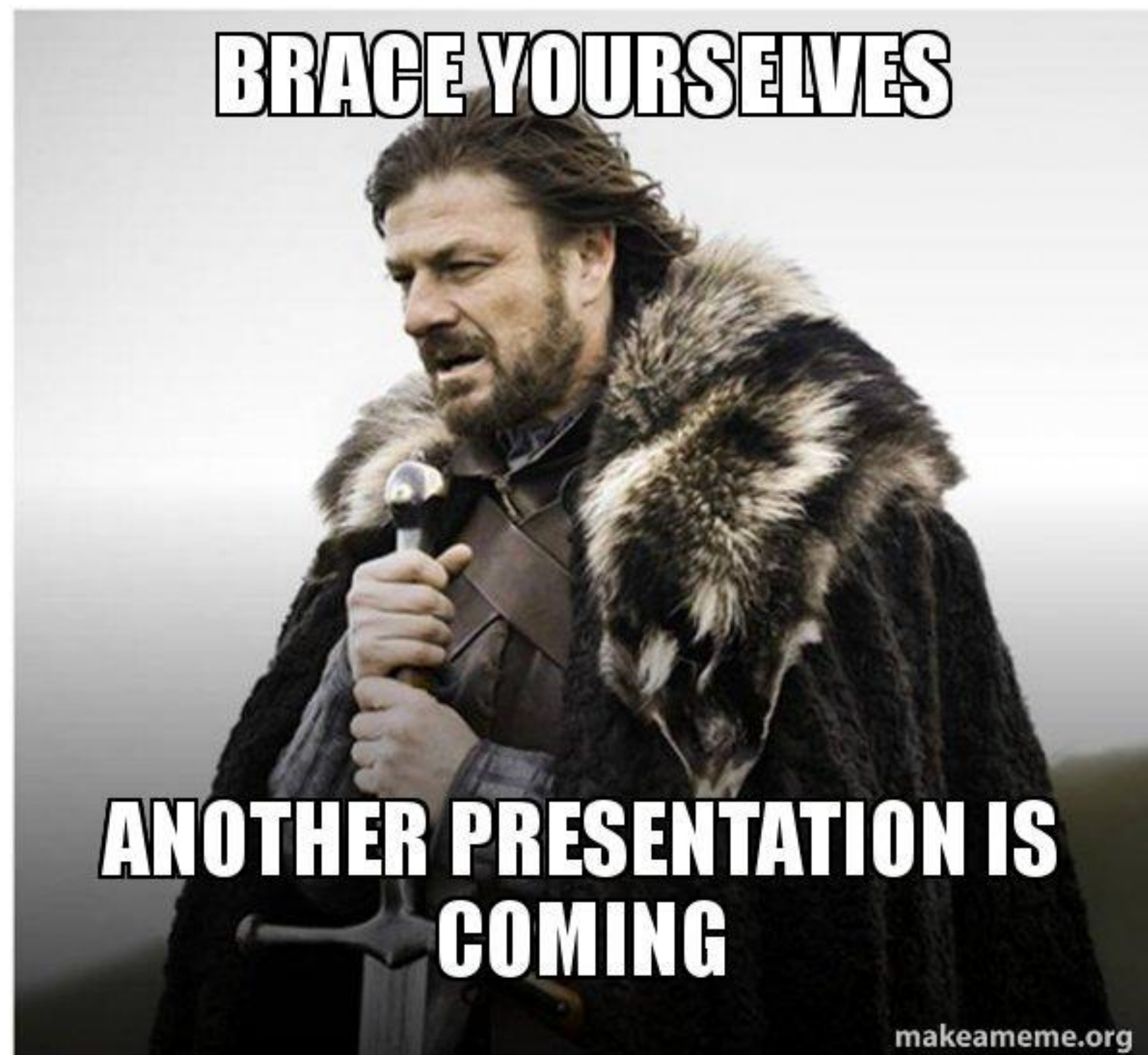


CONTAINER OVERVIEW

Michael Palassis

34.51°

AGENDA



01/
Container Overview

02/
Demo

03/
Q & A

Challenges

If there was a problem, yo, I'll solve it

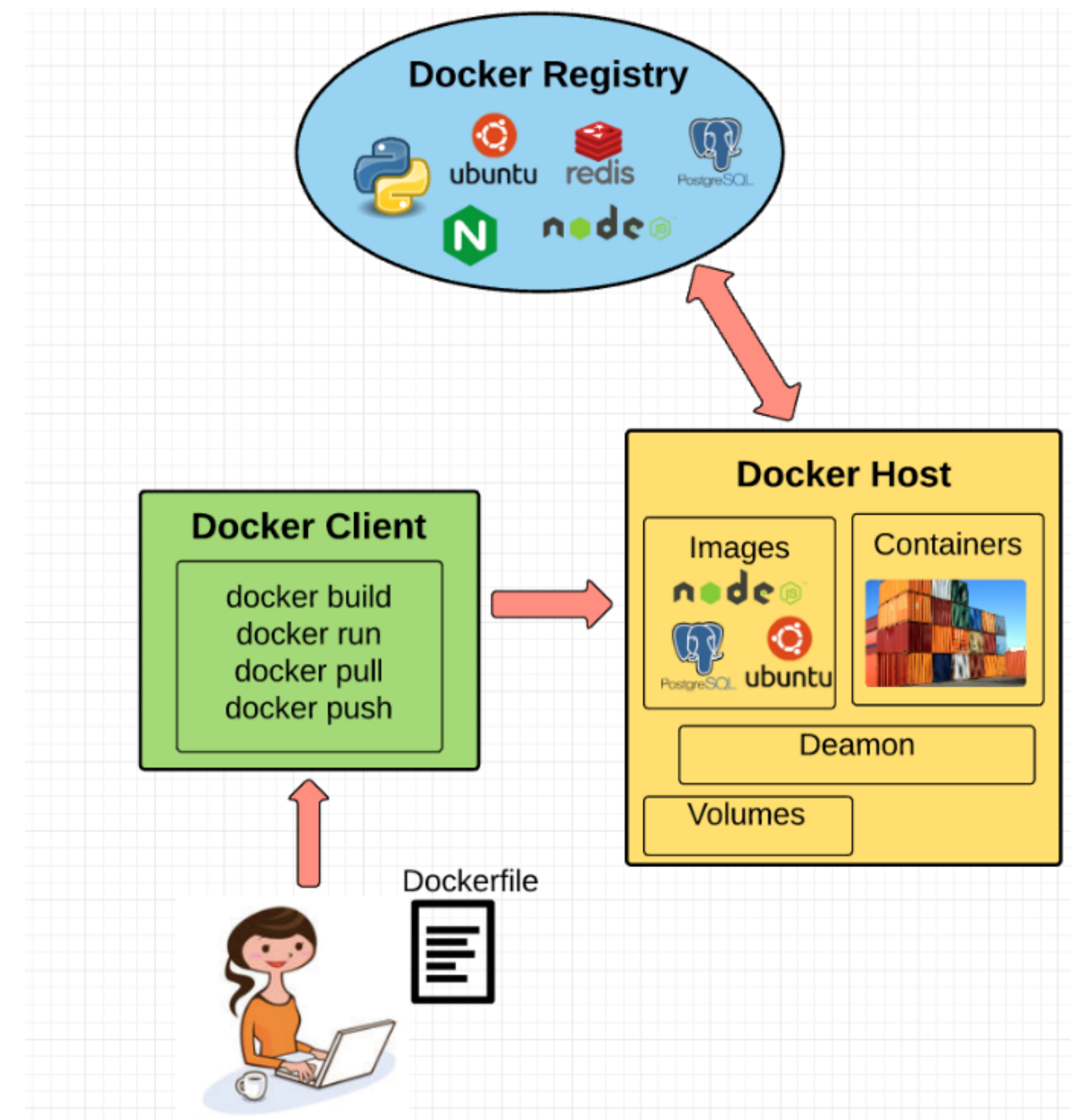
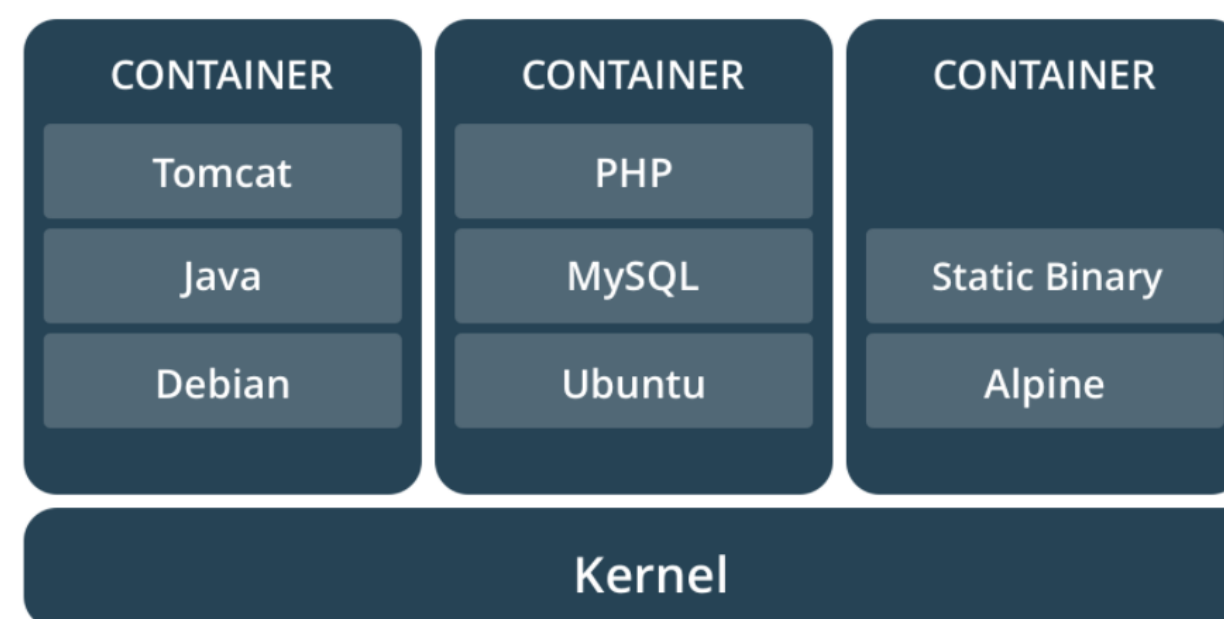
- Environment differences
 - “Code behaves differently in production than it does on my laptop”
- Scaling up/down quickly
 - “I need a lot of compute power for my job, but only for a short time”
- Lightweight
 - “I don’t need a full-blown server with the overhead for my app”
- Consistent deployment
 - “I build my code one way on my machine, then have to alter the build to run in prod”



Container Overview

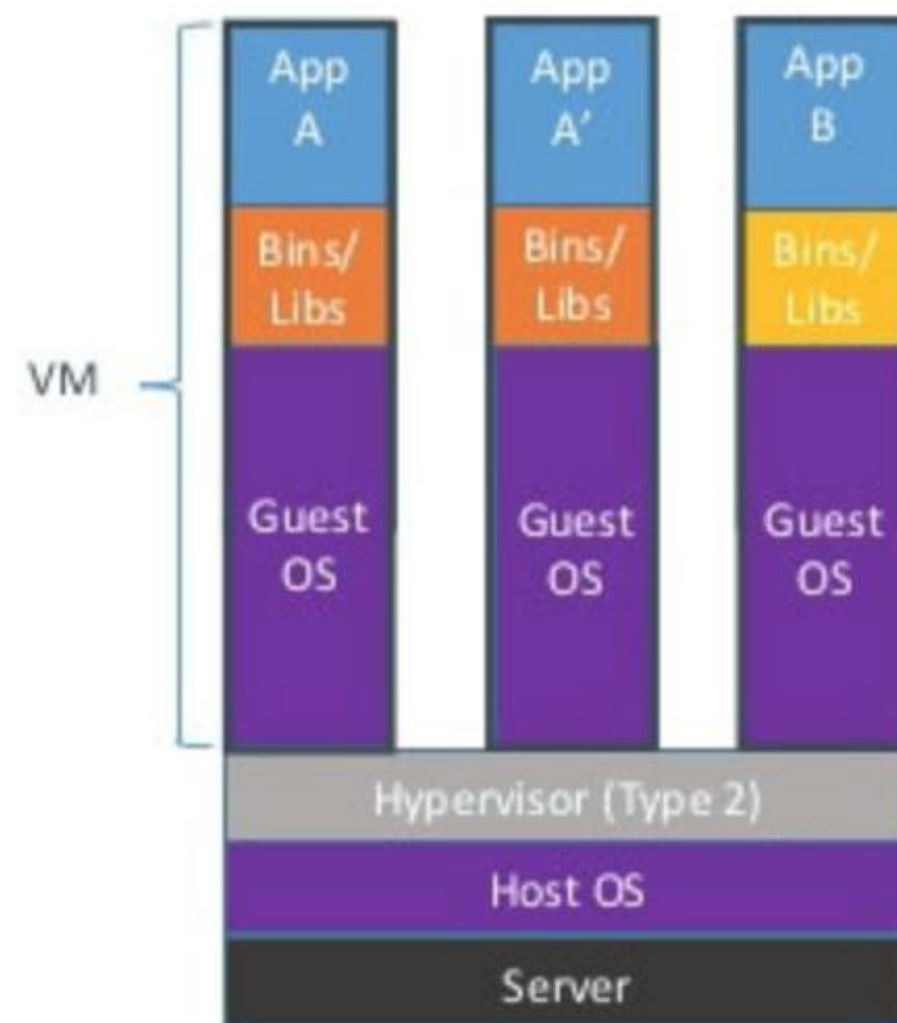
Tupperware for your code

- Think “image”
- Lightweight, “mostly” isolated environment
- Abstract app from host system
- Bundle code, dependencies, libraries, etc
- Portable
- Scalable
- Layering
- OS container vs app container

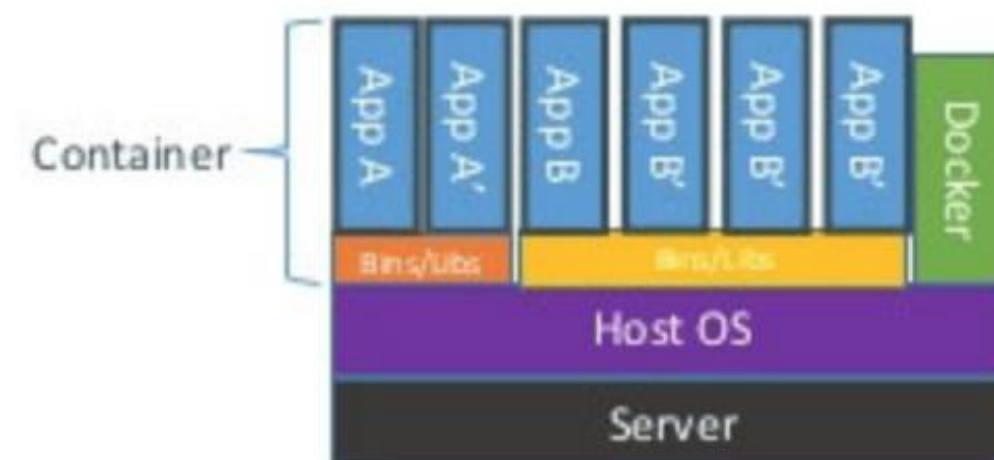


Containers vs VMs

Wait, they aren't the same thing?



Containers are isolated, but share OS and, where appropriate, bins/libraries



- Containers are not a replacement for VMs
- House vs hotel
- Pets vs cattle
- Version control
- Change propagation



Container Risks

Side effects may include arrhythmia, faintness, moderate to severe amnesia, flushing of the face, dry mouth, blurry vision, visual distortions or white spots, nausea and vomiting, constipation, muscle twitches, confusion, euphoria, sedation, itchiness, and increased anxiety, respiratory or cardiac arrest

Dockerfile example:

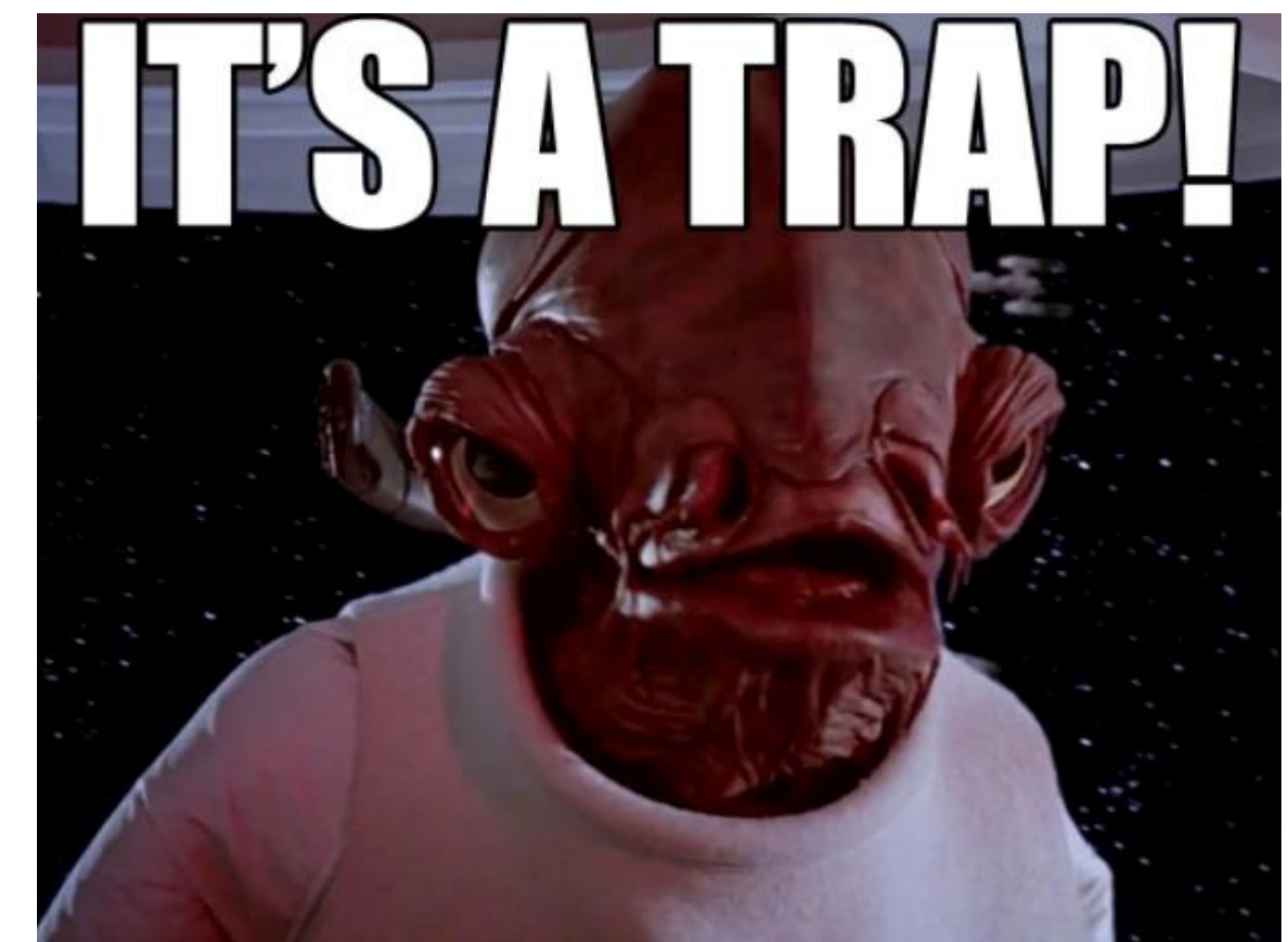
```
FROM ubuntu
RUN apt-get install -y software-properties-common python
RUN apt-get install -y nodejs
RUN mkdir /var/www
ADD app.js /var/www/app.js
CMD ["/usr/bin/node", "/var/www/app.js"]
```

Latest version

Latest version

Latest version

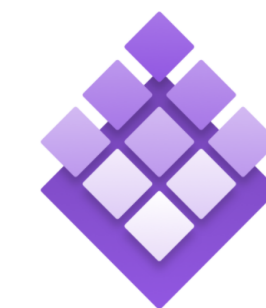
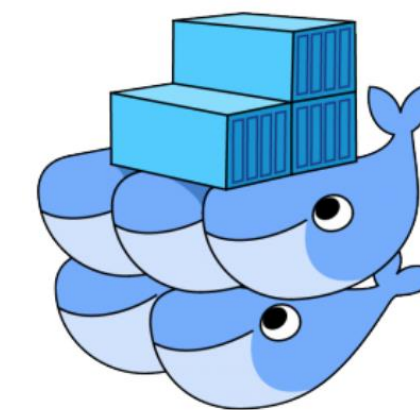
Latest version



Container Orchestration

Different ways of herding cats (or skinning them)

- Resource management
- Multiple containers managed as single entity
- Scaling / replication / placement
- Service discovery
- Rolling update
- Portability to cloud (GKE)



DC/OS



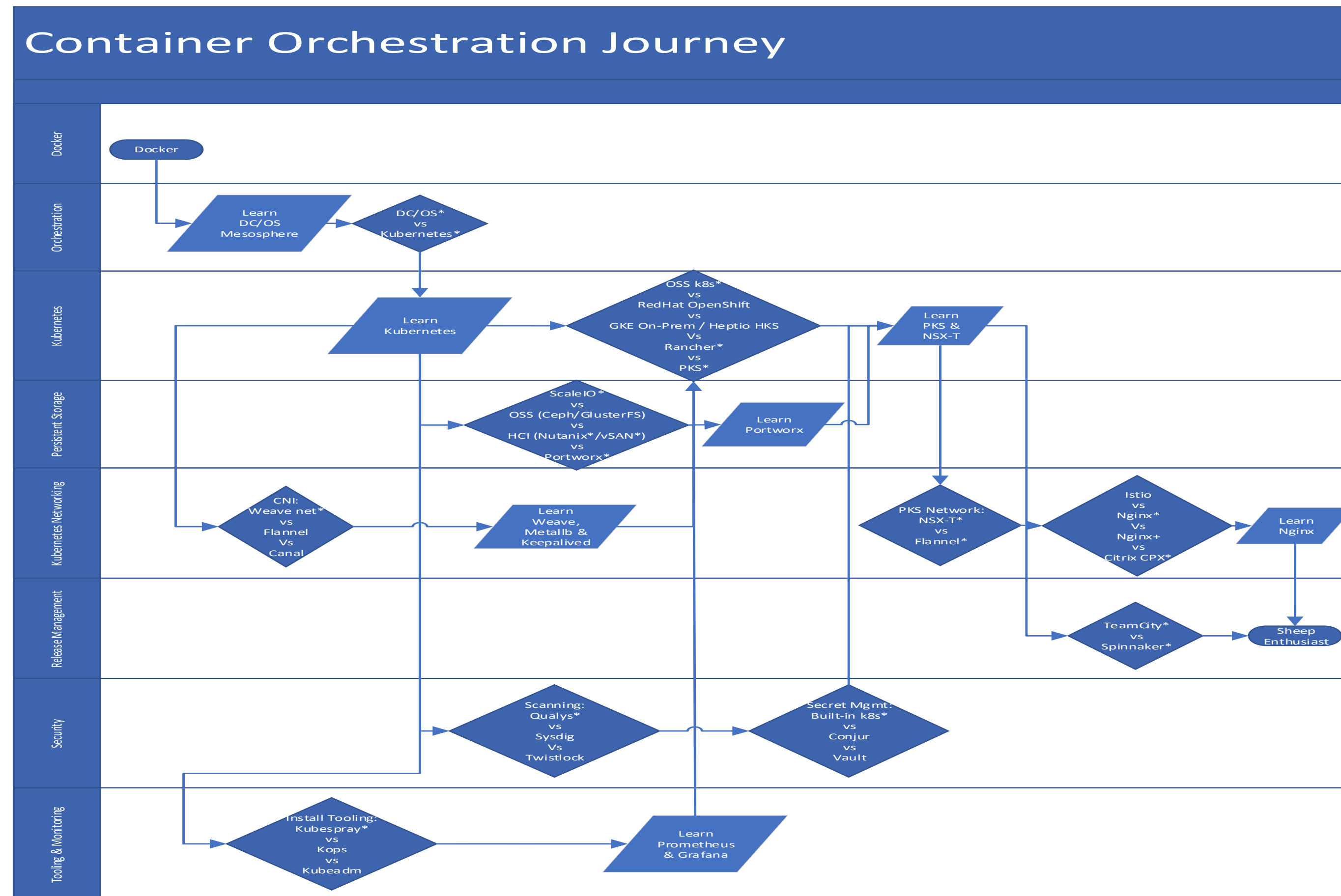
MARATHON



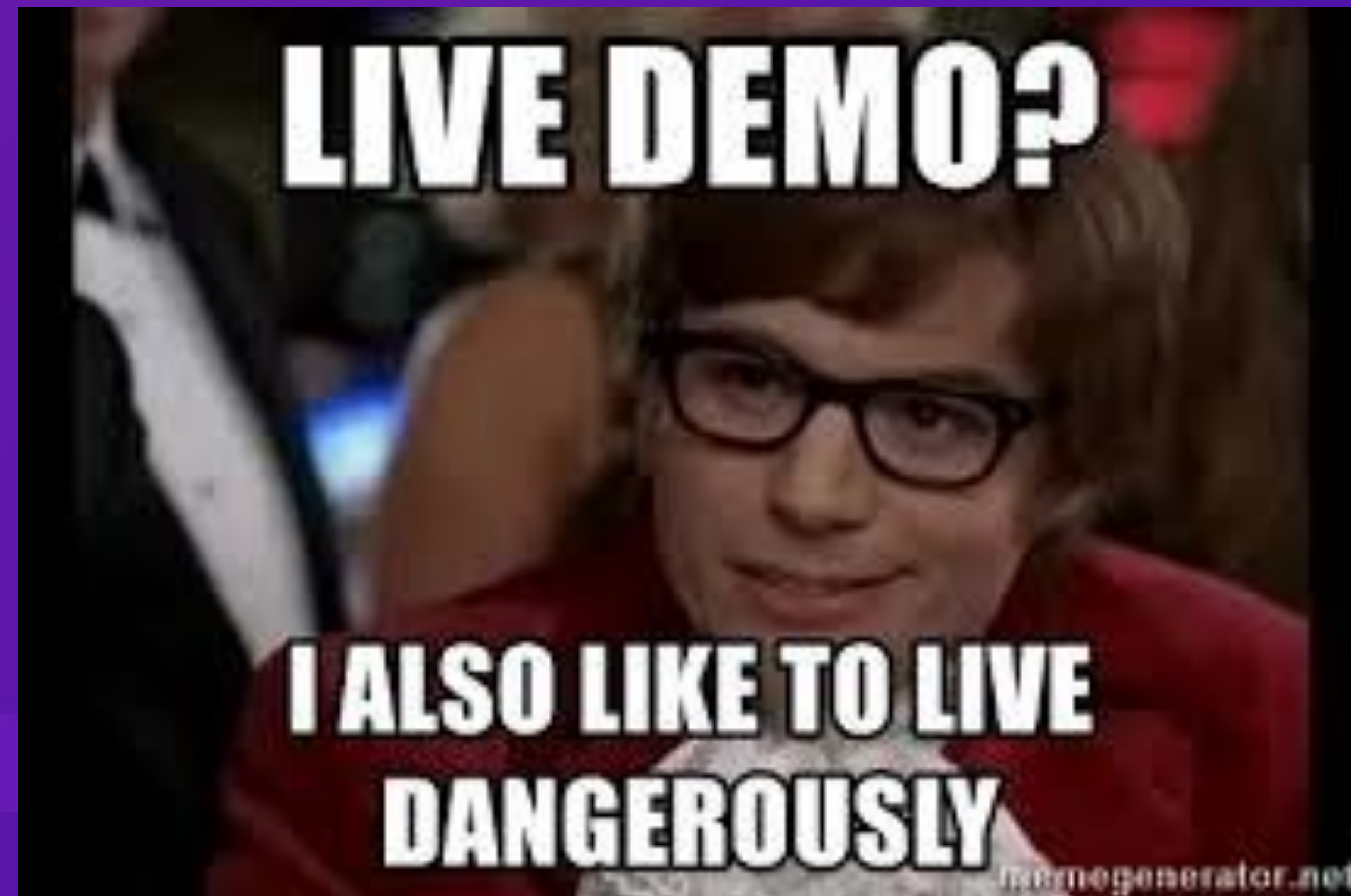
MESOS

84.51° Container Orchestration

Choose your own adventure



K8S DEMO



<https://github.com/palassml/cowsay-server>

A series of squares of various sizes and shades of purple and magenta are arranged in a diagonal pattern along the left edge of the slide, creating a decorative border.

QUESTIONS?



All right. That's it for me.

THANK YOU