



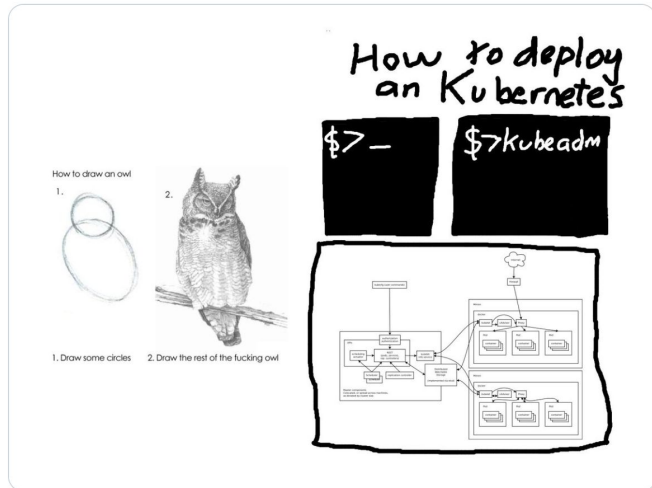
Laying the Foundation

Real World Kubernetes Deployment Patterns

**Josh Rosso
Craig Tracey
May 2019**

CZnative @ home
@pczarkowski

Did you know that Deploying an Kubernetes is as simple as drawing an Owl ?



7:05 PM · Jul 18, 2017 · [Twitter Web Client](#)

Gallagher
@DanielGallagher

I confess that every time I have tried to deploy a Kubernetes cluster, something has failed miserably. At this point, I am almost too discouraged to try again. Does anyone have a good straightforward reference for deployment?

1:21 PM · May 6, 2019 · [Twitter Web App](#)

CZnative @ home
@pczarkowski

"Kubernetes the hard way" falsely implies that there's an easy way.

10:57 PM · Mar 1, 2019 · [Twitter for Android](#)

Hélio Bessoni Rodrigues
@hlalvesbr

Replying to [@MikeKellyCIO](#)

Openshift (Kubernetes actually) is so hard to install and get it running right. It would be so nice to have it running on docker swarm, which is MUCH easier to setup.

4:44 PM · May 8, 2019 · [Twitter Web Client](#)

Landing Zone

Where will you deploy?

Managed Kubernetes

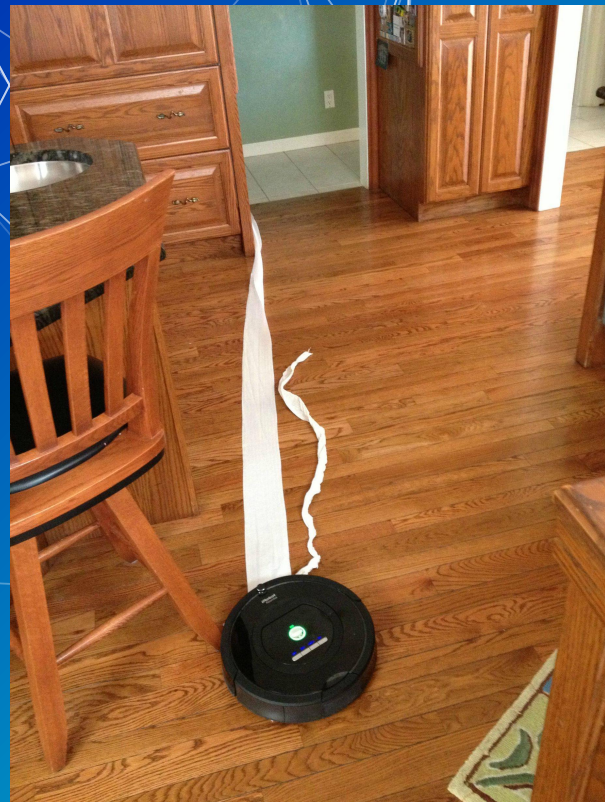
Distribution

Roll Your Own



Landing Zone: Missteps

- **All-in with managed Kubernetes**
 - Very ideal; not a panacea
 - Costs associated with someone else managing your control plane
- **One-size fits all installers**
 - Infrastructure is almost always snowflakey
 - Are you comfortable with supporting this?



Principles

It's more than just the bits

Yesterday, today, and tomorrow

Back to the basics

Enable your stakeholders

Principals: Missteps

- **Solving problems you don't yet have**
 - New solutions (technologies) appearing daily
 - More solutions...more problems
- **Perfect is the enemy of done**
 - Wasting cycles "guessing" about requirements
 - Time could be used gaining operational experience
 - In other words, narrow your scope!



Bedrock

There are some things you won't change

Container Networking

Persistent Storage

Connectivity



Bedrock: Missteps

- Trading “battle-tested” for “cutting-edge”
 - Slow down a little!
- Open source is not free....it requires diligence.
 - Community health
 - Release cycles
 - GitHub stars (most important)



Security

Over obscurity

Multi-team? Multi-tenant?

Consistent AuthZ/AuthN

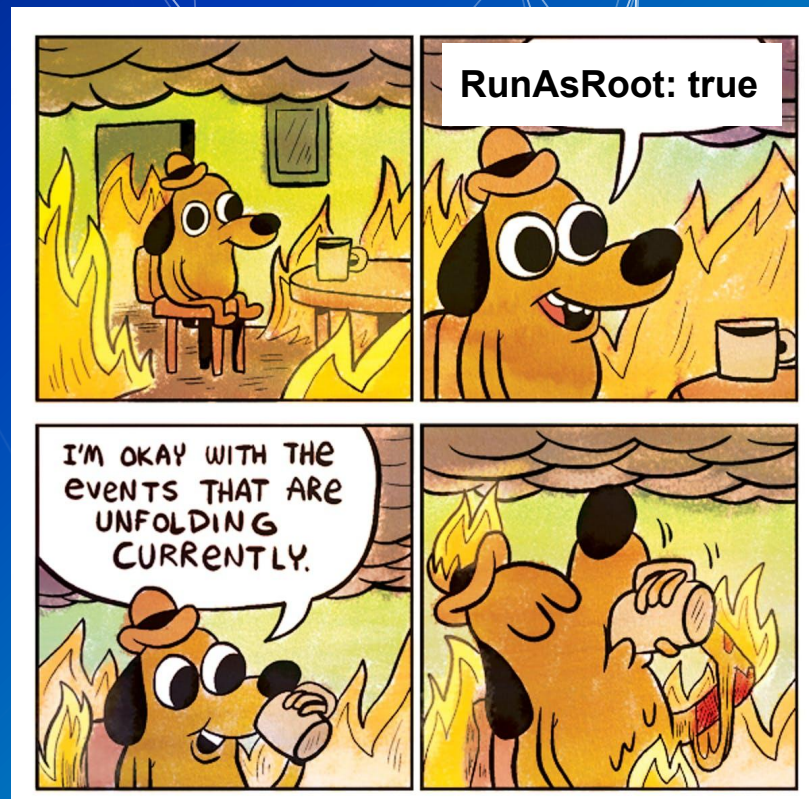
Policies, policies, policies

Backup and restore



Security: Missteps

- **One cluster to rule them all**
 - Hard isolation is, well, hard
- **Not getting security involved early**
 - This journey is for **everyone**
- **Adding security "later"**
 - Not easy to bolt-on



Scale Out

...but You are likely not
Google, Amazon, or Microsoft

Multi-cluster mindset

That 'F' word: Federation

Resources



Scale Out: Missteps

- **Scaling out MEGA clusters**
 - Hard to manage over time
 - Putting all your eggs in one basket
 - Consider smaller clusters you can stamp out with ease



Embrace

And Extend

Highly extensible

Plan on extending

Operators

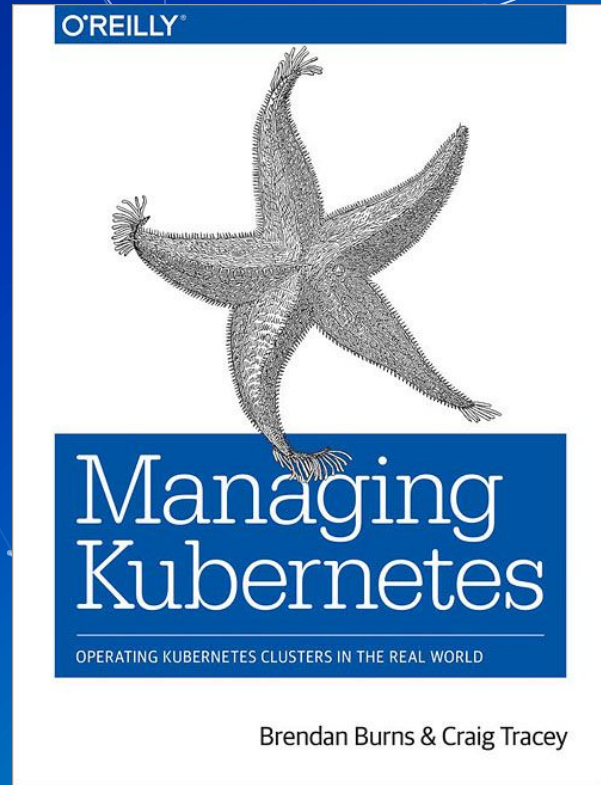


Embrace: Missteps

- **Extending k8s non-natively**
 - Ignoring core Kubernetes concepts
 - Building out fragile flows



VMWare Booth
Wednesday May 22
10:30 & 3:30





Questions?

TODO: Josh's Slides

- my (joshrosso) slide ideas follow this one**