

Familiar Smells I've Detected in Your Systems Engineering Organization... and How to Fix Them

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LISA18

October 29–31, 2018 | Nashville, TN, USA
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About Me

20+ years in systems engineering, have led DevOps and Systems Engineering transformations at multiple companies

Big companies: Cable & Wireless, Salesforce, SolarWinds

Small Companies: Terracotta, Tagged, Librato

International DevOps contributor



Mastering DevOps

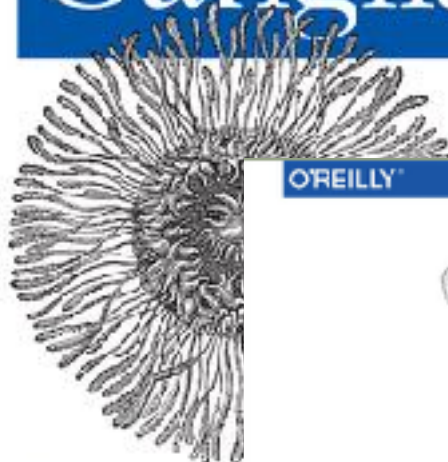
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Monitoring with

Ganglia



O'REILLY®

O'REILLY®



Seeking SRE

CONVERSATIONS ABOUT RUNNING PRODUCTION SYSTEMS AT SCALE

Curated and edited by
David N. Blank-Edelman

DevOps Handbook

HOW TO CREATE WORLD-CLASS
AGILITY, RELIABILITY, & SECURITY
IN TECHNOLOGY ORGANIZATIONS



GENE KIM,
JEZ HUMBLE,
PATRICK DEBOIS,
& JOHN WILLIS

FOREWORD BY BRUCE PERLMAN



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GSE
Records
1009



Sir Joe Quarterman & Free Soul - I've Got So Much Trouble On My Mind - <https://www.youtube.com/watch?v=0sZedHraliY>

Dat darn pager





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Outsourced Ops

The road to hell is paved
with short term projects
that never died

 **Brian Scott**
@brainscott [Follow](#)

Low Performers are 3.9x more likely to use functional outsourcing @nicolefv @jezhumble #DOES18



5:19 PM - 23 Oct 2018



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Don't Fix Problems
Solve Them

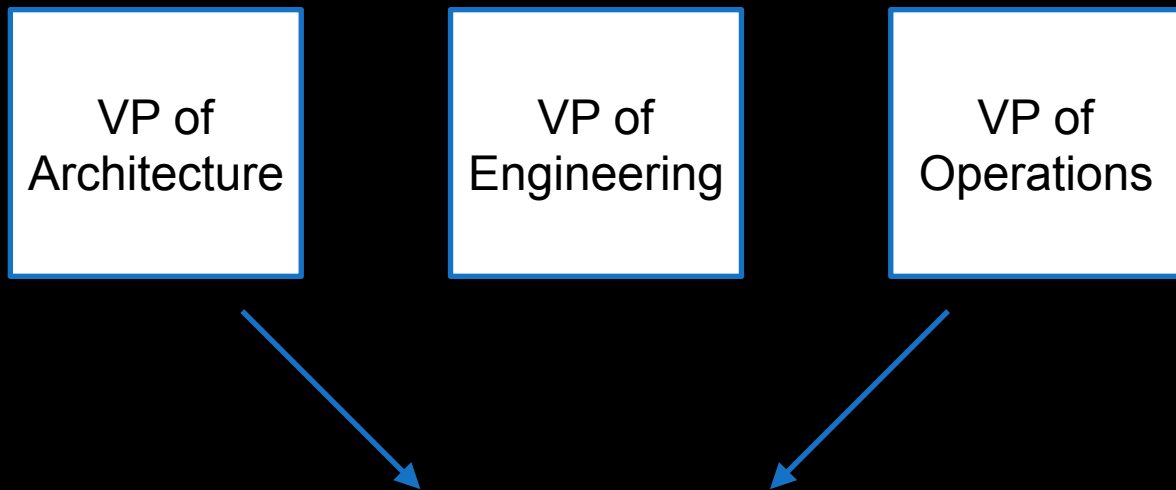
Crawl - Walk - Run

Top N

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  "incidents": [
    {
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      "type": "incident",
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      "html_url": "https://subdomain.pagerduty.com/incidents/PT4KHLK",
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        },
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      },
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        "type": "priority_reference",
        "summary": "P2",
        "self": "https://api.pagerduty.com/priorities/P53ZZH5",
        "html_url": null
      }
    }
  ]
}
```



Conway's Law - Eng/Ops



Follow the Sun

You must be this tall...



SLO

MTTR





I've got, so much trouble in my mind...

Sir Joe Quarterman & Free Soul - I've Got So Much Trouble On My Mind - <https://www.youtube.com/watch?v=0sZedHraiY>

Untested Infrastructure

Run Books (procedural)

DON'T DO IT!

Change Control



Soo Choi

@soochoi01

Follow

.@nicolefv @jezhumble "Change advisory boards are USELESS!" <audience cheers so loud> #does18



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Crawl - Walk - Run

Infra Unit Tests

- Rspec/Test Kitchen
- ServerSpec
- <https://goss.rocks>



Tests in Staging

- Stage is like prod
- Stage is like prod
- Stage is like prod



Automated Deployment

- Dark Launches / Feature Flags
- Canaries
- Blue Green Deploys
- Cfg Management (stateful tiers)



GSE
Records
1009



Sir Joe Quarterman & Free Soul - I've Got So Much Trouble On My Mind - <https://www.youtube.com/watch?v=0sZedHraliY>

Boring Technology



Dave Mangot

@davemangot



"We should generally pick the smallest set of tech that covers our problem domain, and lets us get the job done." - @mcfunley
[boringtechnology.club](#) #Preach

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6 Likes



6



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Avoiding Failure

- bonded network interfaces
- RAID cards
- SAN storage

Taleb Black Swan

“the problem with artificially suppressed volatility is not just that the system tends to become extremely fragile; it is that, at the same time, it exhibits no *visible* risks... These artificially constrained systems become prone to Black Swans. Such environments eventually experience massive blowups... catching everyone off guard and undoing years of stability or, in almost all cases, ending up far worse than they were in their initial volatile state” (p105)¹. - Nassim Taleb

<https://continuousdelivery.com/2013/01/on-antifragility-in-systems-and-organizational-architecture/>

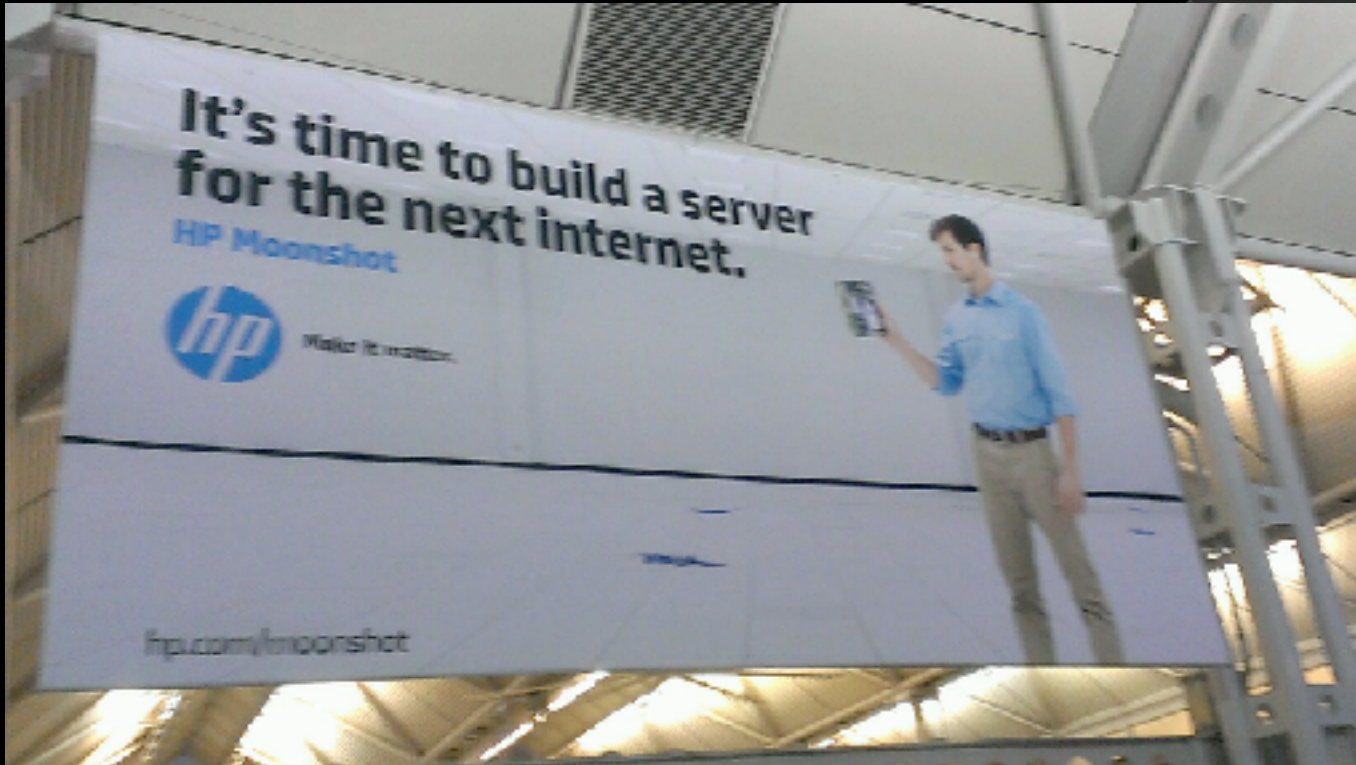
MTTR > MTBF

'So instead of trying to prevent errors, optimize for a relatively frequent occurrence of low-impact errors. “Failure free operations require experience with failure.” For infrequently occurring errors, this means we need to induce them.' - Aaron Blohowiak

<https://www.linkedin.com/pulse/reliability-works-aaron-blohowiak/?published=t>

Crawl - Walk - Run

Configure With Code



Production Readiness Gameday



Chaos Engineering



Crawl - Walk - Run
Stage is like prod (x 3)
Choose Your Incentives!

Questions?

@davemangot