoDB backend for storage



## User Interface Refresh

- New look
- Responsive design
- Bigger UI controls & form elements
- Curves
- Pay respect to compatibility





# Demo

# More UI/UX improvements

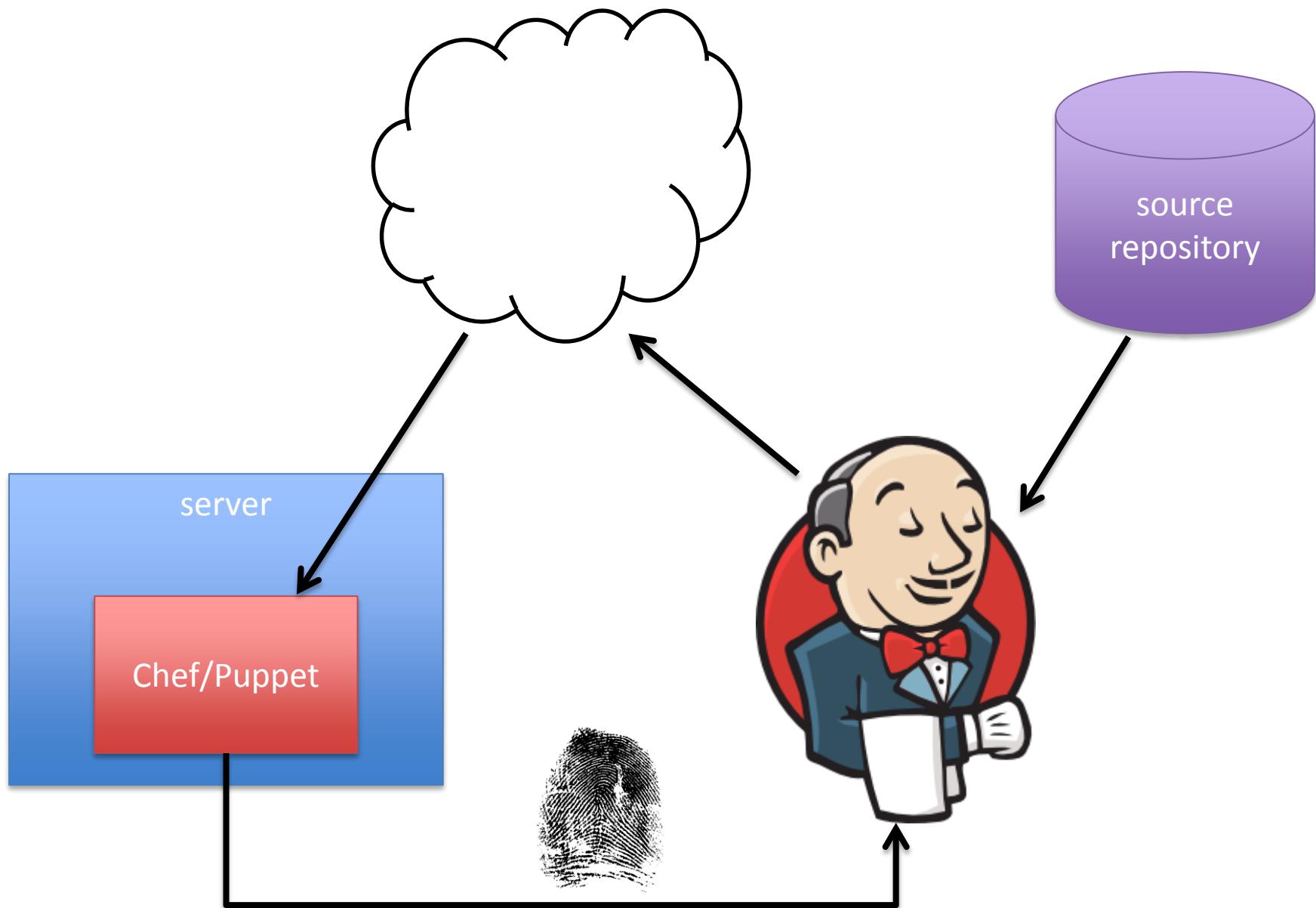
- Dynamic content update
  - Left-over from FOSDEM UI Discussion
- A lot under discussion
  - Create jobs from repos (like GitHub)
  - Plugin pack
  - ...



# Servlet 3.0?

## End-to-end tracking with





# Tracking for Continuous Delivery



- Track what was deployed when/where?
- Use that to automate even more
  - Smoke test
  - Show the status in the build job
- Extensible
  - Integration to specific tool can be written as plugins

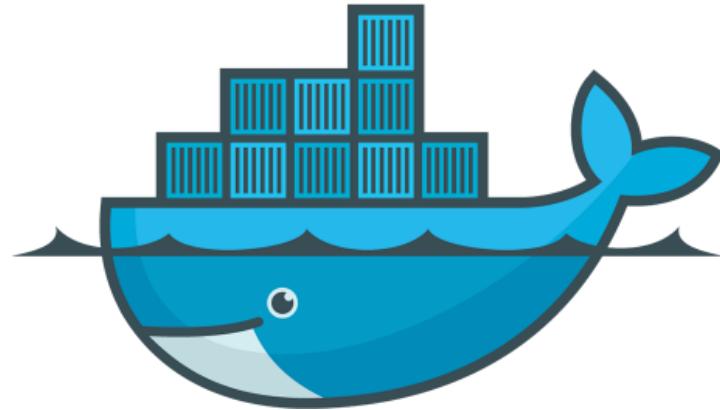
## Changes needed in Ops is minimal

- Chef
  - Custom report handler
- Puppet
  - Just POST a standard report to Jenkins
- Request for feedback
  - How should the data come back to Jenkins?

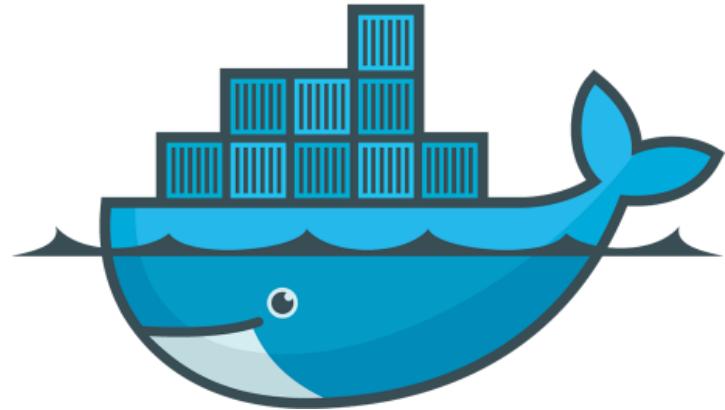


# Jenkins and Docker

- DotCI
- Docker plugin for Jenkins
  - Runs one-off slaves in Docker container
- Docker build publish plugin
  - Build & push docker images

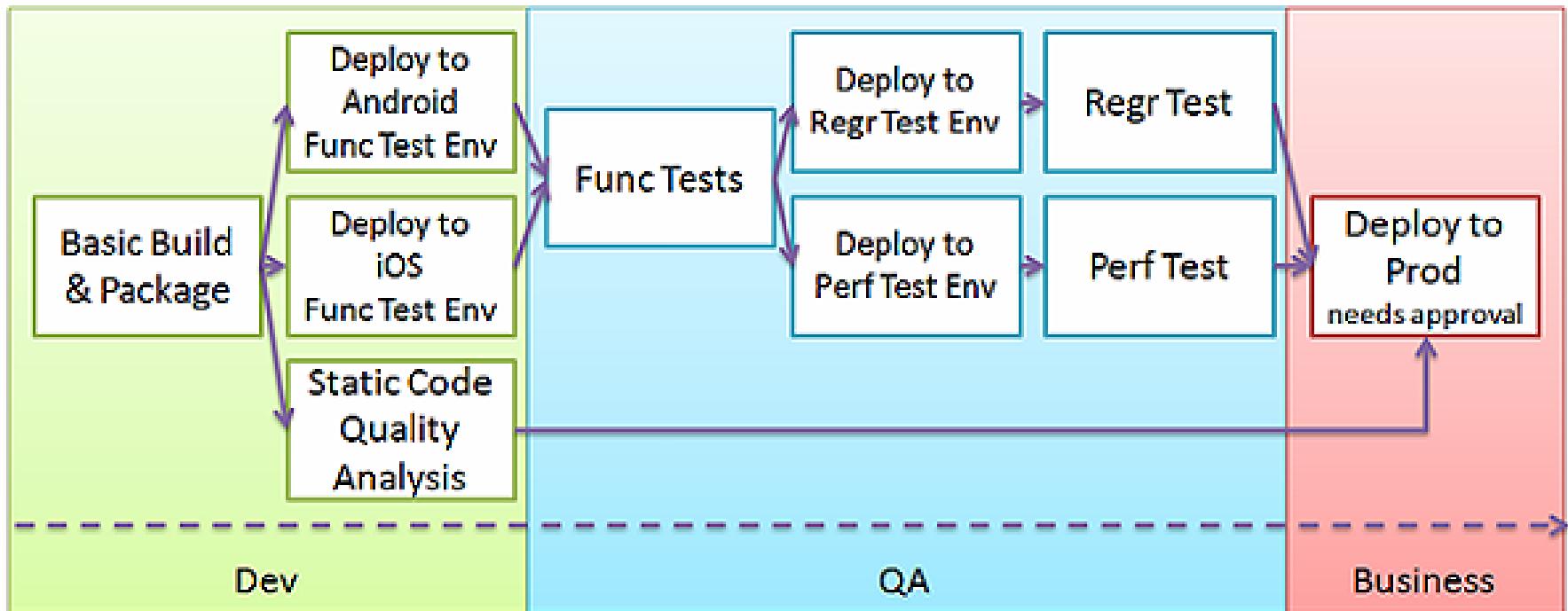


## Official Docker Image!

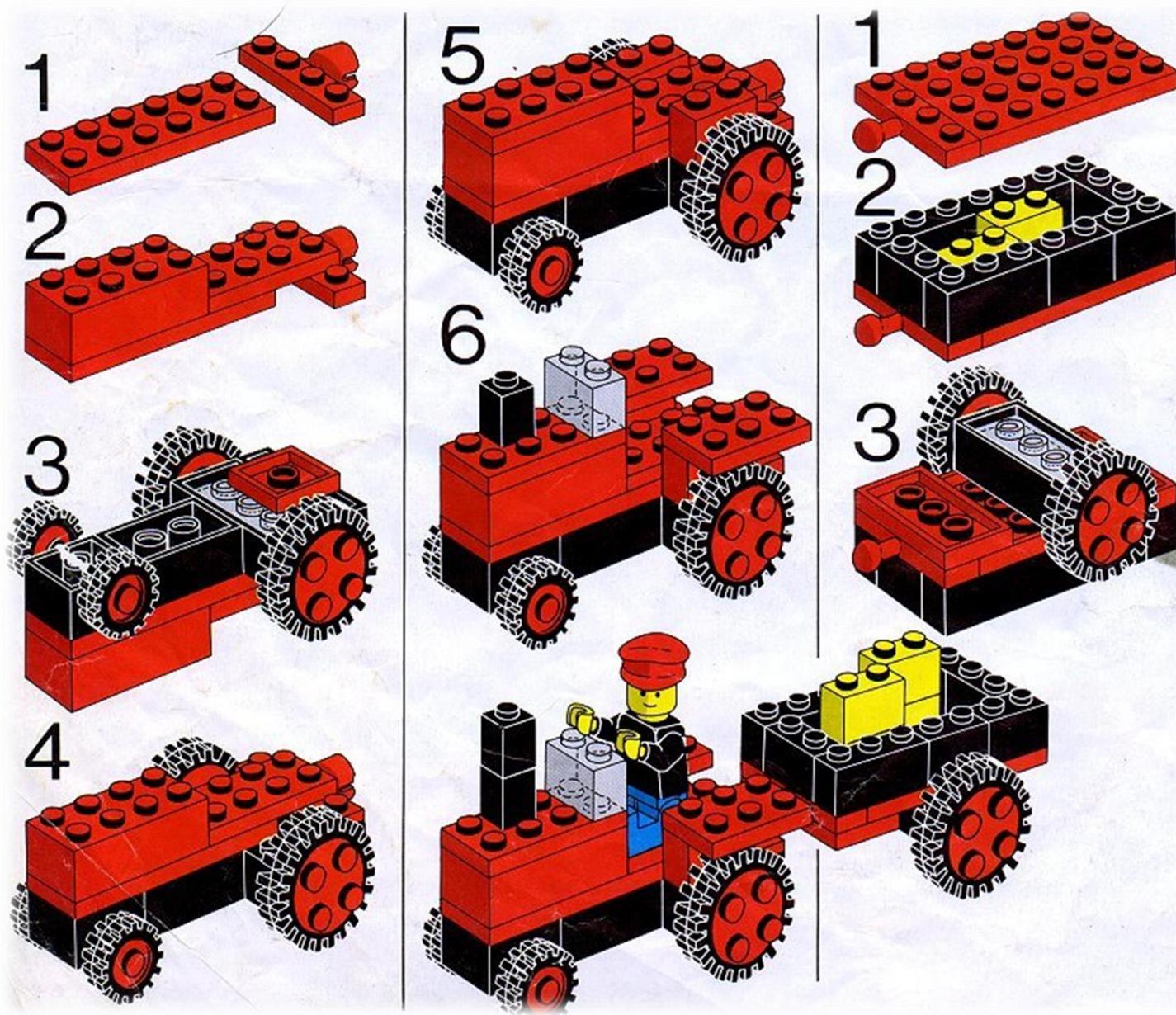


```
docker run -p 8080:8080 jenkins
```

# Workflow



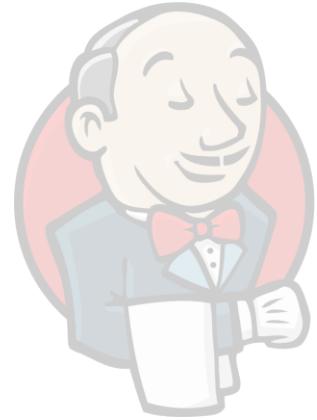
All	MyProject Build Pipeline	MyProject Delivery Pipeline	MyProject Jobs	Sample	+
S	W	Name		Last Success	
		<a href="#">MyProject &gt; 1 - Developer Jobs &gt; Basic Build and Package</a>		21 sec - #18	
		<a href="#">MyProject &gt; 1 - Developer Jobs &gt; Deploy to Android Func Test Env</a>		52 sec - #15	
		<a href="#">MyProject &gt; 1 - Developer Jobs &gt; Deploy to iOS Func Test Env</a>		41 sec - #12	
		<a href="#">MyProject &gt; 1 - Developer Jobs &gt; Static Code Quality Analysis</a>		1 min 2 sec	
		<a href="#">MyProject &gt; 1 - Developer Jobs &gt; Trigger Deploy to Func Test Envs</a>		1.4 sec - #1	
		<a href="#">MyProject &gt; 2 - QA Jobs &gt; Deploy to Perf Test Env</a>		32 sec - #11	
		<a href="#">MyProject &gt; 2 - QA Jobs &gt; Deploy to Regr Test Env</a>		31 sec - #11	
		<a href="#">MyProject &gt; 2 - QA Jobs &gt; Func Tests</a>		25 sec - #15	
		<a href="#">MyProject &gt; 2 - QA Jobs &gt; Perf Tests</a>		11 sec - #11	
		<a href="#">MyProject &gt; 2 - QA Jobs &gt; Regr Tests</a>		6 hr 18 min	





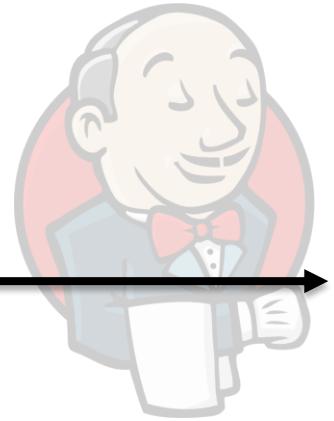
S	W	Name ↓	Last Success	Last Failure
		<a href="#">MyProject</a>	22 sec - #4	N/A

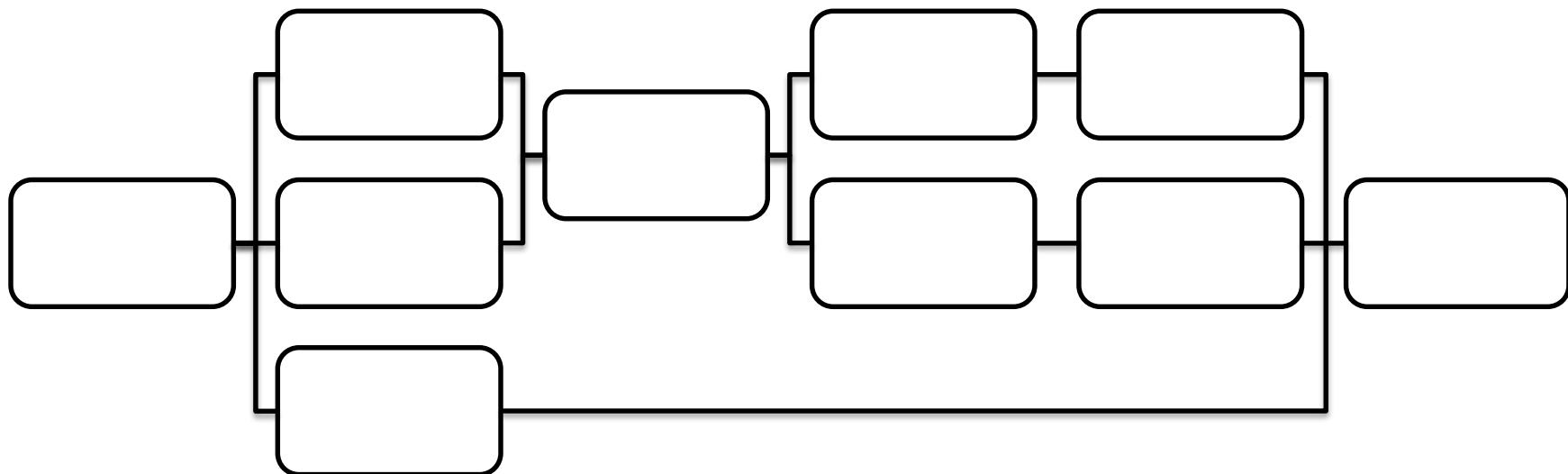
```
with.node("linux") {  
    steps.git ...  
    sh "mvn install"  
    parallel(  
        { sh "./regression-test.sh" },  
        { sh "./performance-test.sh" }  
    )  
    ...  
}
```

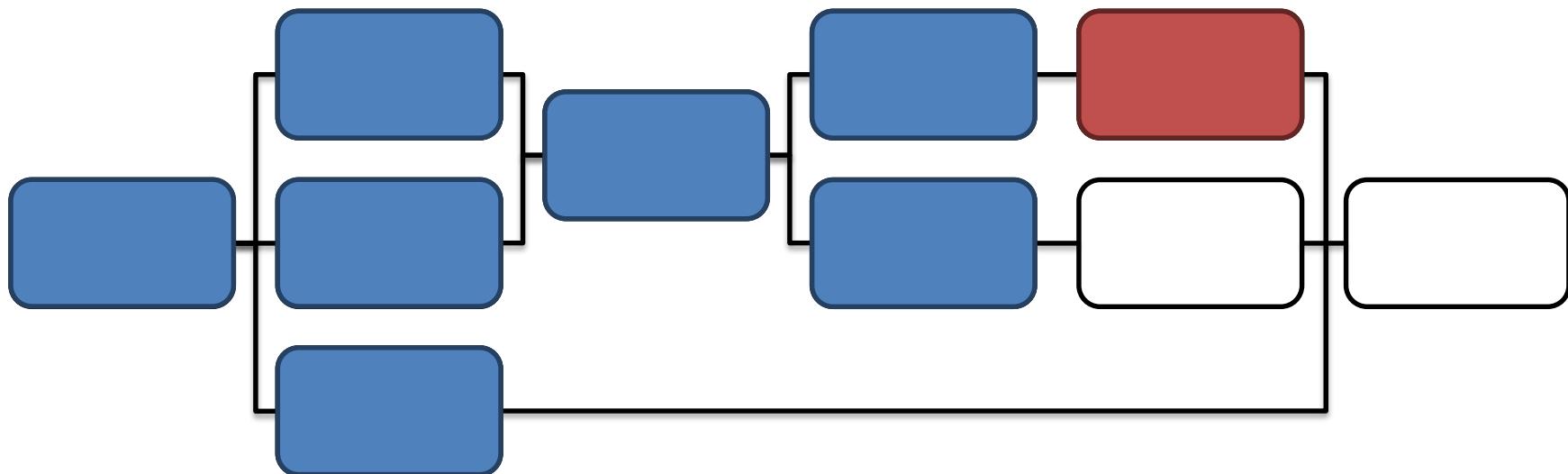


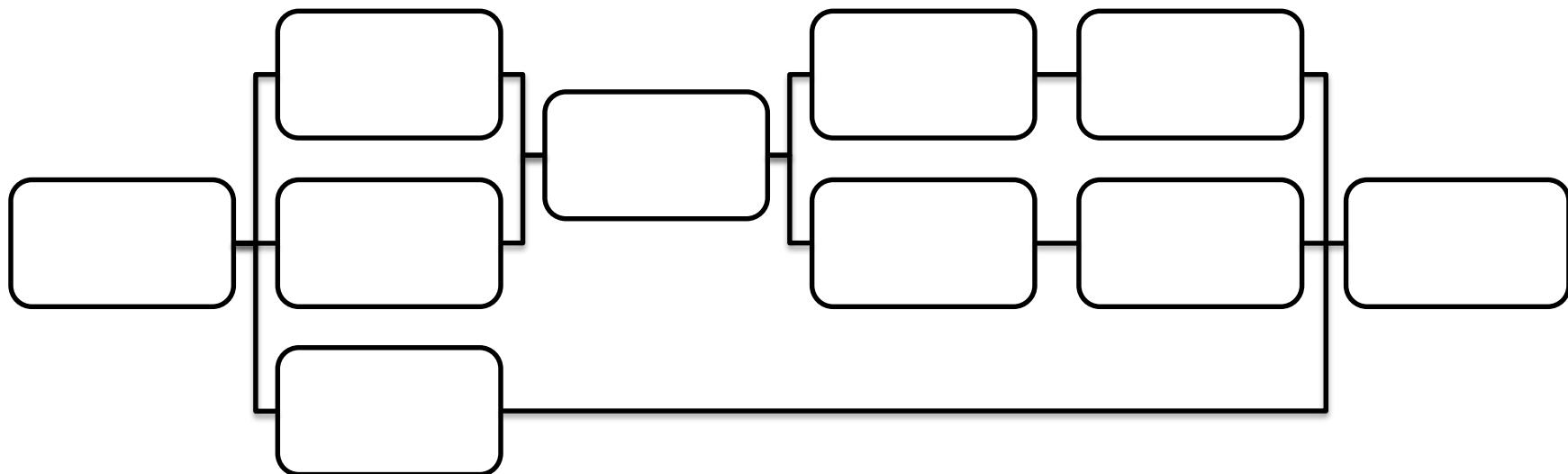
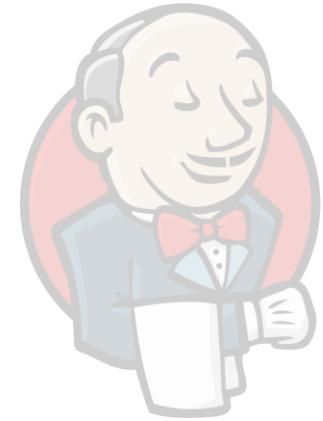


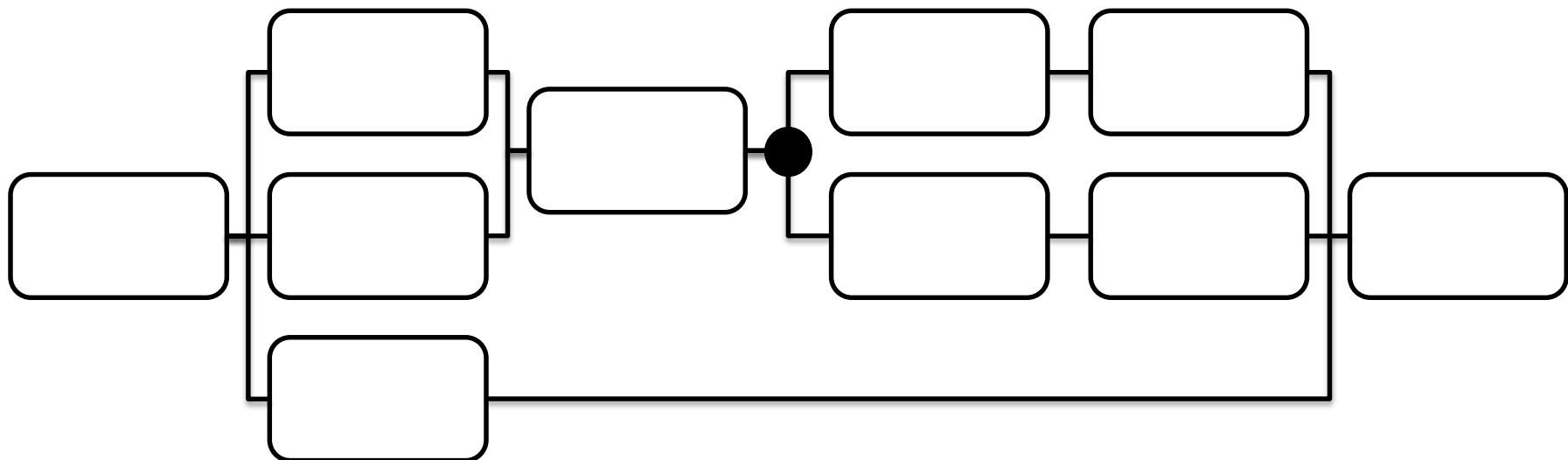
Build #153

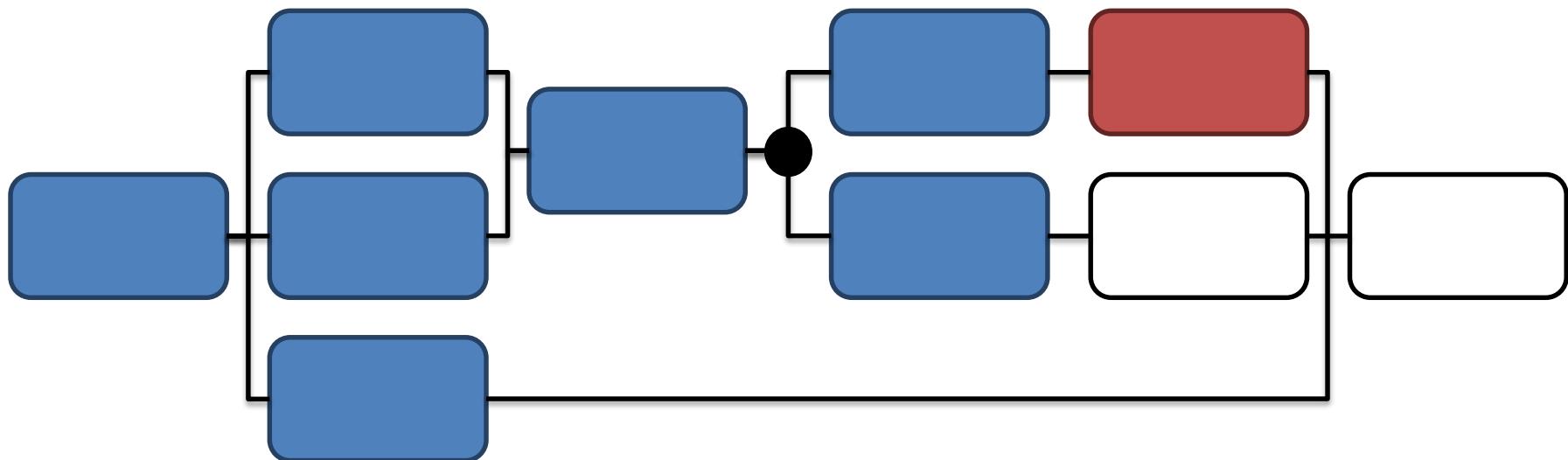


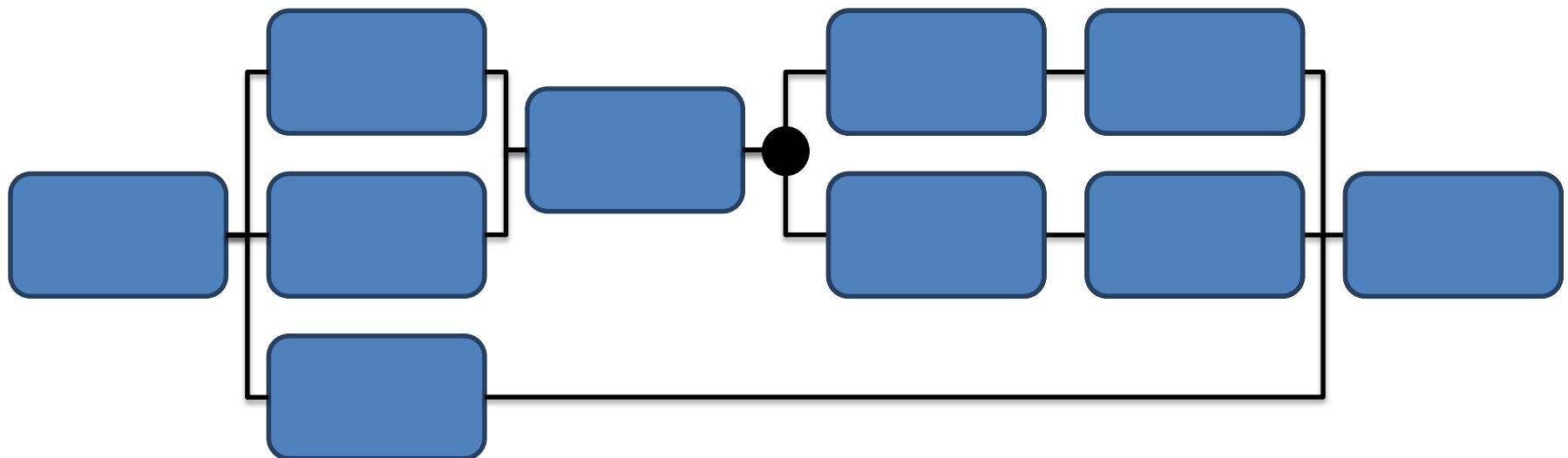














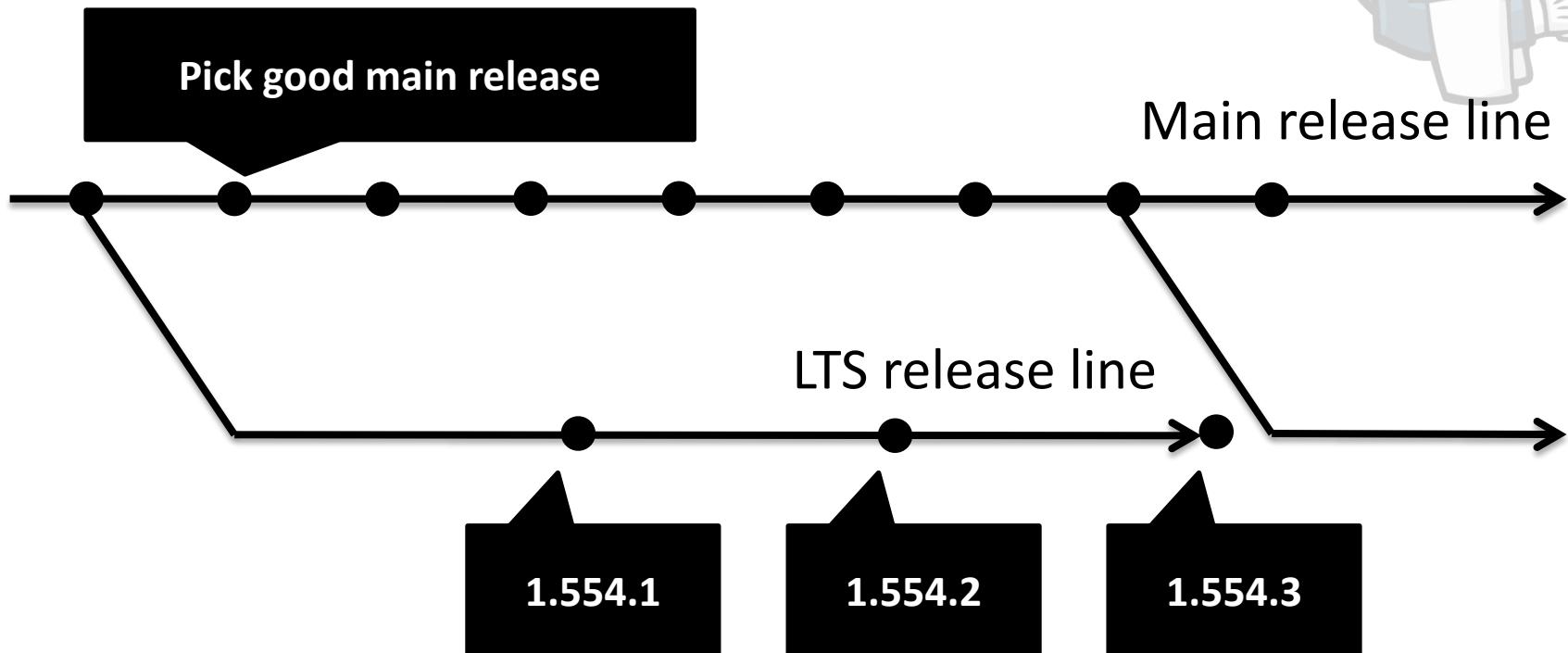
# Workflow

- [github.com/jenkinsci/workflow-plugin](https://github.com/jenkinsci/workflow-plugin)
- Bunch of new extension points
- Expect some value-adds in Jenkins Enterprise by CloudBees
- More about this later today



# Quality

# Train Model for LTS Releases



New LTS release every four weeks

## LTS Release Model Changes

- You can plan ahead for upgrades
- Participate in LTS qualification process

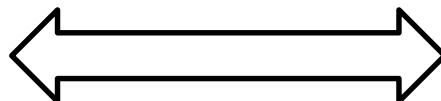


# Acceptance Test & Harness

- Old project, renewed
- Lots of activity
  - 50+ commits/week by 22 people
  - 365 tests
  - 50-ish plugins



## Acceptance Test & Harness



## Class of problems we hope to catch

- Browser-specific issues
- Container-specific issues
- OS-specific issues
- Packaging-specific issues
- Problematic plugin combinations
- Plugin with newer versions of cores



# This is for you, too



I want to make sure a new version of Jenkins works in **my environment with my set of plugins.**



## Reusability

- Make your tests our tests
- Amass a bigger pool of tests





## Separately reusable pieces

Jenkins  
Controller

Page Objects

JENKINS  
HOME seeder

Machine  
Provisioner

Docker  
fixtures

Cucumber  
integration

Geb + Spock

Vagrant

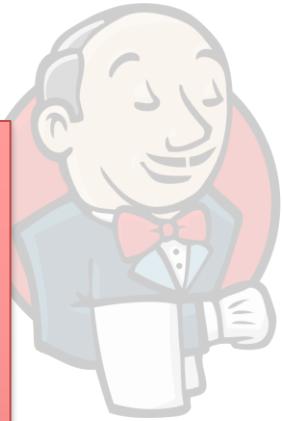
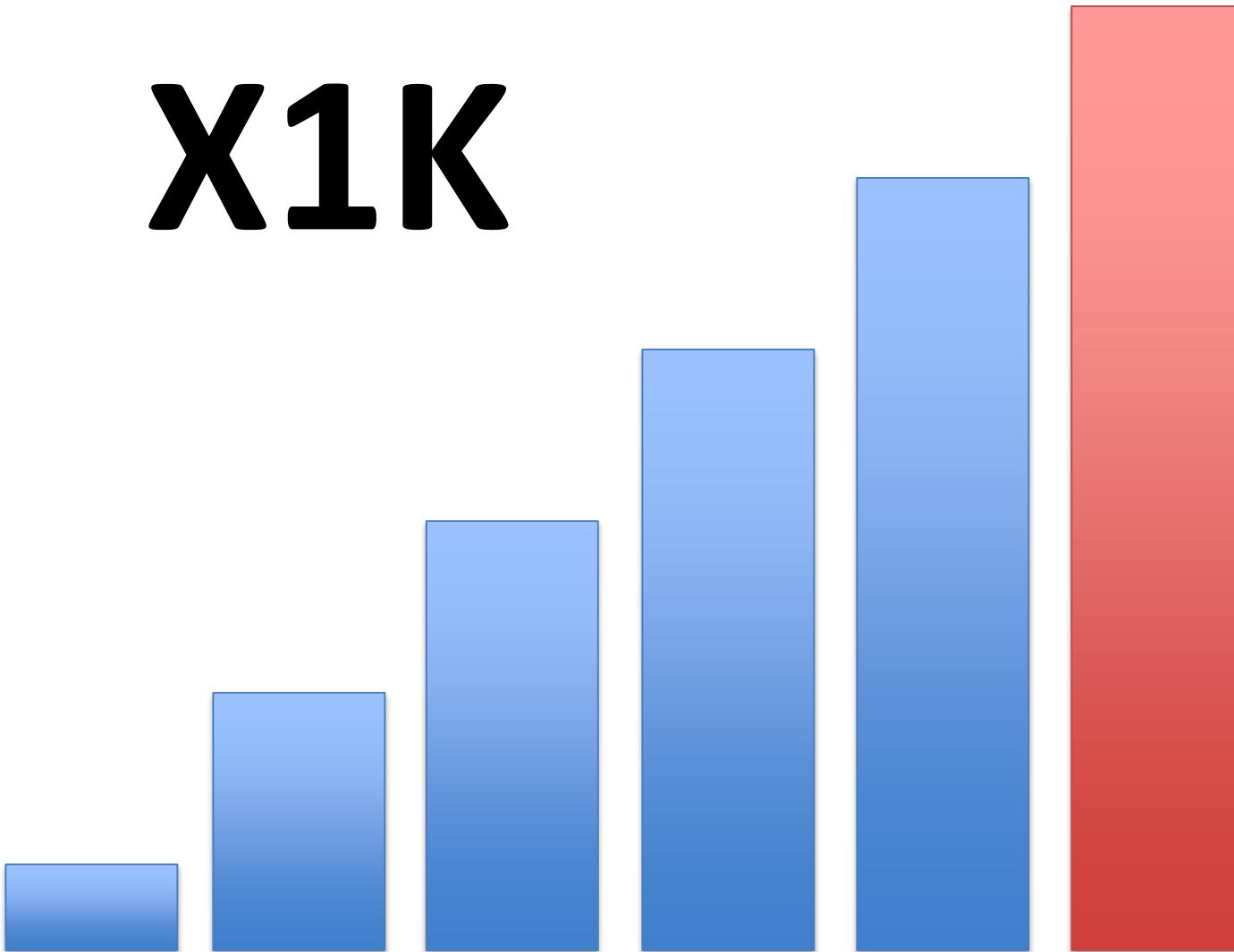
JUT Process  
pool

## More work ahead

- More regular executions
  - More target platforms
  - More browsers
- Test stability improvements
- Expand to non-functional tests



# X1K

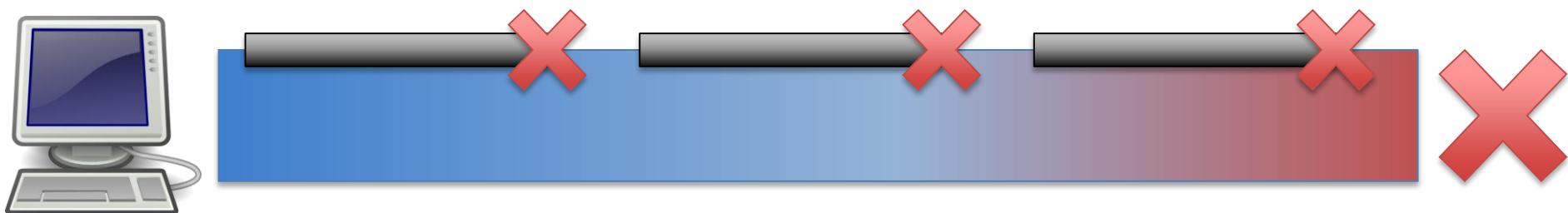


# More efficient master/slave communication

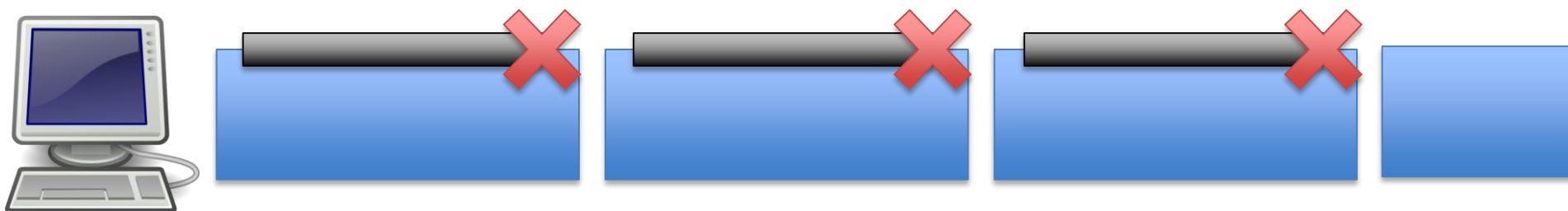


- NIO in remoting
  - use a few threads to manage 100s of slaves
- JNLP today, coming to CLI soon
- Maven2 jobs are a lot faster

## Speaking of JNLP slaves...



## Speaking of JNLP slaves...

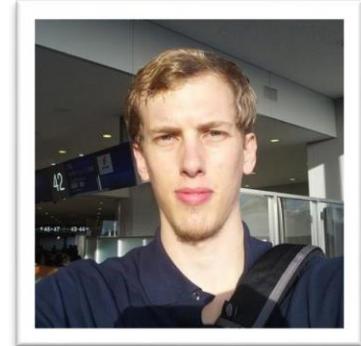


# Infrastructures



## “Eat our own dogfood” approach

- Continuous delivery pipeline for our own infra
- Shout out to Puppet Labs for their help



## Infra Summary

- It's all out there
  - [github.com/jenkins-infra/jenkins-infra](https://github.com/jenkins-infra/jenkins-infra)
- Come join the infra team
  - Work on cutting-edge stuff & brag about it elsewhere







## Conclusion

- So many exciting things going on in the project
- Let's build this together