Jenkins in the Enterprise

Building resilient CI infrastructure

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#jenkinsconf

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Gold

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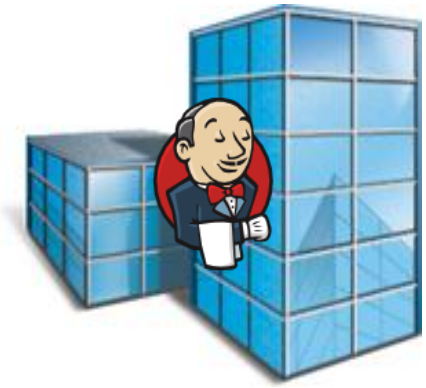
assembla

CloudBees Solutions for Jenkins

Jenkins Enterprise
by CloudBees

Jenkins Operations Center
by CloudBees



On Premise

DEV@cloud

In the Cloud

DEV@cloud
Hybrid

Hybrid

No matter how you use Jenkins

Agenda

- Running Jenkins at scale
- Cloud ⇔ On-premise
- Moving from CI to CD

Scaling Jenkins Vertically

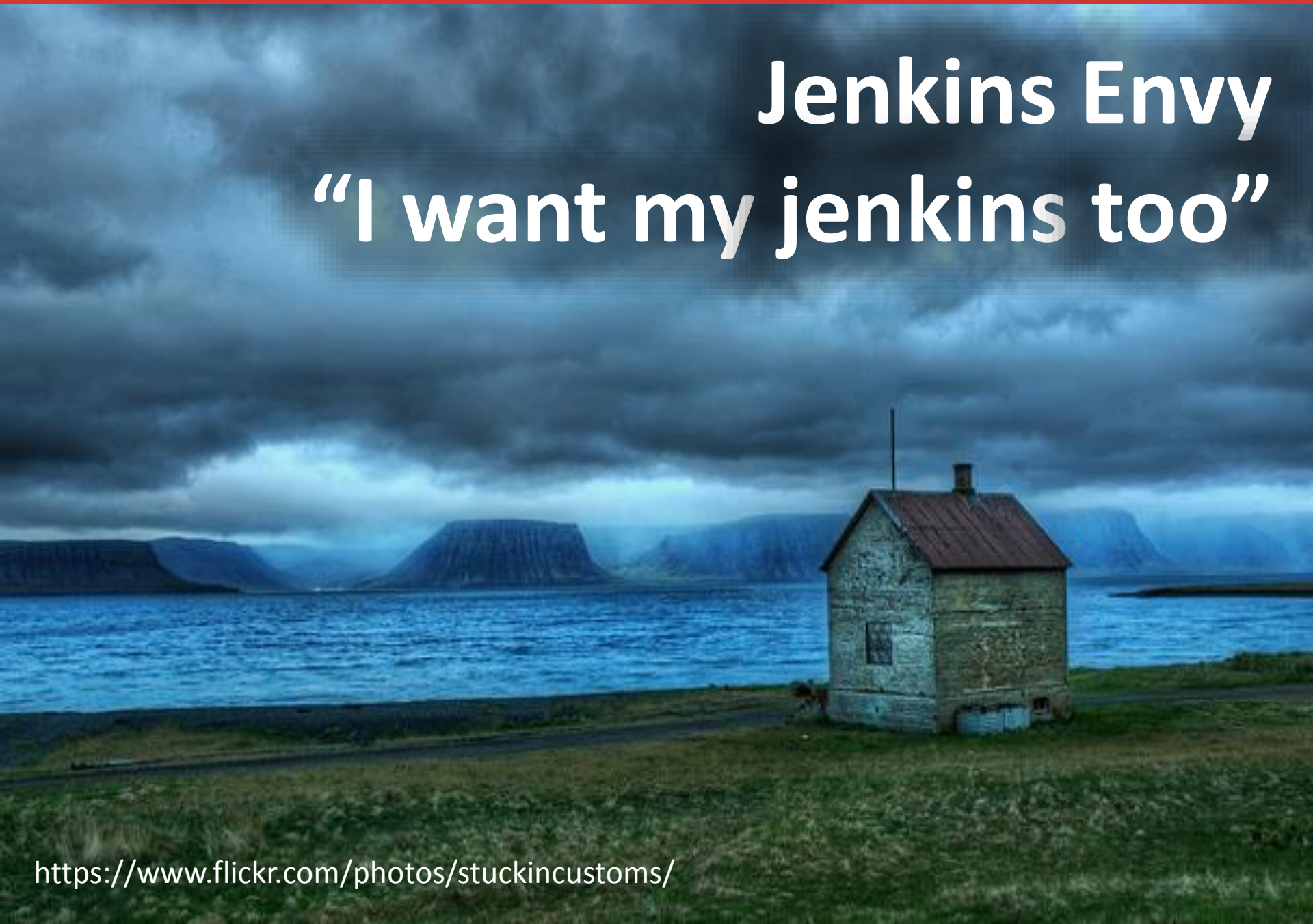
Let’s scale this baby up

https://www.flickr.com/photos/tuis_imaging/

https://www.flickr.com/photos/grapesteinbeck/

We still have a problem

Scaling Jenkins Virally


Jenkins Envy
“I want my jenkins too”
https://www.flickr.com/photos/stuckincustoms/

Jenkins everywhere

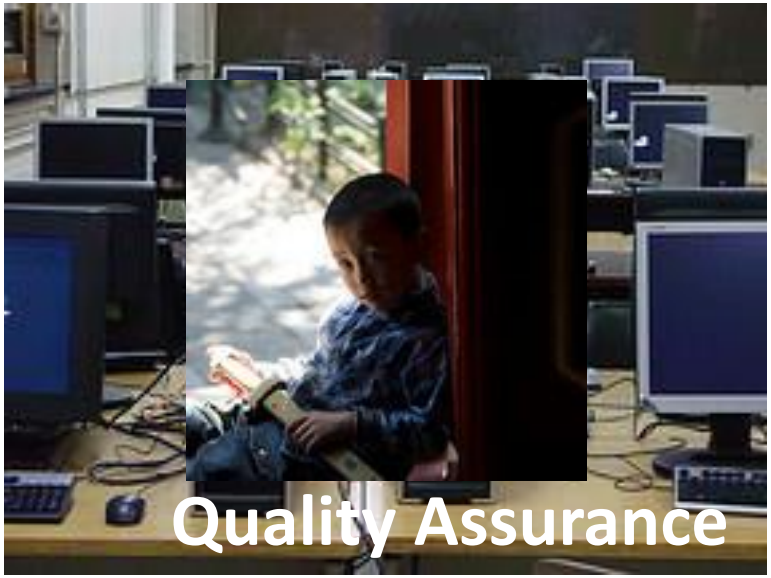
Operations: https://www.flickr.com/photos/dawdledotcom/

QA: https://www.flickr.com/photos/thearchigeek/

Production https://www.flickr.com/photos/treyguinn/

Bad for the bottom line…

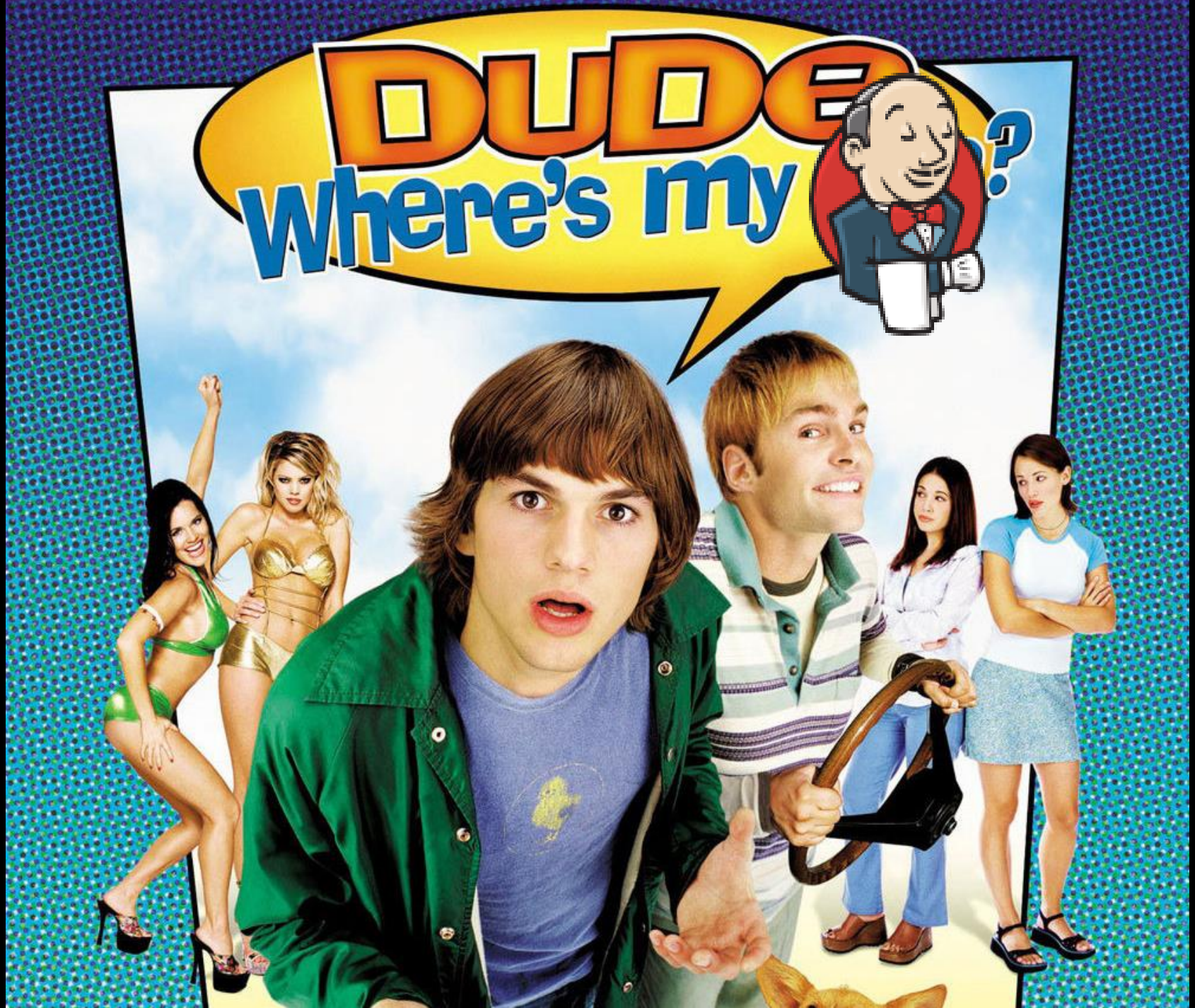
Security by intention



Operations: https://www.flickr.com/photos/dawdledotcom/

QA: https://www.flickr.com/photos/thearchigeek/

Production https://www.flickr.com/photos/treyguinn/


DUDE
Where's my
?

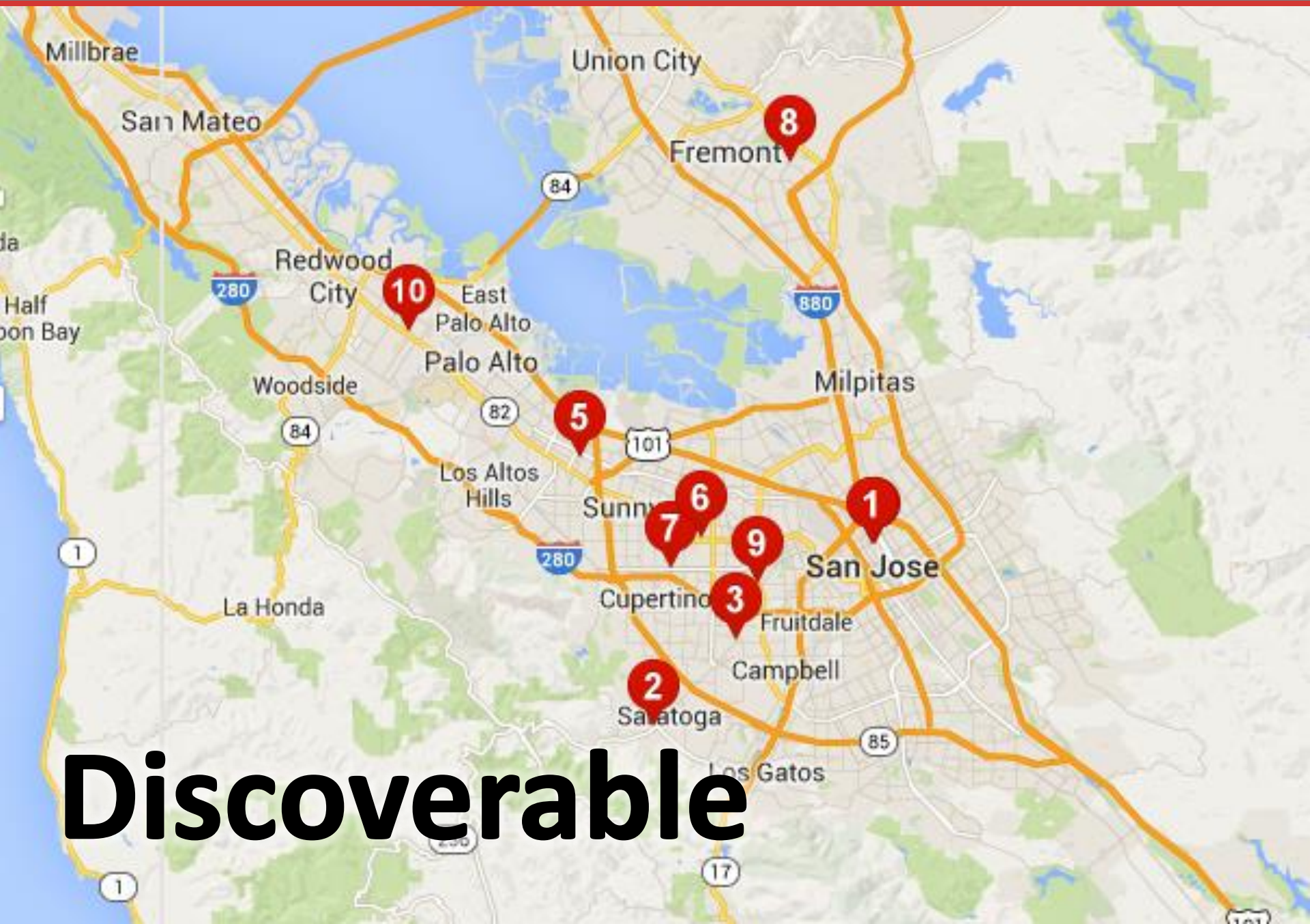
Exhausted Admins

Jenkins Operations Center by CloudBees

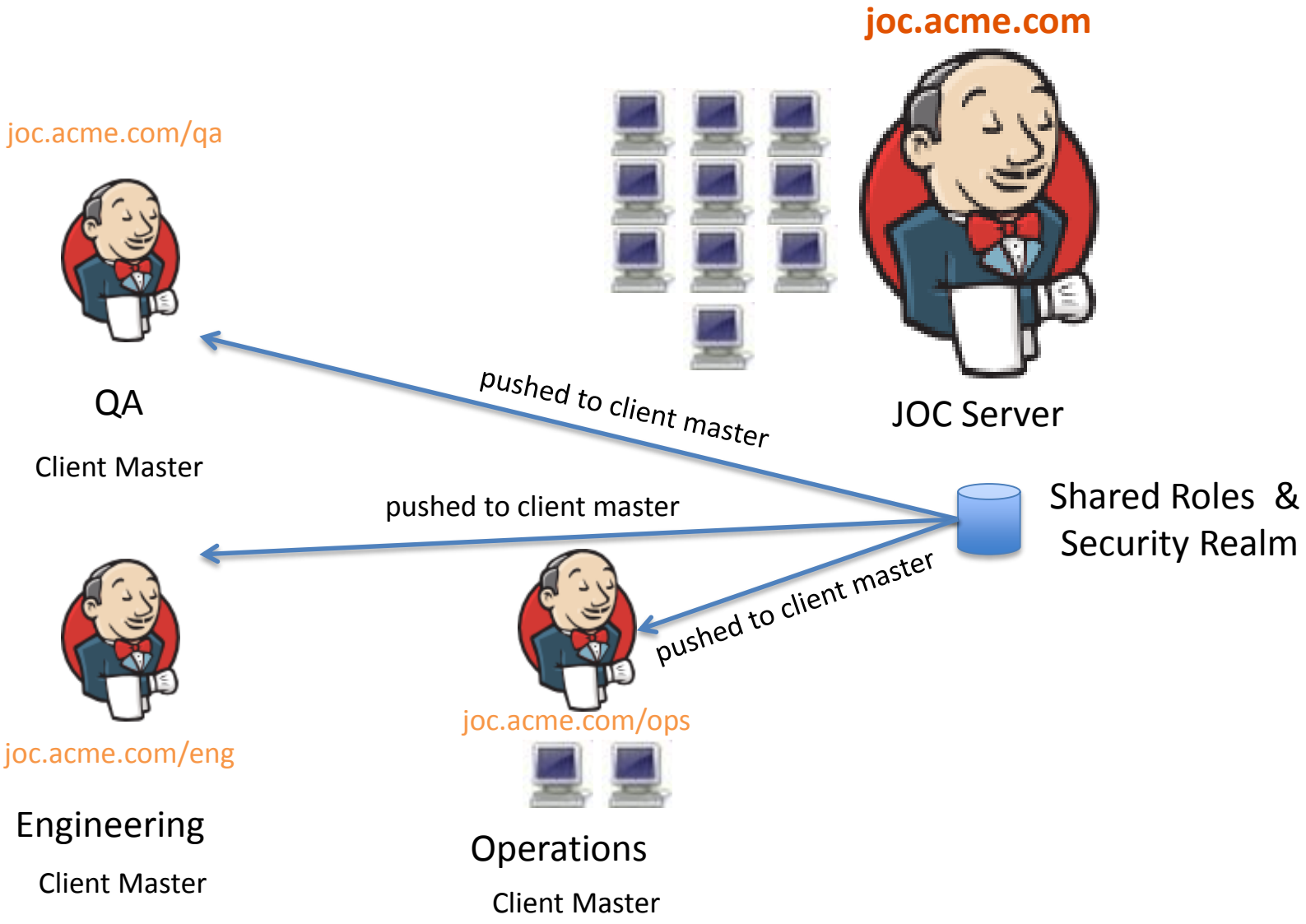
Share resources

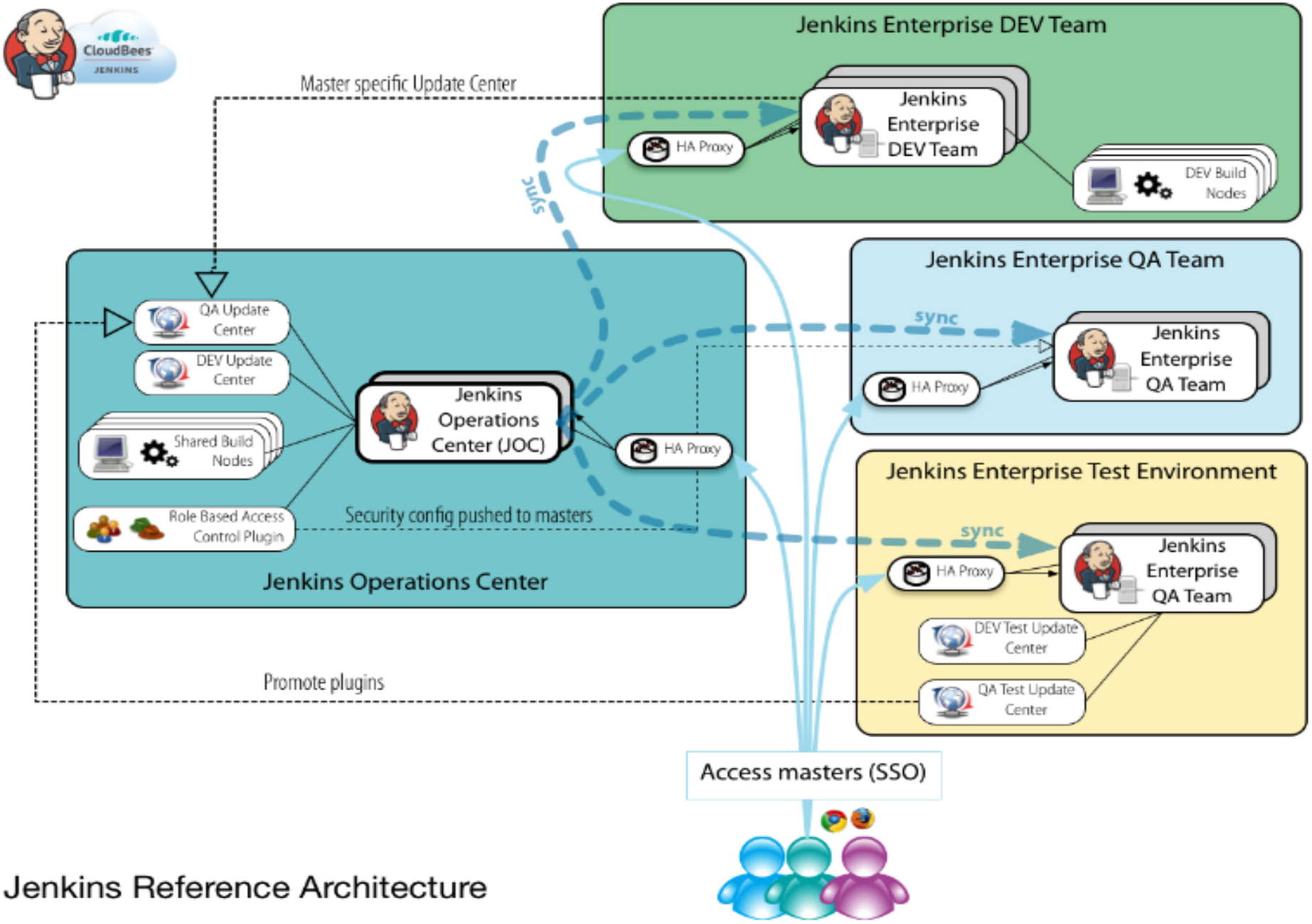
Centralized Security

Development Quality Production



Discoverable


joc.acme.com
joc.acme.com/qa
QA
Client Master
pushed to client master
JOC Server
Shared Roles &
Security Realm
pushed to client master
pushed to client master
joc.acme.com/eng
Engineering
Client Master
joc.acme.com/ops
Operations
Client Master



Jenkins Reference Architecture

GENERAL MOTORS
NEW CENTER COMMONS
A JOINT VENTURE PROJECT
MODEL TURN LEFT ON SECOND

Demo

Jenkins Enterprise by CloudBees Plugins

High Availability

- High Availability
- Restart Aborted Builds
- **Long Running Builds***

Large Installation

- Backup Scheduling
- Consolidated Build View
- Custom Update Center
- Folders
- Folders Plus
- Plugin Usage
- **Monitoring***
- Nodes Plus
- Support plugin
- Templates
- Validated Merge

Security

- Role-based Access Control (RBAC)
- Secure Copy
- WikiText Descriptions

Optimized Utilization

- Even Load Strategy
- Fast Archiver
- Label Throttled Build Execution
- **NIO SSH Slaves***
- Skip Next Build
- VMware ESXi/vSphere Auto-Scaling

*** Released May 2014**

JOC 1.1 release

- JNLP slave & JNLP cloud
- monitoring

DEV@cloud Goodness

DEV@Cloud Hybrid Mode

On-premise Executors

Cloud-based masters access on-premise executors

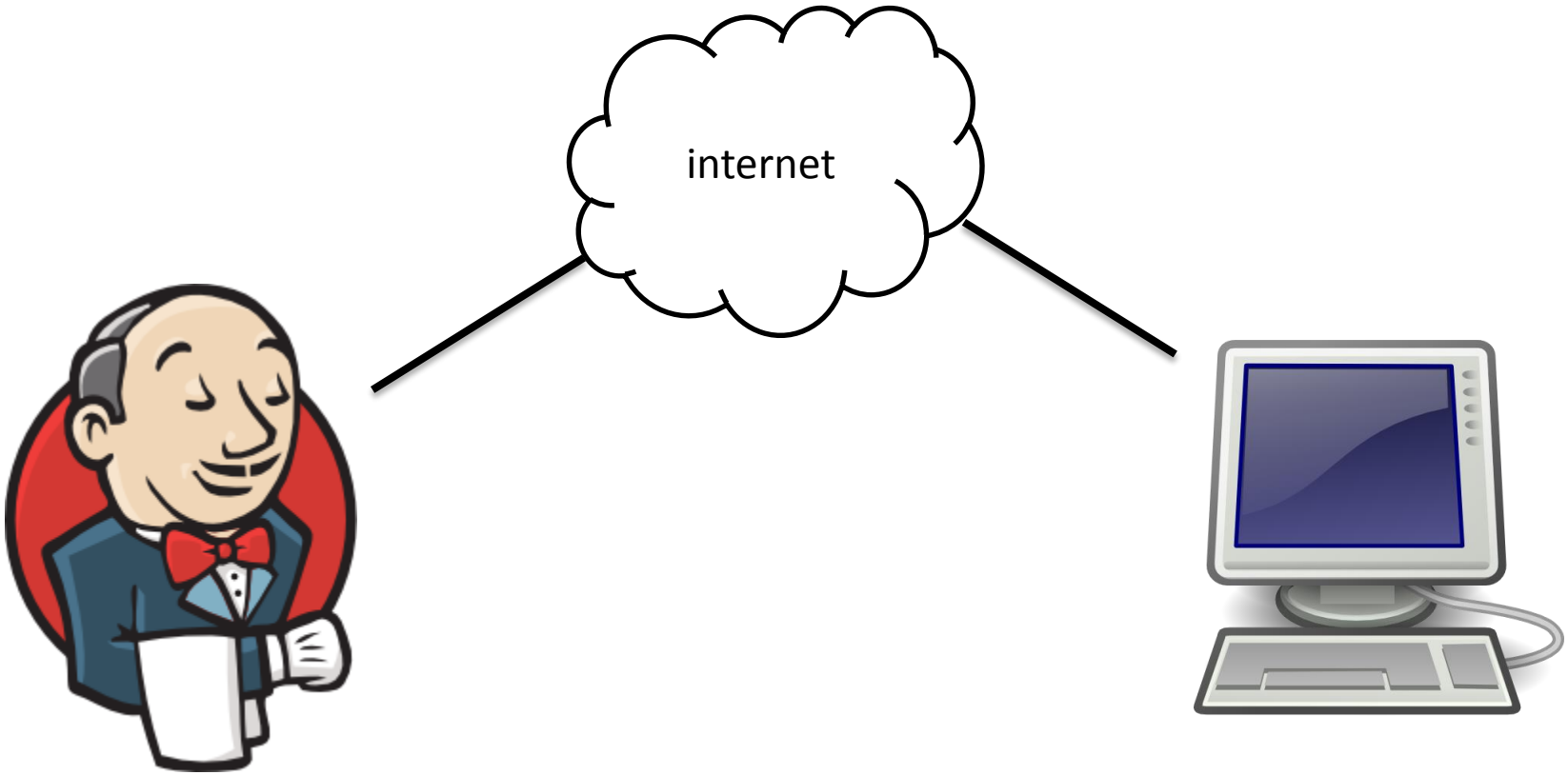
VPN to Jenkins

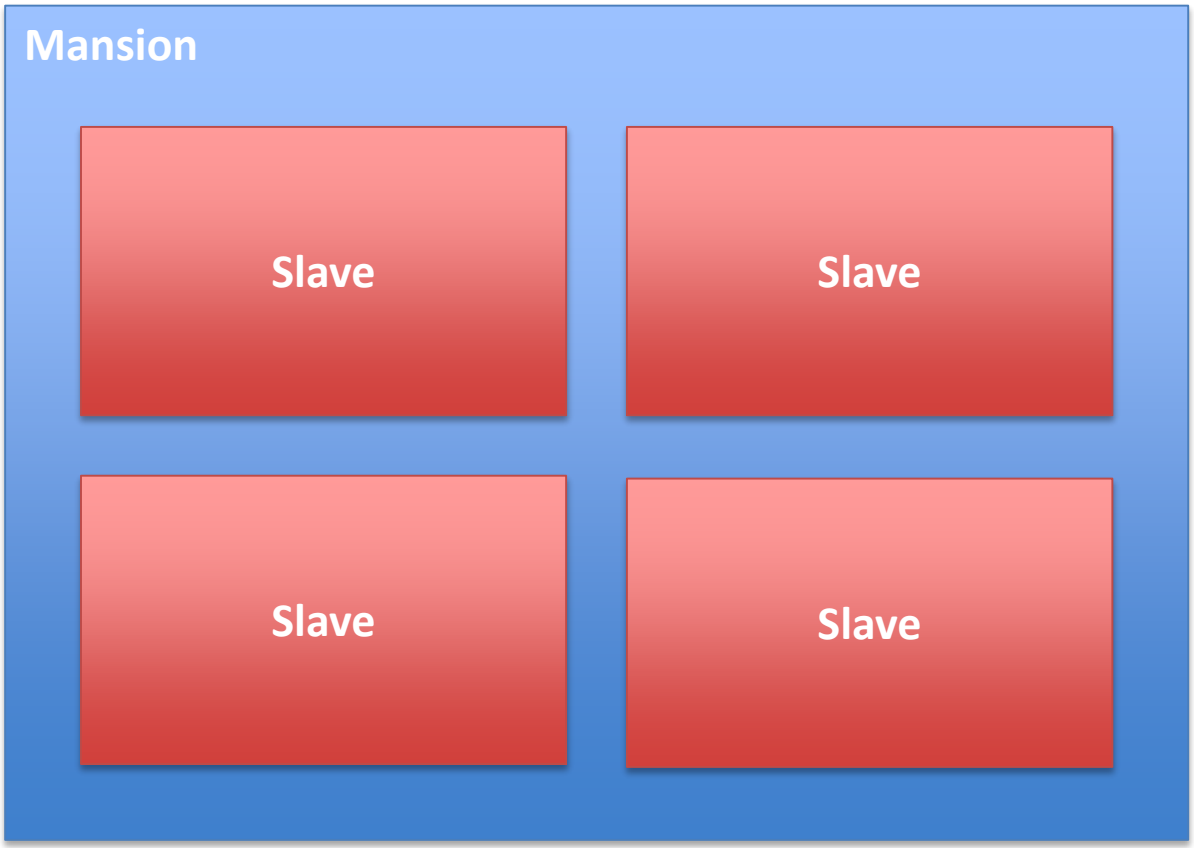
Secure access to enterprise resources from cloud-based masters/executors

Cloud Bursting by the minute

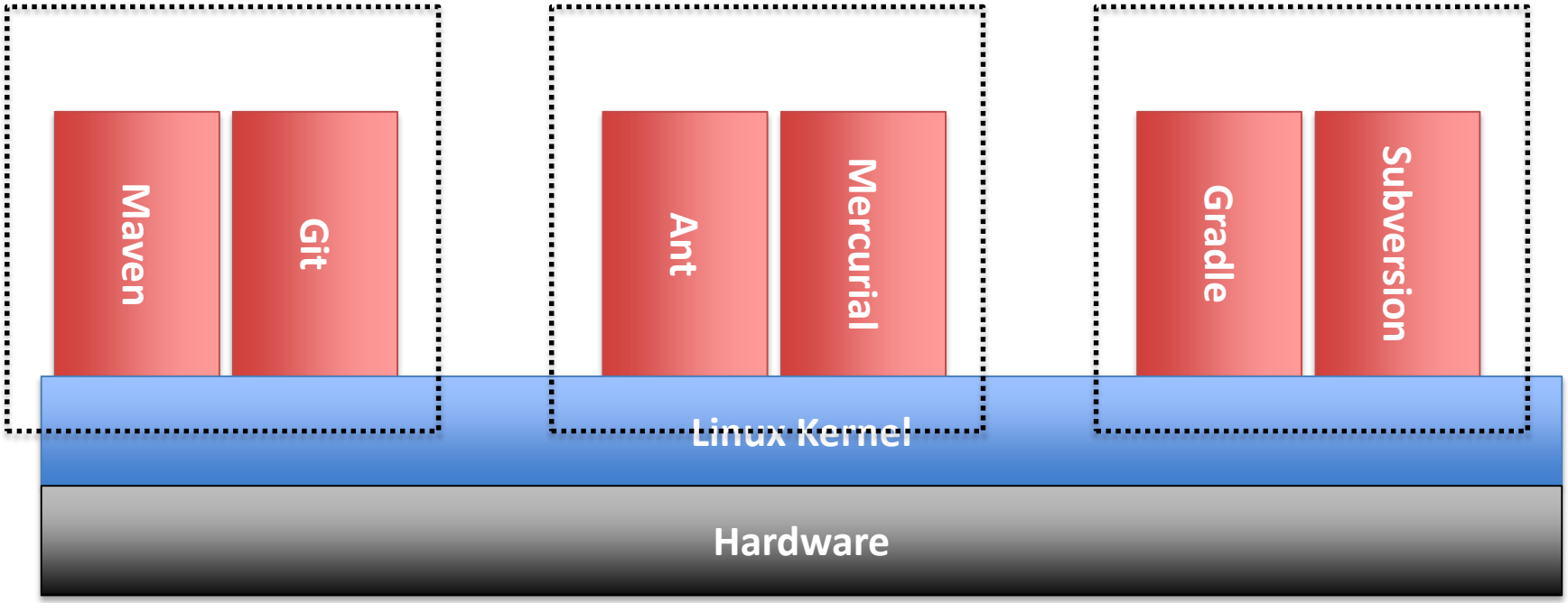
http://bit.ly/jenkins-bursting

- Use elastic cloud slaves from your Jenkins

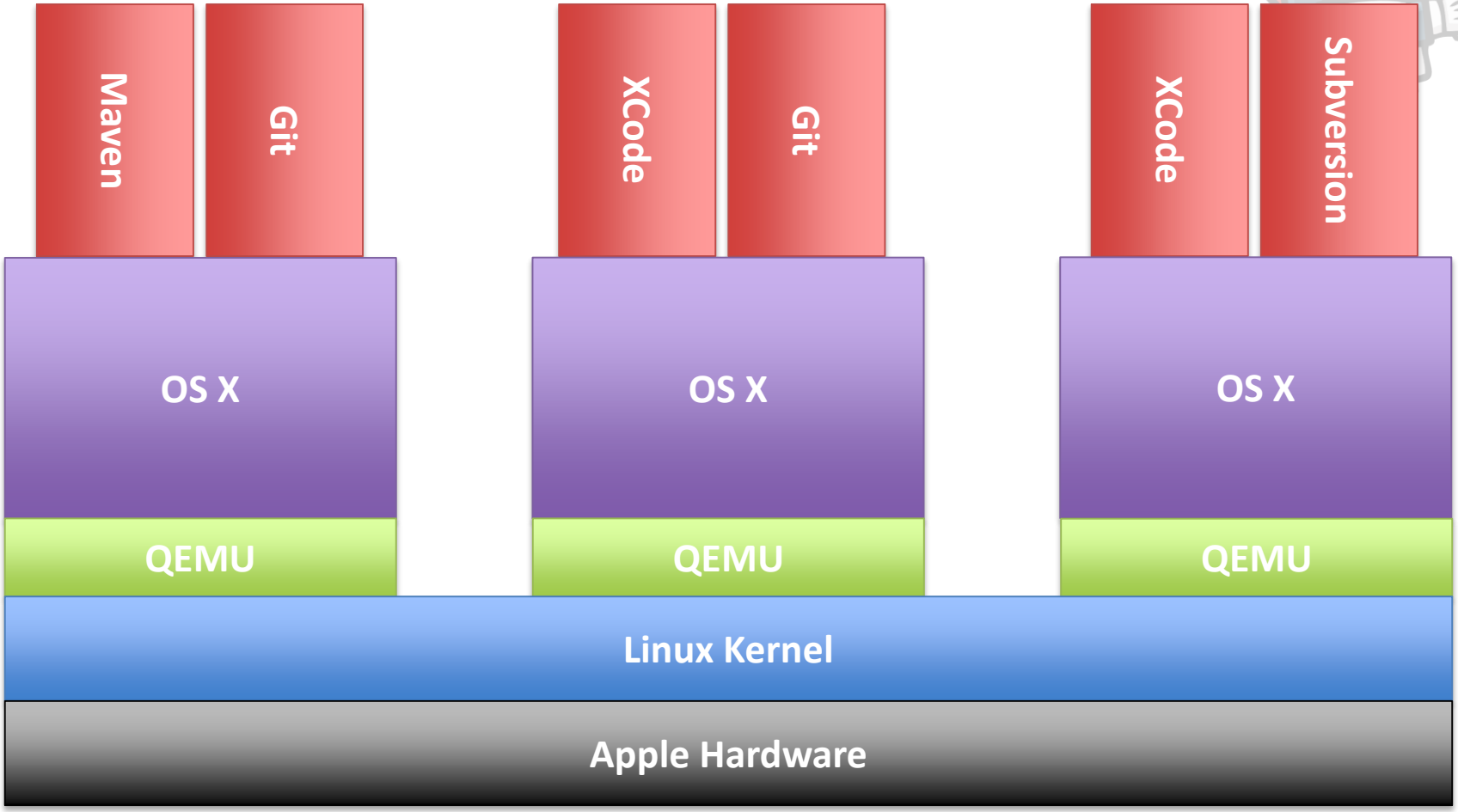



Mansion
Slave
Slave
Slave
Slave

Linux Container = zero cost virtualization



For OSX


Maven
Git
XCode
Git
XCode
Subversion
OS X
OS X
OS X
QEMU
QEMU
QEMU
Linux Kernel
Apple Hardware

ZFS
ON LINUX

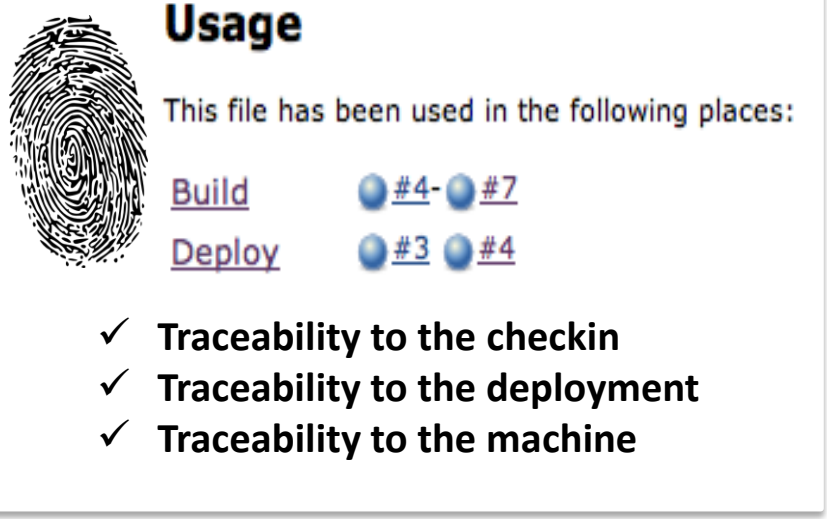
Traceability

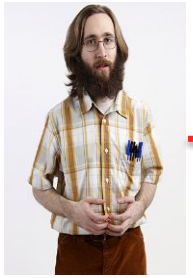
The case of broken production bits

Let’s ship it

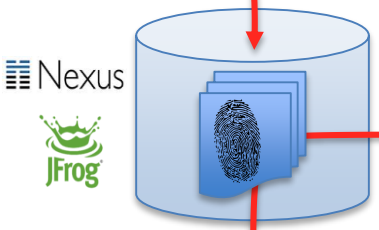
When rotten potato
creeps in …

Traceability in Action

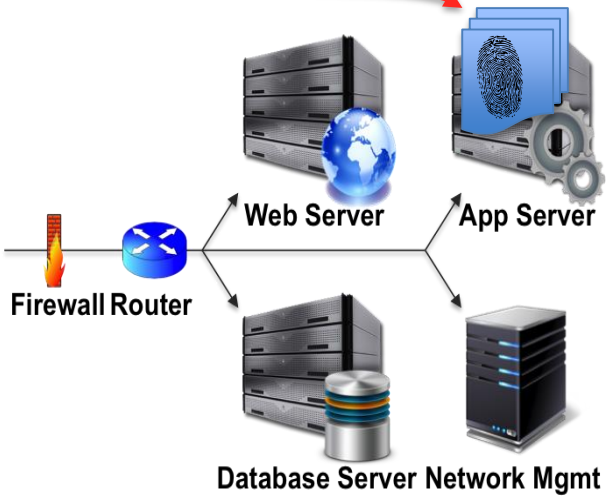




Dev



Ops



Demo

End-to-end tracking with

Chef

puppet labs

Lots to get excited about!

- Enterprise?
  - JOC / JE
- OSS / early adapter?
  - Workflow
  - Traceability