Containers vs VMs

Competition of Co-Existance?

Clint Kitson - EMC {code} developerAdvocate

COMPETITION IS GOOD, CUSTOMERS WIN

Hey Ops!

What do you care about?

VMs, SDDC, and Self-Service.

Devs!

What do you care about?

- The Apps
- Continuously deploying features
- Abstracted and controlled software architectures
  - Infrastructure as Code
- **Getting what I want when I want it**
- **Consistency**
- **Frictionless deployments**

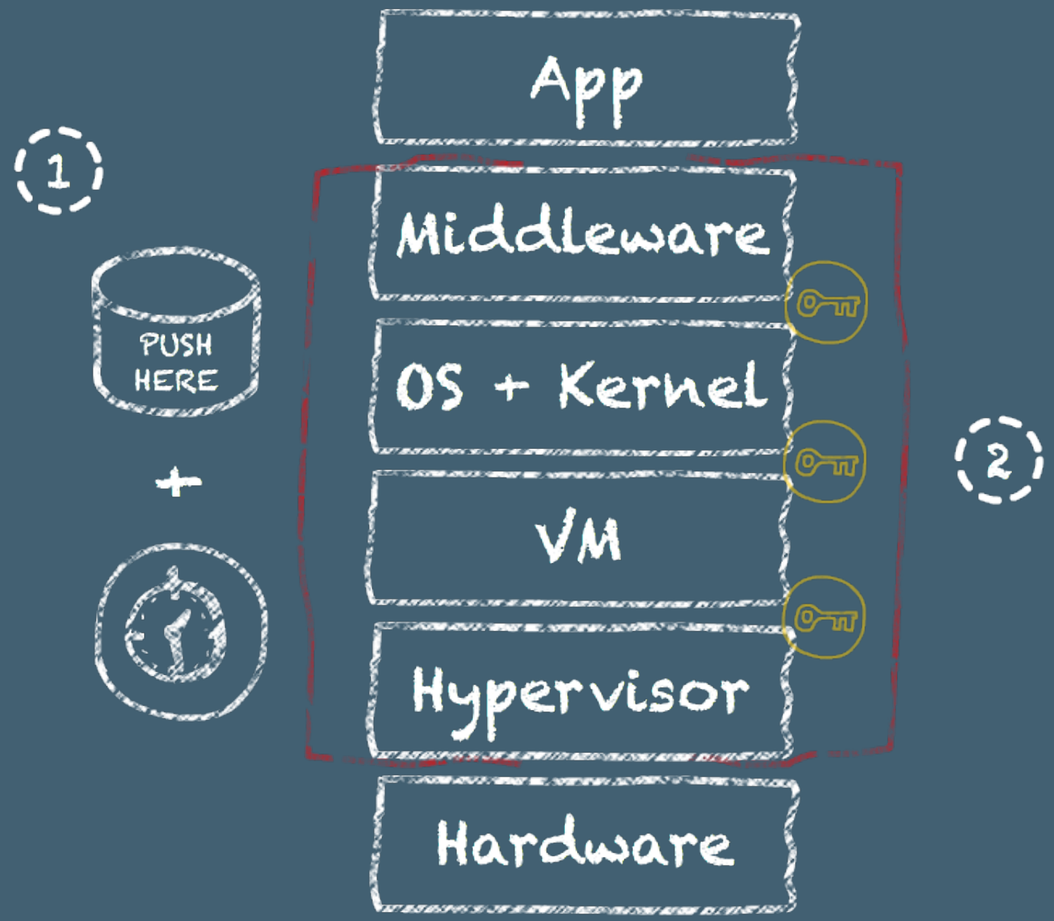
Develop Anywhere and Deploy Everywhere

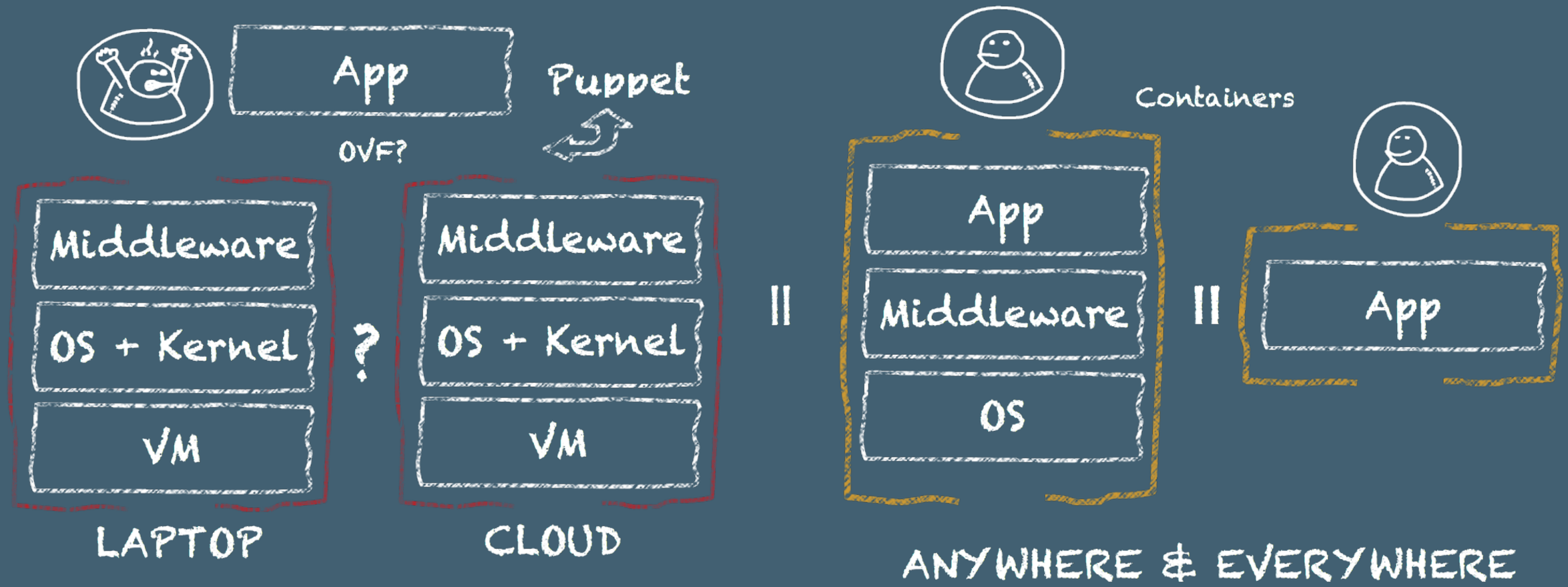
Consistent Packaging and Deployment

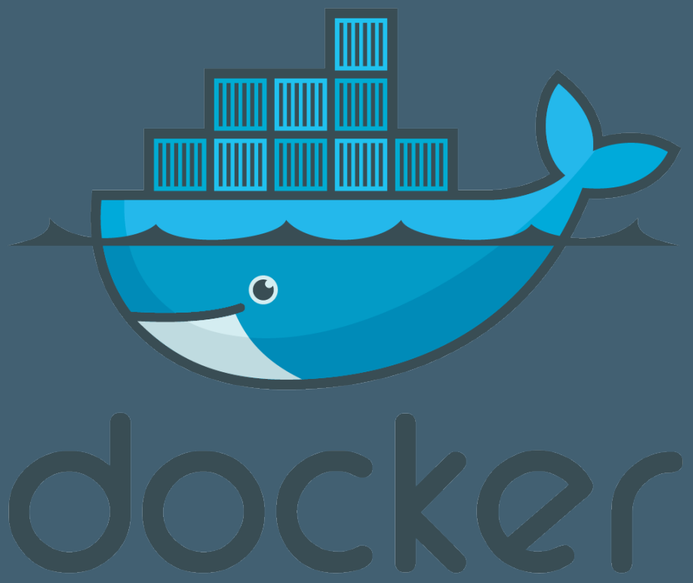
It sure sounds like a VM from a self-service Portal would be perfect!

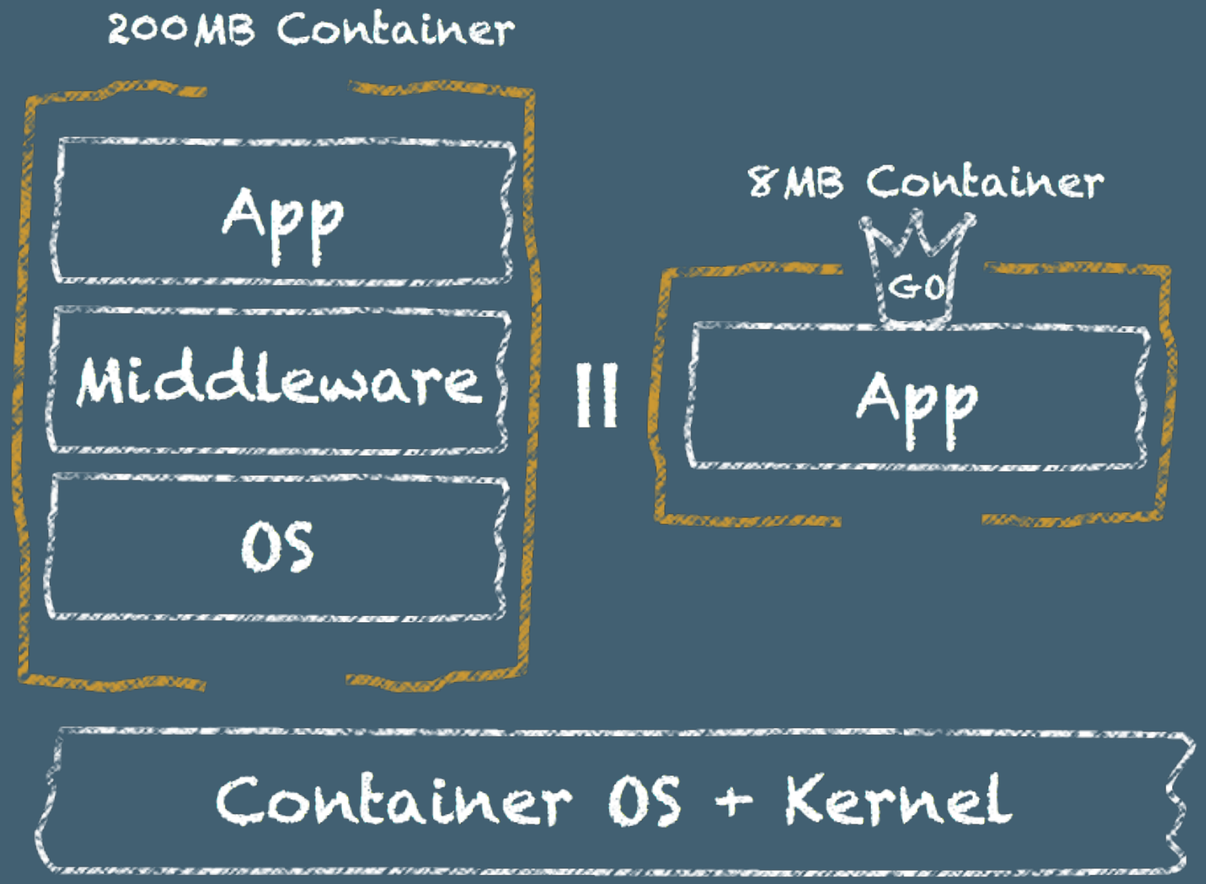

INCOMING!
Try again!

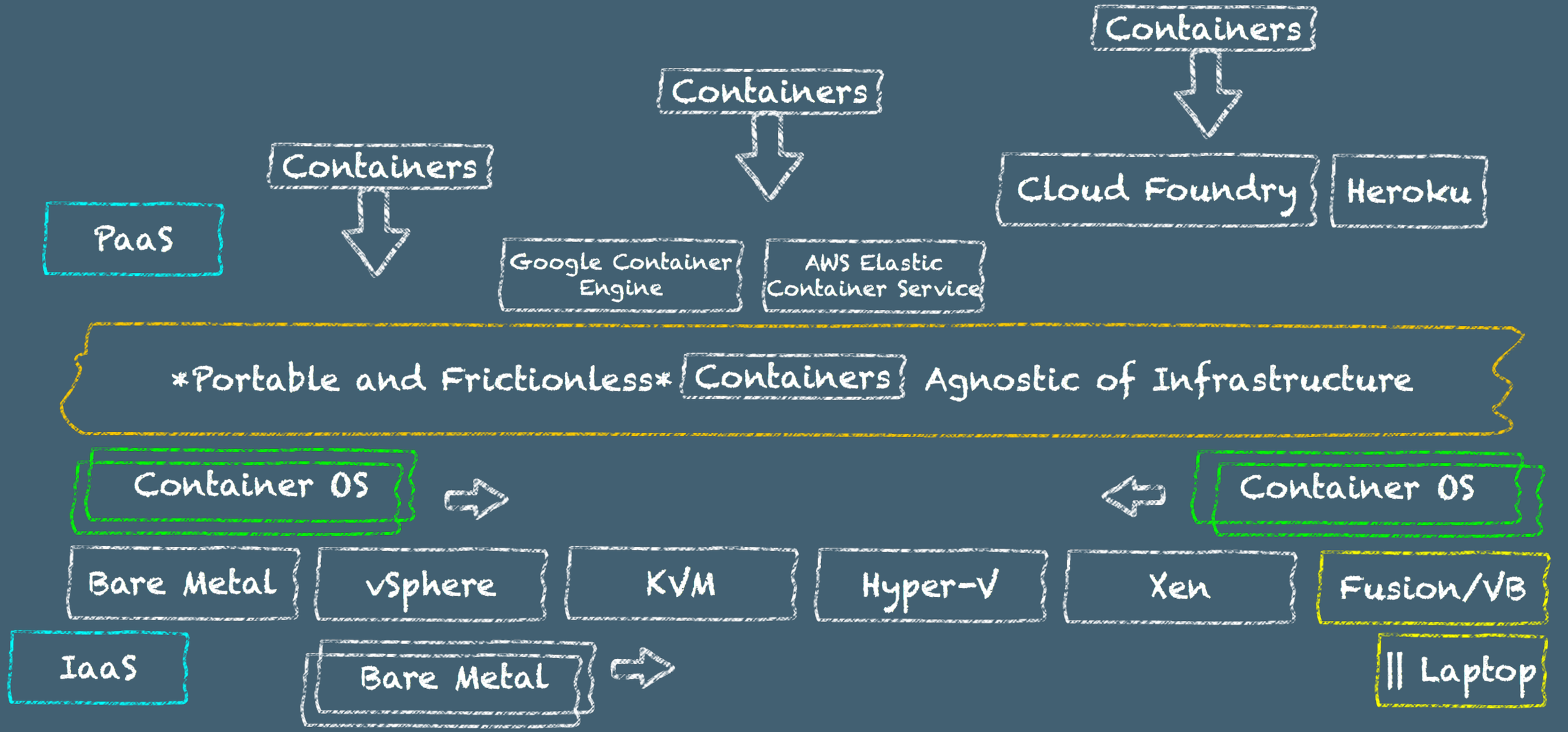
Where's the friction here?

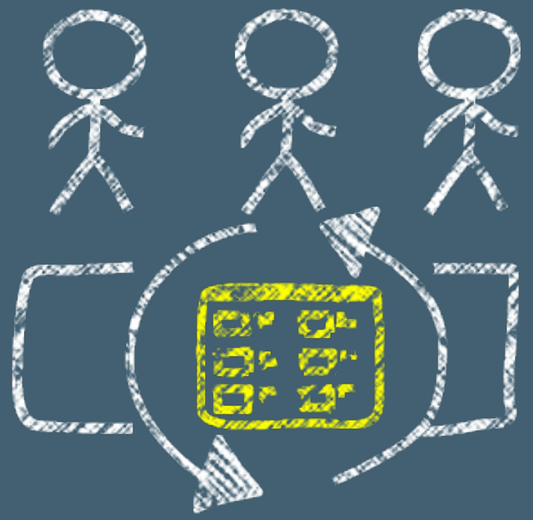


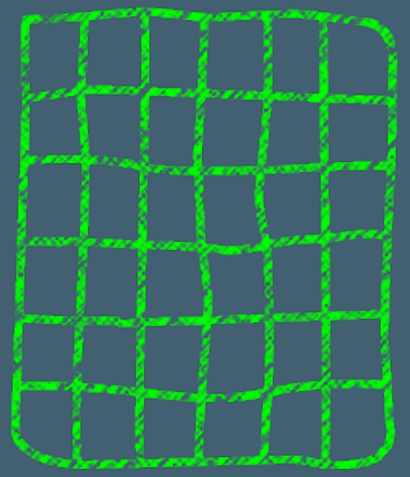

App
Puppet
OVF?
Middleware
OS + Kernel
VM
?
Middleware
OS + Kernel
VM
LAPTOP
CLOUD
=
Containers
App
Middleware
OS
=
App
ANYWHERE & EVERYWHERE


docker

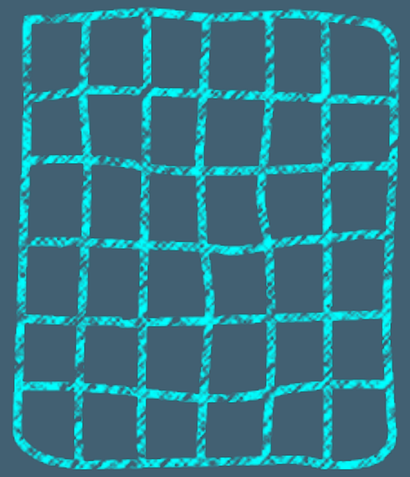

200MB Container
App
Middleware
OS
II
8MB Container
GO
App
Container OS + Kernel


Containers
Containers
Containers
Cloud Foundry
Heroku
PaaS
Google Container Engine
AWS Elastic Container Service
Portable and Frictionless Containers Agnostic of Infrastructure
Container OS
Container OS
Bare Metal
vSphere
KVM
Hyper-V
Xen
Fusion/VB
IaaS
Bare Metal
Laptop



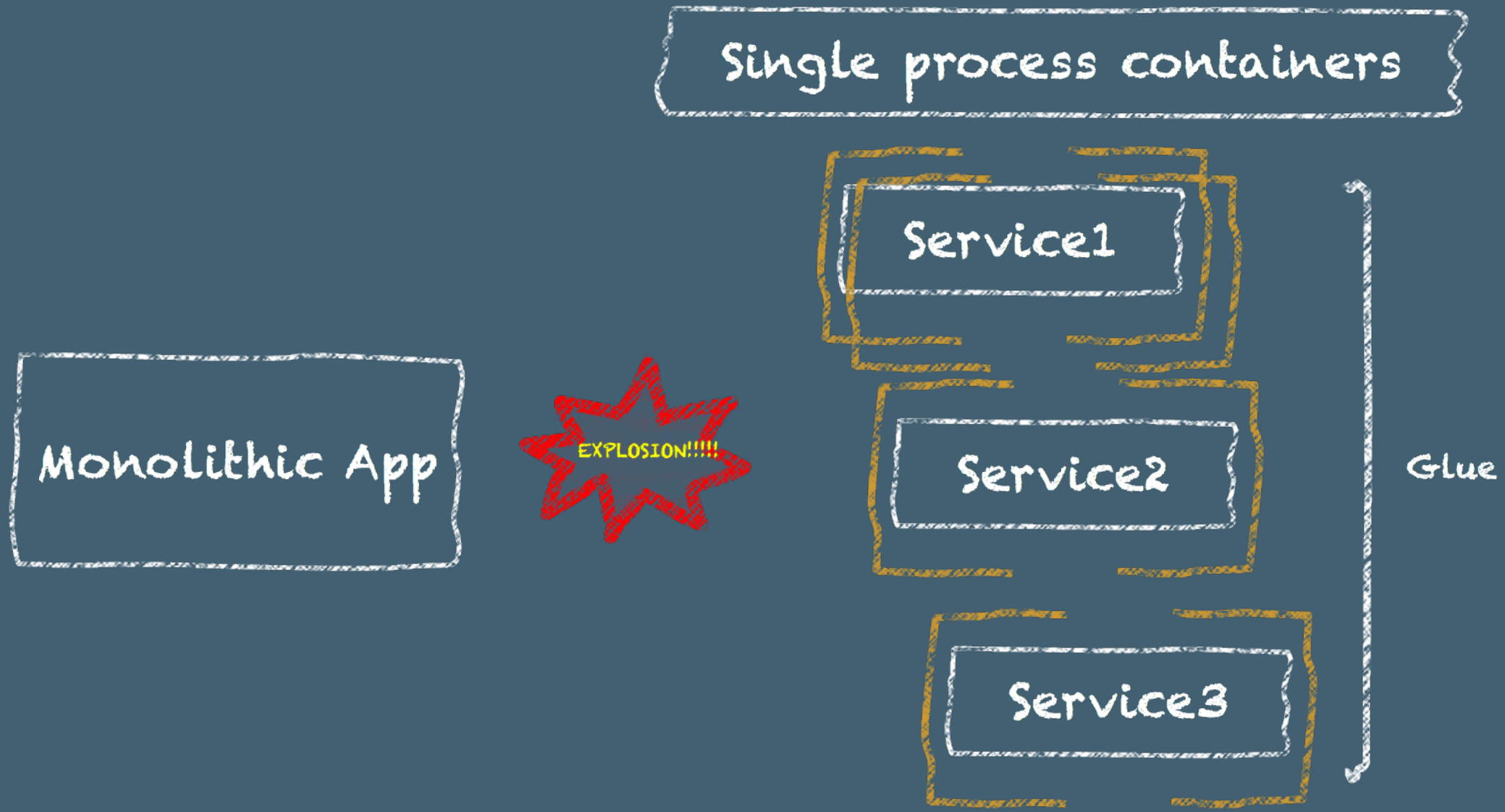


Public & Private
Catalogs/Registries



CHALLENGES

DEPLOYMENT MODELS


Single process containers
Service1
Service2
Service3
Glue
Monolithic App
EXPLOSION!!!!!

READY FOR MICRO-SERVICE ARCHITECTURES?

CONTAINERS ARE PERSISTENT, BUT...

Storage for containers is typically local

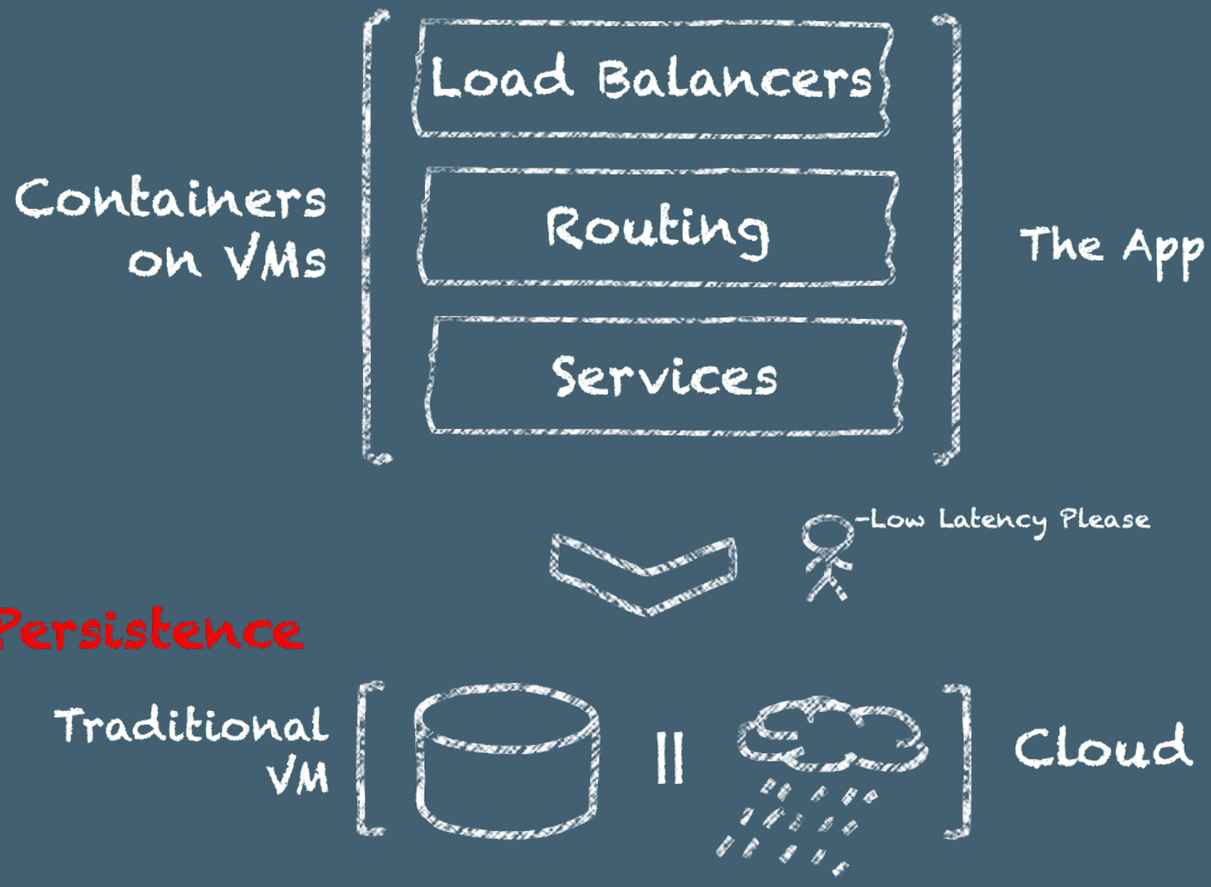
DAS

North-South availability is not top priority

NEW ECOSYSTEM

Software Agents are not built for containers yet

TYPICAL MICRO-SERVICE APPLICATION ARCHITECTURES



WHY CONTAINERS WITH VMS?

- VSPHERE STABILITY HAS DONE GREAT THINGS FOR OPERATIONS

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- ABSTRACTION FROM HARDWARE

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- ABSTRACTION FROM HARDWARE
- SECURITY AND ISOLATION
- STORAGE
- NETWORKING

CONCLUSION

CONTAINERS AND VMS ARE SYMBIOTIC

CONTAINERS ALLOW PORTABILITY

SUPPORT DEVELOPMENT ANYWHERE AND DEPLOYING EVERYWHERE

DEVOPS@EMCWORLD!

FREE PRE-SHOW EVENT

Sunday @the Venetian
2p-6p

THANK YOU