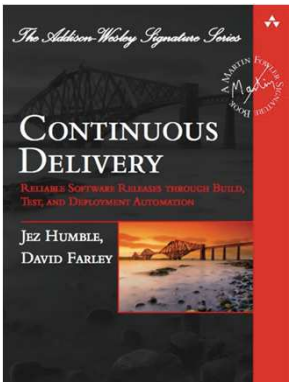
A Tester's Guide to:



by Paul Carvalho

@can_test

Targeting Quality 2013

Principles behind the Agile Manifesto

We follow these principles:

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

Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.

Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.

Business people and developers must work together daily throughout the project.

Continuous Delivery is…

…a set of practices and principles aimed at, *building*, *testing*, and *releasing* software *faster* and more *frequently*.

Goals

Quality ↑

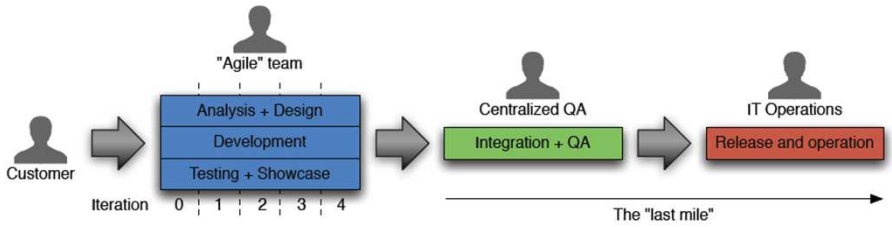
Cycle Time ↓

Ask yourself

"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*

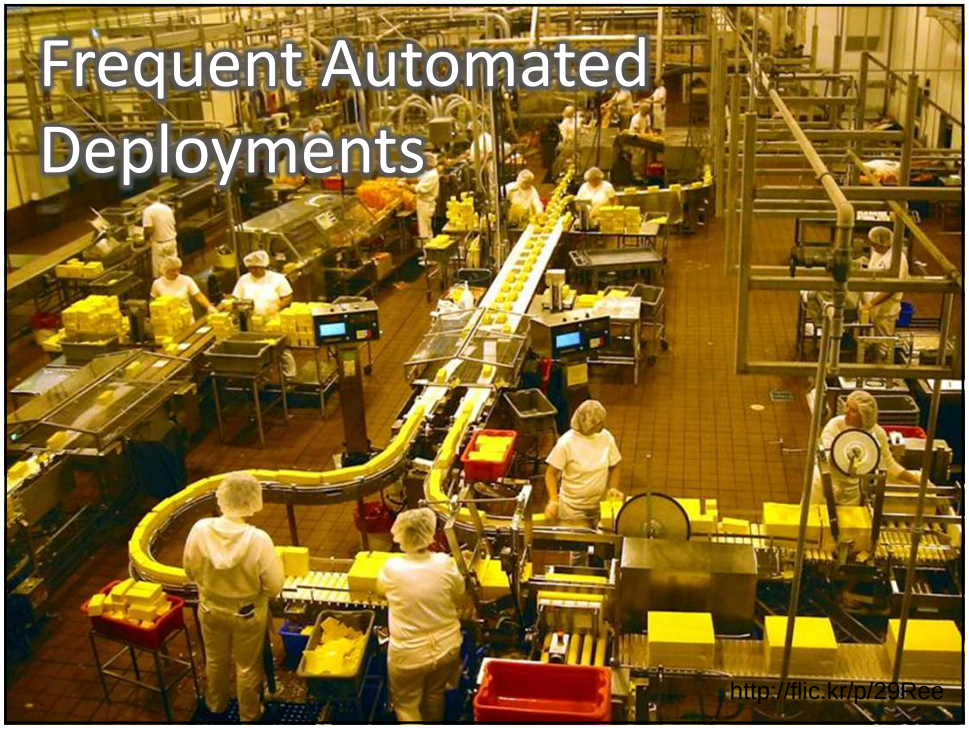
agile 101



(graphic from Jez Humble)

This is Awesome!

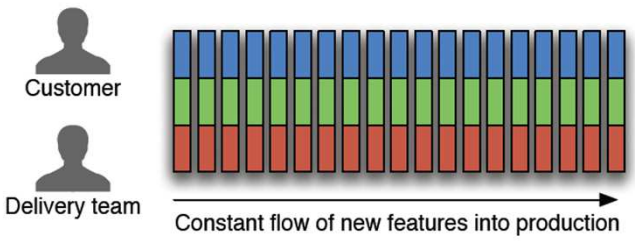
http://code.flickr.com/



Production-Ready Software

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

Continuous Delivery



- Software is always production ready
- Releases tied to business needs, not operational constraints

(graphic from Jez Humble)

CD – What do you need?

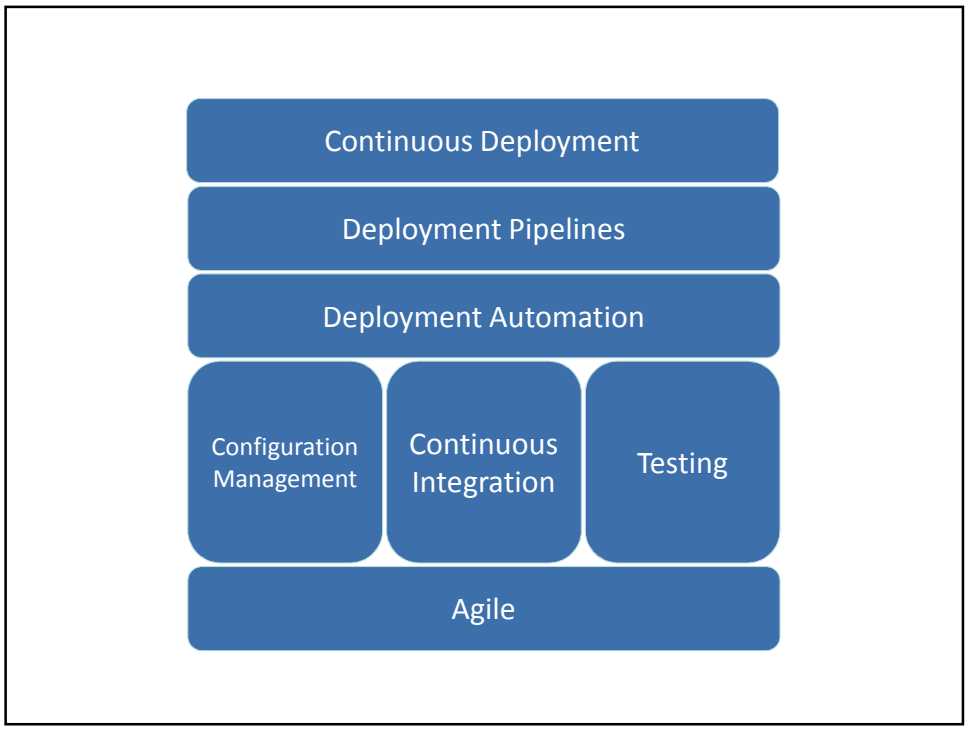
Automation

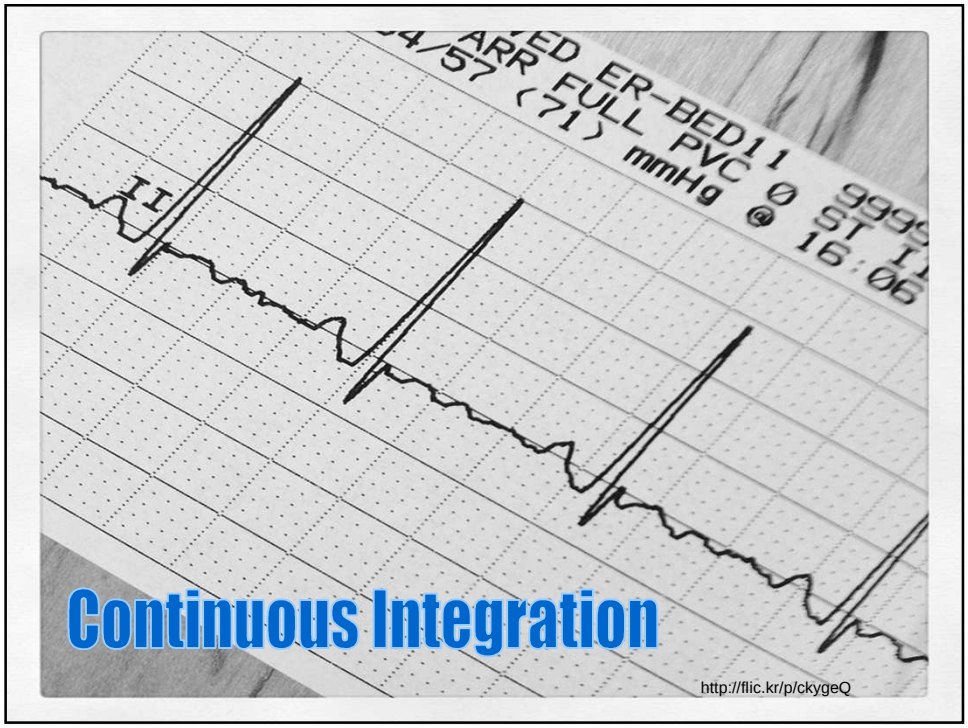
Patterns and practices

Collaboration

Ingredients

1. Continuous integration
2. Configuration management
3. Automated Testing


Continuous Deployment
Deployment Pipelines
Deployment Automation
Configuration Management
Continuous Integration
Testing
Agile

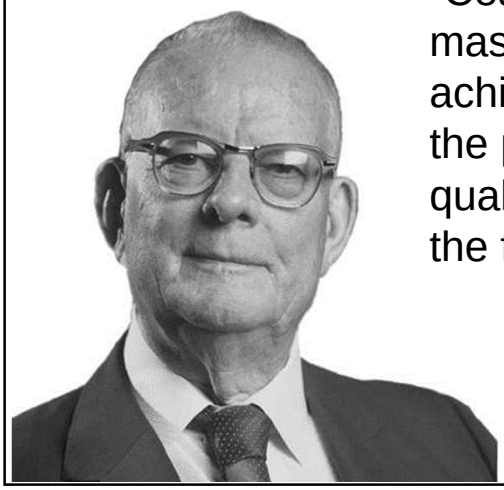

Continuous Integration
http://flic.kr/p/ckygeQ

Everyone Commits

To the Mainline

Every Day

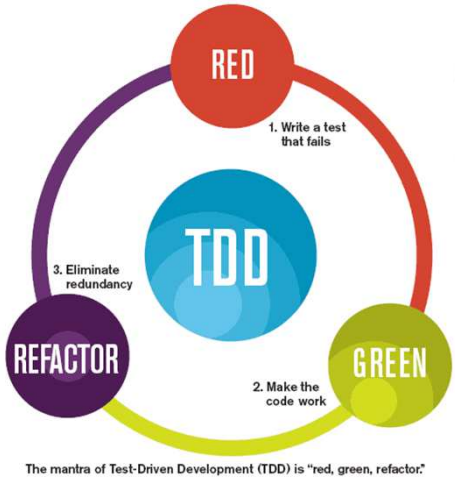
Build Quality In



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

- W. Edwards Deming

Test Driven Development



http://reddevnews.com/articles/2007/11/01/testdriven-development-tdd.aspx

"Dev complete" is a meaningless term.
It means nothing.
"Complete" means working in production.

- Jez Humble, 2012

Continuous Integration

Check-in Daily

Commit to Trunk

Automate the Build

Keep the Build Fast

Every Commit results in Build

Test in Clone of Production

Automate Deployment

Continuous Integration

- Continuous Integration is a practice, not a tool.
- You don't need fancy tools:
  - http://jamesshore.com/Blog/Continuous-Integration-on-a-Dollar-a-Day.html

Environment Control

How quickly can you create a working Production environment?

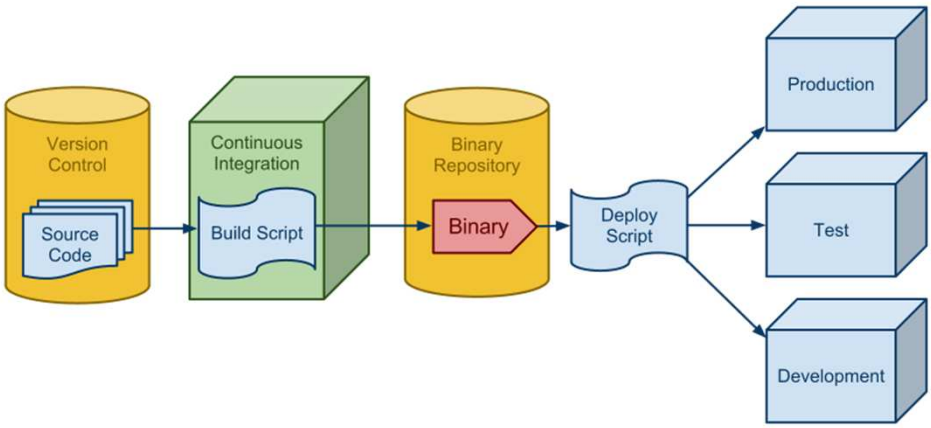
- video example: http://youtu.be/dBtYXFXa5Ig

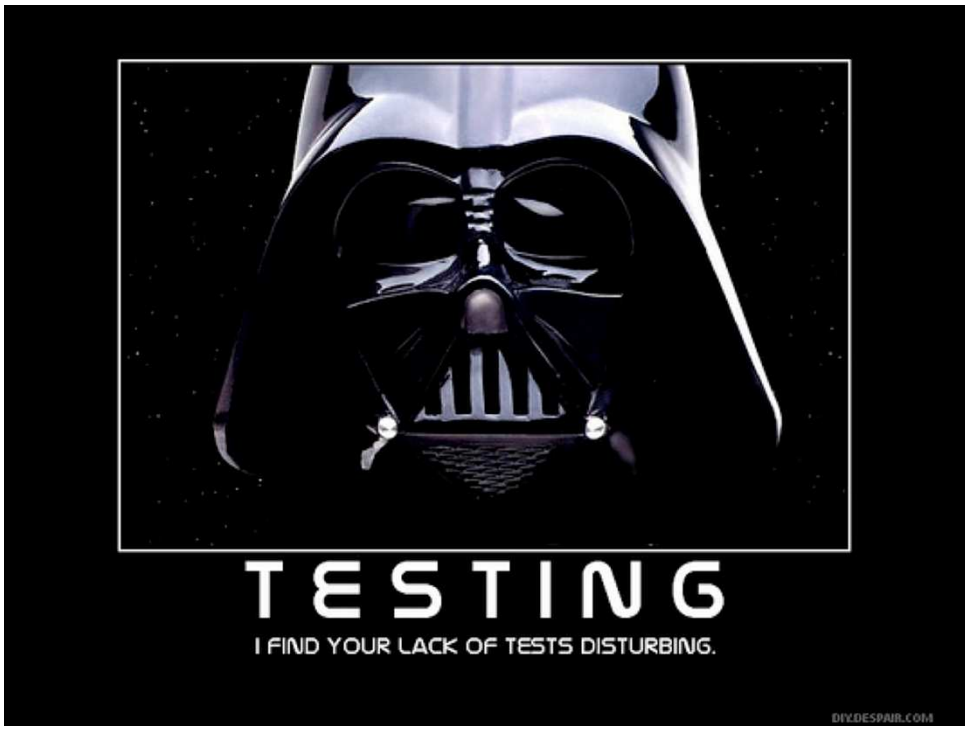
Version Control

Version Everything! (except build output)

Dependencies:	build tools can help you here. Componentize app. Import Libraries
Configurations:	O/S, database, middleware. Environment specific. Keep separate than source.
Data:	Schema and Data

Build Once, Deploy Many

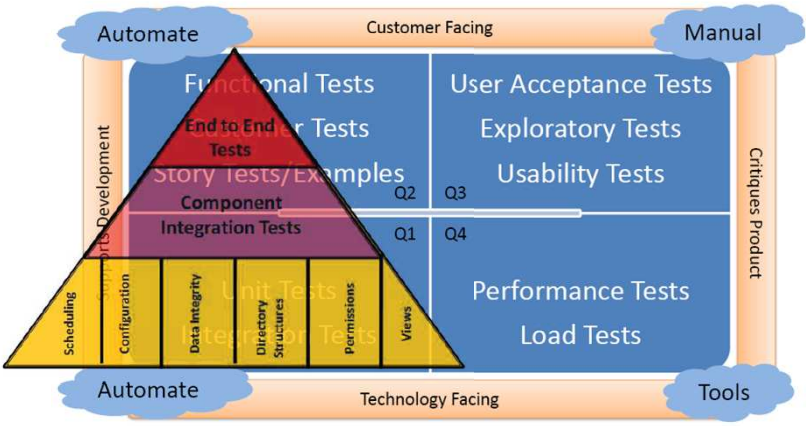




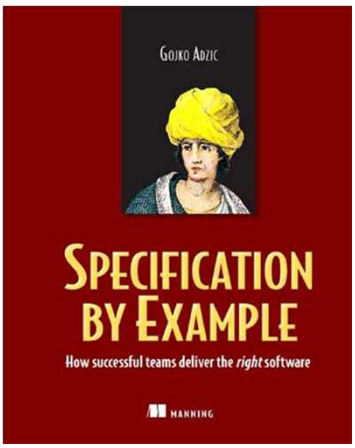
Testing is NOT a Phase

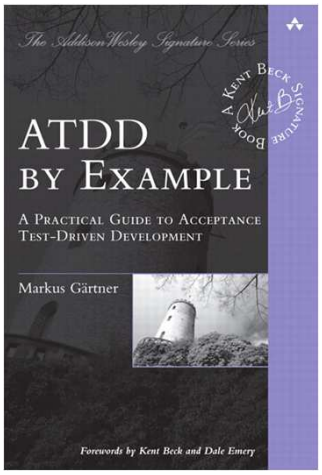
- A Tester has two roles:
  1) Act as a customer/user representative
  2) Make the Quality of the system transparent

Different Kinds of Testing

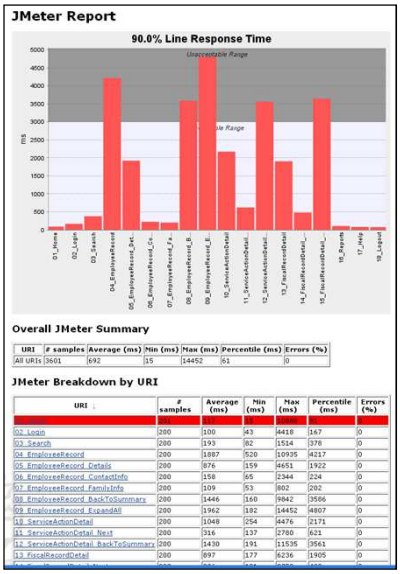


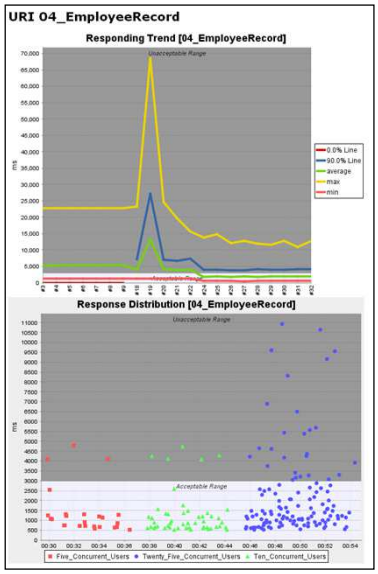
Automate Functional Tests





Automate Performance Testing





Deployment Pipelines

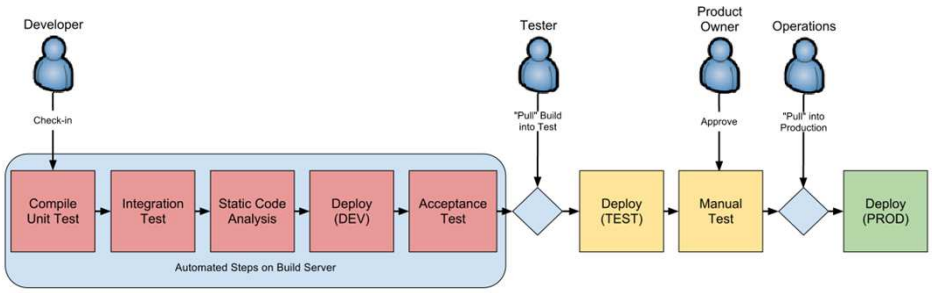
Deployment Pipelines

A *Deployment Pipeline* is an automated process for getting software

from version control

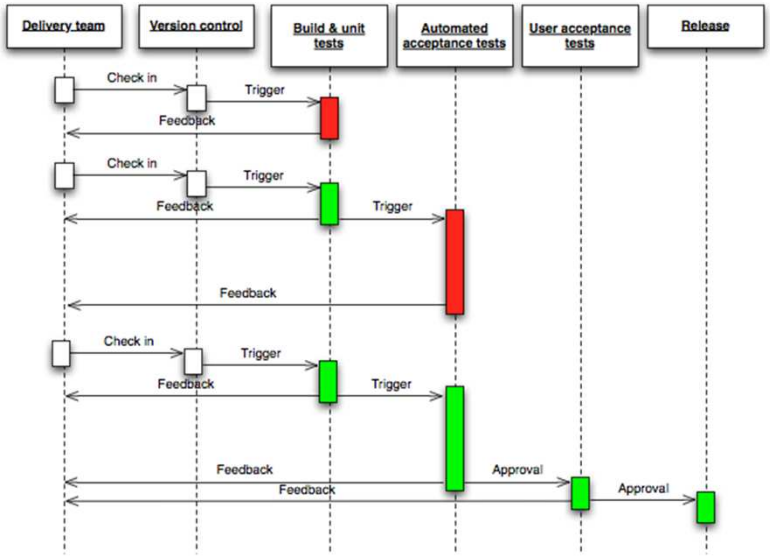
into the hands of your users.

Deployment Pipelines
(aka Build Pipelines)



(graphic from Mike McGarr)

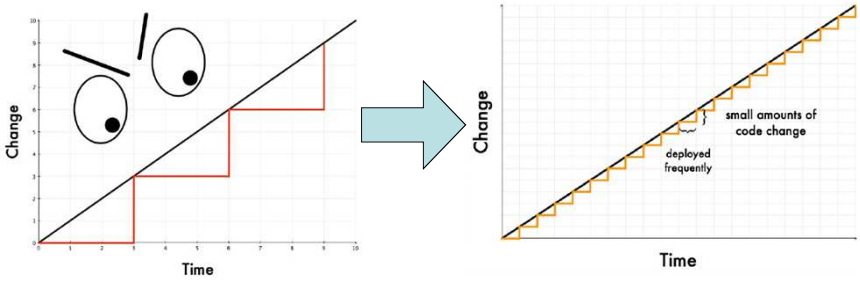
Deployment Pipeline



release != deployment

Reducing Release Risk

- Low risk releases are incremental



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

8 Principles of Continuous Delivery

1. The process for releasing/deploying software MUST be repeatable and reliable.
2. Automate everything!
3. If something is difficult or painful, do it more often.
4. Keep everything in source control.

http://jamesbetteley.wordpress.com/2011/08/04/continuous-delivery/

8 Principles of Continuous Delivery

5. Done means “released”
6. Build Quality in!
7. Everybody has responsibility for the release process.
8. Improve continuously.

http://jamesbetteley.wordpress.com/2011/08/04/continuous-delivery/

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)*

What Skills Did You See?

1. What things (activities, skills, knowledge) do you feel you can contribute to the success of Continuous Delivery in your company?

2. What learning/growth opportunities do you see for yourself?

If you have more questions, ask anytime.

Paul Carvalho

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Paul@STAQS.com

I am a woman in process. I'm just trying like everybody else. I try to take every conflict, every experience, and learn from it.
Life is never dull.

~ Oprah Winfrey

He who would learn to fly one day must first learn to stand and walk and run and climb and dance; one cannot fly into flying.

~ Friedrich Nietzsche

Final word: checkout: http://continuousdelivery.com/