

# Implementing Chaos Engineering in a Risk Averse Culture



Kyle Shelton  
Sr Devops Engineer/Consultant  
Toyota Racing Development  
[chaoskyle.com](http://chaoskyle.com)

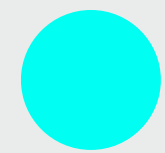
## About me

- girl dad X 3
- avid outdoorsman
- racing and simulation fan
- blogger

## About the Talk

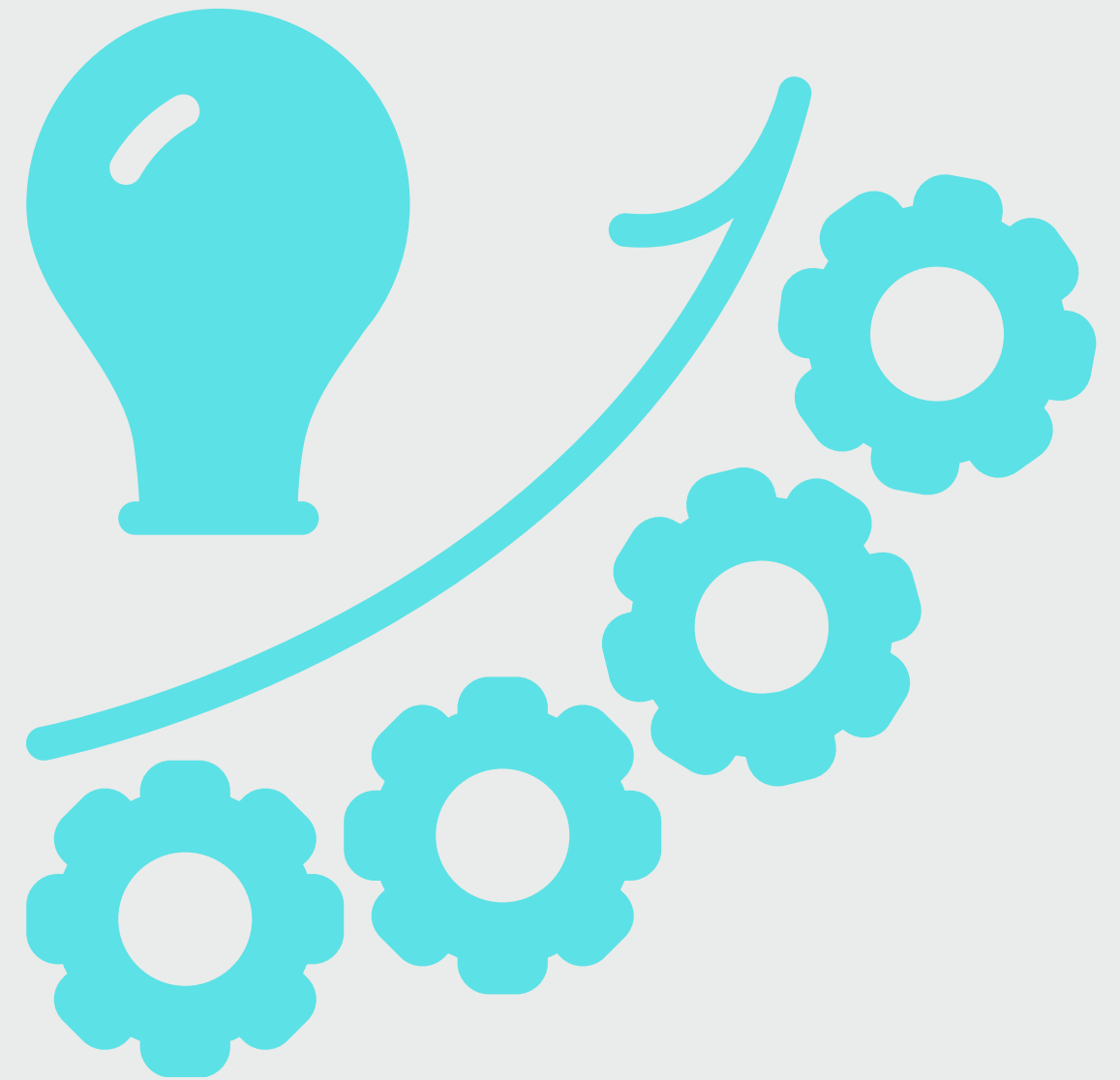
- Evolution of Distributed Systems
- Chaos Engineering
- Conservative Mindset
- Art of Persuasion
- Case Study
- Gaining Buy-in
- Tools and Resources
- Q&A





# Evolution of System Architecture

- Traditional vs Cloud Native
- Challenges with modern systems



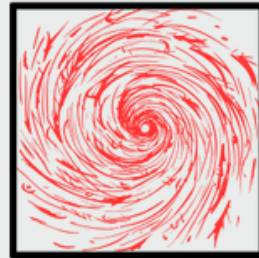
**“Everything fails all the time”**

**Werner Vogels**

# CHAOS ENGINEERING



Define Steady State  
"Normal Behavior"



Introduce  
Chaos in  
controlled  
manner\*\*



Build a hypothesis  
on behavior of  
control group and  
experiment group



Observe both  
groups and  
evaluate  
hypothesis

## ● What is Chaos Engineering?



# ● Principles of Chaos Engineering

- Build Hypothesis Around Steady State
- Vary Real-World Events
- Run Experiments in Prod
- Automate Experiments to Run Continuously
- Minimize BLAST RADIUS

[principlesofchaos.org](https://principlesofchaos.org)

# Conservative Mindset

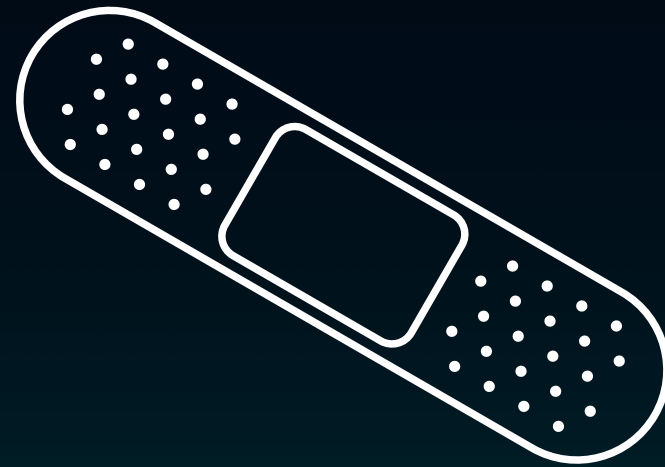
1

Risk Averse bottom line first



2

PTSD from outage frequency



3

Everything is slow





# ● Art of Persuasion

- Long Term Savings vs Short Term Investments
- Reliability = Customer Trust
- Reliability = Happy Engineers
- Reliability = Happy Bosses
- Cost of Fragility

**Cost Benefit  
Analysis & TCO**

**Iterate and  
improve**

**Gather &  
Provide Data on  
everything**

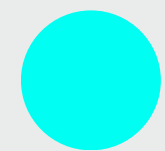
# **Gaining Buy In**

**Speak their  
language**

**Small Pilot  
Programs**

**Demonstrate  
success early**

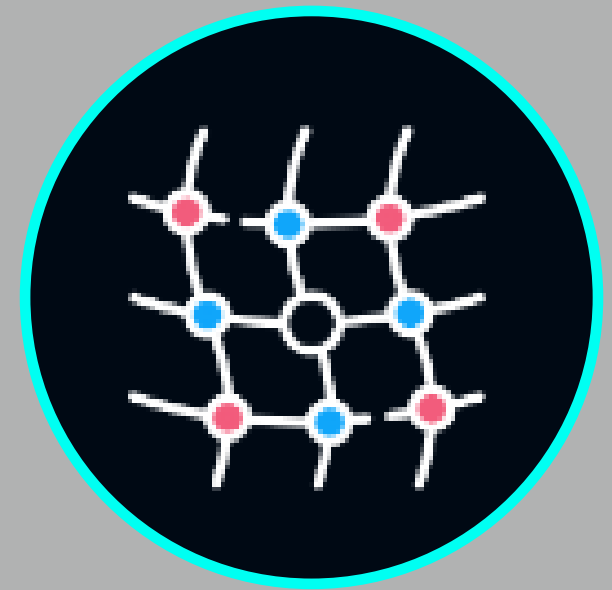




# SplunkCloud Case Study



# Tools & Resources



# Thank You For Watching

Check out my blog

**CHAOSKYLE**  
RELIABILITY  
ENGINEERING

