



A TECHWELL EVENT

T22

DevOps/Continuous Delivery

Thursday, October 4th, 2018 3:00 PM

A Tale of Continuous Testing

Presented by:

David Lumpkin

Craftsy

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David Lumpkin

David Lumpkin is a Senior SDET at Craftsby, an online and mobile platform based in Denver that delivers craft education via interactive video tutorials and workshops. With more than ten years of software engineering experience, he is focused on improving customer experience through innovative tools, continuous delivery, and an extremely lean tester to developer ratio. His expertise includes extensive work with browser automation, load testing, TDD/BDD development, operational support in cloud architectures, and agile project management. David is active in the Denver startup community, presenting at the Software Quality Association of Denver and Denver startup week, and is passionate about furthering the Quality Assurance profession and improving available testing technologies.

A Tale of Continuous Testing

David Lumpkin
@dlumpkin

Craftsy's Story

- Bringing creativity to life
- Convenient access
- Best instructors
- Millions of members
- A passionate engineering team!

We have a situation

- In 2015 we hit a tipping point
 - Unpredictable changes
 - Long time to deploy
 - Inability to iterate
 - Bugs! Stress! Unhappiness!
- Rewrite the platform, yikes!
- Continuous testing, yay!
- Did it work?



Blueprint's success

- Joining the NBCUniversal Family
- Craftsby Unlimited: Experimenting with subscriptions
- Blueprint: Watch + Learn



Our Engineering Team Now

- Small changes
- Deployed by engineers
- 5-10 releases daily
- Happy product managers
- Happy customers



What is Continuous Testing?

Why are we talking about Continuous Testing?

The Reality of Quality Assurance Today

- Quality Assurance is becoming Quality Engineering
 - Testability is an architecture not an afterthought
 - Release Faster!
 - Reduce Risk!
 - Increase Efficiency!

Continuous Testing (saves the day?)

- Built on agile methodologies
 - Test product ideas rapidly
 - Respond to customer feedback
- Great solution, but is it right for your product?
 - DevOps
 - Test Automation
 - Cultural commitment



Development Process Today

- Local Development
- Pull Request
- Staging Environment and Betas
- Continuous Testing and Delivery



A Recent Example

- PMs wanted to experiment with subscription sign ups
- Developers have iterated constantly over the past months
- 2 week cycle while previous iteration is A/B tested
- New iteration is deployed with little to no QA involvement
- Automated tests provide confidence in core functionality (\$\$\$)
- No major customer impacting bugs



How We Got Here

- Test smaller chunks
- Pick good tools
- Train developers
- Report on results
- Incorporate feedback

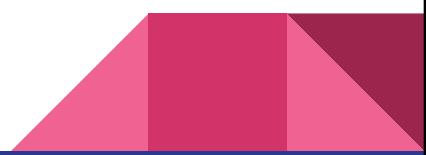




Continuous Testing Best Practices

Earn Leadership Buy-In Early

- Research new technologies
- Trial new tools
- Implement new techniques



Build Culture Around Continuous Testing

- Plan testing with product team
- Design with customer service in mind
- Engage developers to write test automation scripts (shift left)
- Utilize QA expertise



Focus on Prerequisites

- Version control strategy
- Defined build & deployment process
- Alignment between teams



Understand the Test Pyramid

- API
- Integration
- Web/Functional/App



Pick the Right Tools

- Tool ergonomics!
- What's the right tool for the job?
 - Selenium?
 - Appium?
 - SoapUI?
 - Low-level test frameworks?
- Know the landscape, pick your favorites



Prioritize Testing

- Understand Requirements
- Assess Risk
- Test Incrementally



Behavior Driven Development

Scenario: Test BDD's effectiveness

Given a set of requirements
And a developer to code them
When BDD statements are written
Then test intention is well understood
When the test code is filled in
Then functional coverage is high



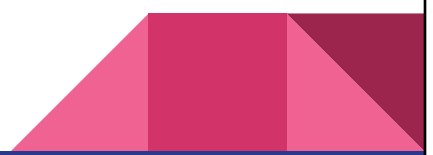
Report on Results

- BDD can be useful outside of QA & Development groups
- Continuous Testing can be overwhelming
- Reporting tools are hot!

HTML report screenshot

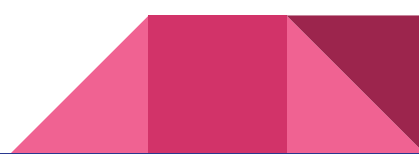
Don't Forget Apps

- Still a new ballgame
- Continuous delivery is still difficult
- Start small
 - Continuous Builds
 - Unit Tests
 - Smoke Tests
 - Monkey Testing?

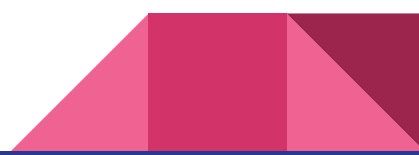
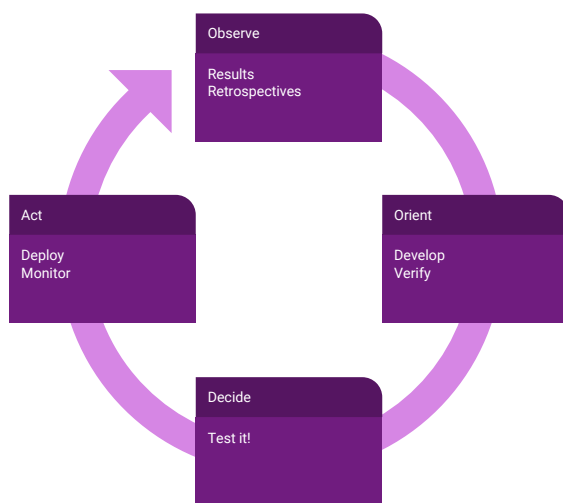


Find a Balance

- Legacy systems
- Optimize for the whole
- Incorporate manual testing



Incorporate Feedback





Takeaways



Get the Team Onboard



Pick the Right Approach



Know when to automate

and when not to



Continuous delivery is a journey



You can do it!

Resources and Questions

Follow me on twitter: [@dlumpkin](https://twitter.com/dlumpkin)

Google Testing Blog: <https://testing.googleblog.com/>

[Continuous Delivery by Jez Humble, David Farley](#)

Some of my favorite tools

<http://spockframework.org/>

<http://gebish.org/>

