totoro

A simple & stable front-end test tool

Zhouxuan Yang

2012.12 ~ Now

- 2008 ~ 2012

- 2012 ~ now

fool2fish

@everywhere

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323 followers **20** starred **6** following

Organizations

spmjs
Sea.js

Contributions | Repositories | Public Activity

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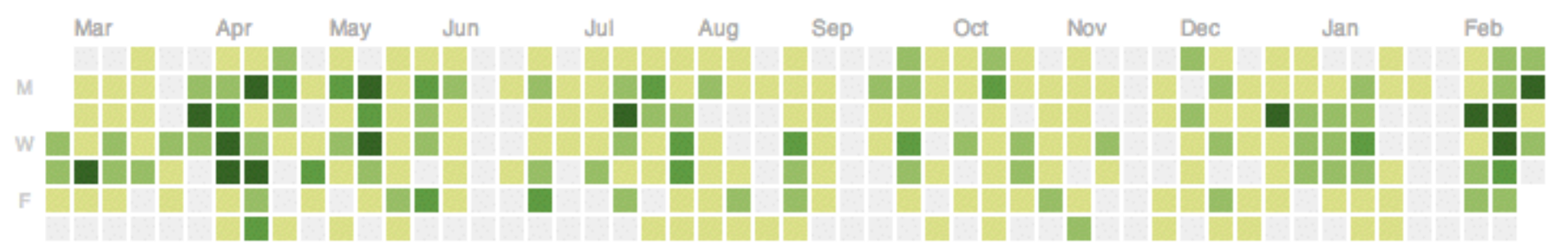
Popular repositories

- **dragon-book-exercise-answers** — Compilers Principles, Techniques, & To... — 133 ★
- **blog** — fool2fish's blog — 51 ★
- **selenium-doc** — selenium 中文文档 — 21 ★
- **vmx** — A velocity template tool that can view de... — 5 ★
- **the-c-programming-language-...** — The C programming language exercise ... — 2 ★

Repositories contributed to

- **totorojs/totoro** — A simple and stable front-end test tool. ... — 184 ★
- **totorojs/totoro-server** — Server side of totoro. — 27 ★
- **totorojs/totoro-log-analyse** — Totoro server log analyse — 0 ★
- **totorojs/browsers** — A simple browser manager. — 15 ★
- **totorojs/totorojs.org** — Official web site and docs of totoro. — 56 ★

Your Contributions



Summary of Pull Requests, issues opened and commits. Learn more.

Less More

1,595 Total	18 days	4 days
Feb 27 2013 - Feb 27 2014	April 07 - April 24	February 23 - February 26
Year of Contributions	Longest Streak	Current Streak

Contribution Activity

Period: 1 Week

totorojs.org

1. What ?

Basic feature

- Run in real browsers
- Support all test frameworks

Simple & Stable

- Concise doc, no config
- JIT feedbacks & report
- Automatic coverage
- Debug

Simple & Stable

- Config error
- Code error
- Browser interrupt

Simple & Stable

- Communication control
- Testing distribution
- Browser guard
- ...

2. How ?

Reference

Karma

Spectacular Test Runner for JavaScript

PhantomJS

sauce LABS

testling-ci

run your browser tests on every push

LET'S CODE TDJS

SeleniumHQ Browser Automation

. . . . . .

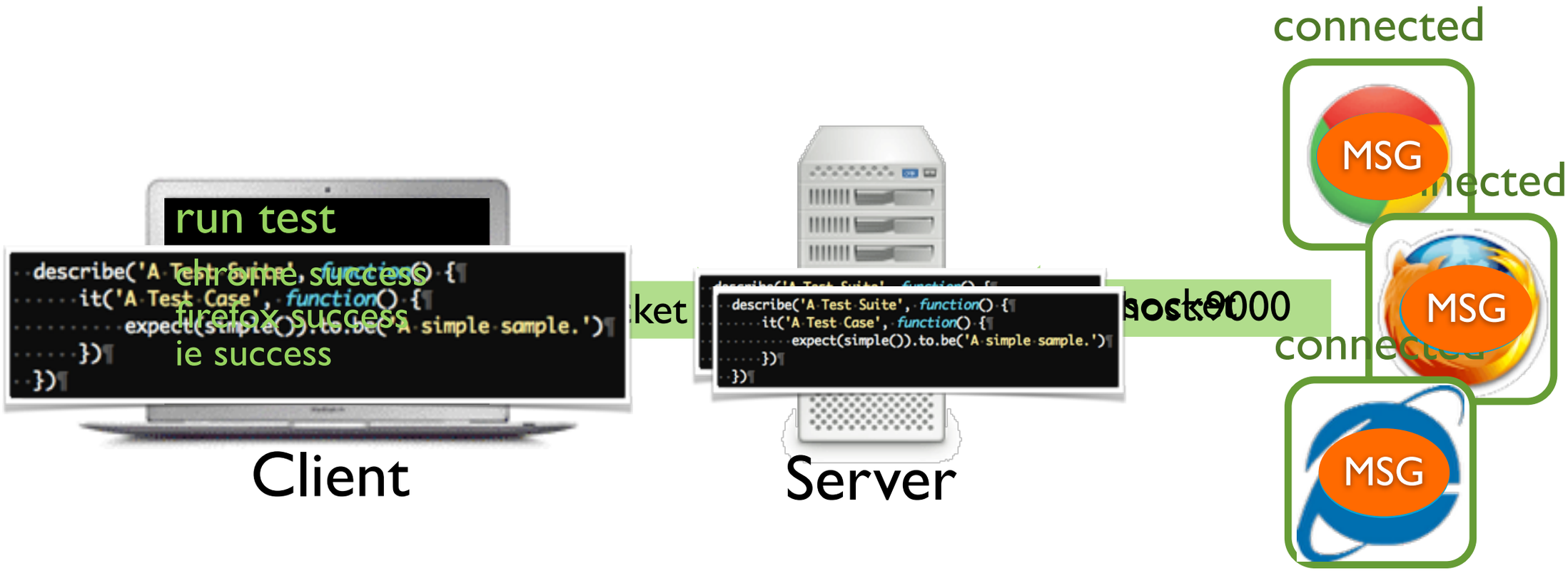
2.1 Socket based

How it works

Client

Server

How it works


run test
describe('A Test Suite', function() {
it('A Test Case', function() {
expect(simple()).to.be('A simple sample.')
})
})
chrome success
firefox success
ie success
ket
describe('A Test Suite', function() {
it('A Test Case', function() {
expect(simple()).to.be('A simple sample.')
})
})
ost:9000
connected
MSG
nected
MSG
connected
MSG
Client
Server

Problems

- Fragile
  - Browser crash
  - Server crash
  - Exception

2.2 Selenium Grid

How it works

Driver

Grid hub

Grid node

How it works

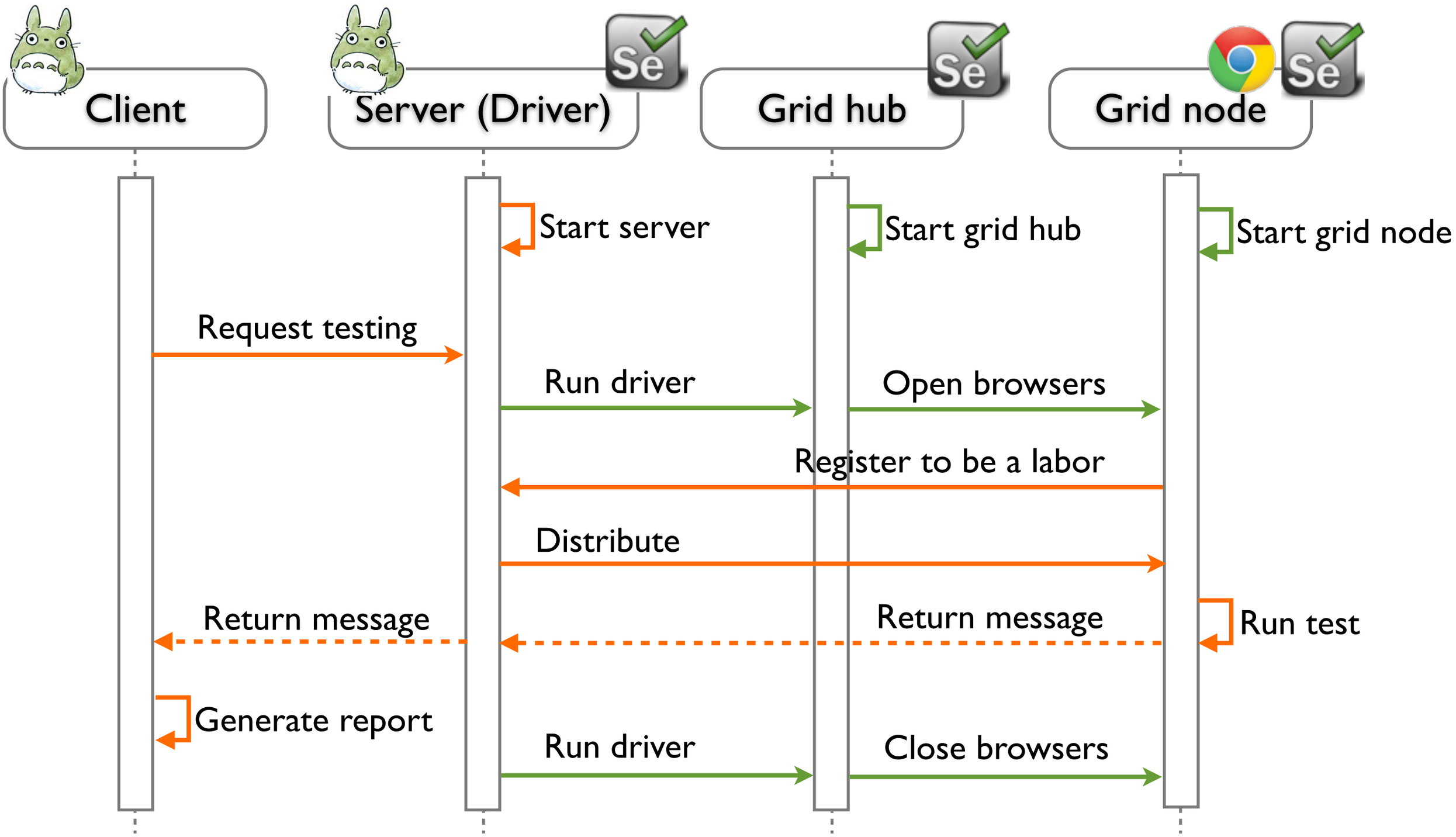
Driver

Grid hub

Grid node

```
browser = driver.get('chrome')
browser.open('alipay.com')
```

Socket + Grid


Client
Server (Driver)
Grid hub
Grid node
Start server
Start grid hub
Start grid node
Request testing
Run driver
Open browsers
Register to be a labor
Distribute
Return message
Return message
Run test
Generate report
Run driver
Close browsers

New problems

- Too complex to use
- Strong coupling, a new incentive to crash

Cashed again!

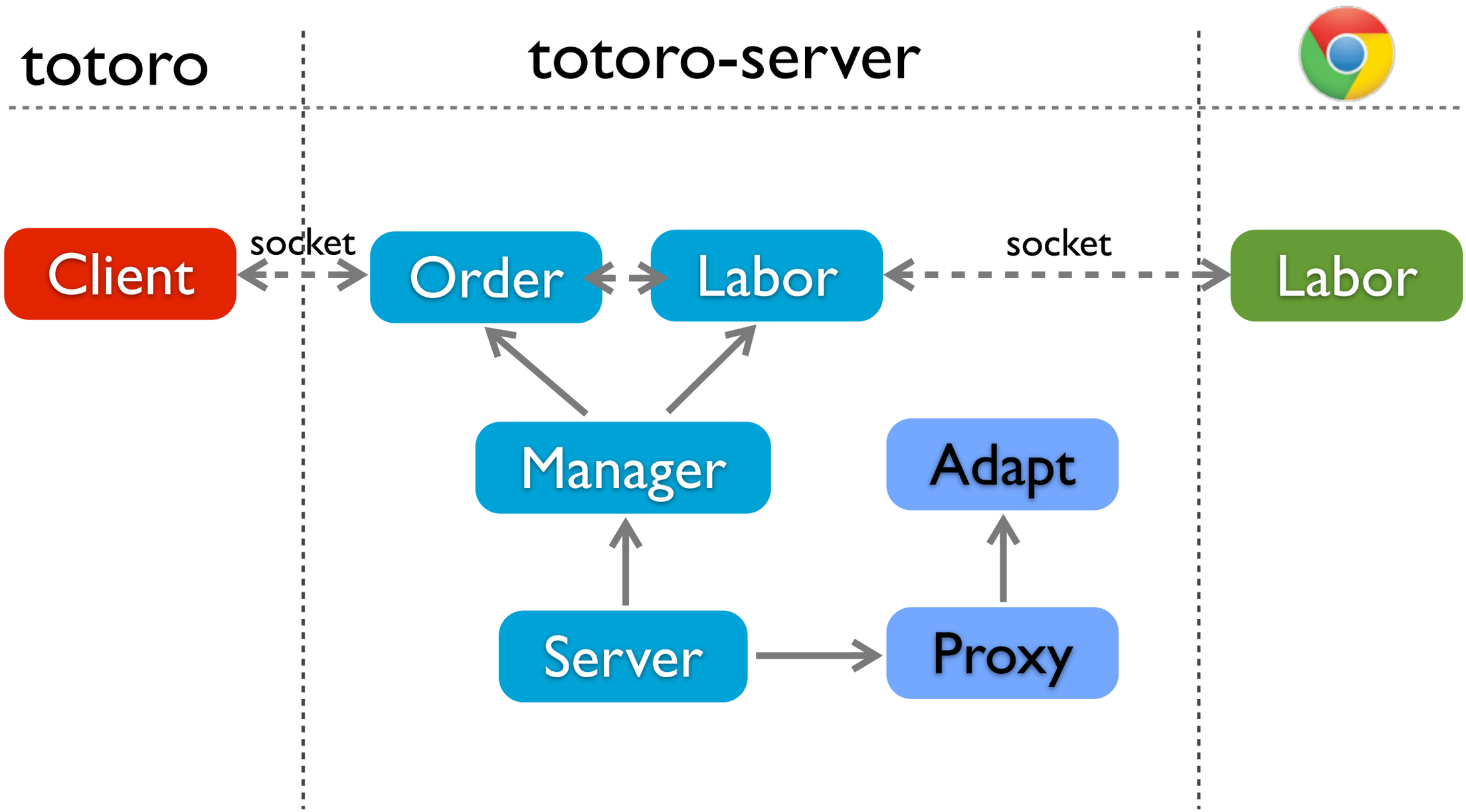
It may be not in the mood.

怒！

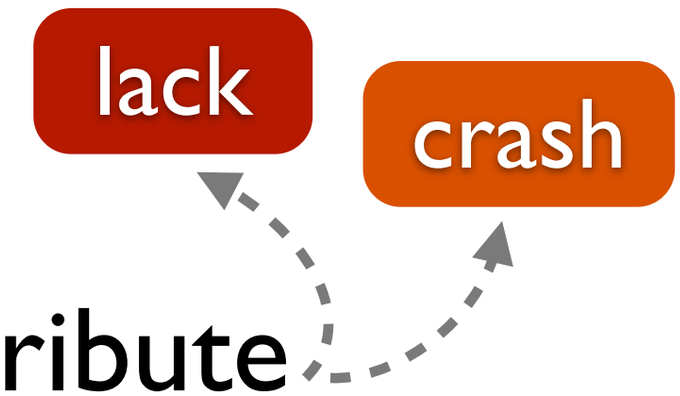
2.3 Totoro

Test tool

How it works


totoro
totoro-server
Client
socket
Order
Labor
socket
Labor
Manager
Adapt
Server
Proxy

Testing distribution



- When should distribute?
- Which browsers should distribute to

When should distribute

- More orders wait
- More labors available

Iframe or window?

Run in iframe

Run in window

Server

Why not iframe?

- Testing efficiency
- Browser stability
- Correctness of testing result

Why not iframe?

```
it('width is not zero', function(){
    var el = document.createElement('div')
    document.body.appendChild(el)
    expect(el.offsetWidth).not.to.be(0)
})
```

```
ie 6.0 / windows xp
Failed 1 of 1 tests in 16ms
    width is not zero: expect 0 to not equal 0

chrome 30.0.1599.69 / macosx 10.8.4
Failed 1 of 1 tests in 6ms
    width is not zero: expect o to not equal 0
```

https://github.com/fool2fish/blog/issues/3

2.4 Browsers

Browser guard

Basic feature

- Start browser
- Kill browser
- Visit URL

Advanced feature

- Monitor status
  - Memory
  - CPU
  - Running
- Monitor connection

How it works?

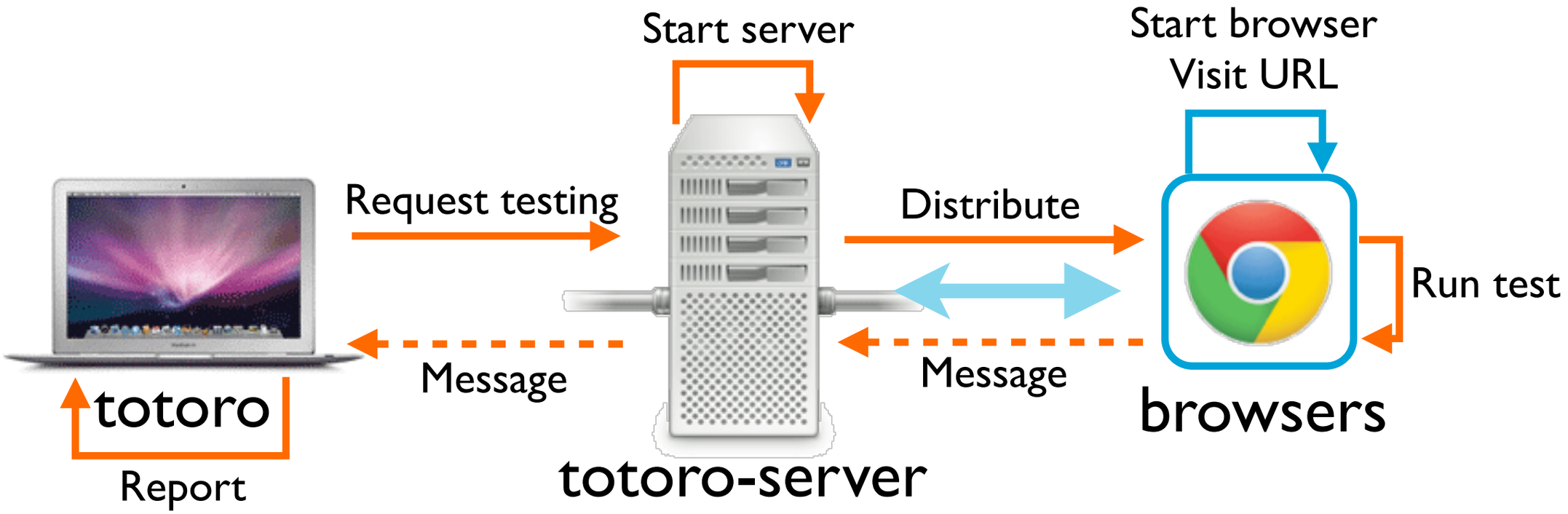
/Applications/Firefox.app/Contents/MacOS/firefox-bin URL

https://developer.mozilla.org/en-US/docs/Mozilla/Command_Line_Options

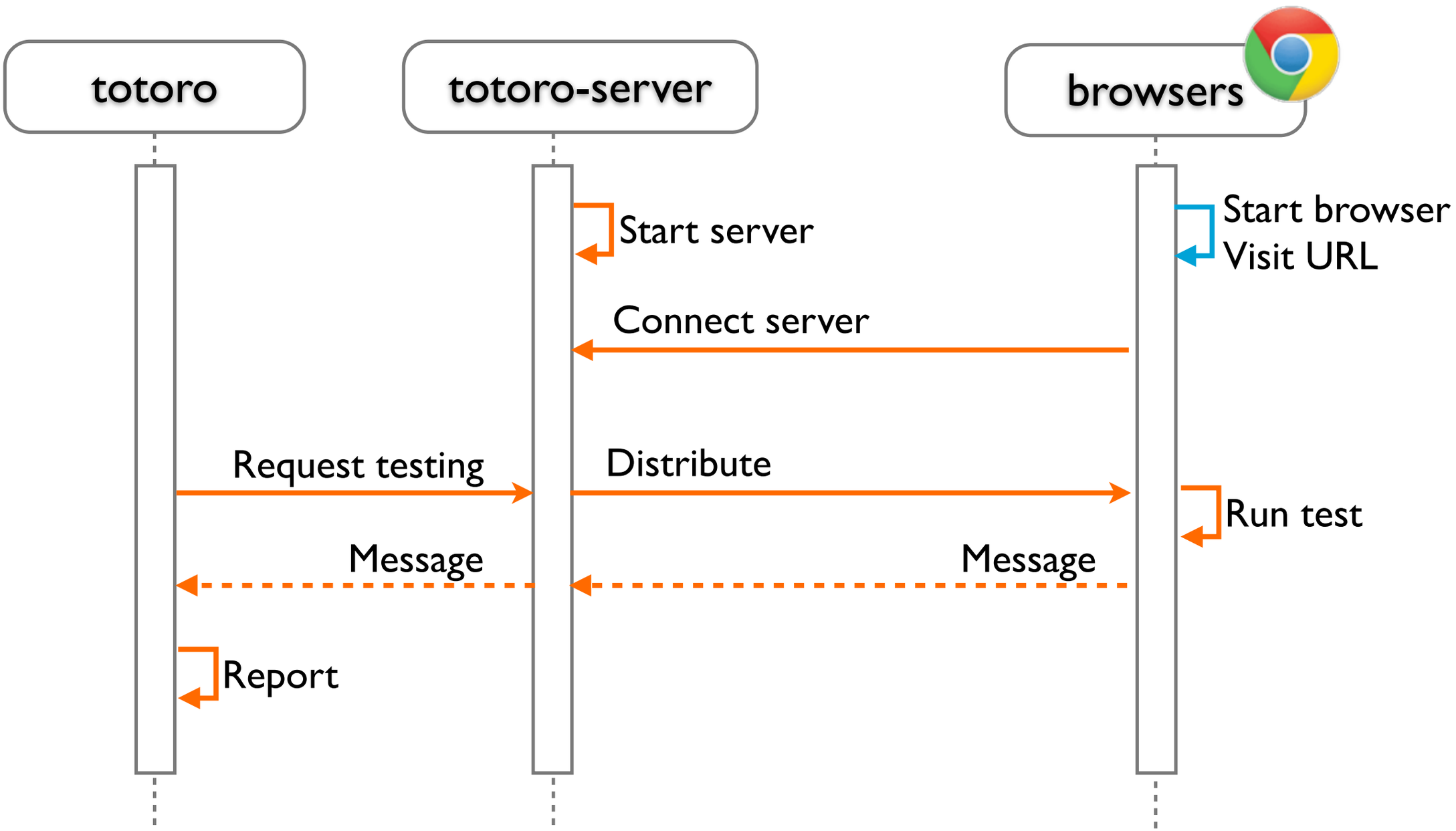
Totoro + Browsers

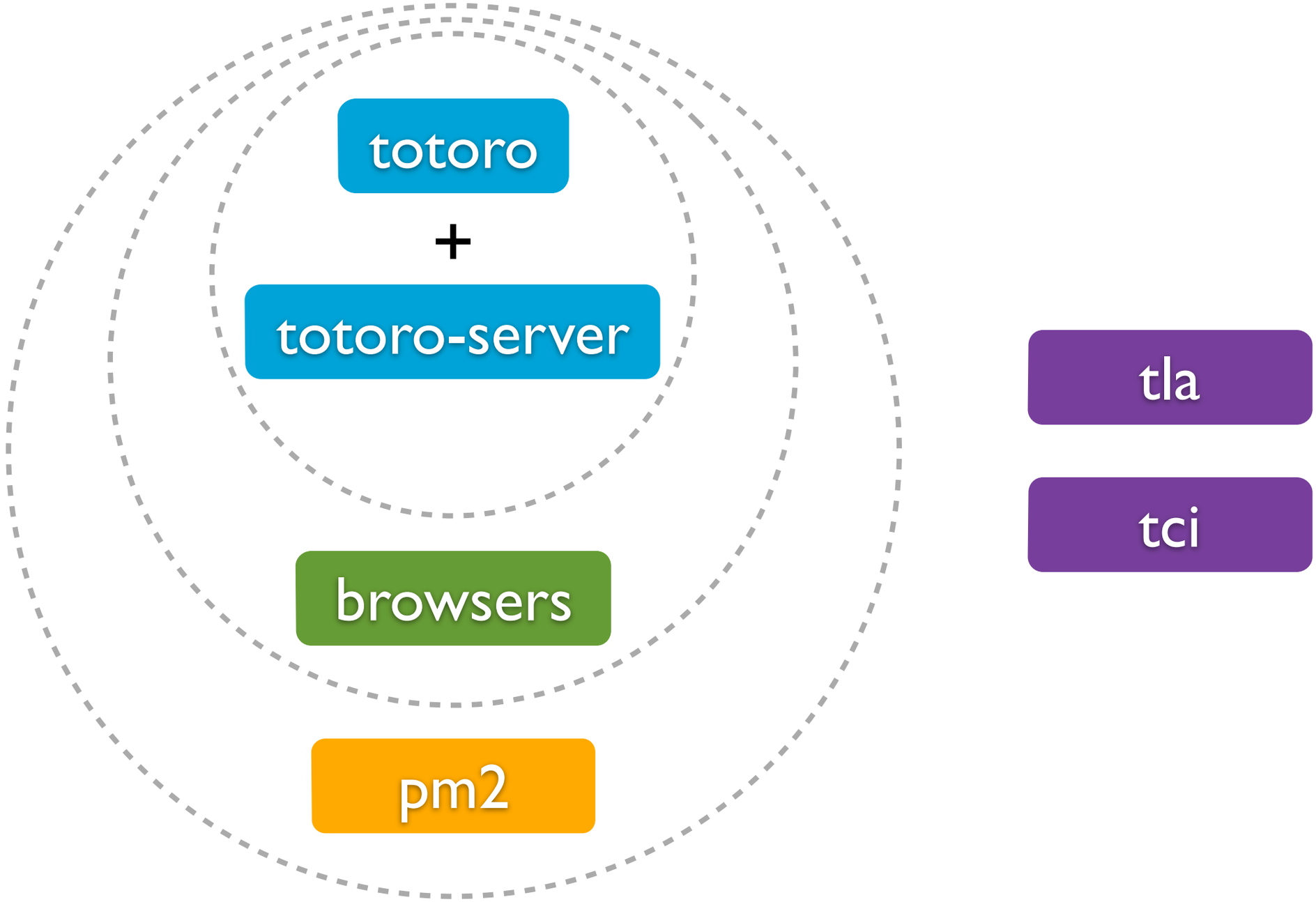
?

Totoro + Browsers



Totoro + Browsers





tla

tci

Learned

- Clear responsibility
- Keep simple
- Eye for details

3. Then ?

- More stable
- Continuous integration
- Open service

totorojs.org

Thank you!

Q&A