

# DevOps for Defense



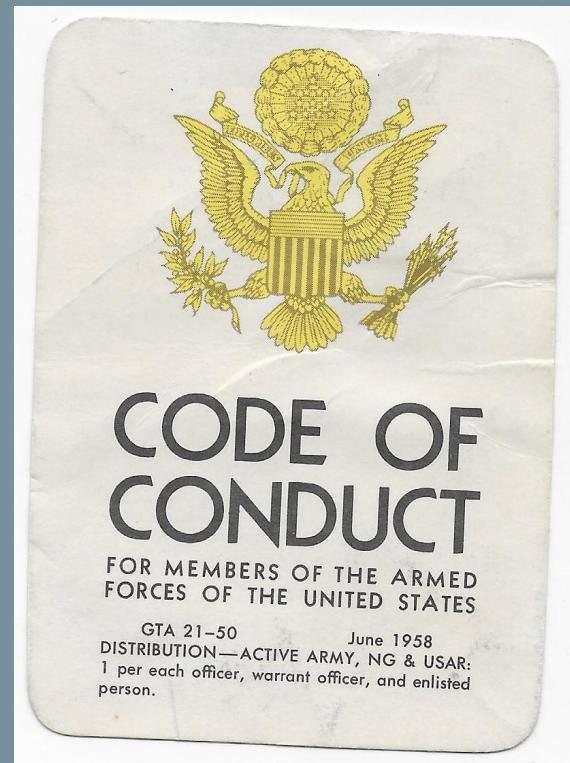
## The 2nd Way: Feedback

Now on GitHub! <https://github.com/jondavid-black/DevOpsForDefense>

JD Black  
February 1, 2018

# DevOps for Defense Meetup: Code of Conduct

- UNCLASSIFIED ONLY!!!!
- Treat each other with respect and professionalism.
- Do not talk about private, sensitive, or proprietary work.
- Do talk about your experiences, needs, desires to improve work in our domain.
- Do share your thoughts.
- Do learn from others.
- Do respect & tip your bartenders!



# DevOps for Defense - A Very Brief History

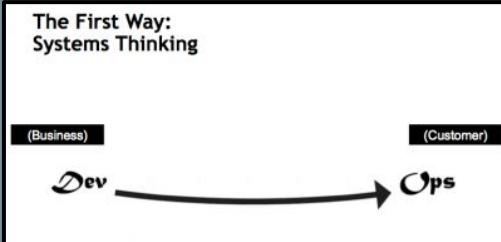
- November 2017
  - Gene Kim - DevOps Keynote
- December 2017 (First Meetup!)
  - DevOps Overview
    - JD Talked too Much
  - Group Project: Obstacles
    - Started good discussions
- January 2018 (Turnout Doubled!)
  - Agile & DevOps
    - Justan was Great!
  - The 1st Way: System Thinking & Flow
    - JD Talked too Much
    - And Disk Golf in the background? Really?
  - Group Project: Small vs Large Batch
    - That was fun. Let's do it again!



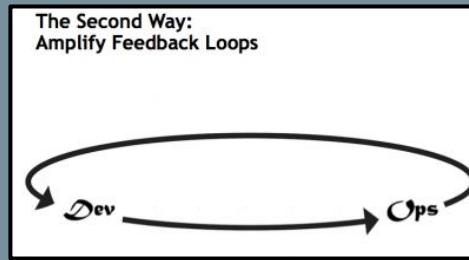
We Made the Board!

# Core of DevOps

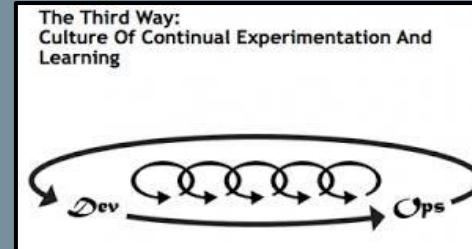
## The 1st Way: Systems Thinking & Flow



## The 2nd Way: Feedback



## The 3rd Way: Experimentation & Learning



Transform Your SW Lifecycle!

COP 3331

Exam 1

### 2 Short Answer Questions

11. [10 points] Name and describe the five key phases of software development.

- ~~1. denial  
2. bargaining  
3. Anger  
4. depression  
5. acceptance~~

# Feedback: Let me Google that for you!

feed·back  
'fēd,bak

Noun



1. Information about reactions to a product, a person's performance of a task, etc., used as a basis for improvement.
2. The modification or control of a process or system by its results or effects, e.g., in a biochemical pathway or behavioral response.

synonyms: response, reaction, comments, criticism

# Remember: State of DevOps Report 2017

## Technology and automation

### Measurement and Monitoring

- Visual management
- Monitoring for business decisions
- Check system health proactively
- WIP limits
- Visualizations

@nicolefv



### Process



#### High Performers Are More Agile

**46x**

more frequent deployments

#### Source: PuppetDORA. 2017 State Of DevOps Report. <https://puppet.com/resource/whitepaper/state-of-devops-report>

**440x**

faster lead times than their peers

#### High Performers Are More Reliable

**5x**

lower change failure rate

**96x**

faster mean time to recover (MTTR)

#### High Performers Win In The Marketplace

**2x**

more likely to exceed profitability, market share & productivity goals

Source: PuppetDORA. 2017 State Of DevOps Report. <https://puppet.com/resource/whitepaper/state-of-devops-report>

**2x**

more likely to achieve organizational and mission goals, customer satisfaction, quantity & quality goals

Source: PuppetDORA. 2017 State Of DevOps Report. <https://puppet.com/resource/whitepaper/state-of-devops-report>

#### High Performers Win In The Marketplace

**2.2x**

higher employee Net Promoter Score

**50%**

higher market capitalization growth over 3 years\*

Source: Puppet Labs. 2016 State Of DevOps Report. <https://puppet.com/resource/whitepaper/2016-state-of-devops-report>

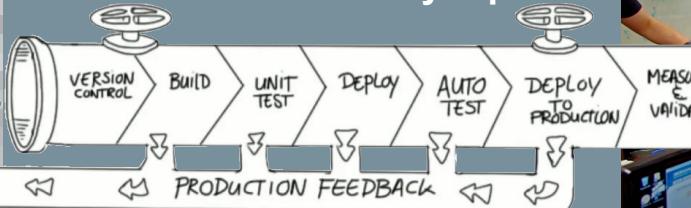
©PuppetLabs

# Sources of Feedback

Management



Continuous Delivery Pipeline



System Test



WORKED FINE IN  
DEV

OPS PROBLEM NOW



End User



# Make Your Feedback Meaningful...and Pay Attention!

“Create a system of work where knowledge acquired downstream in Operations is integrated into the upstream work of Development and Product Management.”

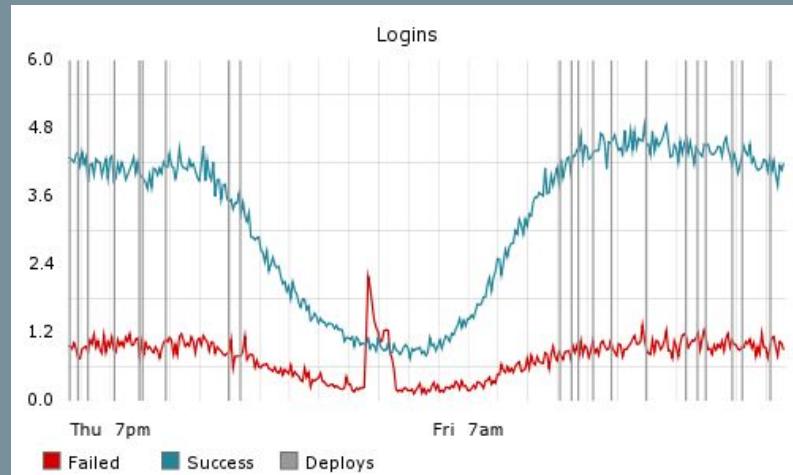
- The DevOps Handbook, 2016

“If Engineering at Etsy has a religion, it’s the Church of Graphs. If it moves, we track it. Sometimes we’ll draw a graph of something that isn’t moving yet, just in case it decides to make a run for it.”

- Ian Malpass, Etcy 2011

“By amplifying signals as part of our daily work, we make it possible to see and solve problems as they occur, and we grow safe systems of work that allow us to confidently make changes and run product experiments, knowing we can quickly detect and remediate failures.”

- The DevOps Handbook, 2016



# Zen...and the Art of Feedback

**"If you can't *measure* it,  
you can't *improve* it."**

**Peter Drucker**

**"Invest *energy* in collecting metrics  
that help you make decisions."**

**Eric Ries**



# Group Exercise: Using Operational Telemetry

1. Separate into 3 teams.
2. Select a team captain.
  - a. Team Captain: Button control, answer giver.
3. Familiarize yourself with the telemetry from your system.
4. Answer questions about your system.
5. High score wins
  - a. +1 for 1st right answer
  - b. 0 for wrong answer
  - c. -1 for buzzing with no answer



# Group Exercise: Background



Screecher!



# Group Exercise: Questions (speed is the key)

1. Did we explode overnight? How many registered users do we have?
  - a. 165 (+ or - 5)
2. User retention is key, especially now in the early stages. Are we seeing consistent positive user growth?
  - a. Good overall trend, but retention is not purely positive...lots of churn
3. Are users engaging with the platform? How many messages have been posted?
  - a. 2053 (+ or - 50)
4. Our service is super efficient. We've budgeted the lowest cost tier of cloud resources for our service. We have a 1500 resource cap. Peak usage at 7pm should be about 10X usage at 6am. Are we good?
  - a. No, get more. At least 3500 based on that projection. (Actual peak ~11.5K)
5. The Strategic Homeland Indecency Taskforce just sent an email. Apparently some users have made posts with offensive language around 5:25am and 5:33 and 5:58. If we don't take immediate action to notify them of policy violation we will be fined \$1M. Who do we need to email?
  - a. Vanny-the-fierce, Sibeal-the-grandiose, Benni-the-rightful, and Janette-the-impossible
6. Are there any improvements we can make to our operational telemetry?
  - a. Bug: We have more active users than registered users. Can't be right!

# Thank You for Attending DevOps for Defense!

We'll meet again on March 1st.

Send me your feedback and ideas in the discussion area of [meetup.com](https://www.meetup.com)...volunteer to present a topic or lead a breakout!

Special thanks to those I “liberally borrowed” material from:

Gene Kim, Nicole Forsgren, Jez Humble, anyone who puts DevOps images on the internet!

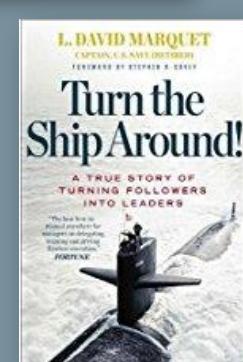
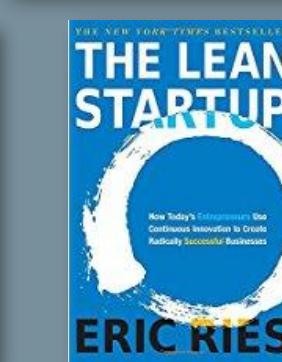
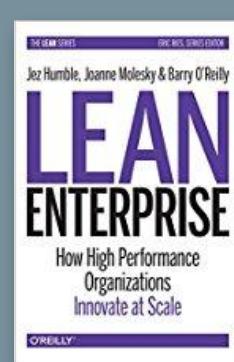
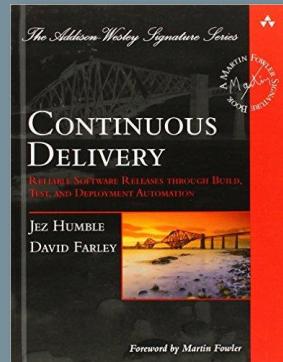
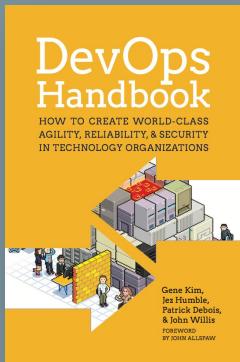
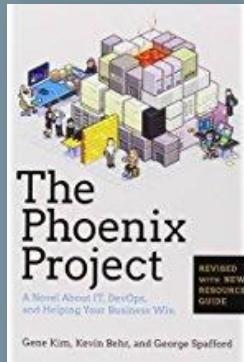
Take some time to talk with the people around you. Meet 1 new person today!

Thank Rocket Republic for hosting us! Tip your bartenders!!!

# DevOps Resources

## Books / Publications:

- The Phoenix Project
- The DevOps Handbook
- Continuous Delivery
- Lean Enterprise
- Lean Startup
- The State of DevOps Report
- Turn This Ship Around!



## Conference Presentations (YouTube):

- DevOps Enterprise Summit (DOES)
- Velocity
- GoTo

