

EVERYTHING I KNOW ABOUT KUBERNETES I LEARNED FROM A CLUSTER OF RASPBERRY PIS

Presented by: **Jeff Geerling**
(geerlingguy)



Jeff Geerling

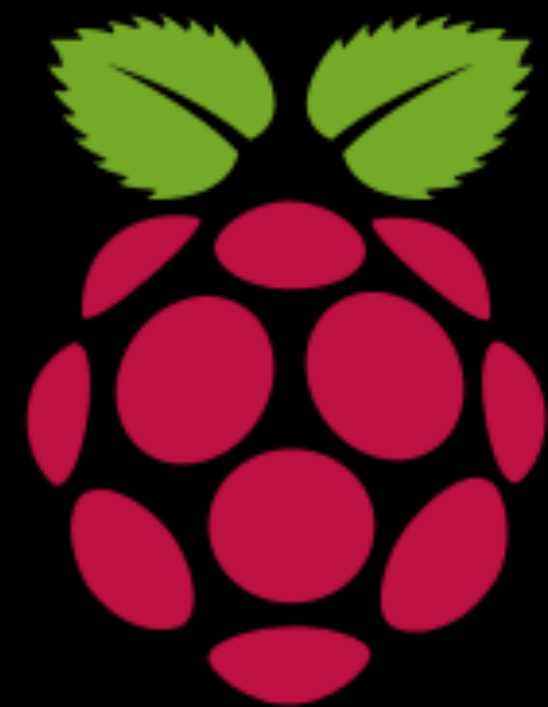
Senior Technical Architect, Acquia

Enjoys snapping photos, does not enjoy snapping turtles.



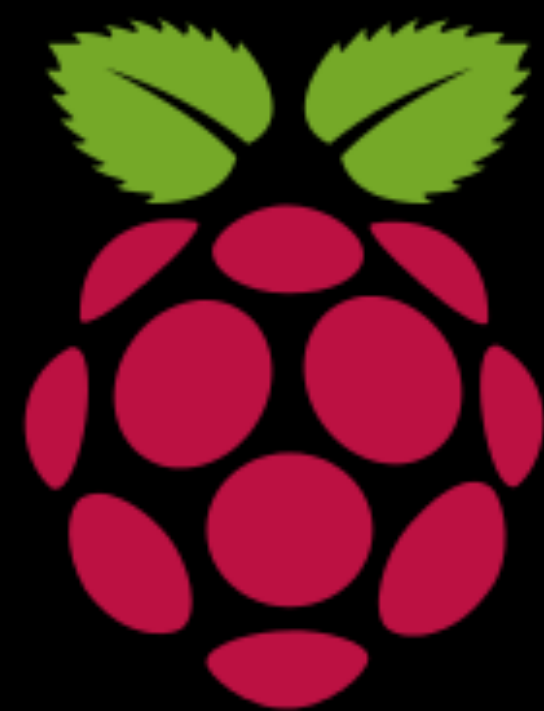
The Big Question

What can I do with my
Raspberry Pi?



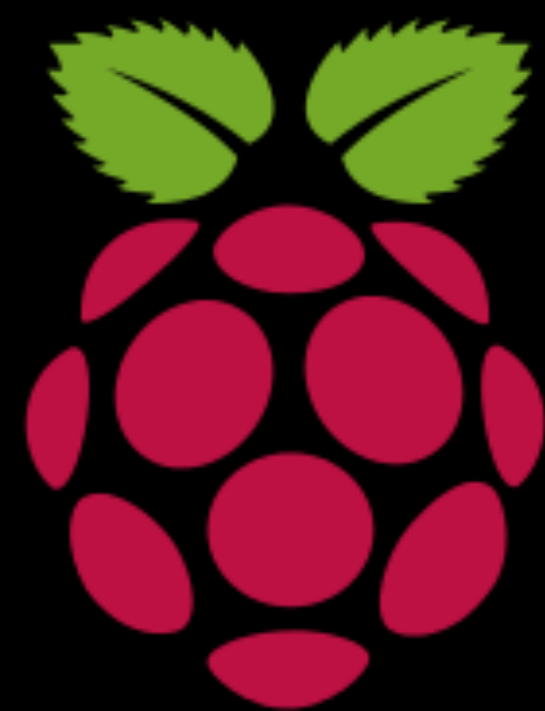
The Big Question

How well does *Kubernetes* run on a cluster of credit-card sized computers?



The Big Question

How well does *Drupal 8* run on Kubernetes on a cluster of credit-card sized computers?

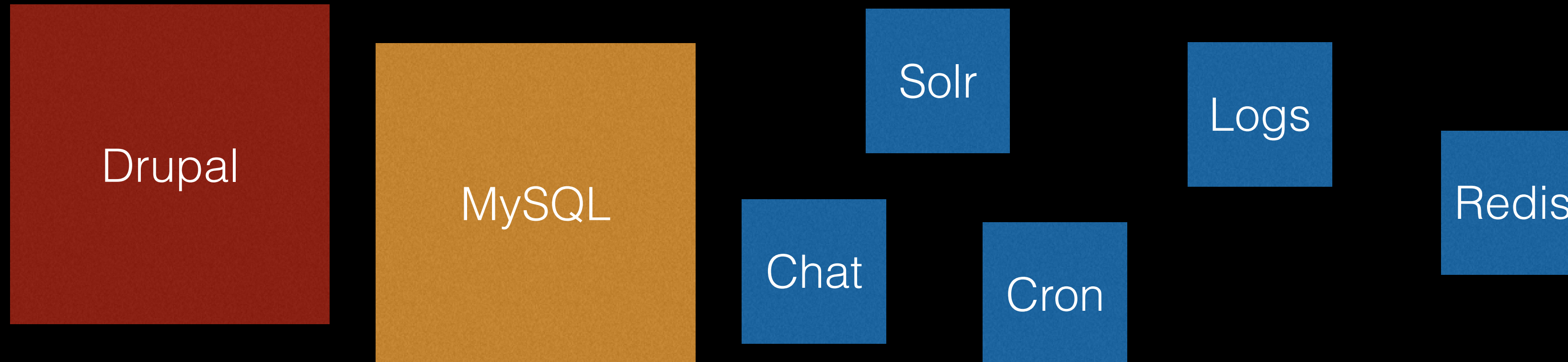


But BEFORE all that

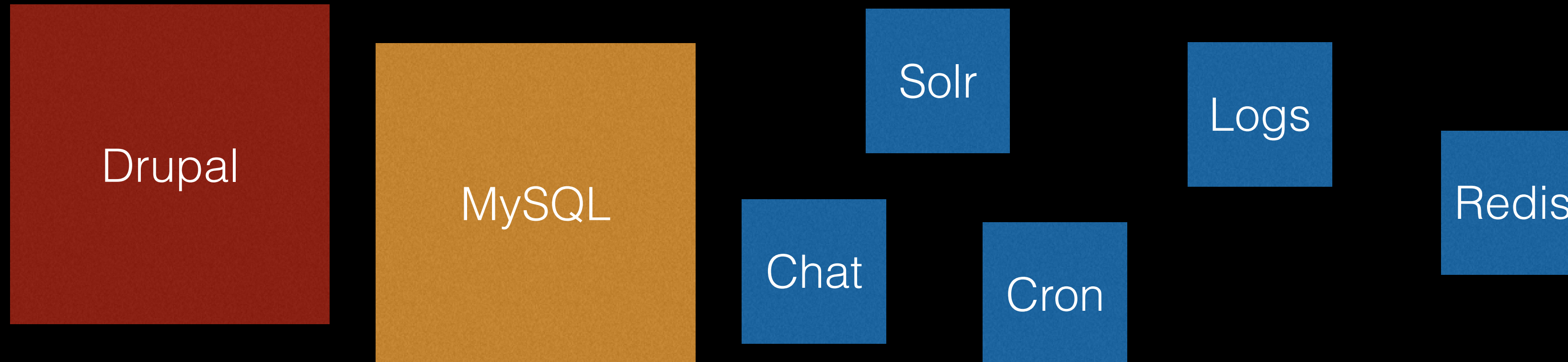
What the heck is *Kubernetes*?



You have applications and services you need to run.



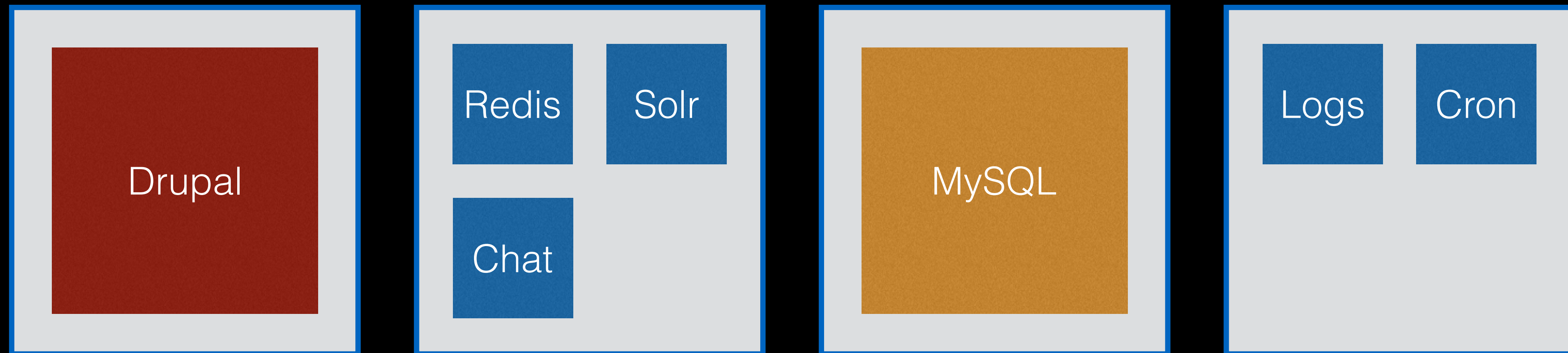
You have applications and services you need to run.



You have a bunch of servers to run them on.



Kubernetes puts things on servers



...and makes sure they keep running.



OMGWTFBBO!





Dex
@dexhorthy

Following

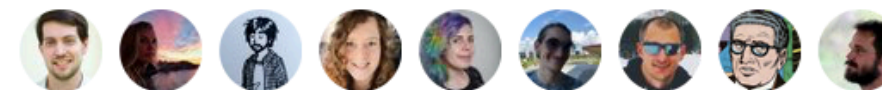


Deployed my blog on Kubernetes



5:40 PM - 24 Apr 2017

2,248 Retweets 4,288 Likes



20

2.2K

4.3K



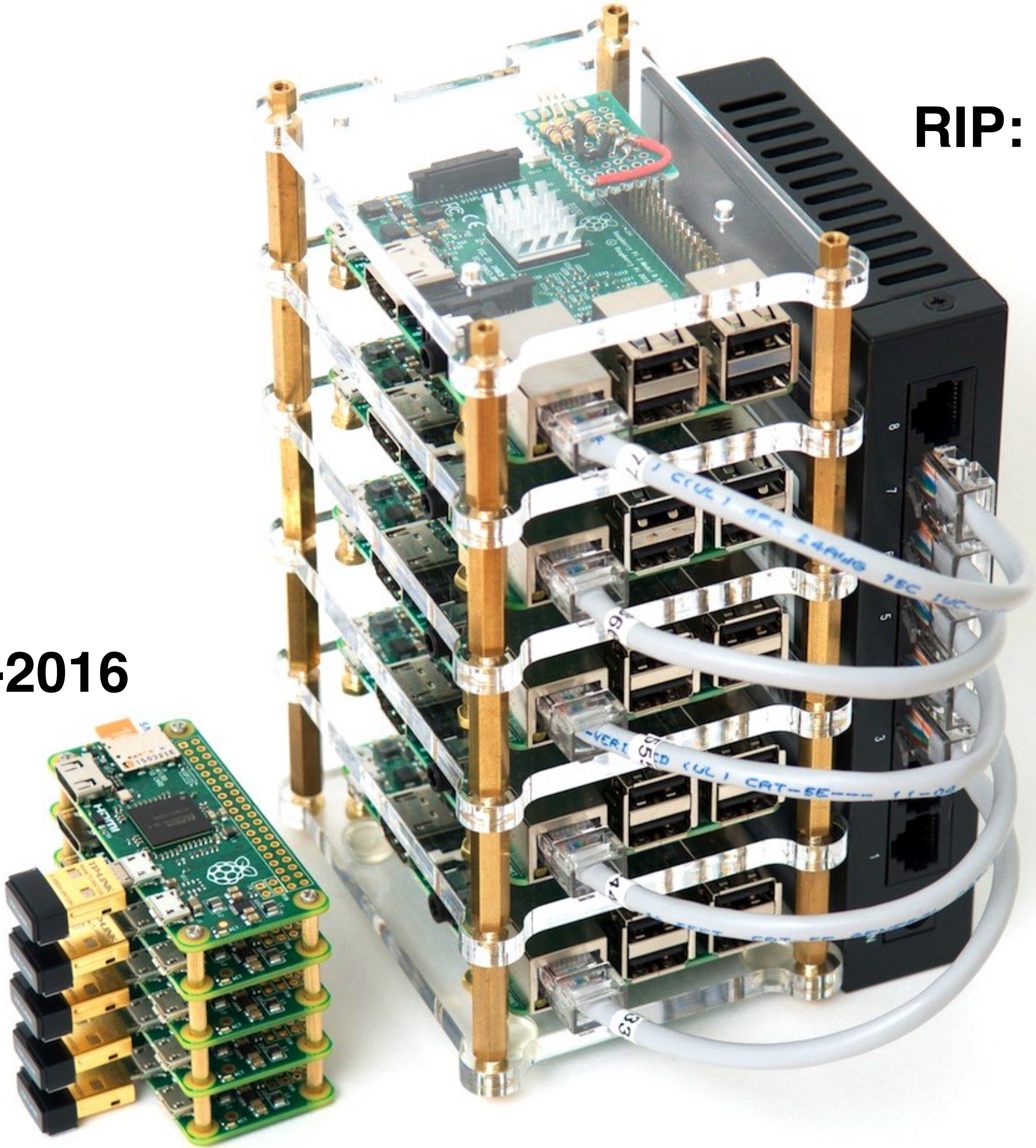




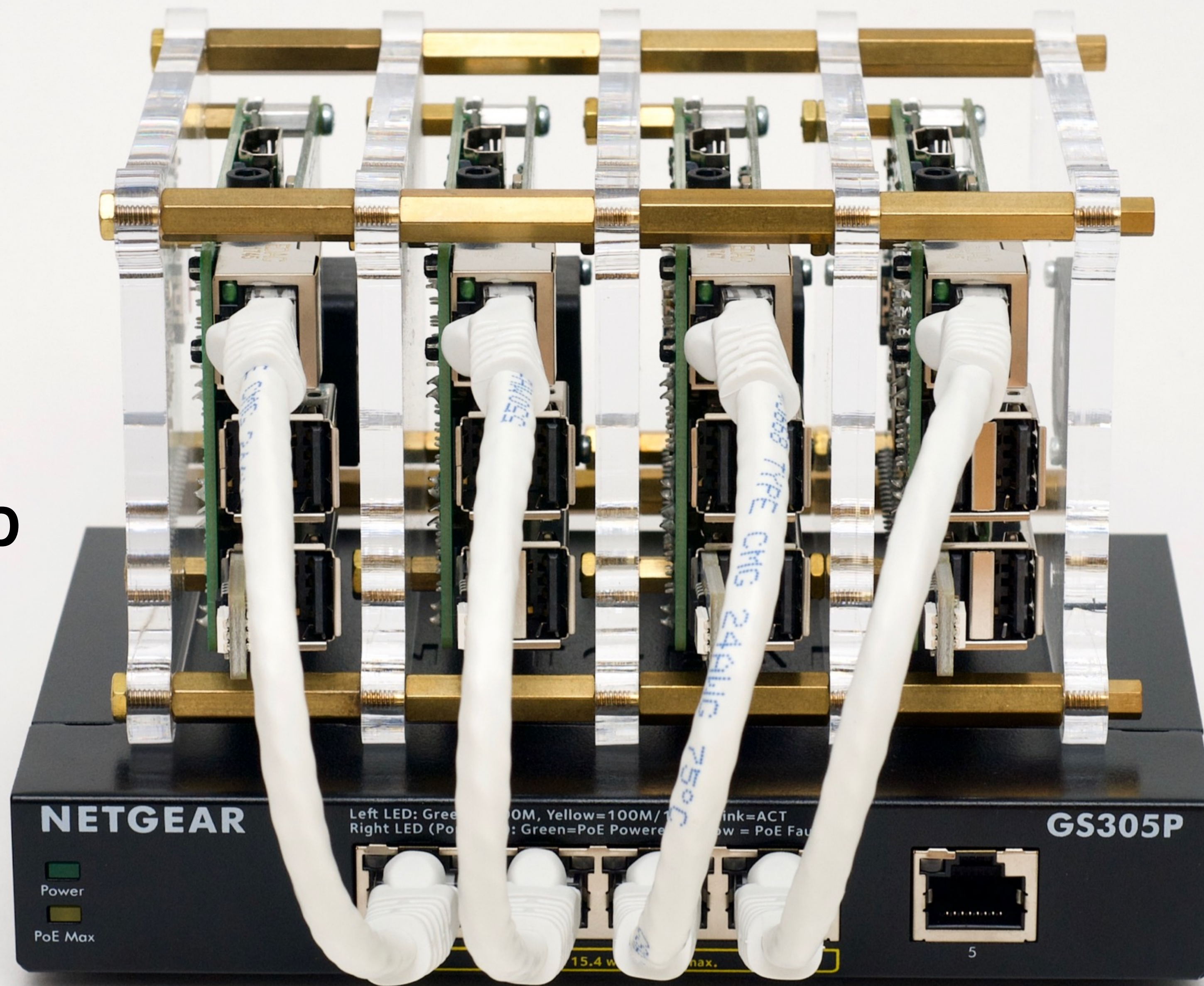
It doesn't have to make sense

RIP: 2014-2017

RIP: 2015-2016

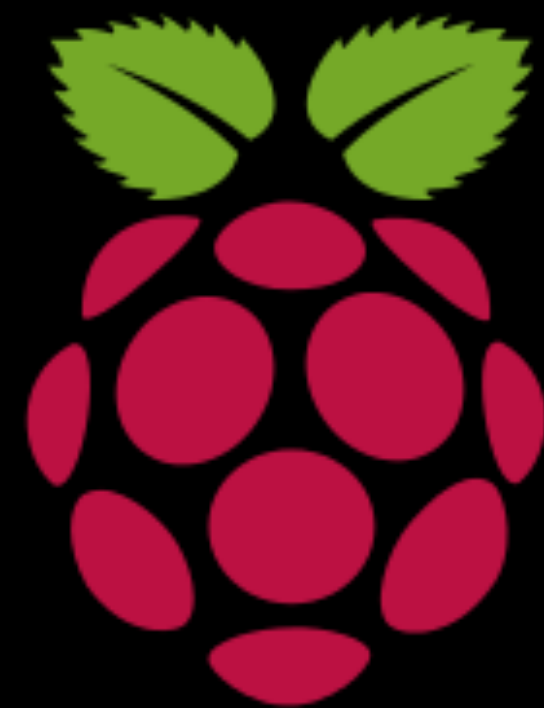


2019-TBD



Problem

How do you put Kubernetes and
Drupal on a cluster of Raspberry Pis?

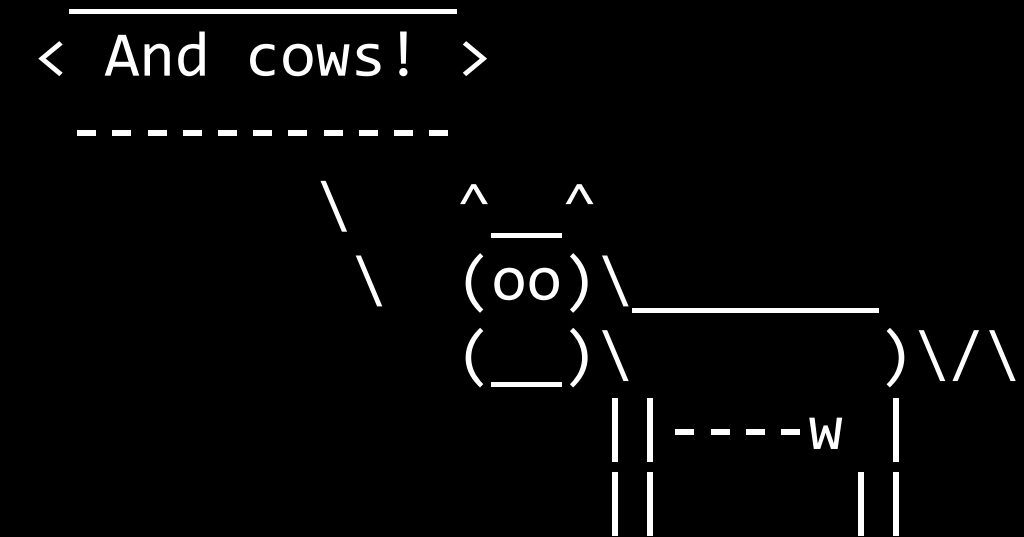


ANSIBLE

“Configuration management for humans.”

ANSIBLE

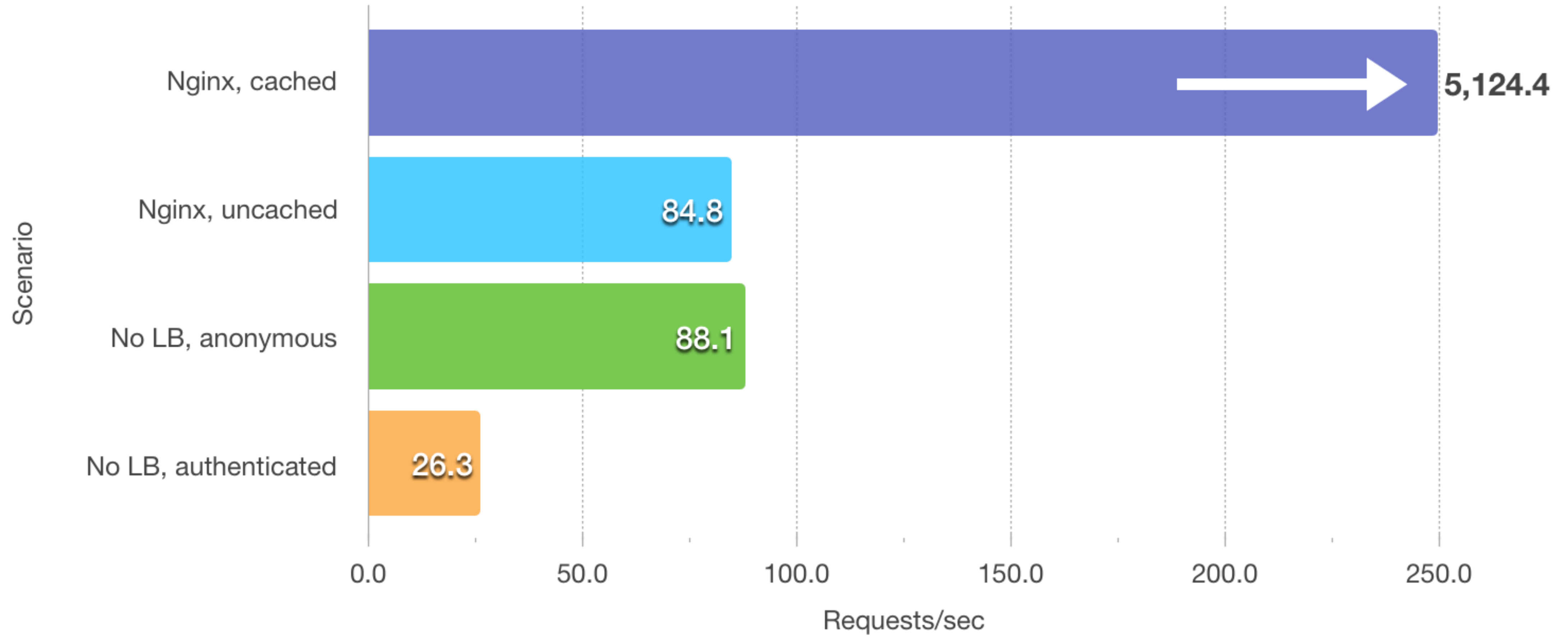
“Configuration management for humans.”



Demo

So how is it?





Drupal Performance - Raspberry Pi 3 model B+ (2019)



For comparison:

- My (single) MacBook Pro: 20-50% *slower**

Home-as-a-Datacenter

- Where will you keep the Pi?
-  Power,  Network,  Physical security
- Who will maintain the Pi?
- What happens if you get 
Slashdotted/Hacker News'ed/Reddit Hugged?

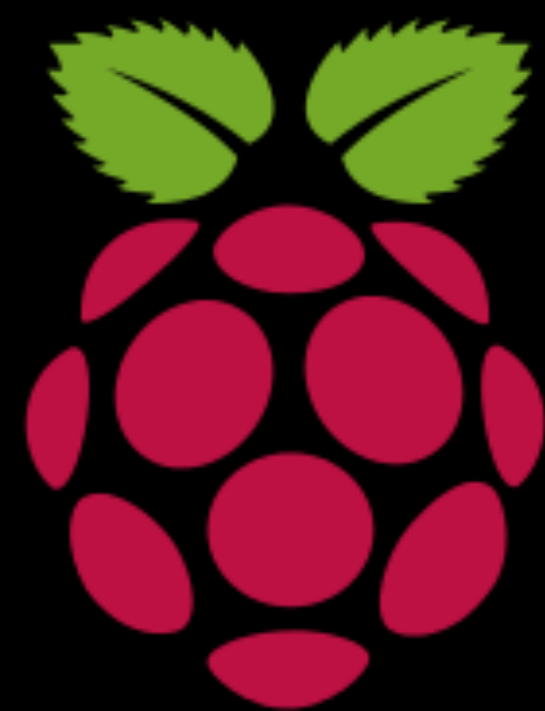


Kubernetes

- Requires more rigor: deployment, automation
- RBAC missteps can lead to major security holes 🤔
- Stateful is *still* not easy (storage, DBs)
- Need a dictionary 📖
- Done well, can do amazing things
 - Done poorly, "failure at web scale"

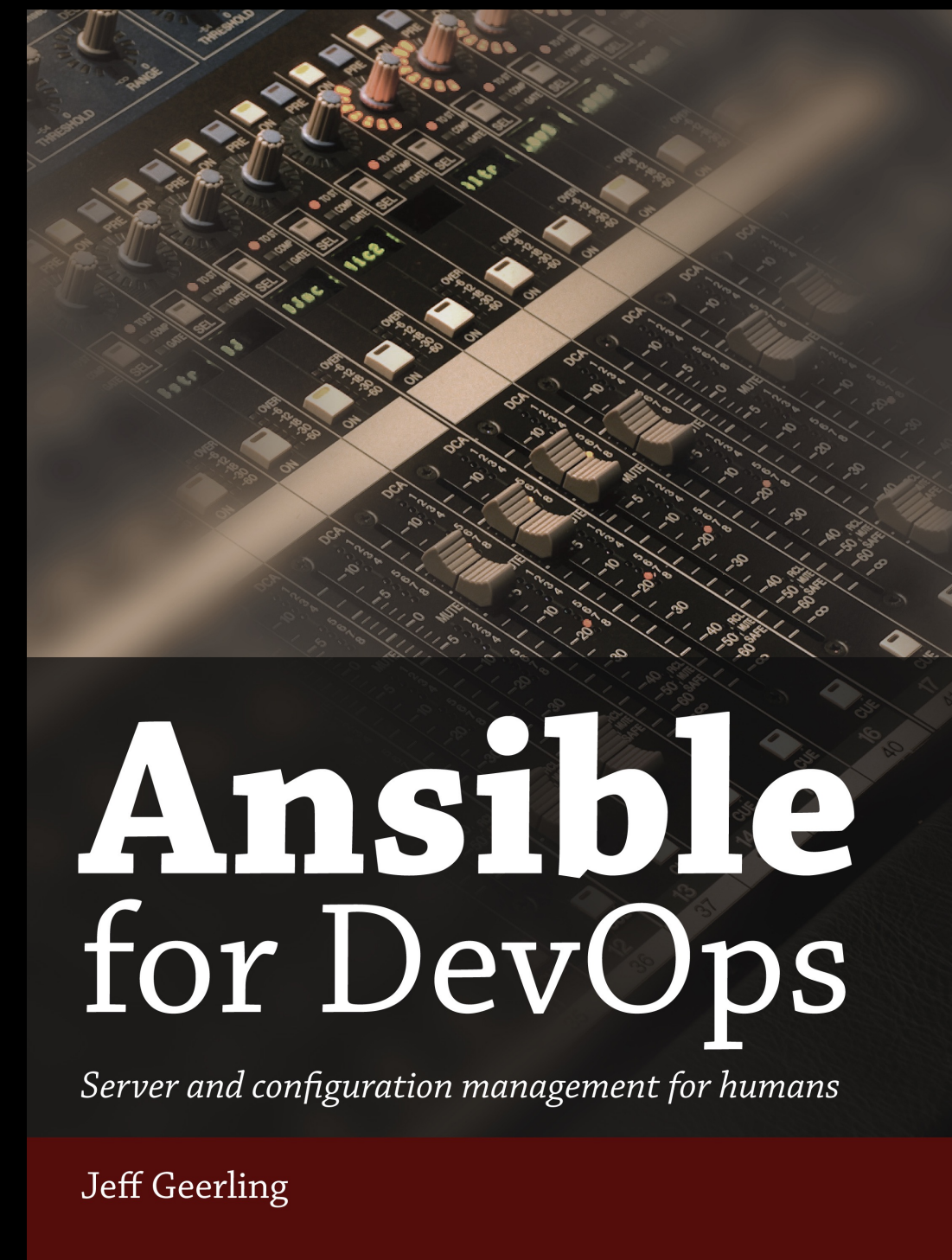
The Big Question

How well does *Drupal 8* run on Kubernetes on a cluster of credit-card sized computers?



Resources

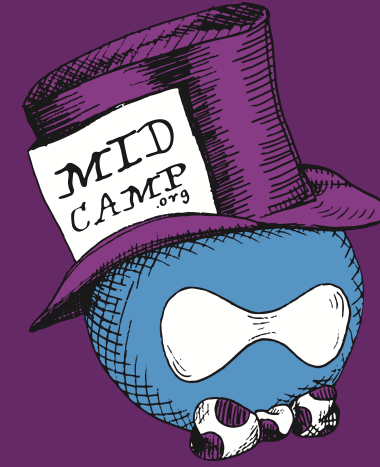
- [Raspberry Pi Drabble](#)
- [Drupal Pi \(Single Pi\)](#)
- [Ansible for DevOps](#)
- [Jeff Geerling's Blog](#)



PLEASE PROVIDE YOUR FEEDBACK!

<http://mid.camp/207>

The top rated sessions will be captioned, courtesy of Clarity
Partners



CONTRIBUTION DAY

Saturday 10am to 4pm

You don't have to know code to give back!

New Contributor training 10am to Noon
with **AmyJune Hinline** of Kanopi Studios