

What is Continuous Delivery?

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@Cessle



About Me

- Operations Engineer for AutoTrader
- Previously worked at M247
- My arm span is greater than my height!
- Don't have as much skill on a mountain bike as I



About Autotrader

- Largest new and used car digital market place in the UK
- 6x larger than our nearest competitor
- 80% of UK car dealers advertise through us
- 92% of UK consumers know who we are
- Worth ~£3.9Bn on the London Stock Exchange
- About 450k cars advertised at any one time

Our product estate

2013/14

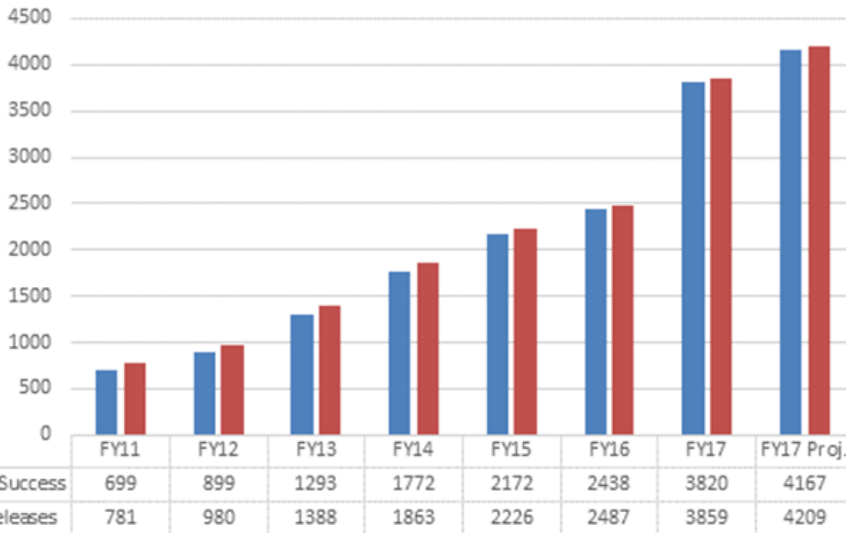
- 40 Deployments per week
- Deployed by Operations to live
- Deployed to live manually using legacy Perl scripts
- 75 Apps
- 350 Go Pipelines

• 2016/17

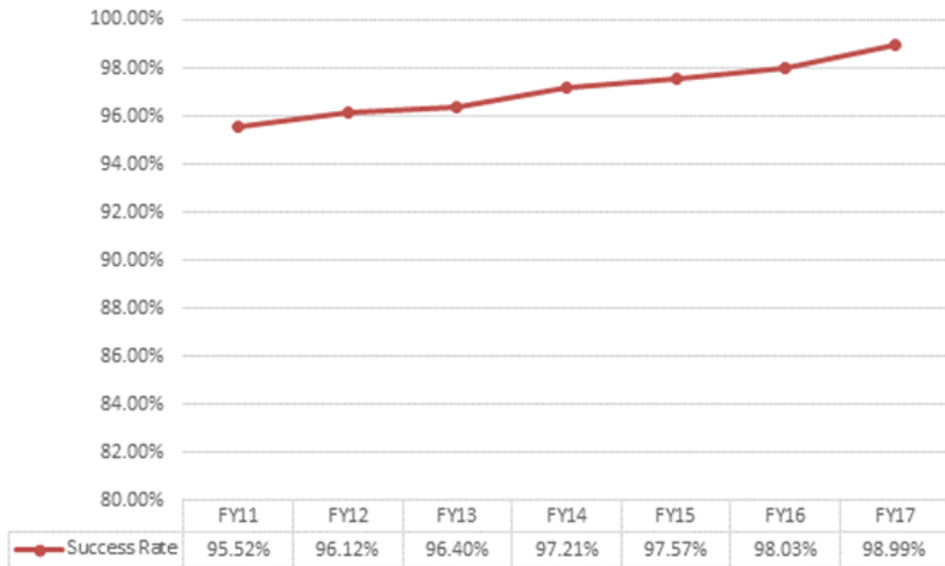
- 80+ Deployments per week
- Deployed by Devs to live
- Deployed to live automagically using GO CI pipelines
- 198 Apps
- 2400+ Go Pipelines

Release Rate & Success

Release Volume over Time



Release Success rate over Time



We all know
waterfall

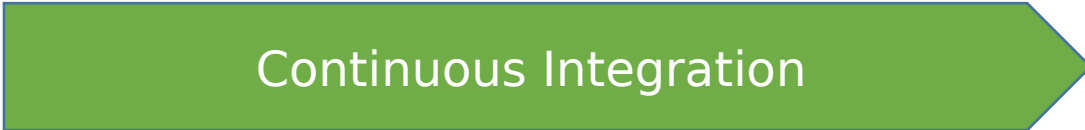
So what is CI & CD?

Continuous Integration (CI)

- Code is stored in shared repository (Git, SVN)
- Committed multiple times per day (typically)
- Each check in is then verified with automated builds
- Fast feed back loop
- Build & deployment process to be consistent
- Dev/QA environments to be consistent

Continuous Delivery (CD)

- An extension of CI
- Deployed to live automatically
- Post integration testing done automatically
- Build & deployment process to be consistent across all environments
- Dev/QA/Staging/Live environments to all be consistent



What about
infrastructure?

Infrastructure

- Your configuration is your code
- Changes only made by changing the code
- Your code is tested in a different environment before live

Cloud Only?

- NO!
- Networks is fashionably late to the party
- Use the same principles & tools as sysadmin / developers

What are my options?

- NAPALM
 - Network Automation and Programmability Abstraction Layer with Multivendor support
 - Python library
 - Set of functions to interact with different router vendor devices via unified API
 - <https://github.com/napalm-automation/napalm>
- OpenConfig
 - Written in YANG
 - <http://www.openconfig.net>

Other Tools

- Ansible
- CFEngine
- Chef
- Otter
- Puppet
- Saltstack

A python script is not going to steal your job

Disclaimer

I take zero responsibility or liability if you loop/null route/shoot laser in engineer eye/erase your network due to following anything I have said in this talk

References

- Past, Present, and Future of Network Operations
 - David Barroso, Fastly
 - <https://www.usenix.org/conference/srecon16europe/program/presentation/>
- AutoTrader... from continuous integration to continuous delivery
 - Mark Crossfield
 - <http://markcrossfield.co.uk/2014-10-22-devops-manchester-auto-trader-from-continuous-integration-to-continuous-delivery.html>