worldpay
from FIS

OPENSHIFT HIVE AT WORLDPAY

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About Worldpay

Coming soon!
- Short introduction ….

- few details on the department/division that you currently work?

- something about the customers, if possible to mention a few

  - shortly about offering more side services, microservices, "all applications been build microservices / multiple small services. "

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How we create and manage OpenShift 4 clusters?

Our path to OpenShift 4

- The Red Hat collaboration and the early OpenShift 4 Beta engagement, and the continued feedback we received

- Red Hat works out in the open and this is how it let us find and use OpenShift Hive

- The Hive operator was Open Source but not known to us but it attracted our attention when we first heard of it

- Discover Hive capabilities and extended to fit our needs

How we deploy cluster?

- Coming from OpenShift 3 we knew the problem of managing infrastructure and cluster provisioning separately

- The OpenShift 4 Installer was good for single cluster deployment but not great for multiple clusters by a team

- We wanted to treat our OpenShift 4 cluster as Cattle and not Pets

- We were looking for API driven cluster deployment and wanting to keep the cluster configuration in sync

OpenShift Hive Cluster Deployment

- A simple Kubernetes manifest defining base information to create the cluster

- We use default provisioning model with Installer Provisioned Infrastructure

- Complete cluster deployment and apply configuration takes around ~45mins and ready to use
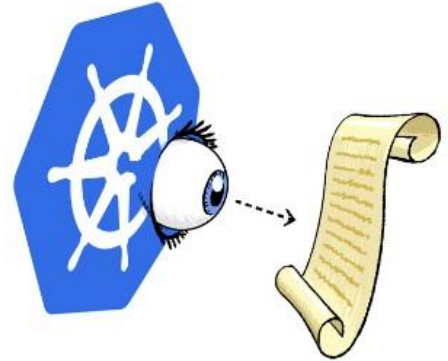
Cluster Deployment demo

How we configure cluster?

- Managing hundreds of configuration manifest and promotion across environments with multiple regional clusters whilst avoiding drift and ensuring idempotency

- OpenShift Hive has SyncSets to apply and push cluster configuration

- Regularly reconcile configuration to keep cluster configuration synchronized
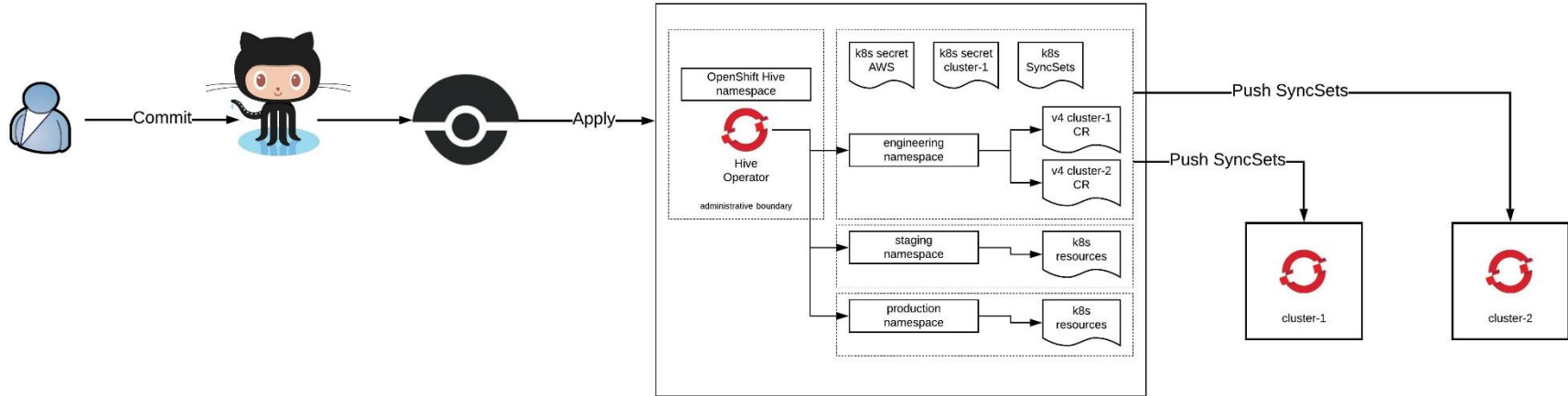
Subscription model using Hive SyncSets

- Just like in yum where you would subscribe to stable, unstable, or testing

- We use this model to promote versions to higher environments
  - Production = v0.3.1
  - Staging = v0.4.0
  - Engineering = master
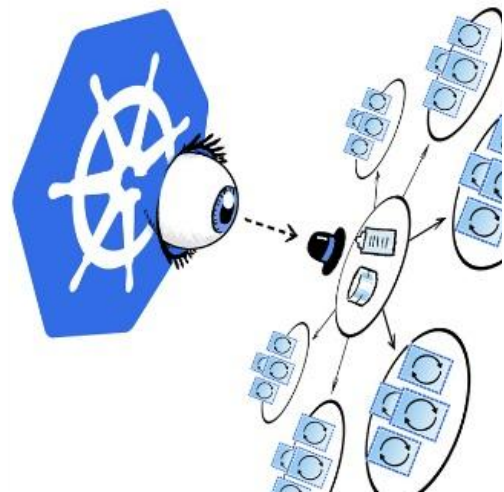
- video link:
https://youtu.be/KoDu8QLJ2E0
Cluster SyncSet demo

GitOps

OpenShift Hive SyncSets

▪ It is difficult to just write a SyncSet manifest because of the size and scope

▪ To overcome this complexity we created a SyncSet generator by reusing the Red Hat Hive libraries to full-fill our needs of the cluster configuration

▪ The SyncSet generator takes normal Kubernetes manifests and generates a cluster SyncSet which can be applied using Hive

How we want to contribute back to the community

- We have ongoing talks with Red Hat and give feedback about how we use Hive and ways to improve

- Everyone benefit from Open Source so we are contributing our SyncSet generator back to the community

<-Github Worldpay Account->

Benefits for Worldpay

- OpenShift Hive operator enabled us to adopt GitOps delivery model

- Transformed the team to shift-left "software developer mindset"

- Closer working relationship with Red Hat and the community

- Improve the self-service capabilities for OpenShift 4

- Release channels and controlled promotions

Please join us for the AMA panel in the afternoon for Q&A,

thank you!

THANK YOU