Pivotal Cloud Platform Deep Dive

Part 4: Enabling Continuous Delivery

Pivotal CF Team

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Meet Henry
(Our Business Owner)

Meet Henry

He needs an app built in the next 8 weeks

He knows what the app should do

He expects competitors to try to beat us to market

Meet Jane
(Our App Architect)

Meet Jane

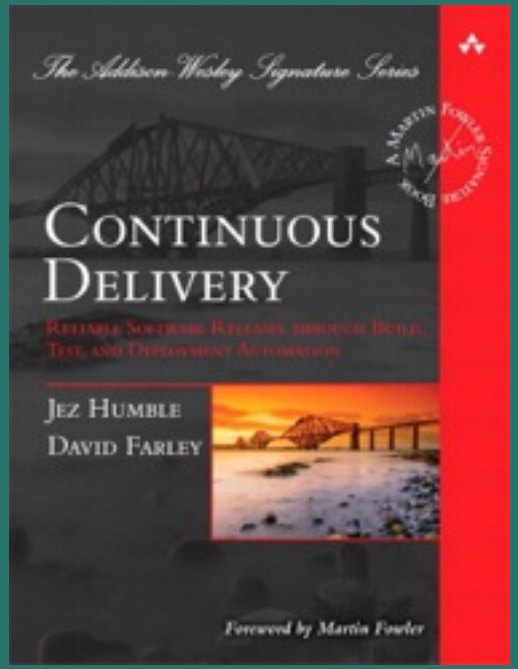
Jane is a little worried:

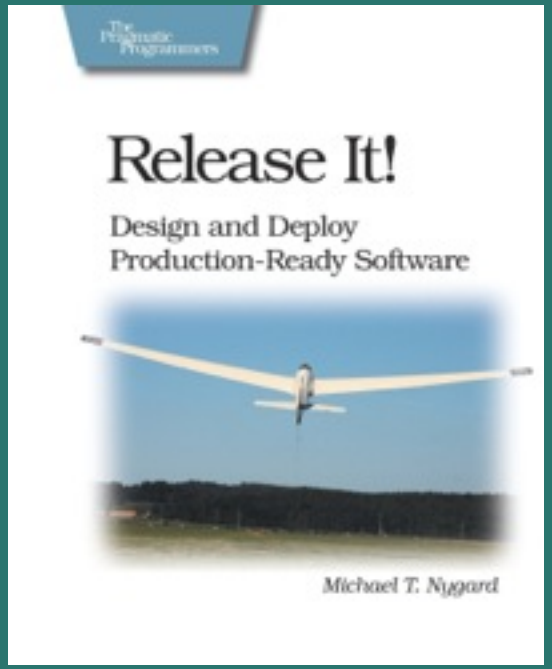
Not everyone understands agile here

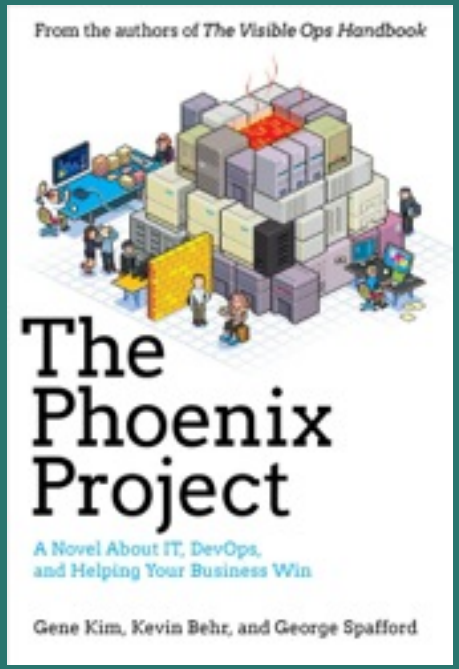
Environment setup takes a long time

8 Weeks isn't much time to get a release to production (!)

Continuous Delivery To The Rescue!







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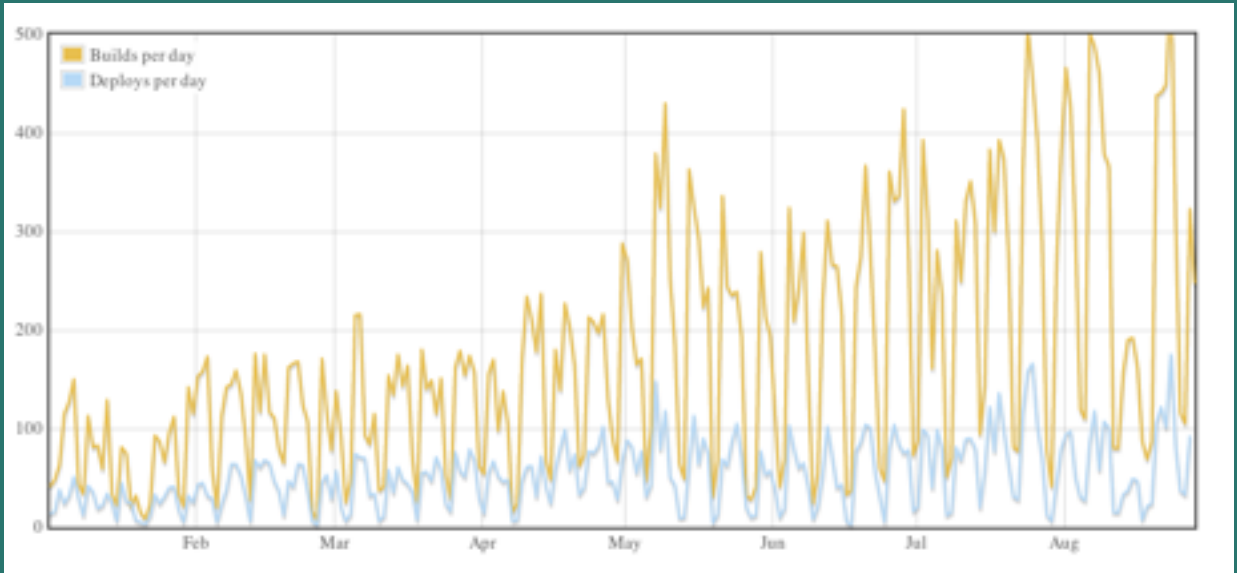
Continuous Deployment



Github: On August 23, 2012 – **563** builds and **175** deploys

github.com/blog/1241-deploying-at-github

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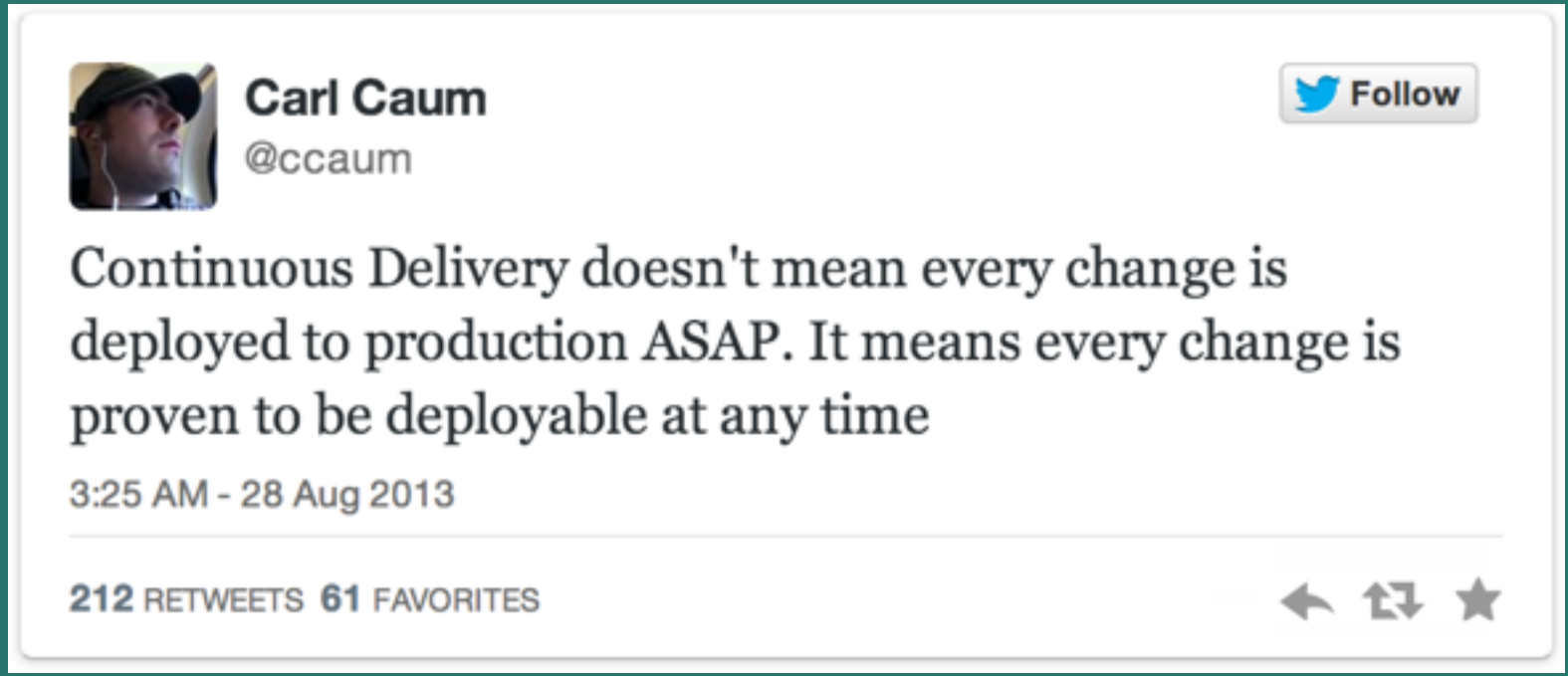
Continuous Delivery != Continuous Deployment

Continuous Delivery != Continuous Deployment



twitter.com/ccaum/statuses/372620989257232384

The Difference:

Who Presses The Button For A Production Deployment?

What Could Get In Jane's Way?

Cycle Time

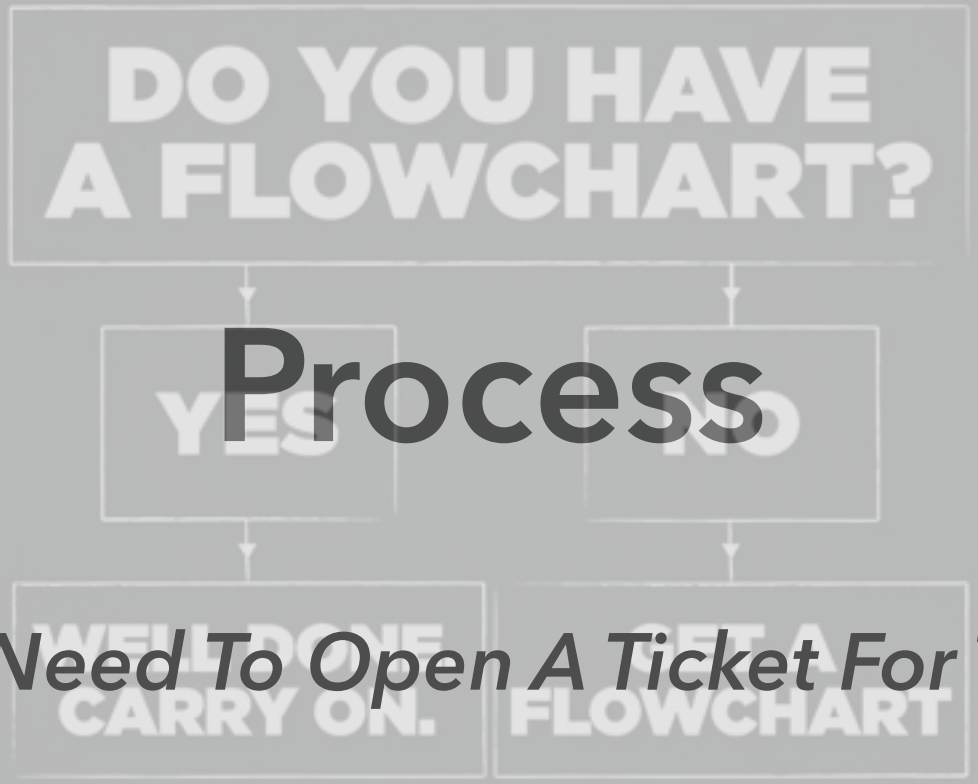
How Long Does It Take To Deploy One Line Of Code To Production?

www.flickr.com/photos/nnova/3399904953

Silos

… But We Have A DevOps Team!

www.flickr.com/photos/denimdave/6334224428



Process

You Need To Open A Ticket For That!

www.flickr.com/photos/kevgilmour/4843051331

Feedback Loop

Are We Building The Right Thing?

www.flickr.com/photos/tenspeedphotography/5450456783

Change

Production Breaks When Changes Are Made (!)

… Right?

Jane Needs Some Help
(This Seems Insurmountable)

Strategies For Success

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Do Implement Continuous Integration

Strategies For Success

Do Not Create Environment Specific Packages

Strategies For Success

Do Externalize Environment Specific Configuration

Strategies For Success

Do Automate Everything

Strategies For Success

Do Not Assume Existing Processes Are Right

(Engage In Continuous Improvement)

Strategies For Success

Do Not Use A Different Process For Different Environments

Strategies For Success

Do Recreate App Environments Frequently

(Also Known As: Servers Are Not Puppies)

Strategies For Success

Do Ensure Database Changes Are Automated

Strategies For Success

Do Deploy Less More Frequently

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Strategies For Success

Do Automate All Testing Where Test Failures Would Prevent A Production Release From Occurring

Strategies For Success

Do Try To Use Tools That Support The Process

(But Don't Get Stuck In Tool Selection Hell!)

Cloud Foundry Helps Jane…

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Get A New App Environment In Seconds

Cloud Foundry Helps Jane...

Have Complete Consistency Between Environments

Cloud Foundry Helps Jane...

Have A Consistent API To Automate Deployments

Cloud Foundry Helps Jane...

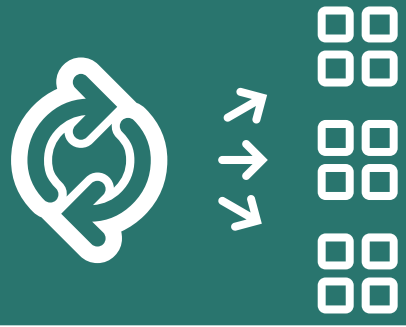
Inject Environment Specific Configuration

Cloud Foundry Helps Jane...

Inject External Dependencies

Cloud Foundry Helps Jane…

Promote Apps Through Environments With The Same Process



Cloud Foundry Helps Jane…

By Providing New Options:

+ Canary Deployment

+ Zero Downtime Deployment

+ A/B Testing

+ Scale Apps On-Demand

App Developers Can Be More Successful When They Are Supported By Agile Infrastructure