IT/Dev CONNECTIONS

DevOps Architecture Deep Dive

Canary Deployment

Eric Landes
Sr. DevOps Consultant
AgileThought

Delivered by KNect365 TMT an Informa business

@EricLandes

Eric.Landes@agilethought.com

Professional Scrum Trainer
Scrum.org

Eric is a scrum.org certified professional Scrum trainer. He is experienced in working with small and large enterprise development organizations and individuals. His years of experience as an Agile Coach, DevOps Consultant and Technical Architect contribute to his solutions presented. Eric has presented on Kanban, Unit Testing, Agile and other topics at many conferences and user groups.

Agenda

- DevOps Practices
- Review of Continuous Deployment Patterns
- Benefits of a Canary Deployment Pattern
- What does it take to move to a Canary deployment pattern?
- Moving from A/B to Canary
- Q&A

Puppet Labs Measures DevOps Maturity

According to the 2018 report:

- Highly evolved organizations are 23X more likely to reuse deployment patterns.
- Highly evolved organizations are 44X more likely to reuse Testing Patterns.

Achiving a High Level of Maturity

- Metrics
- Automation
- Development Team Agility
- DevOps Practices and Habits

Metrics

- Cycle Time, Lead Time can be useful.
- Cumulative Flow is another metric
- Let’s look at what that looks like!

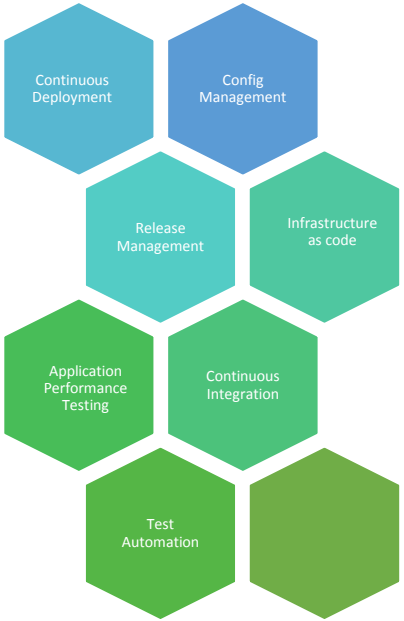
DevOps Practices and Habits

Microsofts :

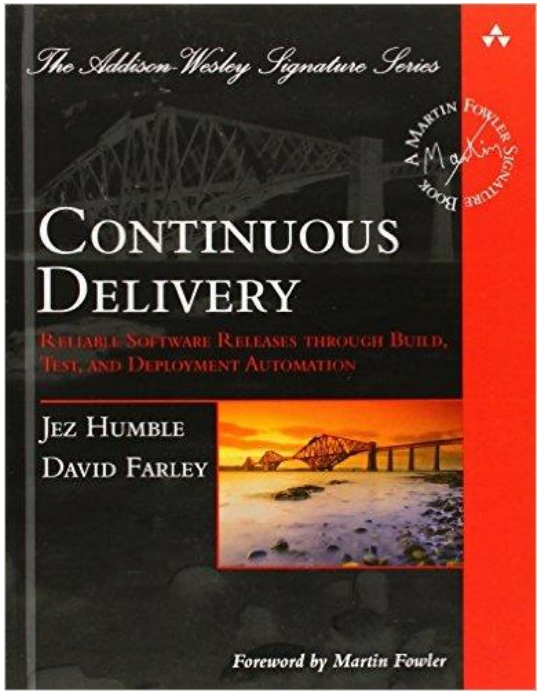
- Visual Studio Program teams moved from every monolithic releases to a continuous delivery model starting with the 2010 release.
- Their experience came up with 7 practices and 7 habits for Devops.

Devops Habits

Devops Practices and Habits



Continuous Delivery



"Continuous Delivery is a software development discipline where you build software in such a way that the software can be released to production at any time" - Martin Fowler

- Scrum assumes shippable code by end of sprint
- CI/CD are good engineering practices
- There is a good post around CD patterns by Itay Shakury. We will discuss those patterns.

CD Patterns


Reckless Deployment


Rolling Upgrade


Blue/Green


Canary

Versioned

Benefits of Canary Deployments

- Feedback on features from actual customers
- Ability to target customers
- Can fine tune features with real customer feedback before rolling out to all customers

Demo of Current Deployment State

TEST AUTOMATION

- Deployment Pipelines include Test Automation
- Types of Test Automation

Demo of Test Automation

Steps to move to Canary

- Implement Feature Toggling
- Think modular!
- Good quality at that modular level
- Plan rollout methods

Feature Toggling

- Use a library in code.
- Do this after the code is fairly stable, not early in development
- Martin Fowler has a great post on feature toggles (Feature Toggles (aka Feature Flags)
- Do you need feature branches? Pros and Cons

DEMO IMPLEMENTING FEATURE TOGGLING

Implications to the Pipeline

- Configuration transformation
- Enable monitoring for new features

.

What changes do we need?

Demo New Pipeline

Summary

- Canary deployments can help Gather evidence to support your Hypothesis driven development, helping to deliver better software to your customers
- Use tools like Feature Toggles to achieve canary deployments
- Your development and deployments need to be rock solid

.

QUESTIONS

Stay Connected

- linkedin.com/in/ericlandes
- @ericlandes
- www.agilethought.com
- www. linkedin.com/company/AgileThought
- @AgileThought

If you have questions or would like more information, feel free to contact me via email eric.landes@agilethought.com

agilethought

insightful solutions :: innovative technologies