Continuous Delivery

Martin Fowler, Jez Humble
YOW! Brisbane, 5 December 2011

http://thoughtworks-studios.com/
The "last mile"
web 2.0

disrupting traditional businesses

Flickr was last deployed 12 hours ago, including 9 changes by 5 people.

In the last week there were 54 deploys of 636 changes by 23 people.

http://code.flickr.com/
releasing frequently

1. build the right thing

innovate

You can't just ask customers what they want and then try to give that to them.

By the time you get it built, they'll want something new.

Steve Jobs

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scientific method

create hypothesis

deliver minimum viable product

get feedback

(repeat)

ask this question

“How long would it take your organization to deploy a change that involved just one single line of code? Do you do this on a repeatable, reliable basis?”

Mary and Tom Poppendieck, Implementing Lean Software Development, p59.
releasing frequently

1. build the right thing

2. reduce risk of release

John Allspaw: “Ops Metametrics” http://slidesha.re/dsSZIr
releasing frequently

1. build the right thing
2. reduce risk of release
3. real project progress
agile manifesto

Our highest priority is to satisfy the customer through early and continuous delivery of valuable software
production-ready software

Fast, automated feedback on the production readiness of your applications every time there is a change - to code, infrastructure, or configuration
Software always production ready

Releases tied to business needs, not operational constraints
continuous delivery

automation

patterns and practices

collaboration
ingredients

configuration management

continuous integration

automated testing
Mainline Server

Local Workstation

Develop

Build

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✔

Done!
Everyone Commits To the Mainline Every Day
build quality in

“Cease dependence on mass inspection to achieve quality. Improve the process and build quality into the product in the first place”

W. Edwards Deming
different kinds of testing

Diagram invented by Brian Marick
deployment pipeline

an automated implementation of your system’s build, deploy, test, release process

visibility

feedback

control
deployment pipeline
deployment pipeline
deployment pipeline
reducing release risk

devops

incrementalism

decoupling deployment and release
devops

culture

automation

measurement

sharing
low risk releases are incremental

blue-green deployments

canary releases

dark launching

feature toggles

production immune system
blue-green deployments
router

web server

app server

DB server

v1.1

v1.2

v1.1

v1.2

v1.1

v1.2
release != deployment
feature toggles

Config File

```
[featureToggles]
wobblyFoobars: true
flightyForkHandles: false
```

some.php

```
<?if ($wobblyFoobars) {?
  ... various UI elements
?}?>
```

other.php

```
$fork_handle = ($featureConfig->isOn('flightlyForkHandles')) ?
  new flightyForkHander(aCandle) :
  new forkHandler(aCandle);
```

Stolen from Martin Fowler [http://martinfowler.com/bliki/FeatureToggle.html](http://martinfowler.com/bliki/FeatureToggle.html)
Dark Launching
people are the key

Get everyone together at the beginning

Keep meeting

Make it easy for everyone to see what’s happening

Continuous improvement (kaizen)
thank you!

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