METRIC-DRIVEN DEVELOPMENT WITH ANSIBLE, INFLUXDB, AND GRAFANA

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PREAMBLE

ABOUT ME

- Over 25 years of corporate IT and startup experience across numerous industries
- “Jack of all trades"
- Old-timer in the Ansible community -- contributing since version v0.5
- The synchronize module in Ansible is all my fault
- Managed a testing and automation team at a large bank in America.

ABOUT THIS PRESENTATION

- One of my last projects at the bank was researching and prototyping a means of metric collection and visualization to drive quality of trading systems
- Got me thinking about how automation and metrics compliment each other in a DevOps management tool chain
- Refining and evolving my thinking on this topic
- Develop something tangible and more concrete to work with thru a POC
- Gather feedback to build on

METRIC-DRIVEN DEVELOPMENT (MDD)

WHAT ARE METRICS?

Metrics are quantifiable measure of any component or process whose change is of interest to your business

WHAT IS METRIC-DRIVEN DEVELOPMENT?

Metrics Driven Development (MDD) is a practice where metrics are used to drive application development

- Inspired by the thinking behind Test Driven Development (TDD), Continuous Deployment and Agile Methodologies
- Popularized by Etsy
  - https://codeascraft.com/2011/02/15/measure-anything-measure-everything/

WHY METRIC-DRIVEN DEVELOPMENT?

QUALITY

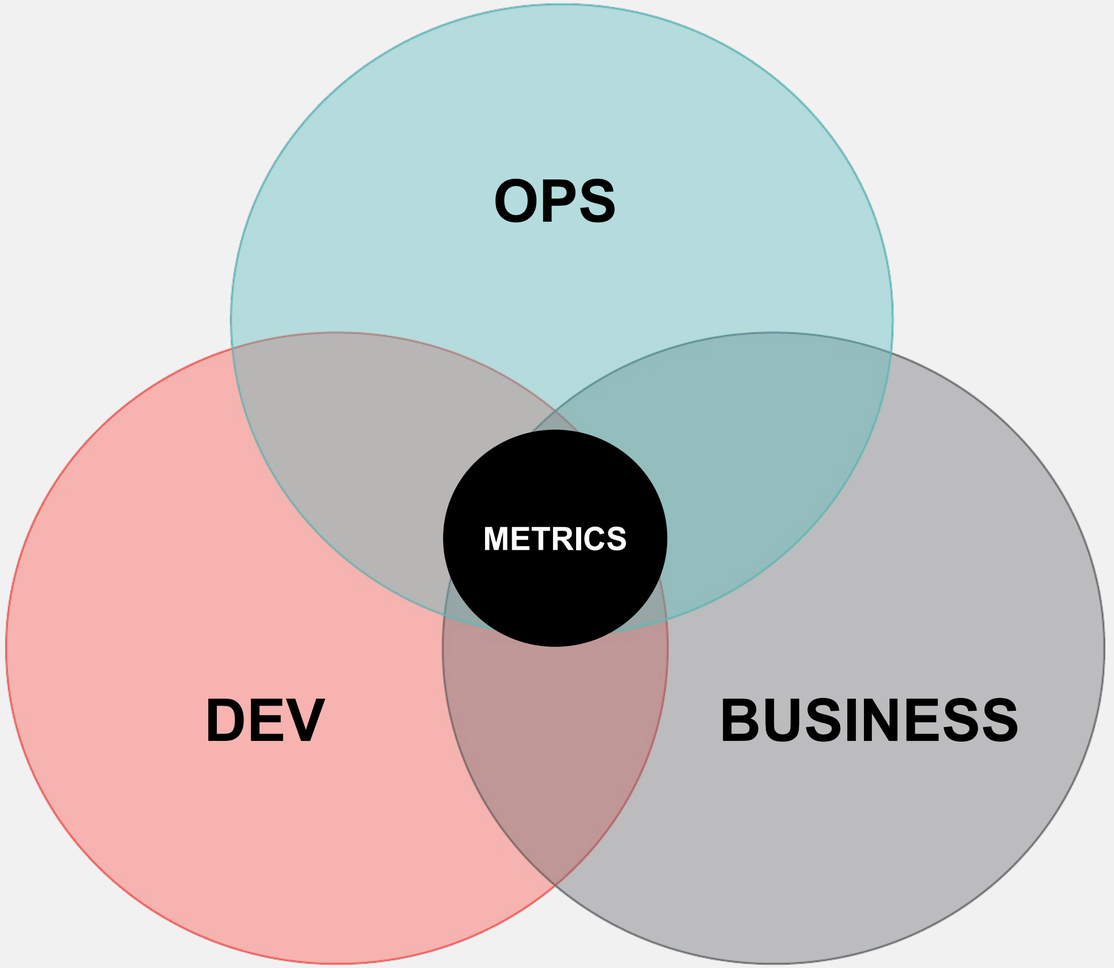
THE BENEFITS

MDD enables the aggressive rollout of changes through the constant collection, monitoring and analysis of relevant metrics.

- Shared view of goals and communication of progress (or not) in real-time
- Early warning system to problems ranging from breaks and reduced quality
- Meaningful data points to measure business impact and derive insights

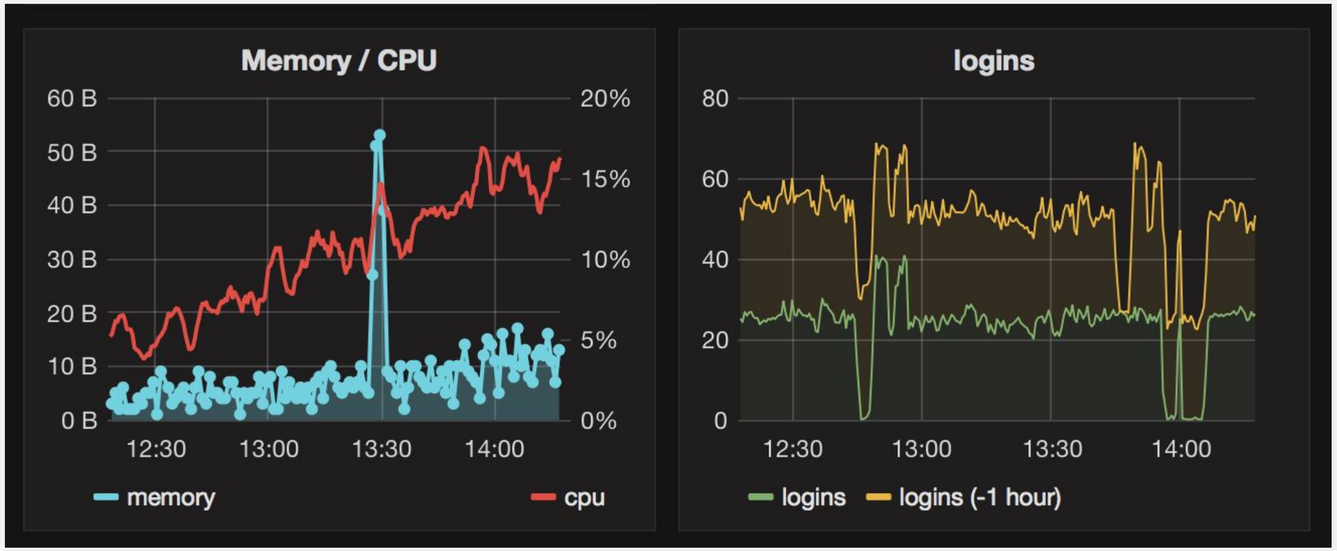
"If you don't know where you are going,
any road will get you there."

METRICS ARE MORE THAN MONITORING

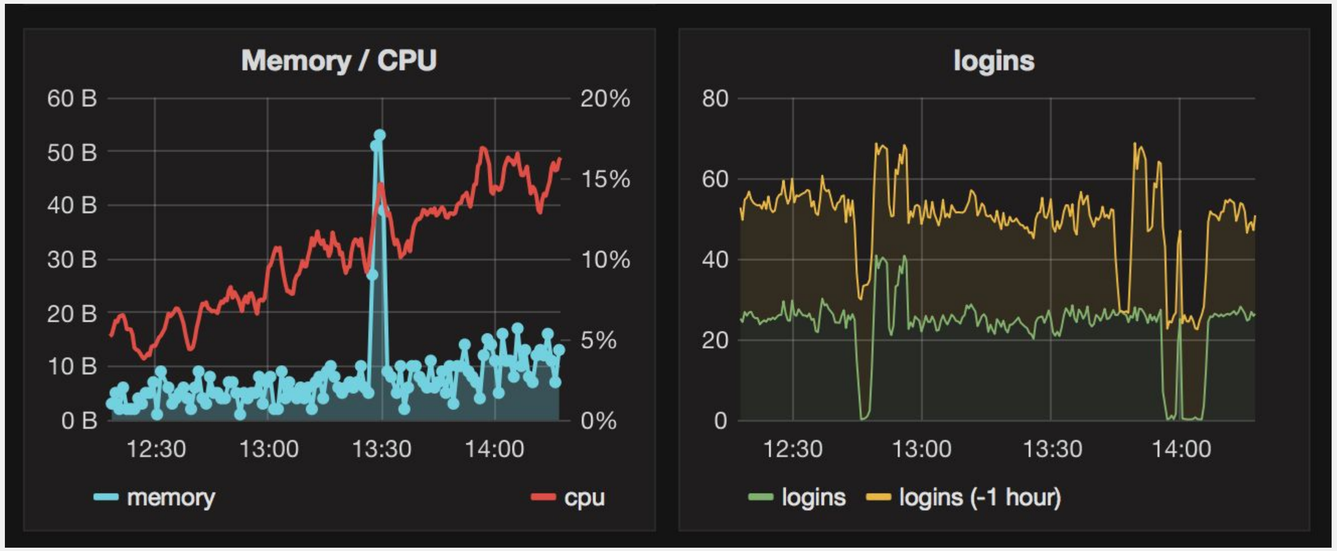


WHERE DOES AUTOMATION AND DEVOPS FIT IN HERE?

WHAT HAPPENED HERE?



THAT EXPLAINS IT



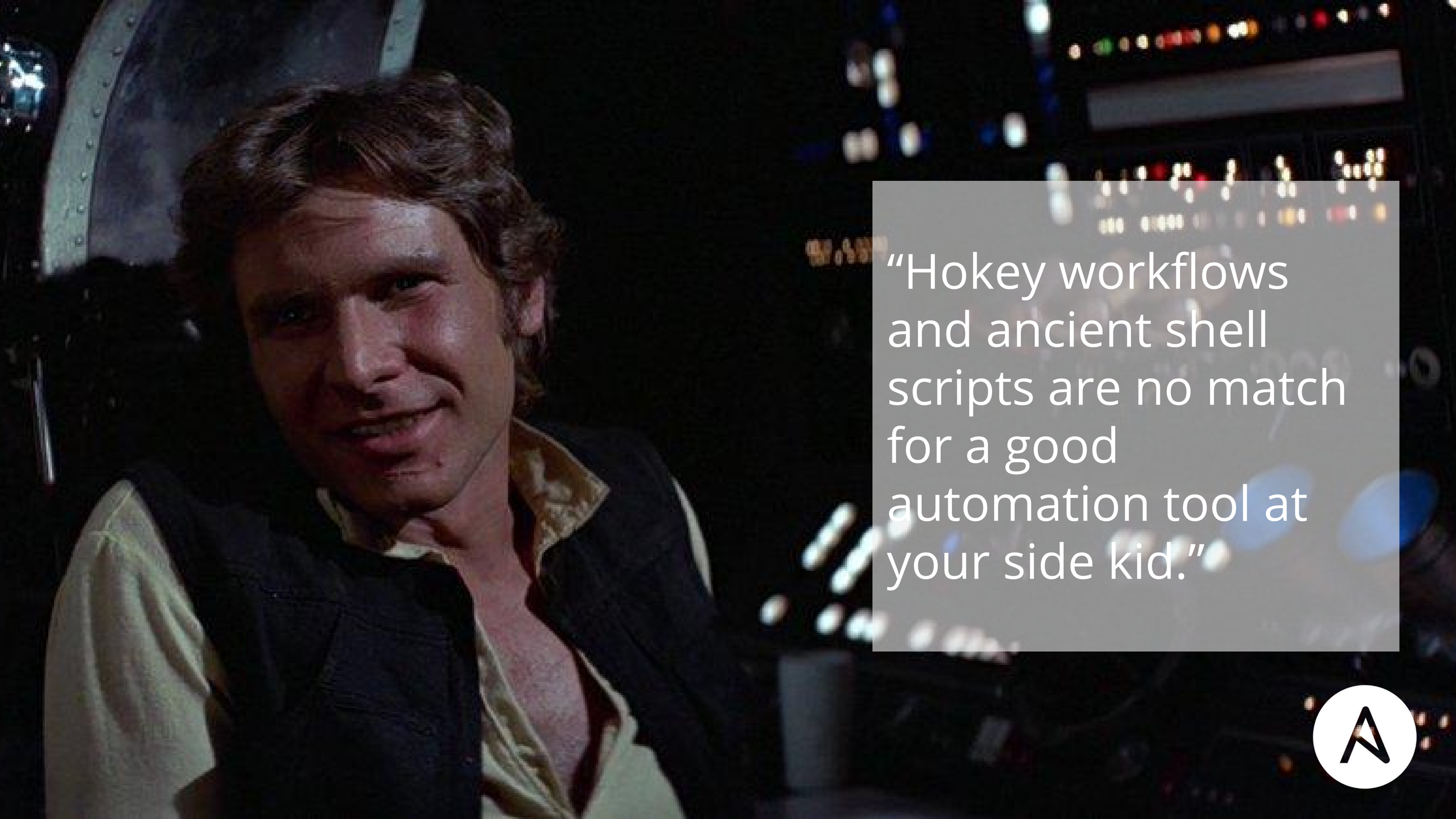
Playbook Ran

App Deploy

App Deploy

AUTOMATION AND DEVOPS IN MDD

- Recording of events that may have bearing on metrics
  - Start and end of a playbook run
  - A service being started/stopped/restarted
  - Application deploy or package upgrade
- Profiling the plays and tasks being executed
- Running a playbook when a certain metrics threshold is breached

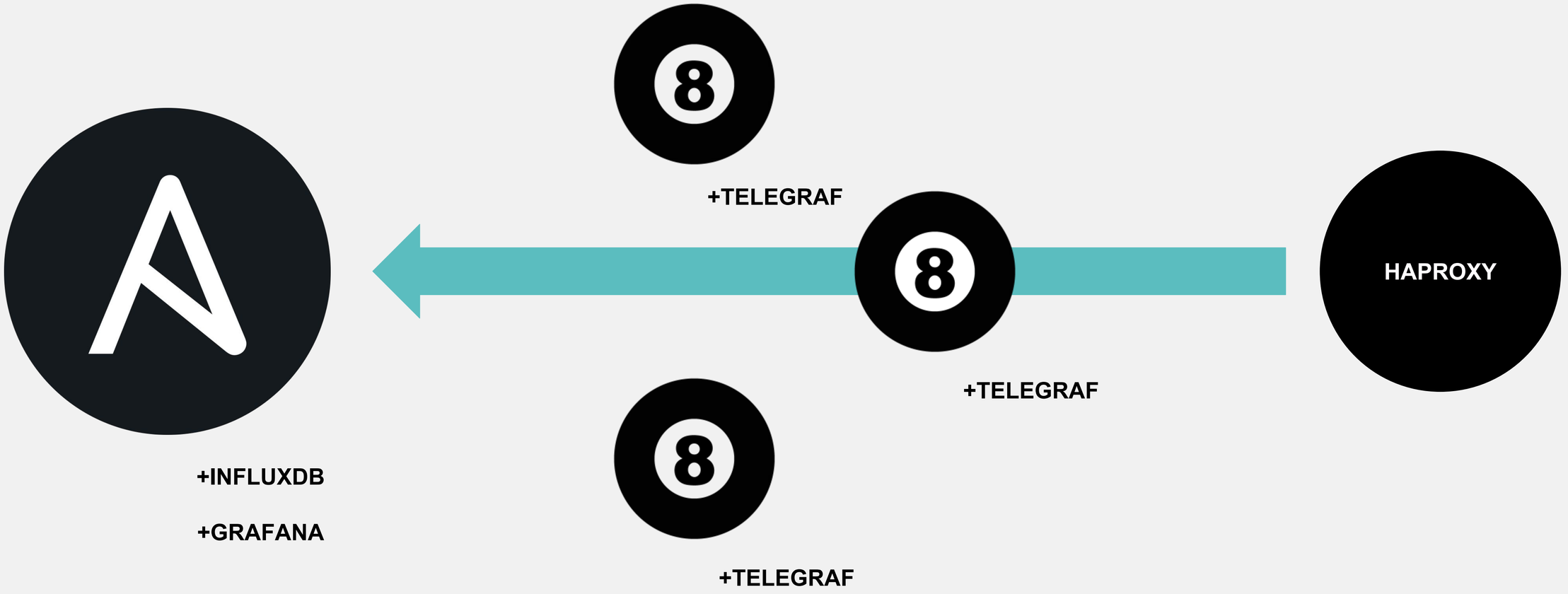

“Hokey workflows and ancient shell scripts are no match for a good automation tool at your side kid.”

(DeHaan Shot First)

DEMO TIME

“Signs point to yes”

ANSIBLE METRICS LAB STACK



DEMO SOURCE

- https://github.com/tima/ansible-mdd
- https://github.com/tima/8ball-service

RECAP

- MDD enables the aggressive rollout of changes through the constant collection, monitoring and analysis of relevant and metrics.
- MDD is about quality and communicates shared goals to developers, ops and business to that end.
- Ansible should be integrated to support and enhance the practice of metric-driven development (MDD) -- not just rapidly provision and configure systems.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