Introducing OKD Virtualization

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Red Hat

OKD

Virtualization

okd

What's OKD?

OKD is a distribution of Kubernetes

OKD embeds Kubernetes and extends it with security and other integrated concepts

OKD adds developer and operations-centric tools

OKD is a sibling Kubernetes distribution to Red Hat OpenShift

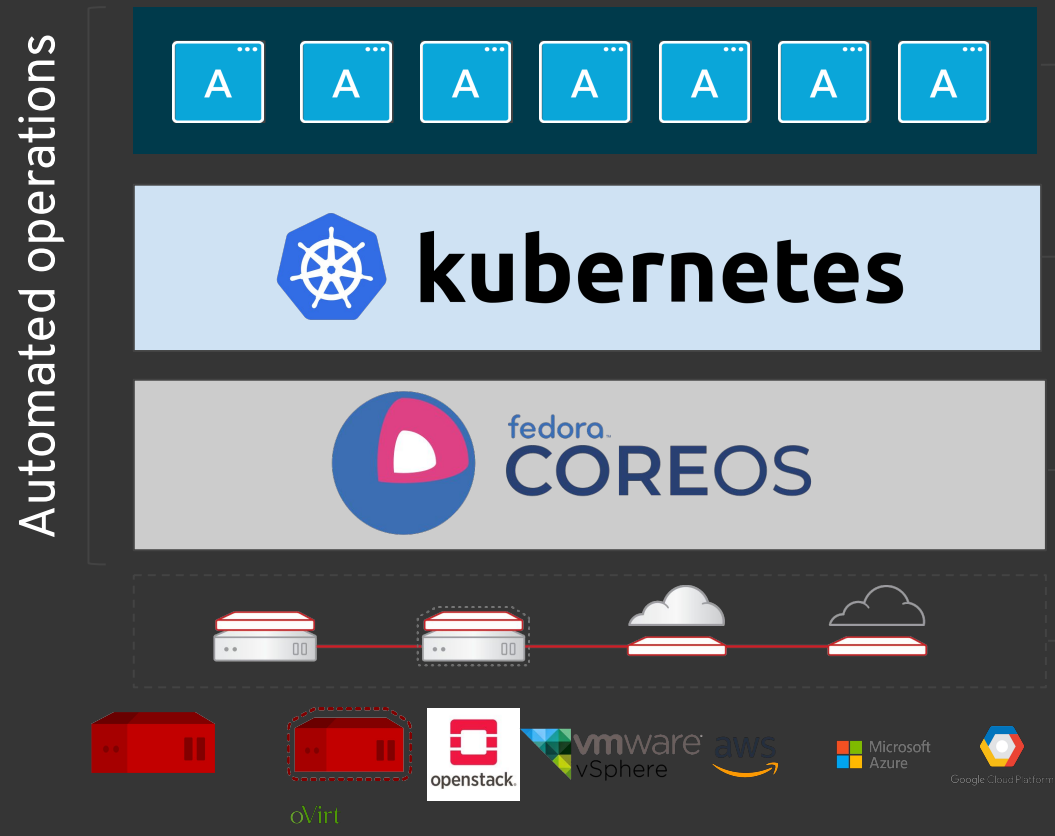
https://flickr.com/photos/64711971@N08/6918935136/
"OKD & Kubernetes"

Governance:

Red Hat

THE UNIVERSITY OF MICHIGAN
ARTES · SCIENTIA · VERITAS
1817

What's OKD?



APPLICATIONS AND SERVICES
from Red Hat and community operators

PLATFORM AND CLUSTER MANAGEMENT
Kubernetes, security, monitoring, registry. etc

LINUX HOST with Fedora CoreOS

FOR HYBRID / MULTI-CLOUD DEPLOYMENTS

What's KubeVirt?

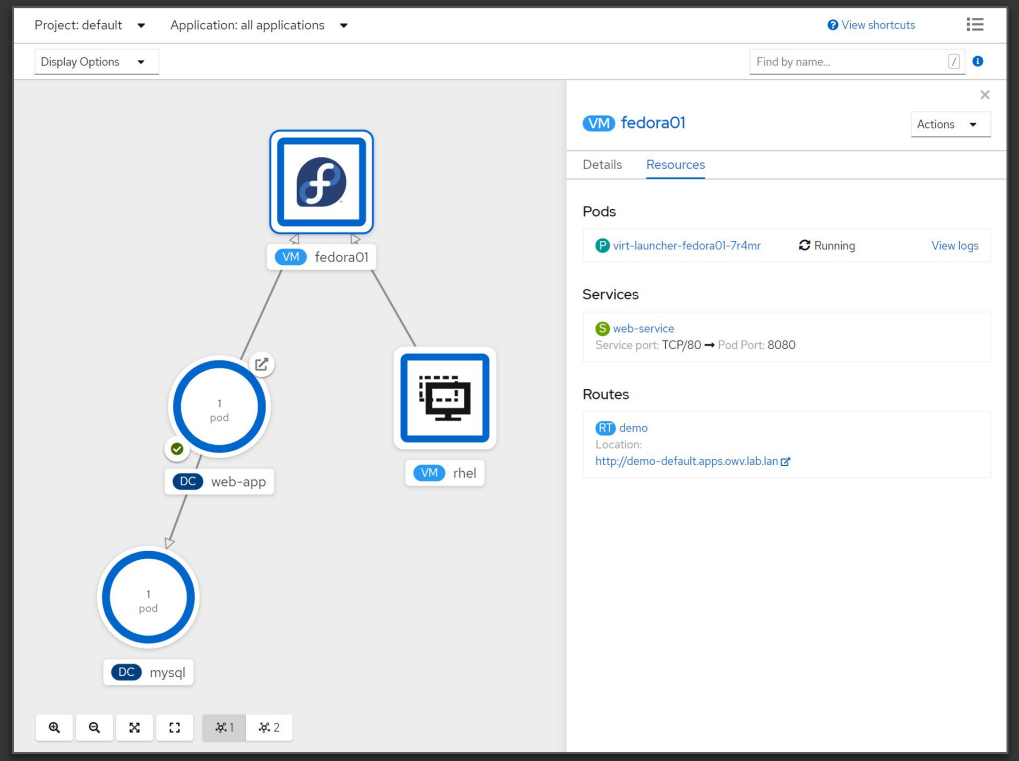
Kubernetes Virtualization API and runtime in order to define and manage virtual machines:

- Virtual machines
  - Running in containers
  - Using the KVM hypervisor
- Scheduled, deployed, and managed by Kubernetes
- Integrated with container orchestrator resources and services
  - Traditional Pod-like SDN connectivity and/or connectivity to external VLAN and other networks via multus
  - Persistent storage paradigm (PVC, PV, StorageClass)

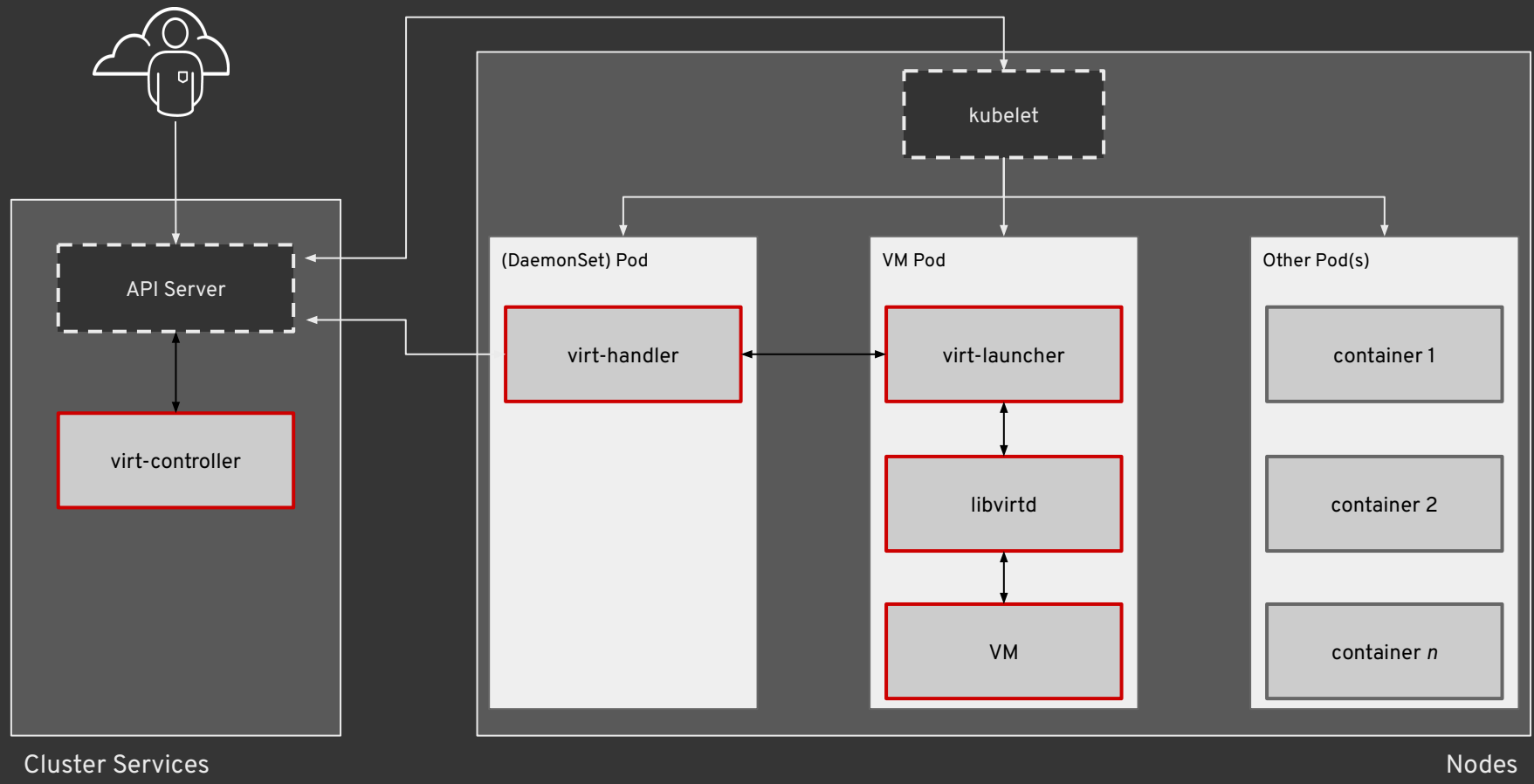
https://flickr.com/photos/linein/2946303389/
"A Container & VM"

Why KubeVirt? Using VMs and containers together

- Follows Kubernetes paradigms:
  - Container Networking Interface (CNI)
  - Container Storage Interface (CSI)
  - Custom Resource Definitions (CRD, CR)
- Schedule, connect, and consume VM resources as container-native
- Virtual Machines connected to pod networks are accessible using standard Kubernetes methods:
  - Service
  - Route
  - Ingress
- VM-to-pod, and vice-versa, communication happens over SDN or ingress depending on network connectivity



KubeVirt: how does it work?



What's HCO?

Hyperconverged Cluster Operator

An opinionated set of components to support classic virtualization use-cases, such as:

- Persistent image upload
- Node network configuration
- Common VM Templates

Single entry point for multiple operators (virt, storage, network...)
Single installable unit
Single upgrade path
Single user entry point for configure the whole virtualization subsystem

https://flickr.com/photos/altopower/2136807538/
"An opinionated cat"

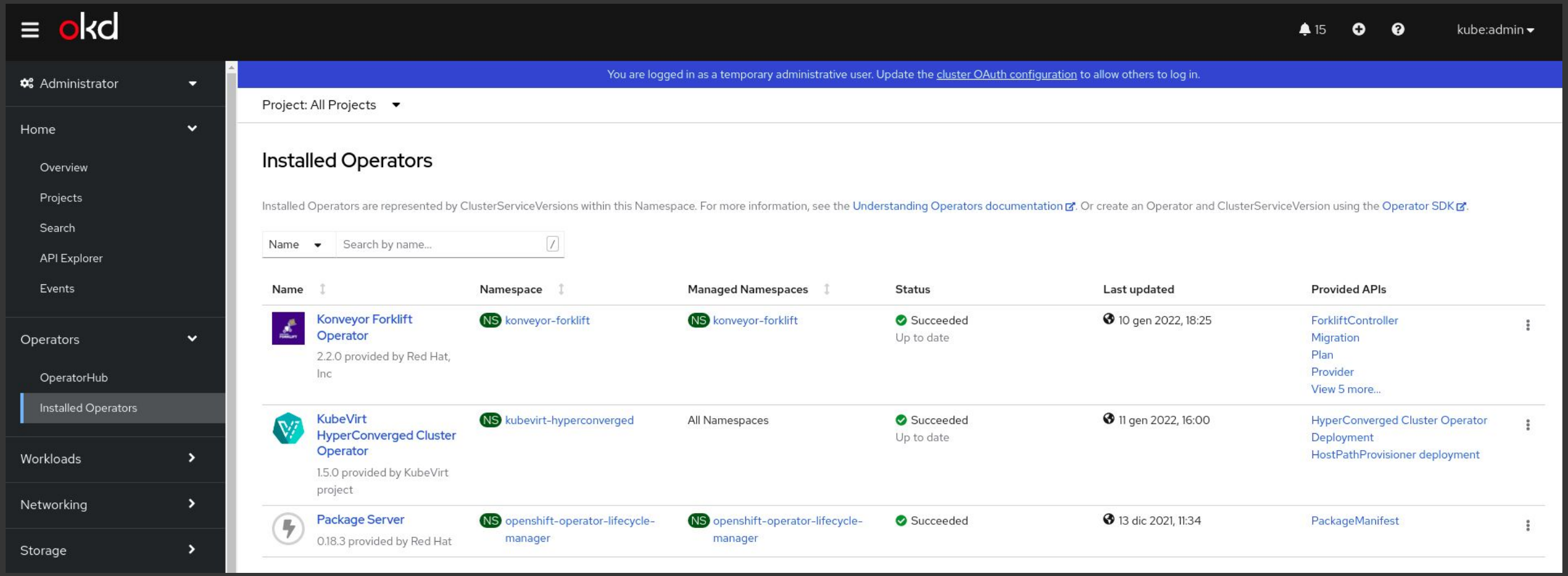
How can I get it?

It's a available "out-of-the-box" in:

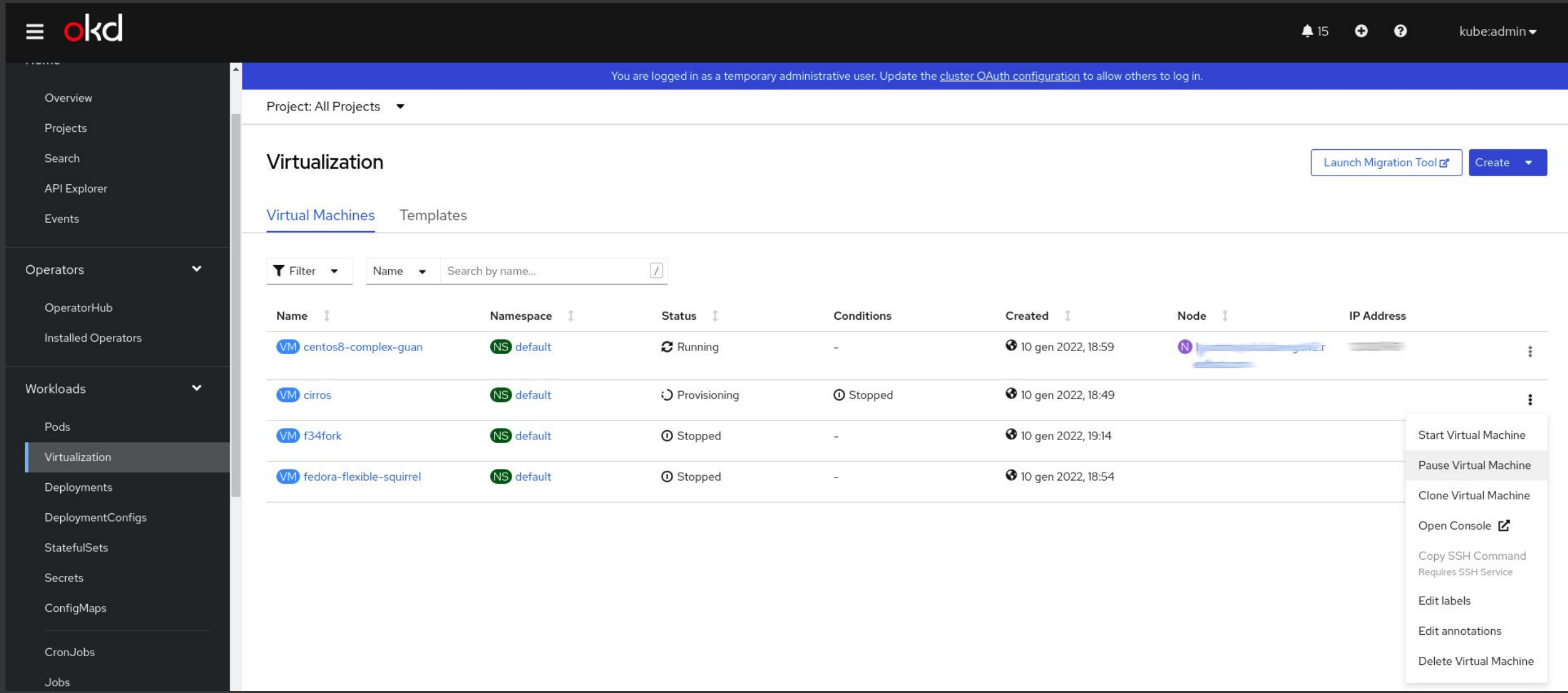
- OperatorHub.io
- OKD Community Operators Catalog

(almost) Single click install !

How does it look like?

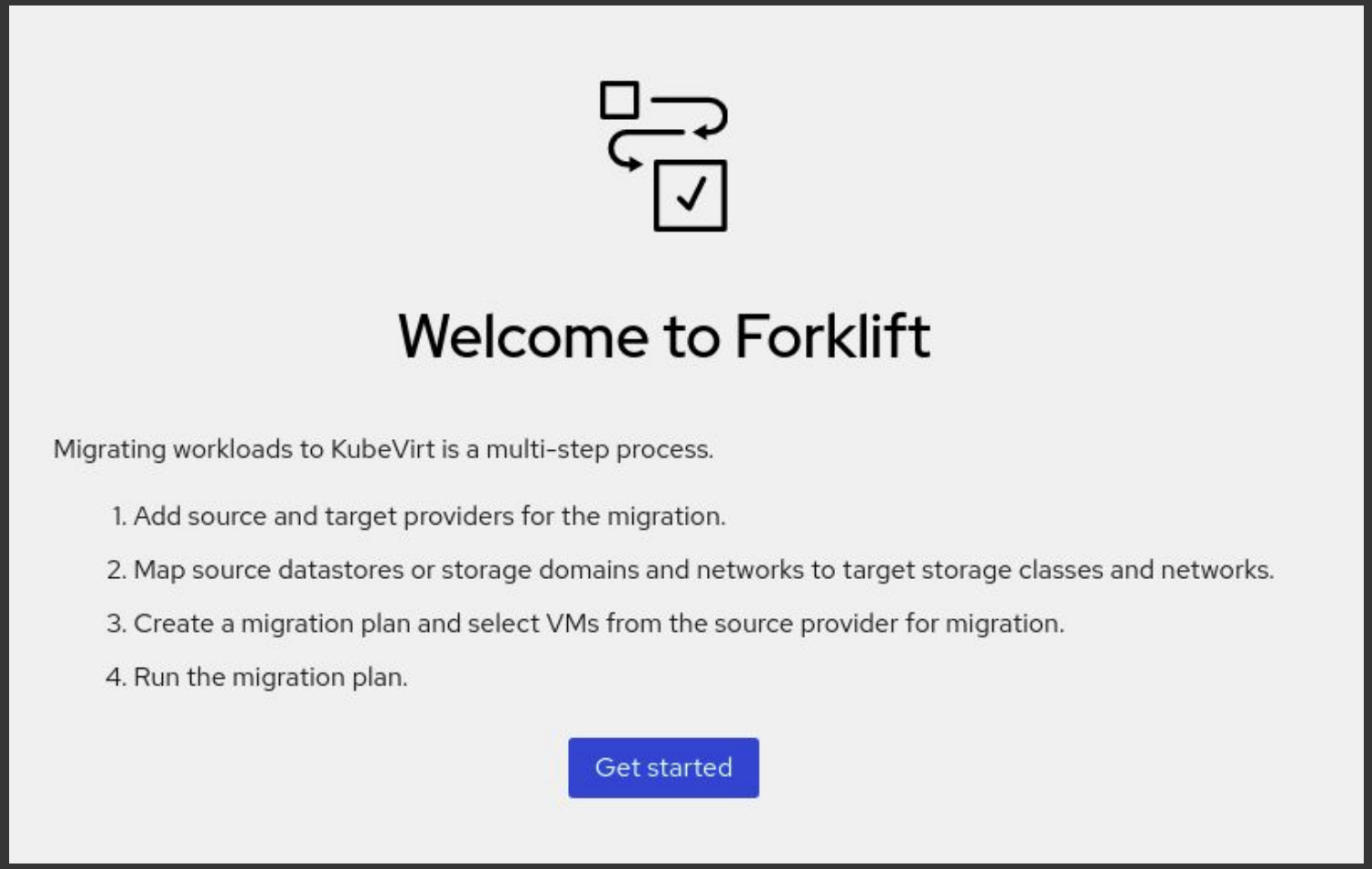


OKD Virtualization UI



Konveyor Forklift integration

Importing VMs from VMware vSphere, oVirt, and OpenStack to KubeVirt



How to **get** and **use** OKD Virtualization

DEMO TIME

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OKD Working Group

Website
okd.io

Twitter
twitter.com/okd_io

Slack
#openshift-dev on kubernetes.slack.com

Google Group
groups.google.com/forum/#!forum/okd-wg

Bi-weekly Video Conference Meetings
apps.fedoraproject.org/calendar/okd

Repositories
github.com/openshift/community
github.com/openshift/okd

OKD Virtualization SIG

Reddit
www.reddit.com/r/OKD_Virtualization

Twitter
twitter.com/OKD_Virt_SIG

Website
okd-virtualization.github.io

GitHub
github.com/okd-virtualization

Thank you

https://www.youtube.com/playlist?list=PLaR6Rq6Z4Iqc3WjZB-rUTPru8RKyOCnBo

https://twitter.com/okd_io

https://twitter.com/OKD_Virt_SIG

https://www.okd.io

https://okd-virtualization.github.io/