September 25 - 27, 2018
Amsterdam, The Netherlands

ons

EUROPE

OPEN NETWORKING //
Integrate, Automate, Accelerate

ons
EUROPE
OPEN NETWORKING //
Integrate, Automate, Accelerate

September 25 - 27, 2018
Amsterdam, The Netherlands

We The Few

Critical Team Composition and Responsibilities For Day 2 Operations

Who Am I?

Keith Strini …

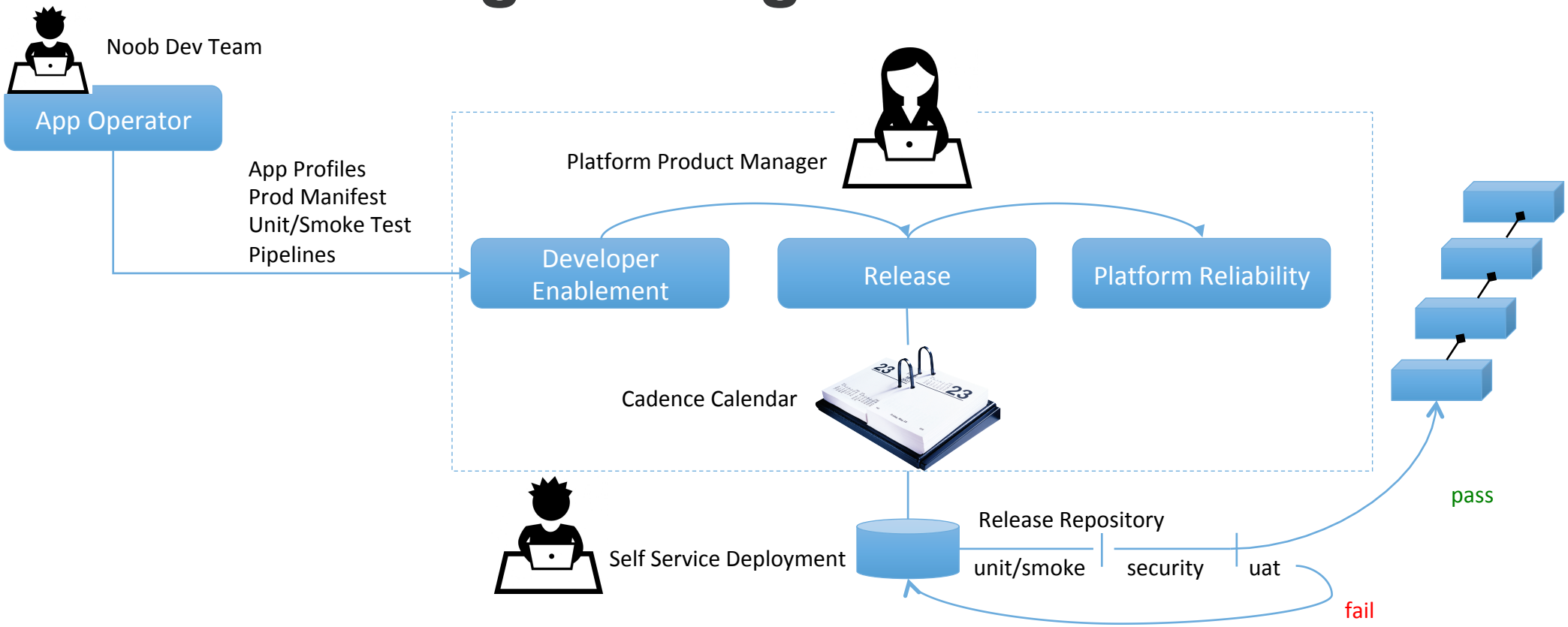
Field Facing Solutions Architect that serves as a technology analyst for the US Department of Defense and Intelligence communities. I architect, develop and field information systems across the Joint Services both CONUS and OCONUS (Korea, Japan, Europe, and the Middle East) and NATO

End Vision

Not End Vision

Options Getting to End Vision

Release Engineering Stratification



Developer Enablement

Coordination Point For All New Development Efforts.

PRACTICES

- Creates/Coordinates Platform on boarding meeting
- Provides Latest Information about Platform Environments
- Provides tooling around Dev Services, CI/CD environment, governs code repositories, etc

Release Engineering

Coordination Point For All New Releases.

PRACTICES

- Attends Final Pre-Release Demo of Apps
- Verifies Release Artifacts
- Coordinates Initial Release Date
- Collaborates on Downstream Environment Triage

Platform Reliability

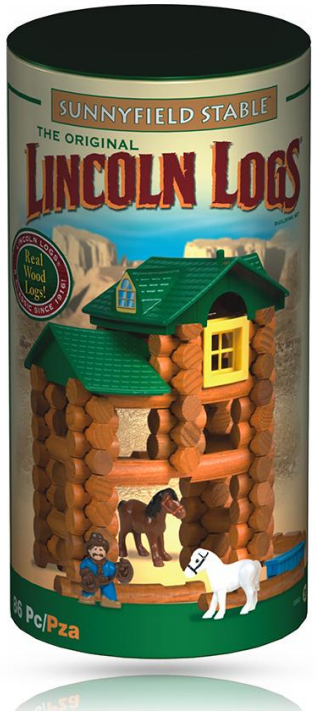
Coordination Point For All Platform Environment Changes.

PRACTICES

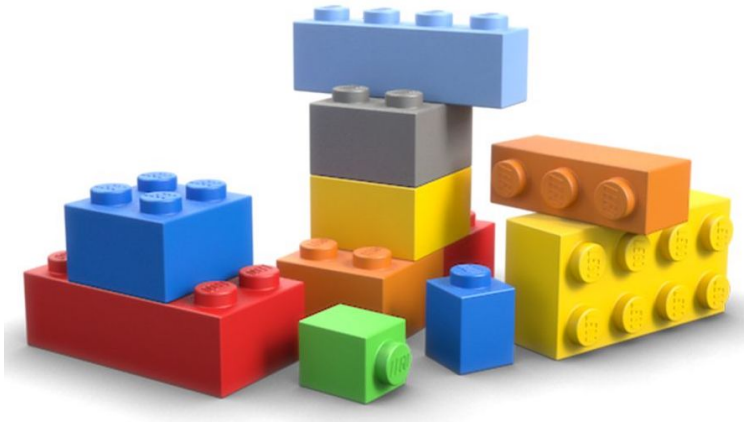
- Creates/Coordinates Cadence Meeting
- Continuously Develops Resiliency Probes based on Post Mortems
- Maintains Environment Parity
- Enforces Strict Runtime Version Control
- Communicates Environment Adversity
- Creates/Coordinate Resiliency Exercise
- Instruments Distributed Tracing in Ops

Troubleshooting Complex System Failure

Simple System Failure (Daddy I want to build a car)



Simple Complexity



=

Failure is Inevitable, Hope is Not a Strategy

Developers

Unit/Smoke

Been There, Done That, Got the swag!

Dev Enablement

Contract

Focuses Developers on Contract Based Testing For Integration

Release

Feature Flagging

Decides on Feature Maturity From a Stability Perspective

Operations

Canary

Care And Feeding Of New Releases To Ensure Early Intervention

Operations

Distributed Tracing

Deep Understanding of How New Efforts Deploy Into Operations

ons
EUROPE
OPEN NETWORKING //
Integrate, Automate, Accelerate

Decoupled Integration – Contract Testing

- If Speed Is What you Want, End-To-End Testing is not how you get there.
  - Getting feedback…this week?
- Are you mocking me?
  - Single Source of Truth…
  - Verifying the Goods
- Isolation testing of Single Services (Provider or Consumer)
- I do not think that means what you think it means (Semantic Testing)

- Complexity From Simplicity, Not Complexity From Complexity
- Test Data…let's not ignore the elephant in the room
- Stability, Stability, Stability… we're talking Operations not Science Experiments
- Ah Sunsets…
  - Paying off Technical debt by subtraction *and* addition
- You get me… you really get me
  - Consumer defined APIs

Maintaining Operational Velocity – Feature Flagging

- I dunno. You tell me what you want.
  - Non Techs getting in on the Action
- Ok so most of it works but I gotta send it back?
  - Beauty of context encapsulation
  - Waiting for a feature like you
- I see how we do 1 app but how do I manage 1000s?
- So what if we don't know exactly what our users want?
- Ah Sunsets…
  - Paying off Technical debt by subtraction *and* addition

Predictive Fire Fighting In Operations – Canary/Distributed Tracing

- Almost trust you
  - Canaries – Profiling the CPU, memory, disk usage, cache synch
    - Rollback/Roll Forward Strategies
  - Blue/Green Deployments
    - The case of stateless
    - The case of stateful (transactions, migrating data)
    - Infrastructure Isolation
  - A/B testing

- It not you, its me
  - Distributed Tracing
    - Yes we are talking scale here
    - But that's a lot of instrumentation
    - Correlation is tough
      - Good definitions of SLO/ SLIs
      - Threshold tuning

Operations as the Caretaker of Code?

- Your baby is ugly, Our baby is cute
  - Platform as Product helps align our interests
  - Automation helps us be responsive as a team to our end users
  - Lot's of up front pain is better than chronic pain indefinitely
  - Success as defined by rhythm

Get Off My Lawn!

- Change Inherently Creates Failure
  - Alignment of Values
- One Team One Fight
  - Joint SLOs
    - Platform SLIs
    - Application SLIs
    - Instrumentation

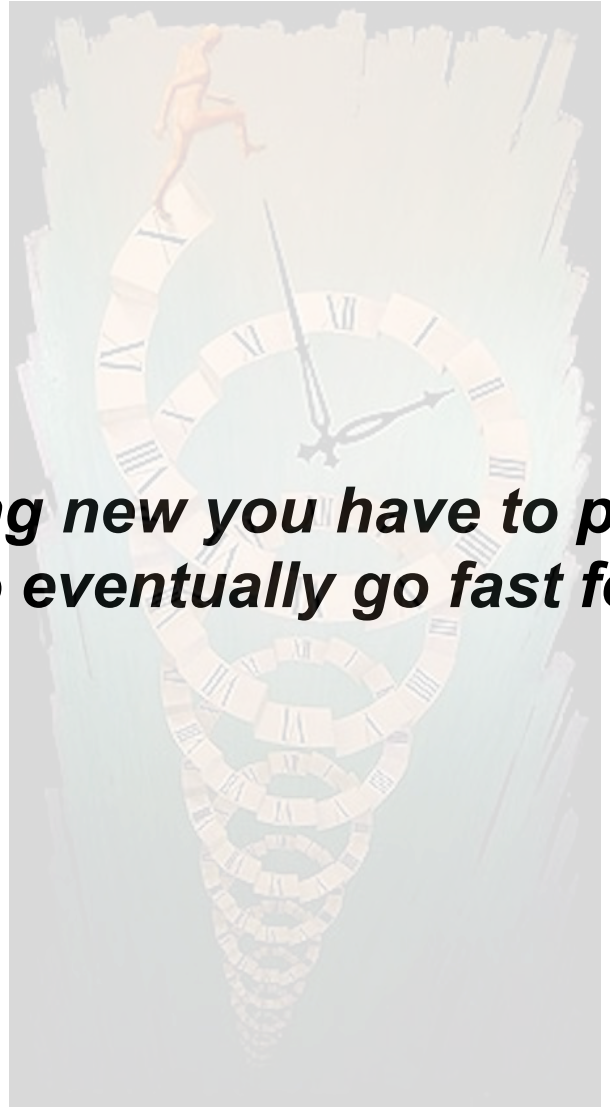
- Growing up is hard to do
  - Graduating Product Teams to Self-Service Deployments

Growing Up Is Hard to Do

- Resiliency Exercises as the litmus test
- Communicating the attitude that Stability is a team sport

- Starting the Cycle Over
  - Capturing Lessons Learned from every class
  - Knowledge Transparency aides the greater team

In Conclusion



"When learning something new you have to practice going slow, if you want to eventually go fast forever"

ons
EUROPE
OPEN NETWORKING //
Integrate, Automate, Accelerate

Questions?