

# VMs2PODs

VMUG France

VMs2PODs, la série de la rentrée que vous allez adorer !

« Moins effrayant que Stranger Things, plus prenant que Halt and Catch Fire... » *Télérama*

« Une vision réaliste des Cloud Native Apps » *Les Inrocks*

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Platform Architect | VMware EMEA  
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## **DISCLAIMER:**

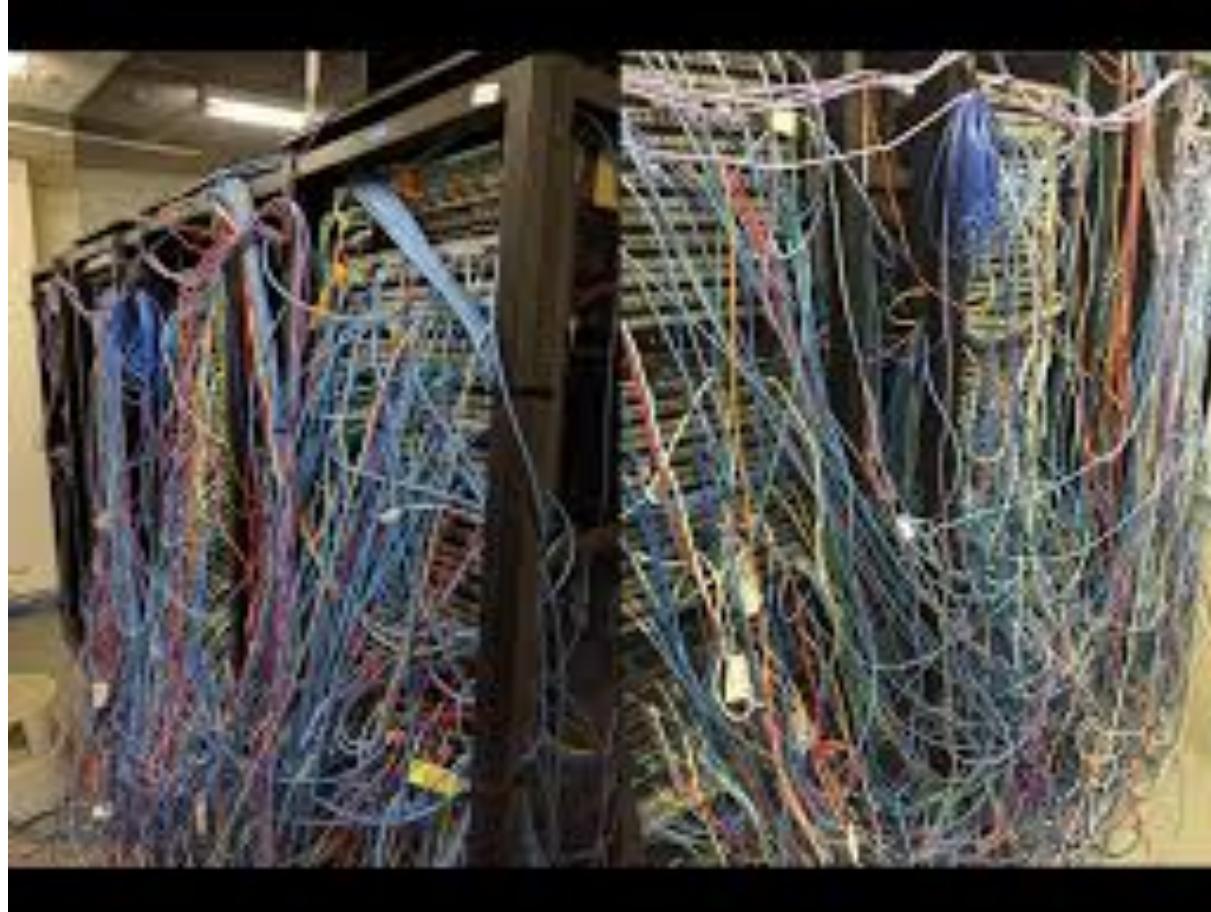
**Don't reproduce any scenes without the  
help of an adult!**



# “What The Hell!”

## Episode 1

# How to build Lab in that Hell!



**cPod Factory** is a flagship SDDC environment build by the field for the field. The main goal is to be able to play with **VMware Solutions** (100+ Demos played to customers and during public events) through **Story Telling** (i.e. [Tito App](#) & [VMs2PODs](#)) but also to have **Sandboxes** to test, get trained and build Architecture Design without any road blocks.

#repeatable #automation #flexible #speed #green #experience #gitops

# Why cPod?

How to accelerate business

Need for Speed &  
Repeatable

Dynamically Deployed,  
Full Automated

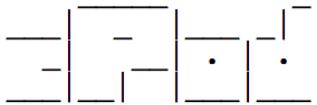
Slack Integration, Same  
Experience as regular  
SDDC

Collaboration & Ease of  
Use

- 4500+ lines of source code (powershell, bash, conf, etc.)
- 6 containers: ha-proxy, openvpn, nextcloud, mariadb, dokuwiki, syncthink running in Docker
- 3 OVsAs: cPodEdge, cPodRouter, cPodFiler w/ PhotonOS 3.0
- Leverage vSphere / vSAN / NSX
- Open Source: free to use / to duplicate / to improve

<https://github.com/bdereims/cpodfactory>

Powered by



Multiple DCs in a Box

Full Routed, Virtual  
DCs, Pseudo Multi-  
Tenant

VPN, Reverse Proxy,  
DNAT / SNAT, NSX  
Connectivity

Hybrid Cloud with  
Connectivity



# “Scaling The App”

## Episode 2

One of challenges when designing and operate application is the data and scalability.

In this example, we will demonstrate how to leverage vSphere capabilities to move App from VMs to Pods without copy data and using k8s scalability.

This use case could be used to avoid copying large amount of data mitigating the risk of corruption and accelerating “containerization”.

# Big-Mountain Corp.

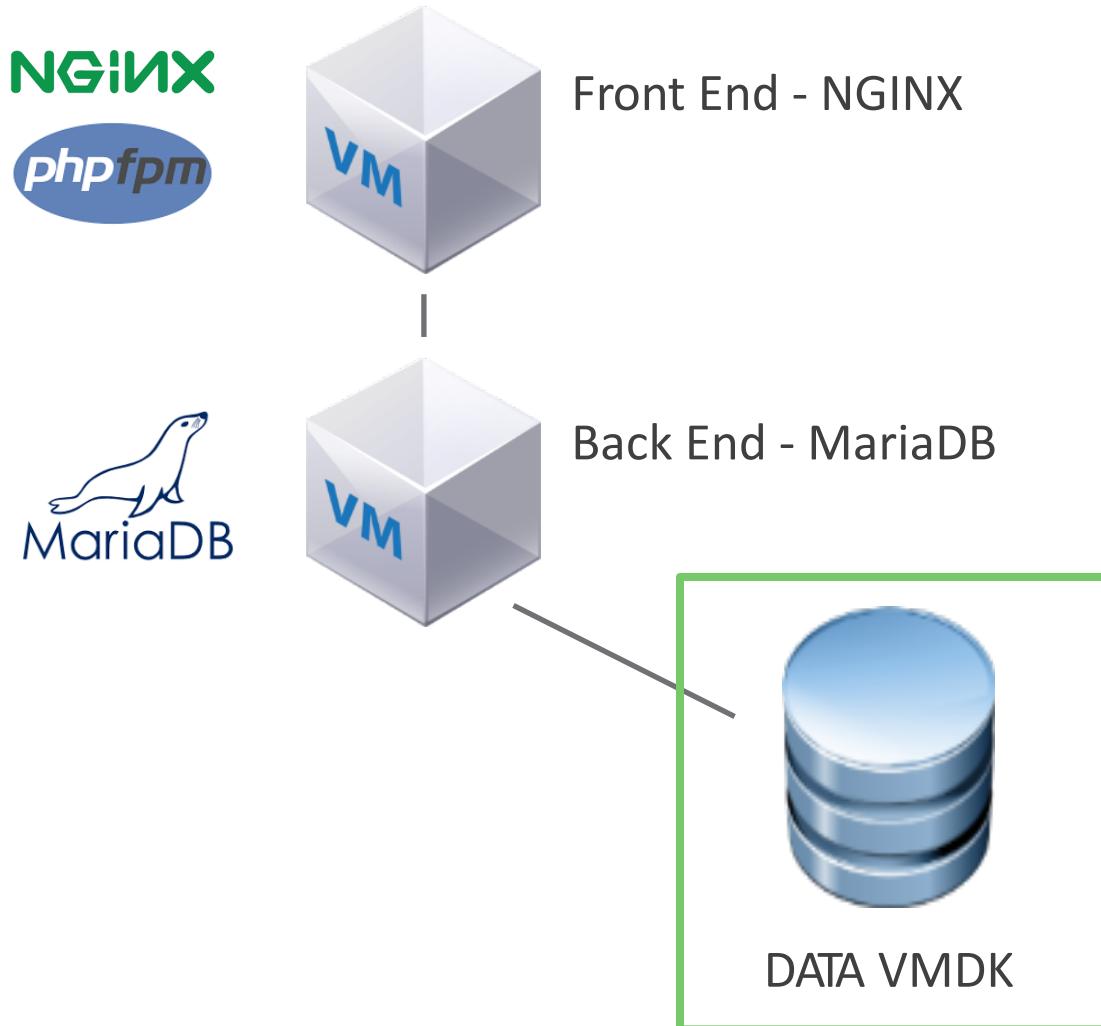
The Fictive Company

- Online electronic and spare parts vendor
- Double digit growth
- Competitor : Farnell, Conrad, Radiospare



A new project improving web app to serve more and more customers as fast as possible and reach revenue target.

# The problem to solve



- Limited throughput
  - Does not scale easily
- Hard to update
  - Monolith components
  - Not transportable

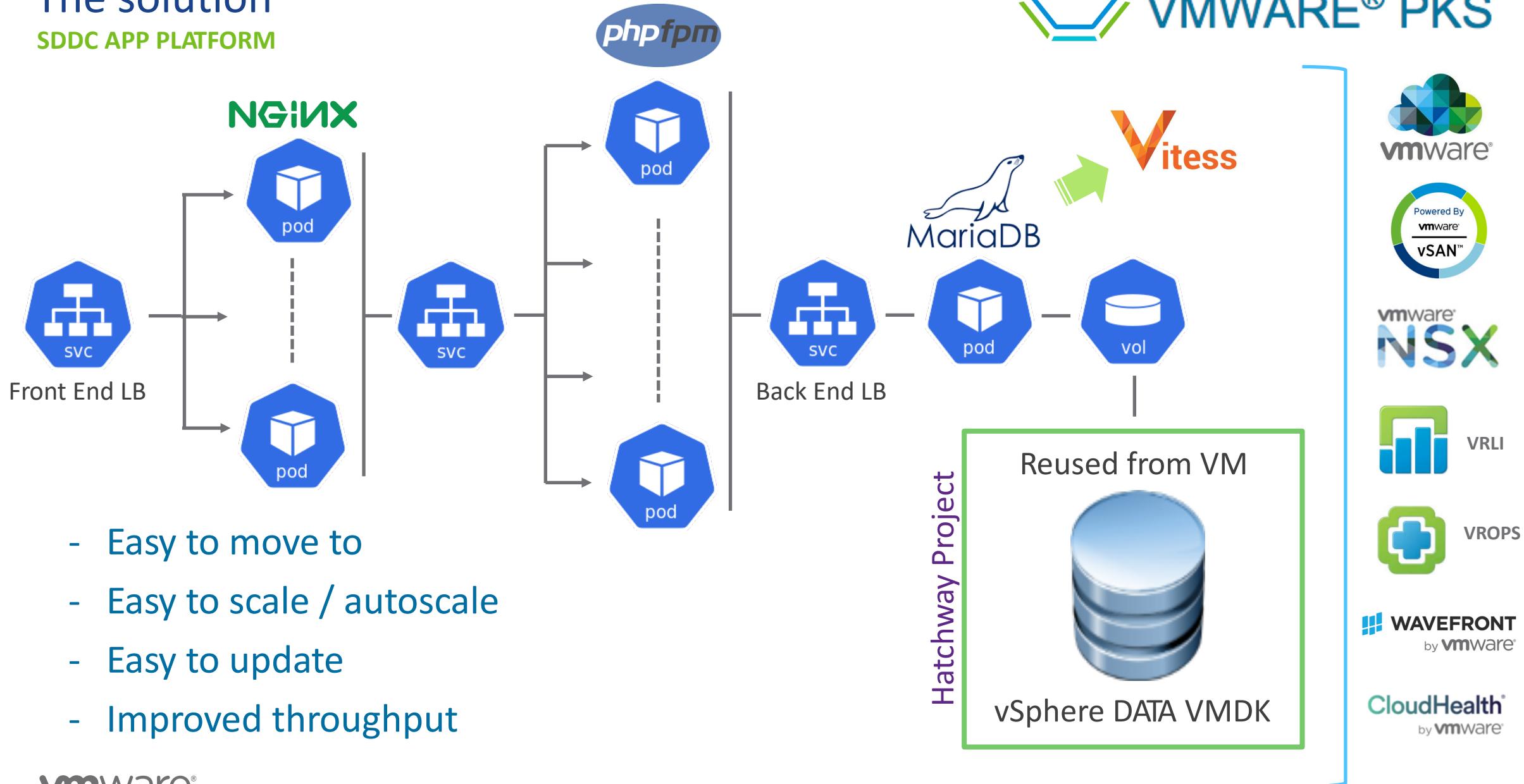
- We want to keep these data
- Importing this into pod could be painful
- How to do that?

Blow up it down!



# The solution

SDDC APP PLATFORM

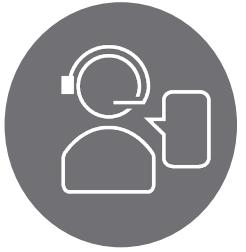




# “The Push Experience”

## Episode 3

# The “git push” Experience



New request

Devs modify code

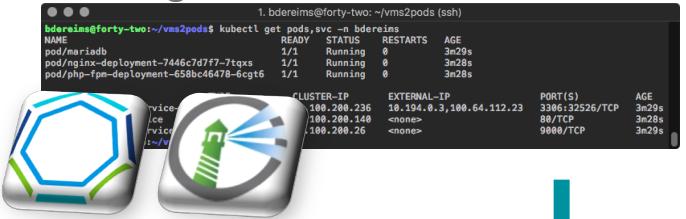
```
1. bdereims@forty-two: ~/vms2pods/containers/html (ssh)
bdereims@forty-two:~/vms2pods$ ls
back-end.yaml  front-end.yaml  nginx  tools
build.sh  govc.yaml  push.sh  VMs2Pods.mov
containers  HPA.txt  README.md  VMS2Pods.pdf
deploy.sh  kubectl_apply.sh  rollout.sh
env  kubectl_create.sh  secret.yaml
front-end-lb.yaml  mk_data_vmdk.sh  test
bdereims@forty-two:~/vms2pods$ cd containers/
bdereims@forty-two:~/vms2pods/containers$ ls
html  Makefile  nginx  php-fpm
bdereims@forty-two:~/vms2pods/containers$ cd html/
bdereims@forty-two:~/vms2pods/containers/html$ ls
index.html  info.php  list.php
bdereims@forty-two:~/vms2pods/containers/html$ vi index.html
```

Devs push code to repo

```
1. bdereims@forty-two: ~/vms2pods (ssh)
bdereims@forty-two:~/vms2pods$ git add .
bdereims@forty-two:~/vms2pods$ git commit -m "my mods"
[master 4378363] my mods
 1 file changed, 1 insertion(+), 1 deletion(-)
bdereims@forty-two:~/vms2pods$ git push
Username for 'https://172.19.3.12:443': bdereims
Password for 'https://bdereims@172.19.3.12:443':
warning: redirecting to https://172.19.3.12:443/bdereims/vms2pods.git/
Counting objects: 5, done.
Delta compression using up to 2 threads.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 540 bytes | 540.00 KiB/s, done.
Total 5 (delta 2), reused 0 (delta 0)
To http://gitlab.cpod-common.az-demo.shwrrr.com/bdereims/vms2pods.git
  ff08ac9..4378363  master -> master
bdereims@forty-two:~/vms2pods$
```

Manual

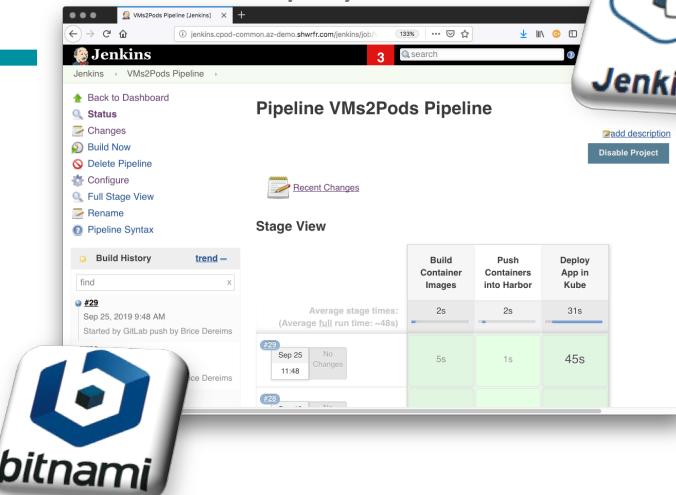
Running in Kubernetes



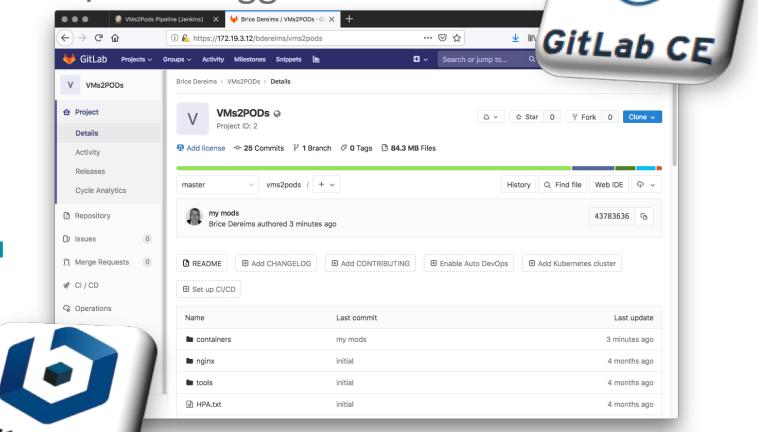
Updated!

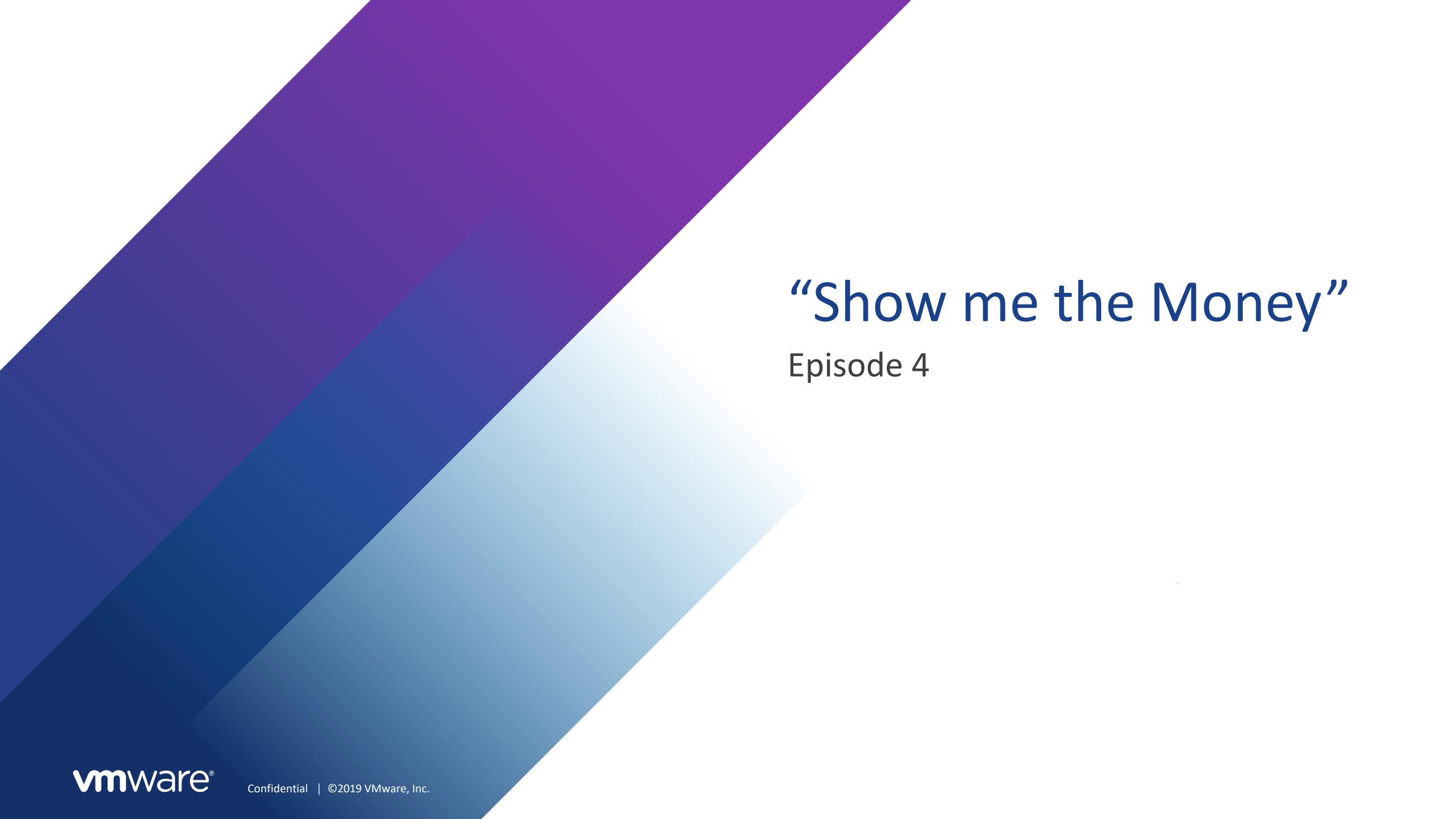


Build and Deploy



CI/CD is triggered





# “Show me the Money”

## Episode 4

# DEMONS

# Q&A

**Quelles sont les solutions VMware (autre que PKS) qui rendent la Gestion de Kubernetes Simple et Efficace ?**

**#intégré #Out-the-BOX**