Automation, Innovation and ContinuousDev

@MarioCruz
Cofounder & CTO
ChooseDigital
A Viggle Company

October 23, 2014

#jenkinsconf

My Career

Jobs:

- Network Engineer (lots of certs)
- Developer (lots of code)
- IT Operations (lots of lost sleep)
- IT Security (lots of smoke & mirrors)

Experience:

Hacking, Networking, Developer, Ops &

NOW Pointy Haired Boss

© Scott Adams

CHOOSE DIGITAL

Music

–Over 7 million music download tracks (MP3's) from all the major record labels and leading independents. Tracks sync seamlessly with iTunes and Windows Media personal music libraries.

Movies

–Movies from the major studios and independents are available for rental or purchase. The site features new release titles. Purchases are streamed from a personal digital locker incorporated into the platform and can be viewed on most browser enabled devices without the need to download a player.

TV Shows

–Season passes and individual episodes for the major TV networks.

eBooks

–Over 400,000 eBooks that can be read on most browser based devices. Audiobooks in MP3 format.

Some brands that that use CHOOSE DIGITAL

UNITED

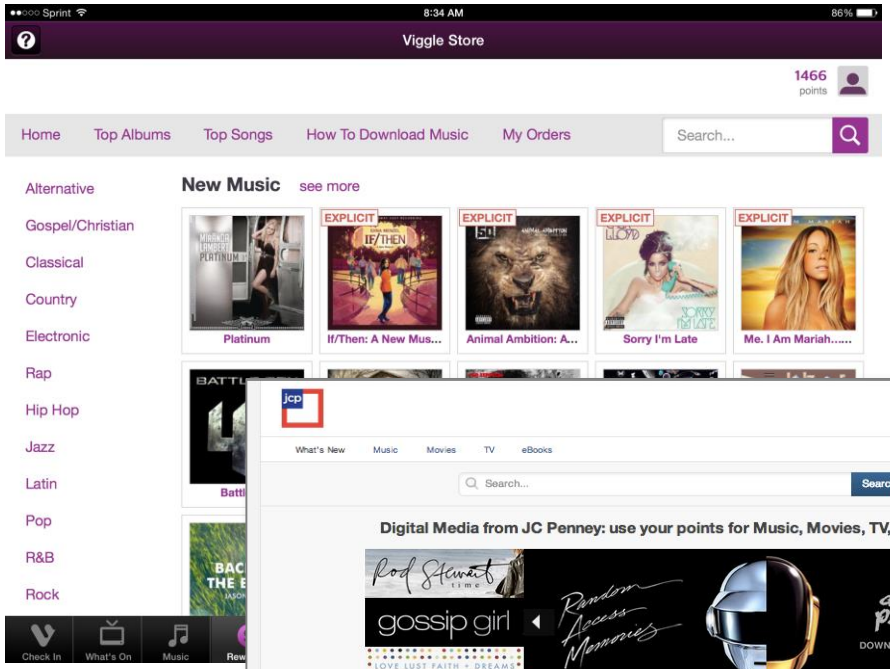
viggle™

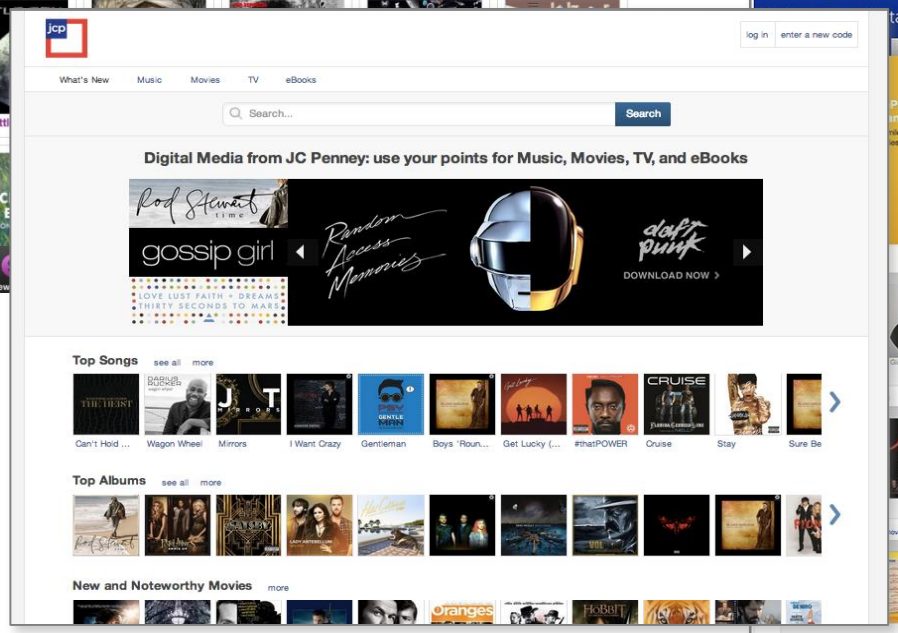
SkyMall

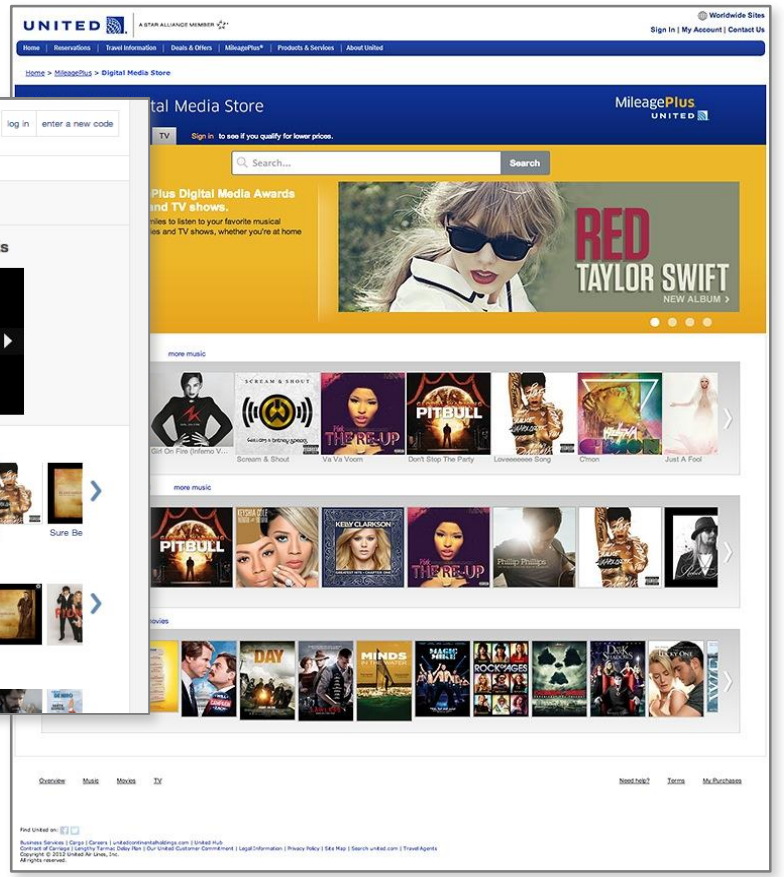
PETRO-CANADA TM/MC

Marriott HOTELS · RESORTS · SUITES

Technology Solutions







Fan Boy

Build, Test & Deploy

When we push to Stage or Prod branch, a build is done

Dashboard [Jenkins]

https choosedigital.ci.cloudbees.com

oogle Apps | Mariocruz.ne...riocruz.net | ClearCache | Popular | TestPlay | Adt | CDUL | MusicRep | API | Google Analytics | Sample Lab for

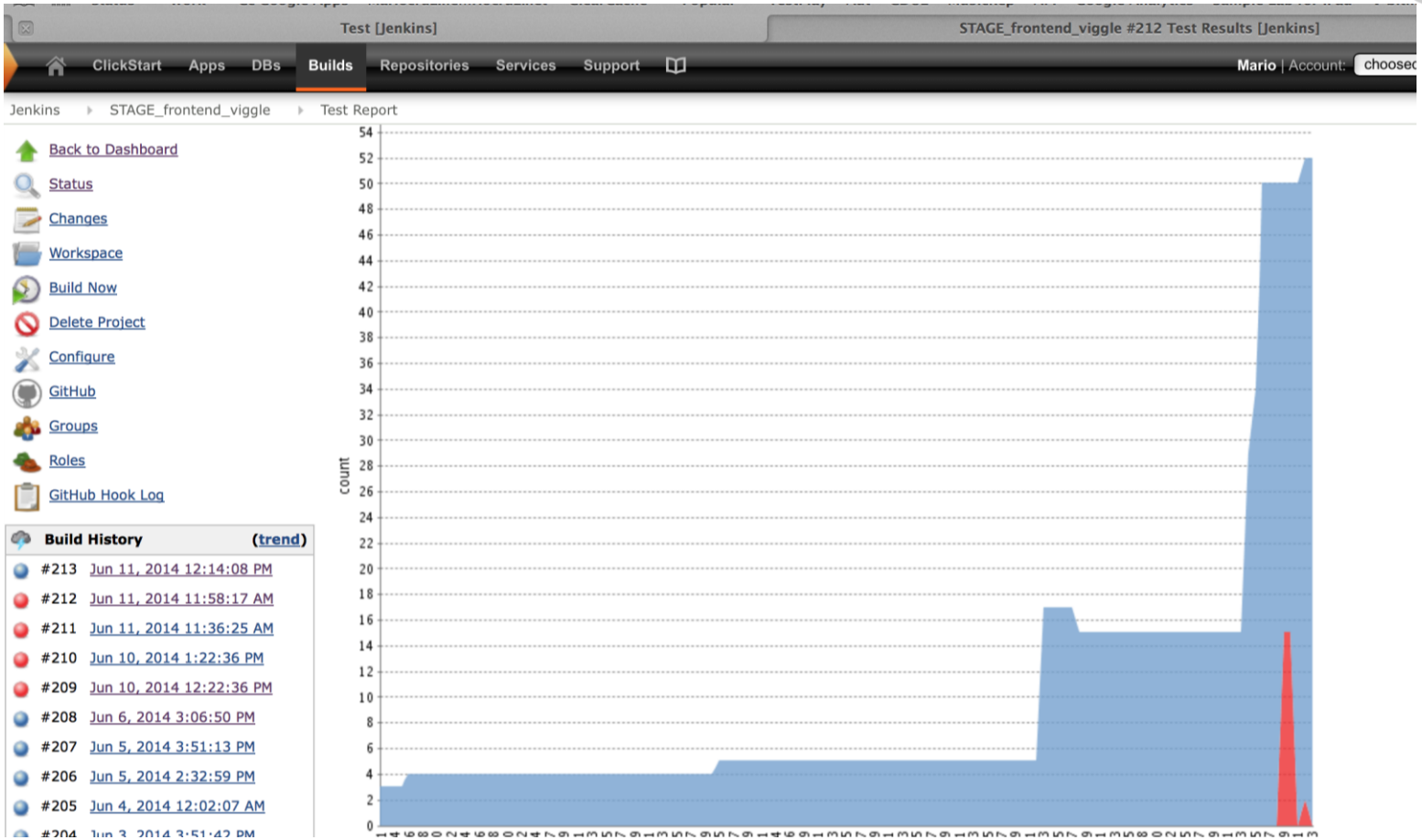
Dashboard [Jenkins] | STAGE_frontend_viggle #212 Test Results [Jenkins]

s | Builds | Repositories | Services | Support | Mario | Acco

All +

S	W	Name	Last Success ↑	Last Failure	Last Duration
		PROD_tardis	1 day 4 hr - #267	1 mo 22 days - #249	1 min 41 sec
		STAGE_api	1 day 17 hr - #411	1 mo 7 days - #401	8 min 2 sec
		DEV_api	1 day 23 hr - #716	1 mo 0 days - #704	8 min 14 sec
		STAGE_frontend_united	1 day 23 hr - #592	N/A	4 min 29 sec
		DEV_frontend_united	1 day 23 hr - #935	N/A	3 min 52 sec
		STAGE_frontend_codeplay	3 days 15 hr - #245	25 days - #239	8 min 32 sec

Run set of tests before each deploy



When all tests pass, it is auto deployed

ClickStart Apps DBs **Builds** Repositories Services Support Mario

Jenkins ▸ STAGE_frontend_viggle ▸ #213

- Back to Project
- **Status**
- Changes
- Console Output
- Edit Build Information
- Delete Build
- Polling Log
- Environment Variables
- Git Build Data
- No Tags
- Test Result
- CloudBees RUN@cloud
- CloudBees RUN@cloud
- Previous Build

Build #213 (Jun 11, 2014 12:14:08 PM)

Changes

1. fix test (commit: 6b2e1295a15caa7c9dc9c027b794232daa4e4647) (detail)

Started by GitHub push by darinpope

Started by user Mario Cruz

This job spent:

- 2 min 15 sec waiting in the queue;
- 5 min 16 sec building on an executor;
- 7 min 31 sec total from scheduled to completion.

Revision: 7239b7458ceeaa0ec75d6847ab6cd362c7e26390

- origin/stage

Test Result (no failures)

Deployed to CloudBees RUN@cloud http://viggle-stage.choosedigital.cloudbees.net
Id: choosedigital/viggle-stage; Environment: run

Deployed to CloudBees RUN@cloud http://viggle-lv3.choosedigital.cloudbees.net
Id: choosedigital/viggle-lv3; Environment: run

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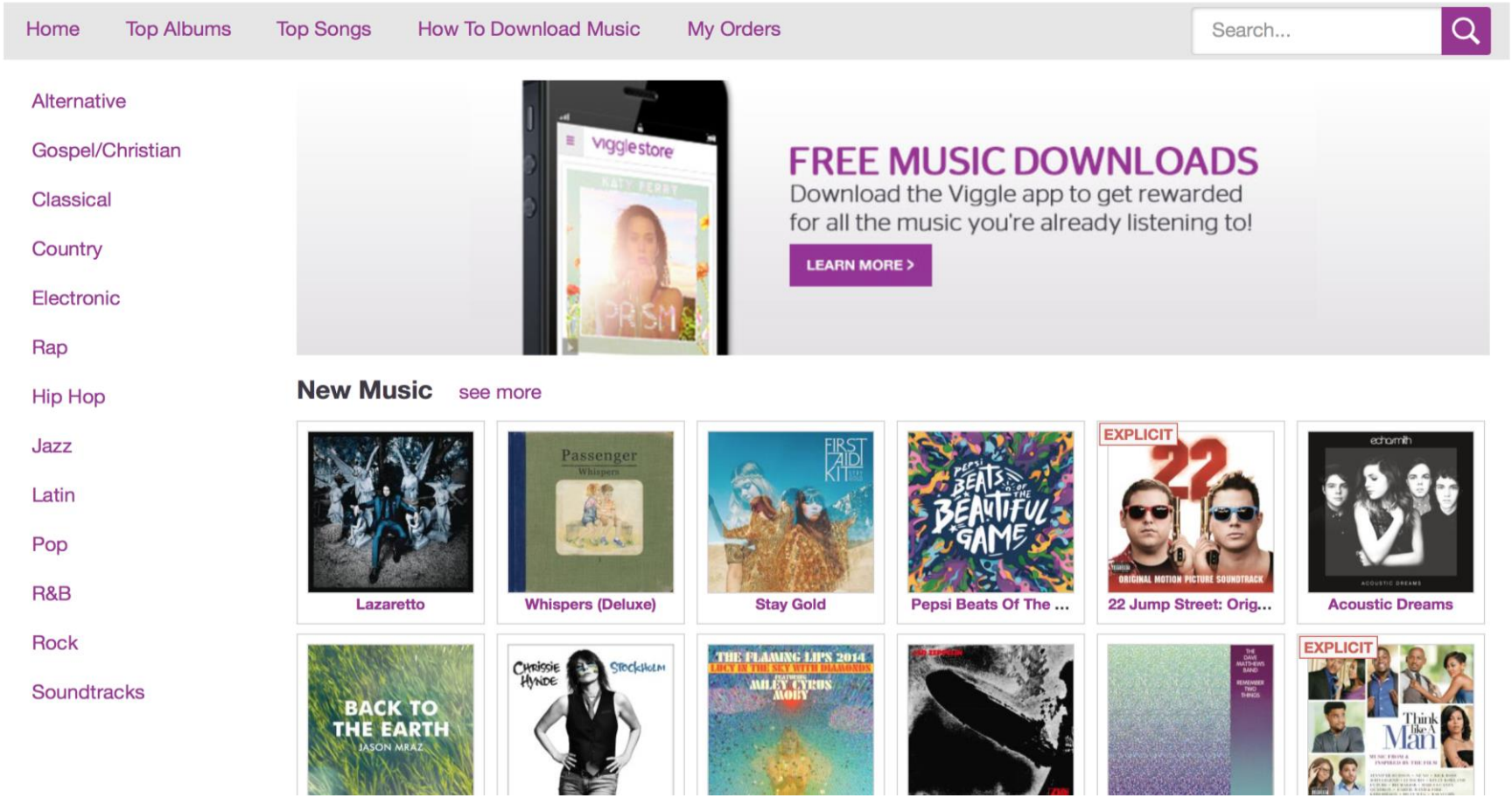
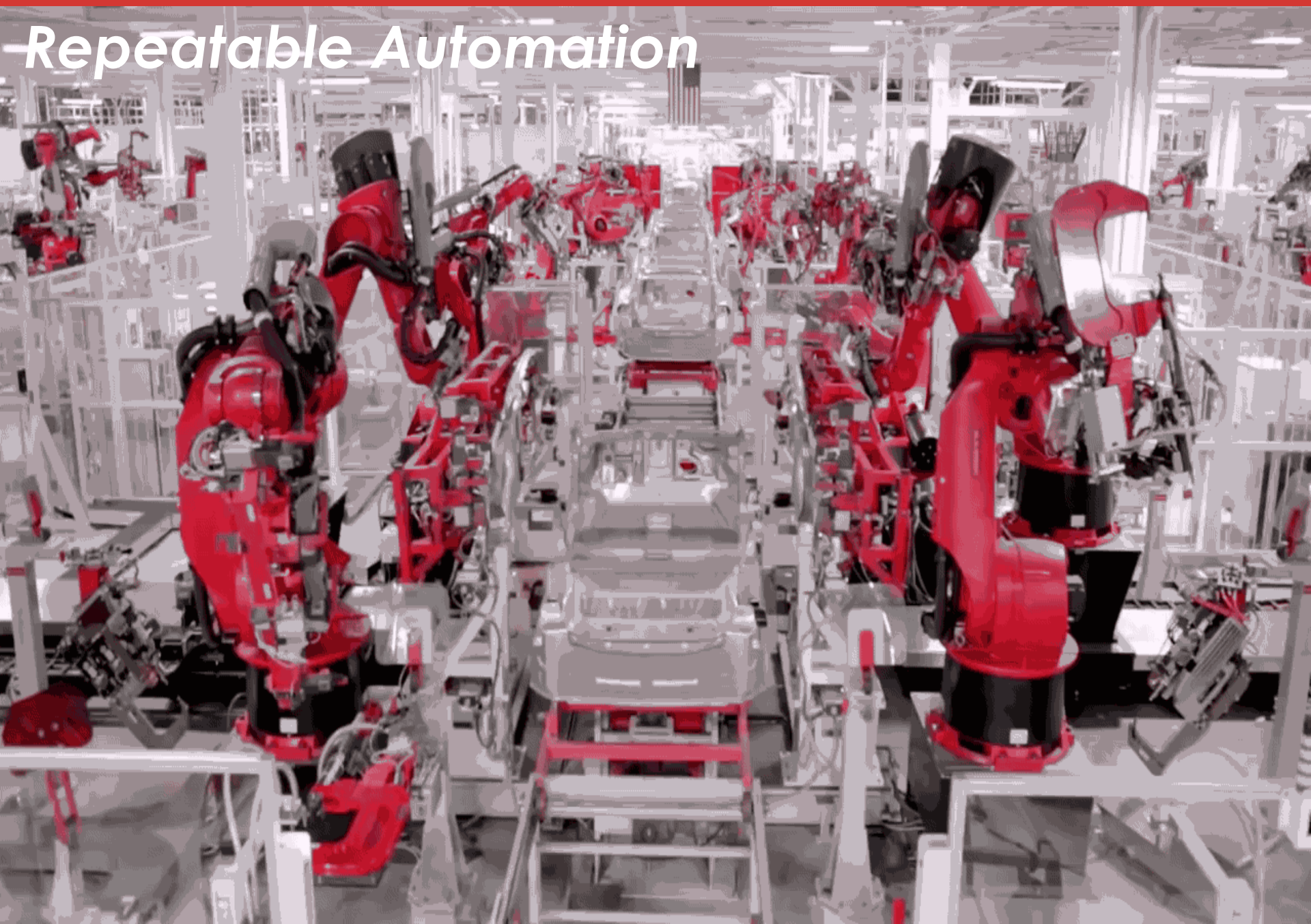
Developer Tries the Live Site



Repeatable Automation



The next evolution of Continuous Delivery (You can't automate innovation.)

Developer Control

(C) 2009 Gary T. Takeuchi

Trust

Blameless Culture

Communication

Slack

Thursday

jenkins 9:54 AM
STAGE_frontend_viggle - #316 Started by changes from yigal, Cristina Solana

jenkins 10:03 AM
STAGE_frontend_viggle - #316 Success after 9 min 10 sec (</job/STAGE_front

jenkins 10:22 AM
STAGE_frontend_viggle - #317 Started by changes from Cristina Solana (1 file

jenkins 10:29 AM
STAGE_frontend_viggle - #317 Success after 6 min 15 sec (</job/STAGE_front

jenkins 12:51 PM
STAGE_frontend_viggle - #318 Started by changes from yigal, Cristina Solana

jenkins 12:57 PM
STAGE_frontend_viggle - #318 Success after 6 min 16 sec (</job/STAGE_front

jenkins 2:35 PM
STAGE_frontend_viggle - #319 Started by changes from Cristina Solana (6 file

jenkins 2:41 PM
STAGE_frontend_viggle - #319 Success after 5 min 48 sec (</job/STAGE_front

jenkins 5:18 PM
PROD_frontend_viggle - #45 Started by changes from yigal, Cristina Solana (7

HipChat

Jenkins STAGE_frontend_viggle_mgo - #117 Success after 5 min 11 sec (Oper Oct-

Jenkins STAGE_frontend_viggle_mgo - #118 Started by changes from yigal (2 changed) (Open) Oct-

Jenkins STAGE_frontend_viggle_mgo - #118 Success after 5 min 17 sec (Oper Oct-

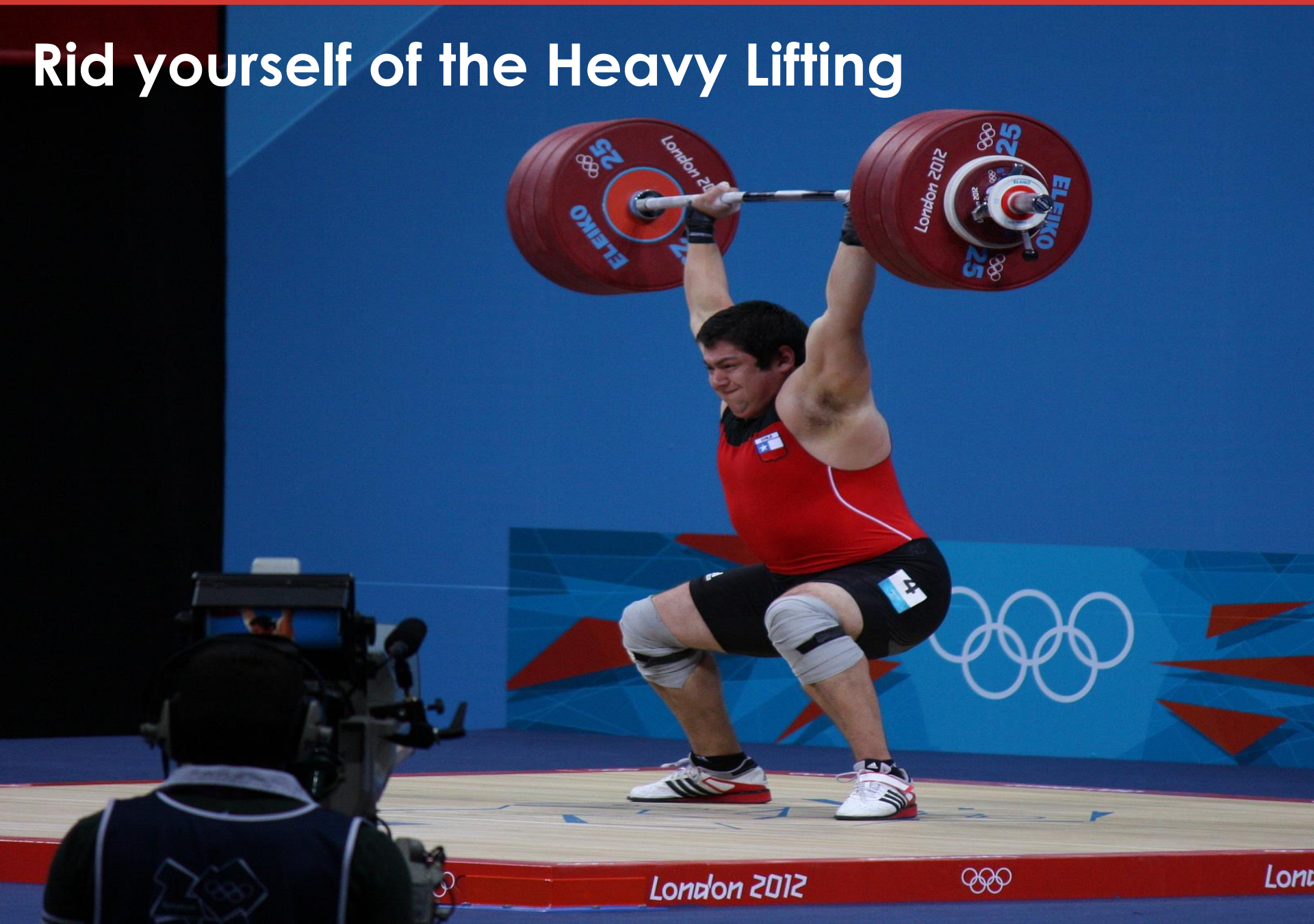
Communication

darth #161 4m 8s	DEV_api #870 7m 59s
DEV_delivery #158 3m 43s	PROD_api #352 9m 40s
PROD_consumers #4 Possible Culprits: Russ Reynolds , Darin Pope 4m 1s	PROD_delivery #66 4m 57s
PROD_frontend_codeplay #74 8m 32s	PROD_frontend_united #178 4m 0s
PROD_frontend_viggle #68 4m 42s	PROD_tardis #289 2m 10s
STAGE_api #477 15m 7s	STAGE_delivery #81 3m 20s

Brought to you by Jan Molak

If software is eating the world, be a Chef

Rid yourself of the Heavy Lifting



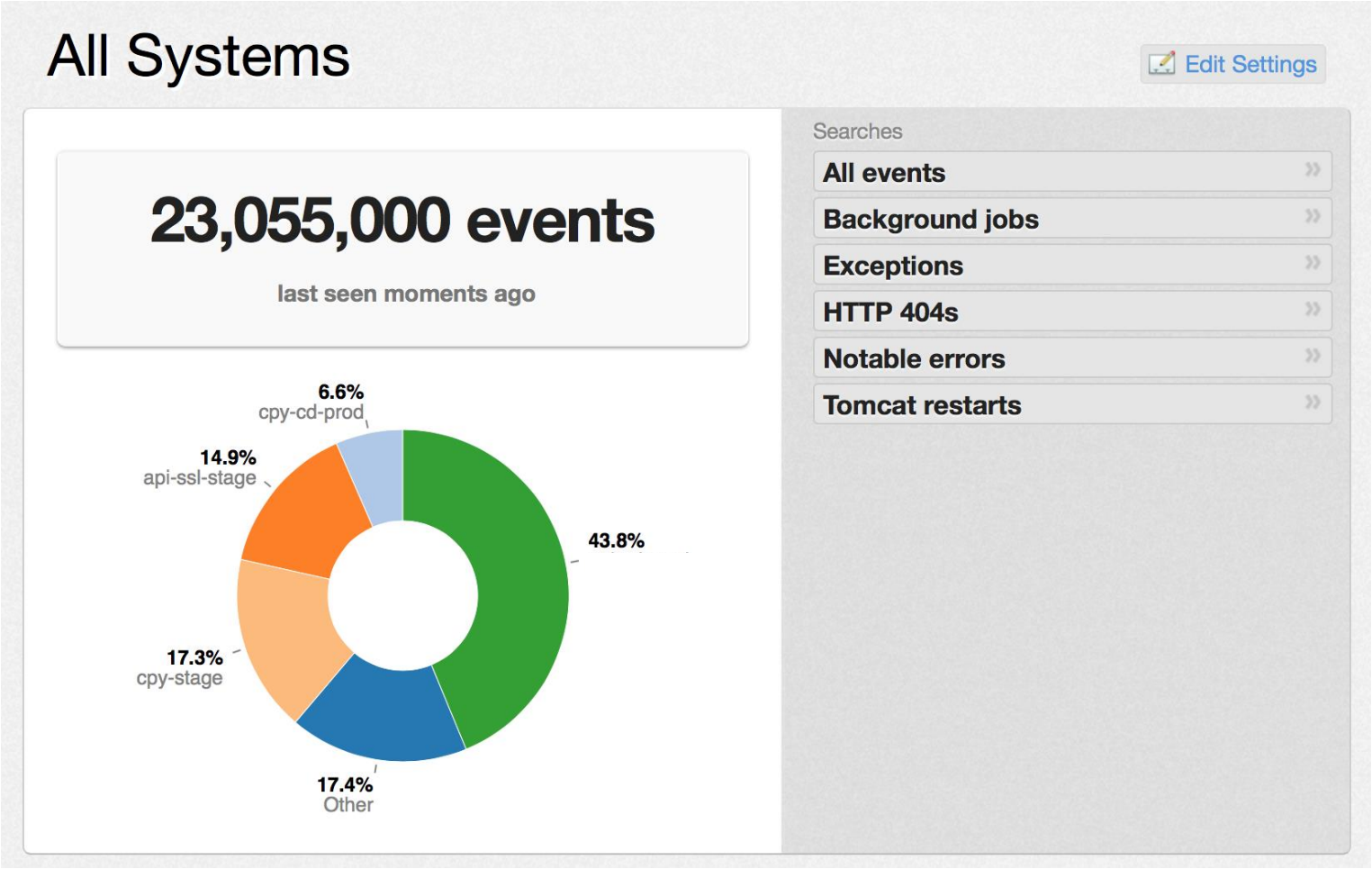
CloudBees (Jenkins Differentiator)

- Heavy Lifting Not Done by Choose Digital
  - DEV@cloud
    - Jenkins
    - Plugins
    - Upgrades
    - Support

Other Technology Partners

- AWS
  - Route53
  - S3
  - CloudFront
  - Elastic Beanstalk
  - RDS
  - CloudSearch
  - DynamoDB
  - SQS
  - SNS
  - ElastiCache
  - Kinesis
  - Redshift
- Asana
- HipChat
- Trello
- Zendesk
- SendGrid
- New Relic
- Papertrail

Log Everything (but let me turn it off)

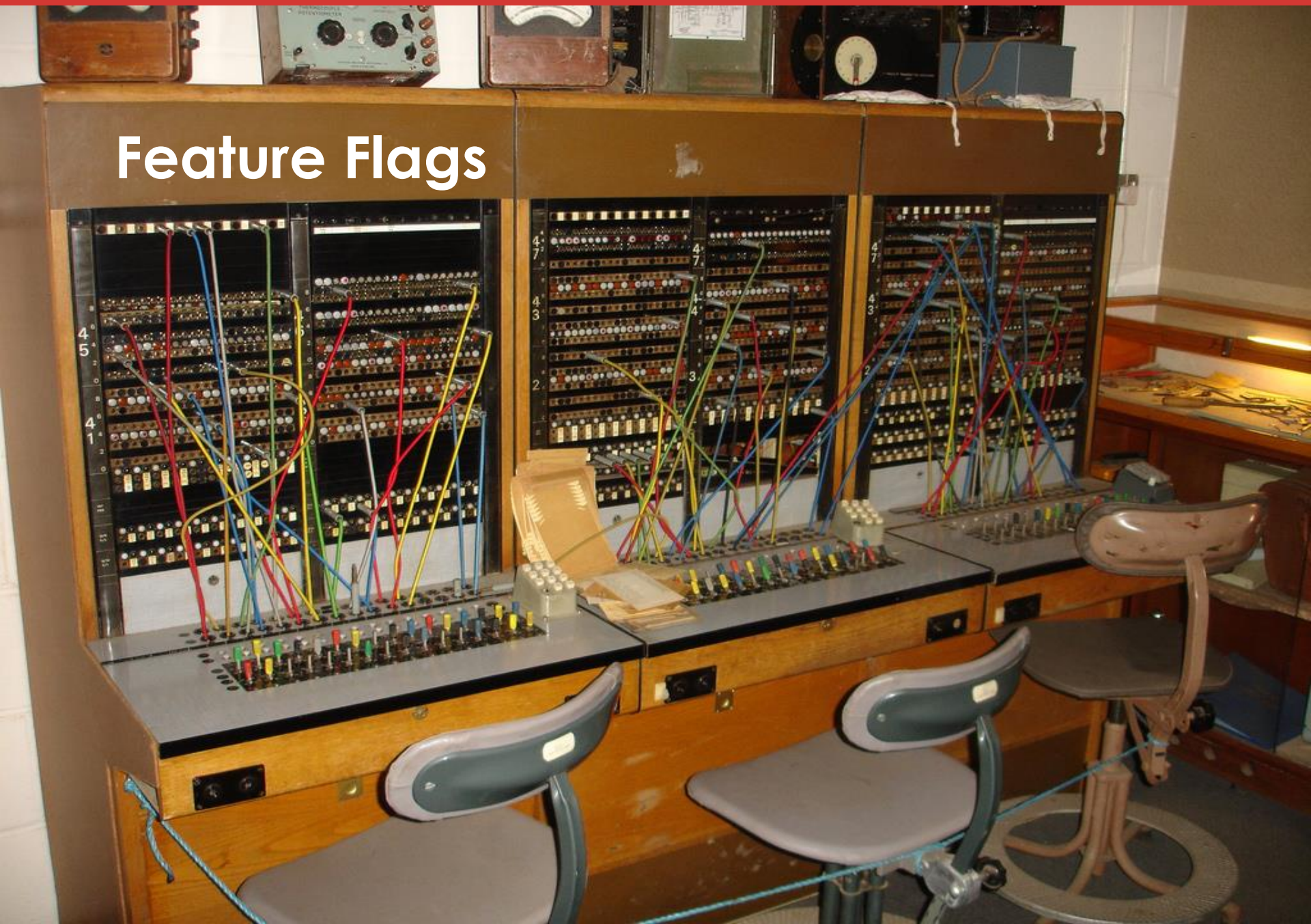


Monitor Apps (Mange up and down)

- Real User Monitoring
  - End user perspective metrics
  - Browser performance and response times
  - Bottlenecks at FE, app or connected systems
- Performance Analytics
  - Throughput
  - Response Times
  - Errors
  - Slow Transactions
  - SQL Performance
  - Thread Profiler
- Server Monitoring
  - CPU
  - Memory
  - Network activity
  - Processes
- Reporting
  - SLA
  - Availability
  - Deployments
  - Scalability

If you push code,
you are on-call

Feature Flags



Feature Flags (Archaius from Netflix OSS)

d	property_key	property_value
1	active.cache	true
2	active.maintenance	false
3	consume.validation.token	true
4	consume.get.user.info	true
5	consume.redeem.points	true
6	send.viggle.calls.to.log	true
7	send.consumers.to.log	true
8	log.cache	true
13	send.viggle.login.calls.to.log	true
14	active.music.purchase.per.day.limitation	false
15	max.allowed.music.purchases.per.day	20
16	log.all.cd.service.response.to.console	false
18	viggle.header.required.for.access	false
19	max.allowed.music.amount.per.day	5000
20	order.confirmation.from.address	v@choosedigital.com>
21	log.request.headers.to.console	false
22	user.info.check.active	true
23	send.bank.calls.to.log	true
24	display.bank.purchase.button	true
25	registration.active	true
26	credit.card.active	true
27	bank.active	true
28	sony.music.cash.purchase.enabled	false
29	active.movie.purchase	true
30	active.movie.rental	true
31	active.television	true
32	go.analytics.logging.active	true
33	go.help.address	help@r .com

one push > one build > Deploy to N

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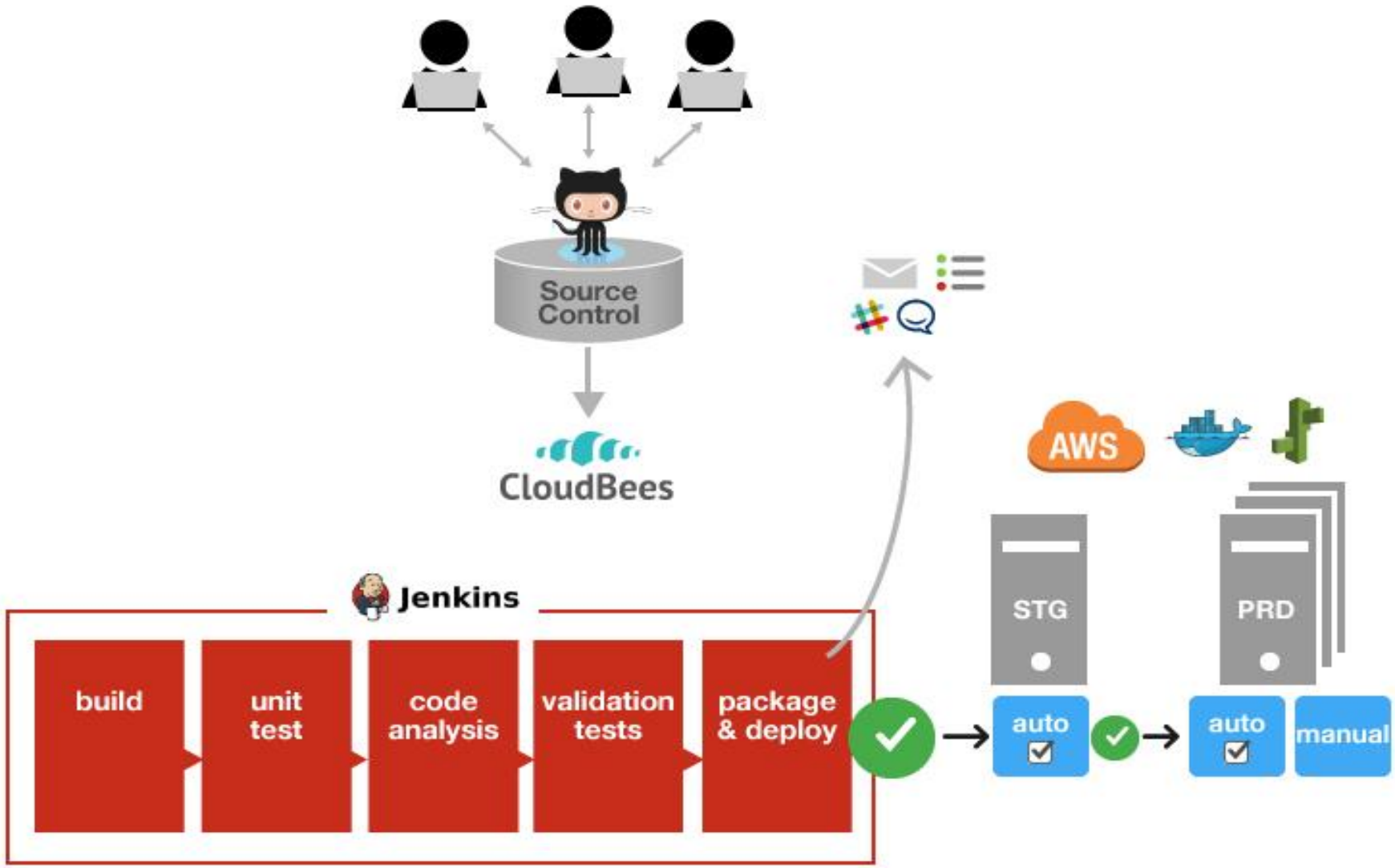
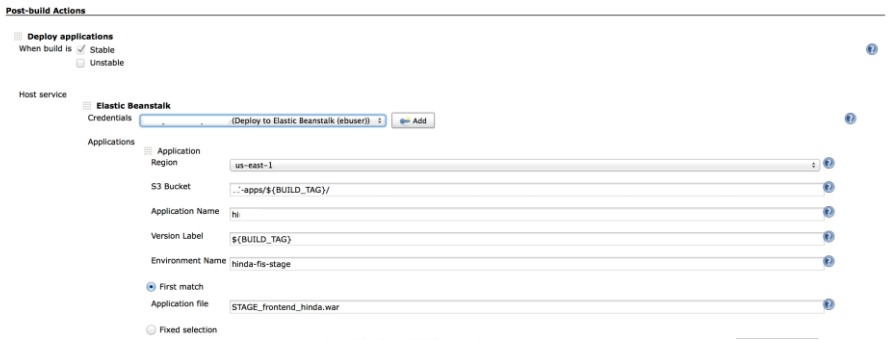
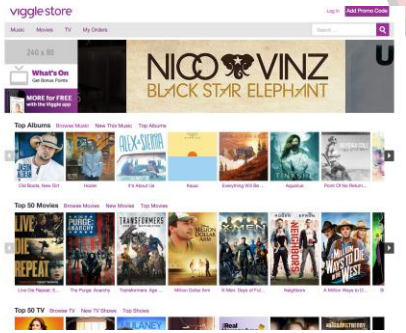
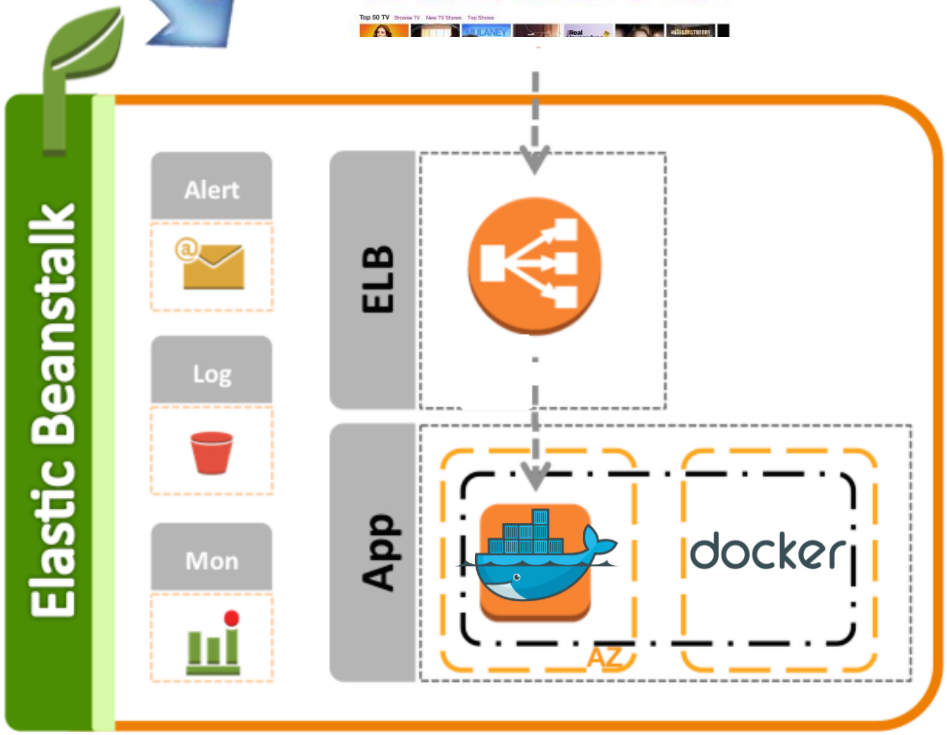

Source Control
CloudBees
AWS
Jenkins
build
unit test
code analysis
validation tests
package & deploy
STG
PRD
auto
auto
manual


Post-build Actions
Deploy applications
When build is
Stable
Unstable
Host service
Elastic Beanstalk
Credentials
(Deploy to Elastic Beanstalk (ebuser))
Add
Applications
Application
Region
us-east-1
S3 Bucket
...-apps/${BUILD_TAG}/
Application Name
hi
Version Label
${BUILD_TAG}
Environment Name
hinda-fis-stage
First match
Application file
STAGE_frontend_hinda.war
Fixed selection


viggle store
NICO VINZ
BLACK STAR ELEPHANT
Top Albums
Top 50 Movies
Top 50 TV

Jenkins
CloudBees
CI


Elastic Beanstalk
Alert
Log
Mon
ELB
App
docker
AZ

?
Questions

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keynote

zend

BlazeMeter
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ravello systems

elasticbox

JFrog

perfecto mobile

black diamond SOFTWARE

Silver

SOASTA

YAHOO!

Pivotal

SERENA

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