

JMeter Automation for Agile Projects

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About Me

- Simon Knight
 - Professional tester since 2008
 - Independent since 2010
 - Generalist – working on automation, performance and exploratory test projects in a wide range of contexts
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About This Workshop

- Group exercises
- Automation stories
- Your questions and issues

Ice Breaker

Get in a circle. An object is thrown around the group with the two rules below:

1. Everyone must touch the object once.
2. The object must be touched in the same *human* sequence.

About JMeter

- JMeter is free and open source software from the Apache foundation
- Written in Java so runs on any system
(so long as you have a JRE installed)
- Used for:
 - Performance Testing
 - Functional Testing
 - HTTP, FTP, TCP, JDBC, LDAP, JMC, SOAP, SMTP and more...



About JMeter

It's like the Swiss Army Knife of testing tools!



Image from: <http://www.thisiswhyimbroke.com/the-ultimate-swiss-army-knife>

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JMeter Proxy

- HTTP(S) traffic recording
 - Other proxies are of course available – Charles, Fiddler, ZAProxy, browser dev tools etc etc
- Jmeter can be used to turn your recordings into scripts
 - [Blazemeter Chrome Extension](#) *may* allow you to do the same thing
 - I haven't tried it... 😊

Jmeter & Testing

- Functional testing
- Data generation
- SOAP & API testing
- Automation of repetitive or time-consuming tasks
- Security Testing
- Performance Testing

Case Study

- **Generating Users**

- User Defined variables
- Counter
- Navigate to a sign-up page
- Submit user details
- Extract confirmation email link from Gmail
- Send confirmation
- Login as new user

Case Study

- **API Testing**
 - Requests
 - Responses
 - Assertions
 - Scripting

Case Study

- **Verify Download Files**

- Identify Downloads

- Xenu Linksleuth



- Navigate directly to download file

- CSV import

- Download the files

- Verify the file extensions have been fixed

Case Study

- **Security Testing**

- Exploit already identified

- We use Accunetix for automated vulnerability scanning

- The scanner reported a HTTP Header Injection vulnerability

- We needed to reproduce the issue in order to understand it better

- Curl proved inadequate

- JMeter was used instead

Case Study

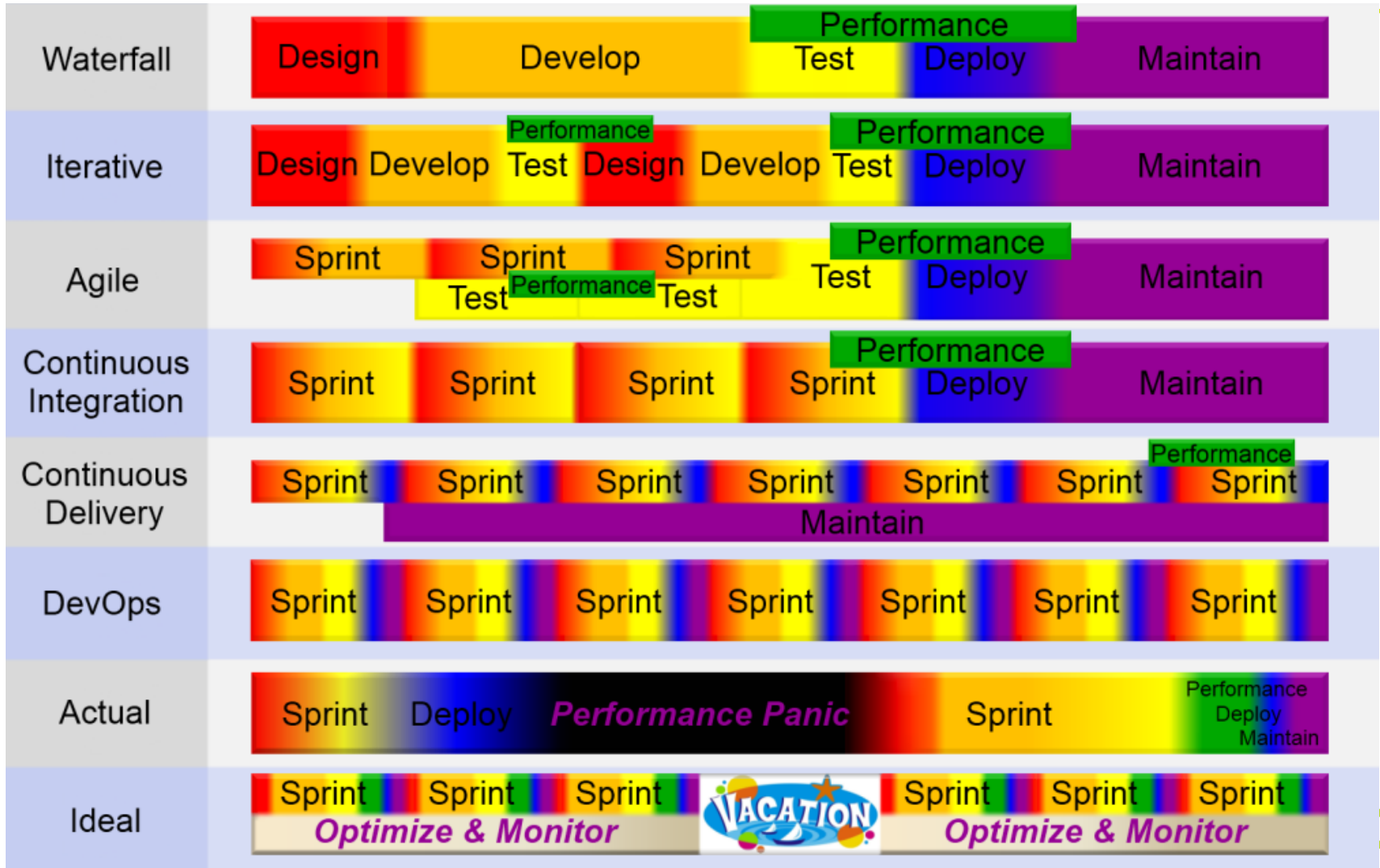
- **“End-to-End” Performance Testing**
 - Additional scripting considerations
 - Think time
 - Logic
 - Monitoring
 - Load patterns
 - Interpreting results

Group Exercise

Discuss:

- What are the challenges of performance testing in agile?
- What are the challenges of performance testing every build?
- How might you overcome some of the challenges?

Where does Performance Testing fit in?



Where does Performance Testing fit in?



Images via
Scott Barber

“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”

Case Study

- **Exploratory Performance Testing**
 - Focused scripts targeting high impact areas of the application normally
 - Logins, purchases or other transactions
 - Load generation – often using a stress testing pattern
 - Performance testing is a team sport!
 - Work closely with developers/operations

Case Study

- **Continuous Integration**

- Jenkins and Bamboo have performance plugins
- Performance jobs can be run against every build

Given I am a registered user

When I login to the site

Then I should see my dashboard in < 5 secs

Group Exercise

- In groups - write an agile performance test plan for the Amazon web site
 - Acceptance criteria?
 - Areas to test?
 - Any additional considerations?

Thanks for coming

• Any questions...?

• Resources:

- Jmeter http://jmeter.apache.org/download_jmeter.cgi
- FoxyProxy <http://getfoxyproxy.org/>
- Xenu Linksleuth <http://home.snafu.de/tilman/xenulink.html>
- Jenkins Performance Plugin <https://wiki.jenkins-ci.org/display/JENKINS/Performance+Plugin>
- Bamboo Jmeter Aggregator <https://marketplace.atlassian.com/plugins/jmeterAggregator>
- Scott Barber images
<http://www.ministryoftesting.com/2014/04/testbash-3-video-managing-application-performance-throughout-lifecycle/>
- <https://dojo.ministryoftesting.com/series/performance-testing-101-simon-knight> for more about performance testing

• About me:

- <http://sjpknight.com> for more info about me, Jmeter and a mailing list
- Follow me on Twitter @sjpknight
- Connect with me on LinkedIn: <https://uk.linkedin.com/in/simonjknight>
- Complete Jmeter performance testing course by me here:
<https://dojo.ministryoftesting.com/series/performance-testing-101-simon-knight>