



# Power to the People

How using containers can make your life easier



# DrupalCon Vienna!



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# \$> whoami bastian



- System Engineer at amaze.io
- @dasrecht
- Too many sideprojects!
  - TEDxBern
  - DevOpsDays Zurich
  - Openair Cinema
  - I forgot at least two others...

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## \$> whoami tyler



- also Systems Engineer at amaze.io
- former Drupal developer
- Oh the hobbies: ♥ VWs, woodworking, homebrewing, and more...
- PNW Drupal Summit 2018 organizing committee (come to Portland!)



# Agenda

- What are containers (and what are they not)
- Benefits and pitfalls
- Our journey into containers
- Where are containers taking us
- Drupal specific container tools
- Discussion / Questions



# What are containers?



# What are containers not?

- A VM or server
- Docker
- Magic solution to problems
- DevOps/NoOps



# What are containers?

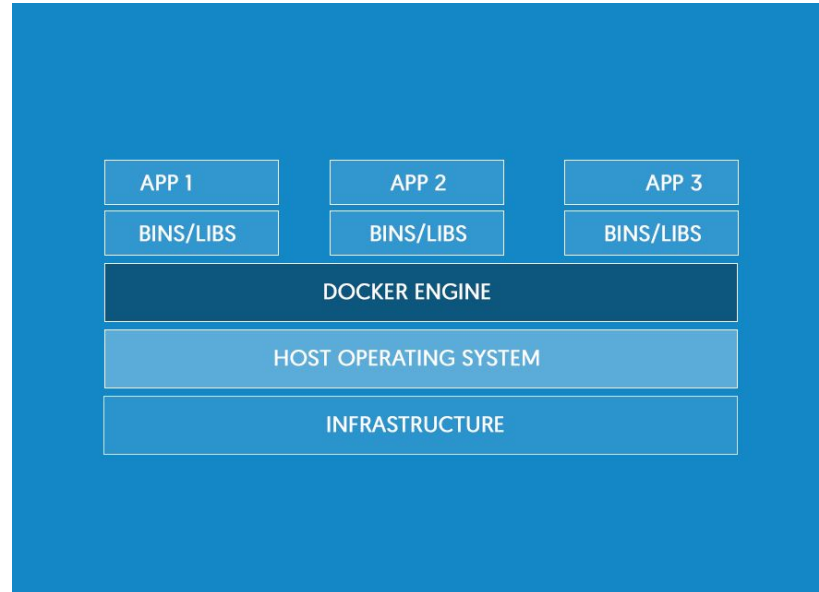
- Small, fast, lightweight
- Shared resources
  - Kernel
  - Firewalls
  - Networking
- Secure
  - Process running in container can only see inside that container
  - Orchestration systems enforce security
  - Images are immutable







# What are containers?





# Benefits & Pitfalls

**“Containers will not fix  
your broken culture”**

Bridget Kromhout

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# Pitfalls

Tech is easy - Humans are hard (and we resist change)

Hierarchical Structure of your Docker Files is **important**

Don't reinvent the wheel - base off of actively maintained images (e.g. Alpine / CentOS)

A monolith in a container is still a monolith!

Be good at OPS - BE VERY GOOD (you can easily scale your problems)!



# Pitfalls - Containers make it hard to ...

Monitor “correctly”

Store logs consistently (because a container can just fade away and get rescheduled somewhere else)

KISS, the ‘simple’ things can become not so simple anymore





# Benefits

- 'Doesn't work on production' goes goodbye
- Platform independent - Build it once - run it anywhere
- Sharing is caring, whole team can run the exact same stack
- Multiple projects, multiple stacks, multiple versions
- Speed - create and destroy containers in seconds
- More flexibility / responsibility as a Developer
- OPS is a Software Development Skill



# Have fun!

What can run in a docker container?

- Ansible
- Youtube\_dl
- tiny\_care\_terminal
- FIREFOX!
- Docker in Docker (ok that's taking it a bit too far!)
- But totally doable - [https://hub.docker.com/\\_/docker/](https://hub.docker.com/_/docker/)



# Our journey into containers





# It's not going to be easy

- 1st - Custom built by us - NIH!
- 2nd - Managed by external Company
- 3rd - Puppet & Ansible
- 4th iteration of our Hosting - Containers & Microservices!

At this point in time you might skip a step and leapfrog an iteration or two :)

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**But how did you actually get started?**

- Everyone in the room**



# How amaze.io got started

Build local development environment

Start with 'accessory' services

PHP 5.3 Support! (no, really)

Jenkinsfiles, Pipelines, Openshift

Lagoon : <https://www.github.com/amazeio/lagoon>

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# Containers - TO THE FUTURE



MI 🌀 CRO 🌀 SER 🌀 VI 🌀 CES for all the things!



# The Future™

- Cloud Native development will become the standard of application development
- More Flexibility
- Container Based Operating Systems (Rancher OS)
- Containers in a Car? (Exchangeable Software Components - think Autopilots, Navigation Systems)
- Linux containers on Windows
- Windows Containers on Linux
- Maybe not “Docker” anymore
- OPS becomes a Software Development skill





# Who uses containers?



# Who uses containers?

- Netflix - one million containers launched per week
- Visa (100'000 transactions per day)
- Alibaba (12 billion dollars on a `Singles Day`)
- Drupal Hosting Providers
  - Pantheon
  - Platform.sh
  - amaze.io



# Drupal specific container tools





# Drupal Tools

- Docker \ docker-compose
- Kalabox\Lando
- docker4drupal
- ddev
- outrigger
- Pygmy / Cachalot

# Questions & Discussion

Hi I'm XYZ and I'm working with containers in production...



# We are hiring!

System Engineer x 2 (UTC Timezone Hours)

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# Thank you DrupalCon Vienna!

Take the survey!

<https://www.surveymonkey.com/r/drupalconvienna>

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# References

Netflix Container Usage -

<https://medium.com/netflix-techblog/the-evolution-of-container-usage-at-netflix-3abfc096781b>

Alibaba - <https://medium.com/@chatradhi.jyotsna/docker-conference-day-2-5d2ff6d9cfdc>

Tech is easy - Humans are Hard - Hannah Foxwell -

<https://www.devopsdays.org/events/2017-zurich/program/hannah-foxwell/>



# References

Tiny-care-terminal - <https://hub.docker.com/r/dasrecht/tiny-care-terminal-docker/>

Youtube\_dl [https://hub.docker.com/r/dasrecht/youtube\\_dl/](https://hub.docker.com/r/dasrecht/youtube_dl/)