#RedHatOSD

RED HAT FORUMS

KUBERNETES + ENTERPRISE + AUTOMAZIONE = OPENSHIFT 4

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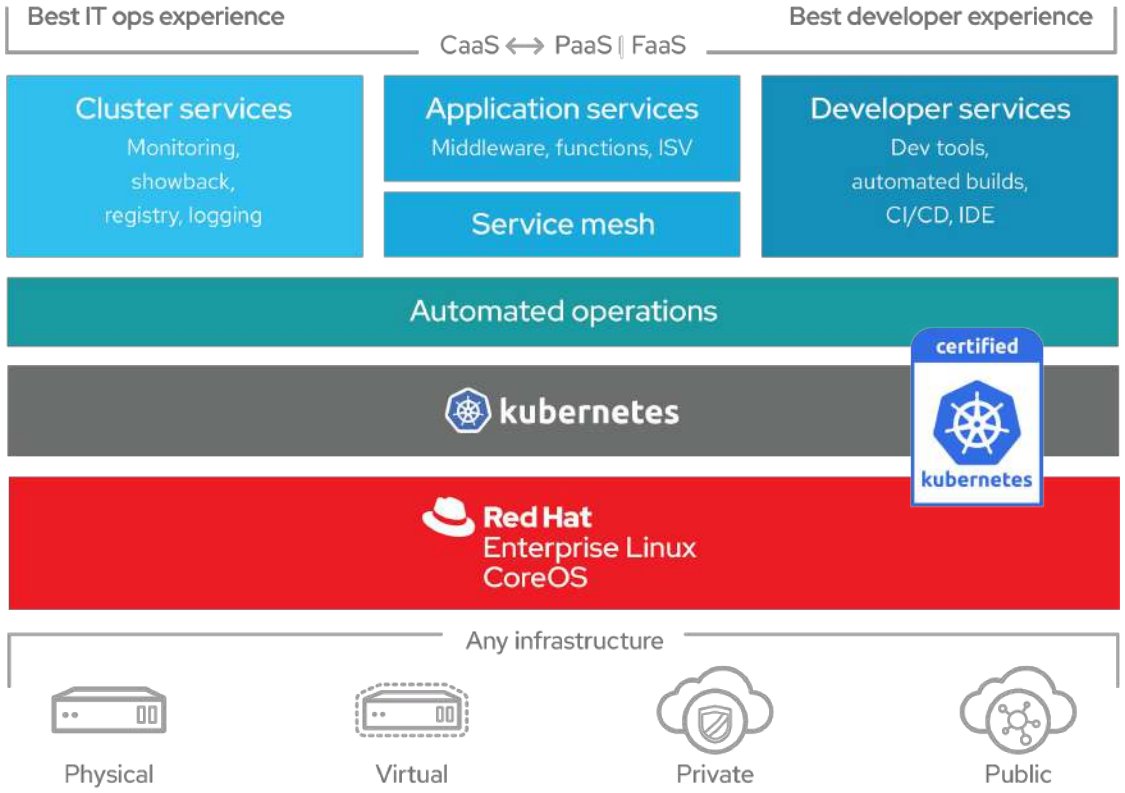
November 20th 2019 - Roma
December 3rd 2019 - Milano

Red Hat

OpenShift - A smarter Kubernetes platform



Automated, full-stack installation from the container host to application services

Seamless Kubernetes deployment to any cloud or on-premises environment

Autoscaling of cloud resources

One-click updates for platform, services, and applications

Red Hat

RED HAT® OPENSHIFT

Hybrid Cloud Experience:
cloud.redhat.com

Trusted enterprise Kubernetes

- 100% Kubernetes *
- Full Stack Automated Install
- Over the Air Updates & Day 2 Operations

A cloud-like experience, everywhere

- Hybrid, Multi-Cluster Management
- Operator Framework
- Operator Hub & Certified ISVs

Empowering developers to innovate

- Service Mesh (Istio)
- Serverless (Knative)
- CodeReady Workspaces (Eclipse Che)

* Check out and repeat the conformance test on your own OpenShift install at https://github.com/cncf/k8s-conformance/tree/master/v1.11/openshift

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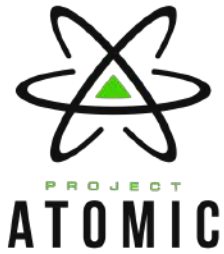
RHEL CoreOS



- Minimal Linux distribution
- Optimized for running containers
- Decreased attack surface
- Over-the-air automated updates
- Immutable foundation for OpenShift clusters
- Ignition-based Metal and Cloud host configuration

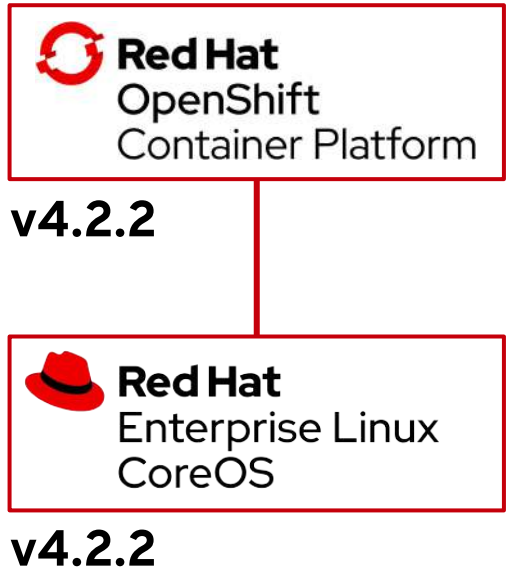
Immutable Operating System

Red Hat Enterprise Linux CoreOS is versioned with OpenShift

CoreOS is tested and shipped in conjunction with the platform. Red Hat runs thousands of tests against these configurations.

RHEL CoreOS admins are responsible for:

Nothing. 😀🙌



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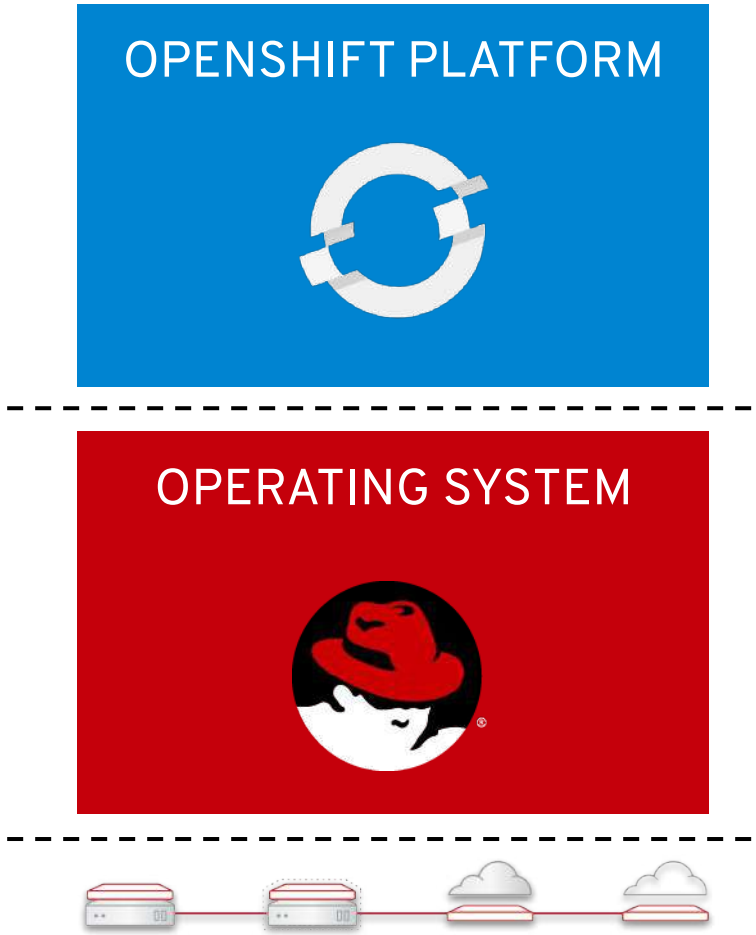
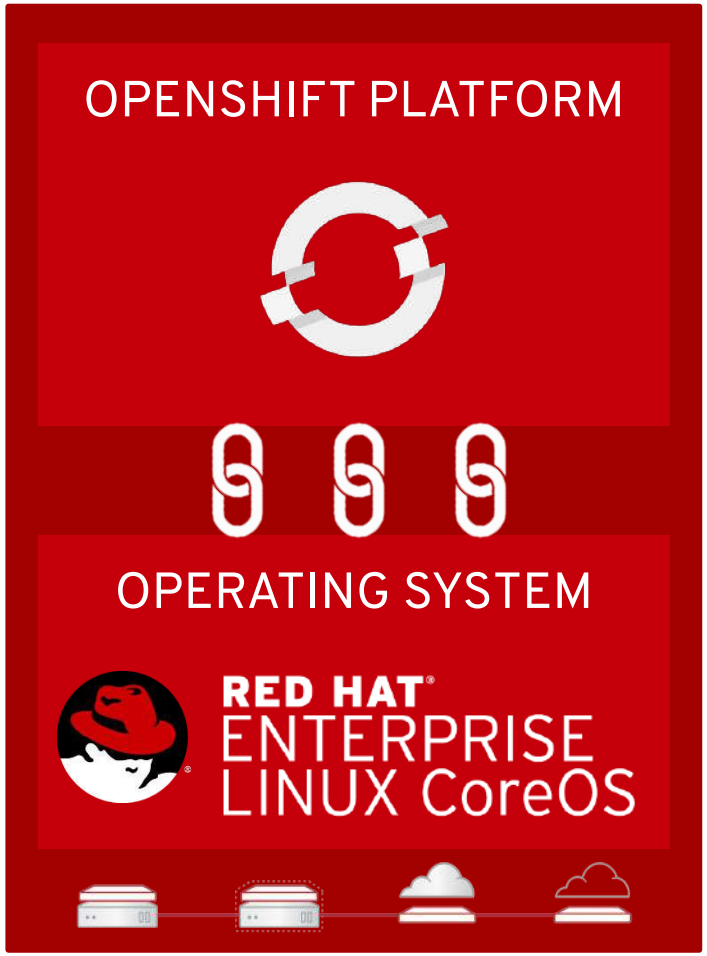
OPENSHIFT 3



OPENSHIFT 4



Red Hat

Installation Experiences

OPENSHIFT CONTAINER PLATFORM

Full Stack Automated

Simplified opinionated "Best Practices" for cluster provisioning

Fully automated installation and updates including host container OS.

Red Hat Enterprise Linux CoreOS

Pre-existing Infrastructure

Customer managed resources & infrastructure provisioning

Plug into existing DNS and security boundaries

Red Hat Enterprise Linux CoreOS

Red Hat Enterprise Linux

HOSTED OPENSHIFT

Azure Red Hat OpenShift

Deploy directly from the Azure console. Jointly managed by Red Hat and Microsoft Azure engineers.

OpenShift Dedicated

Get a powerful cluster, fully Managed by Red Hat engineers and support.

Red Hat

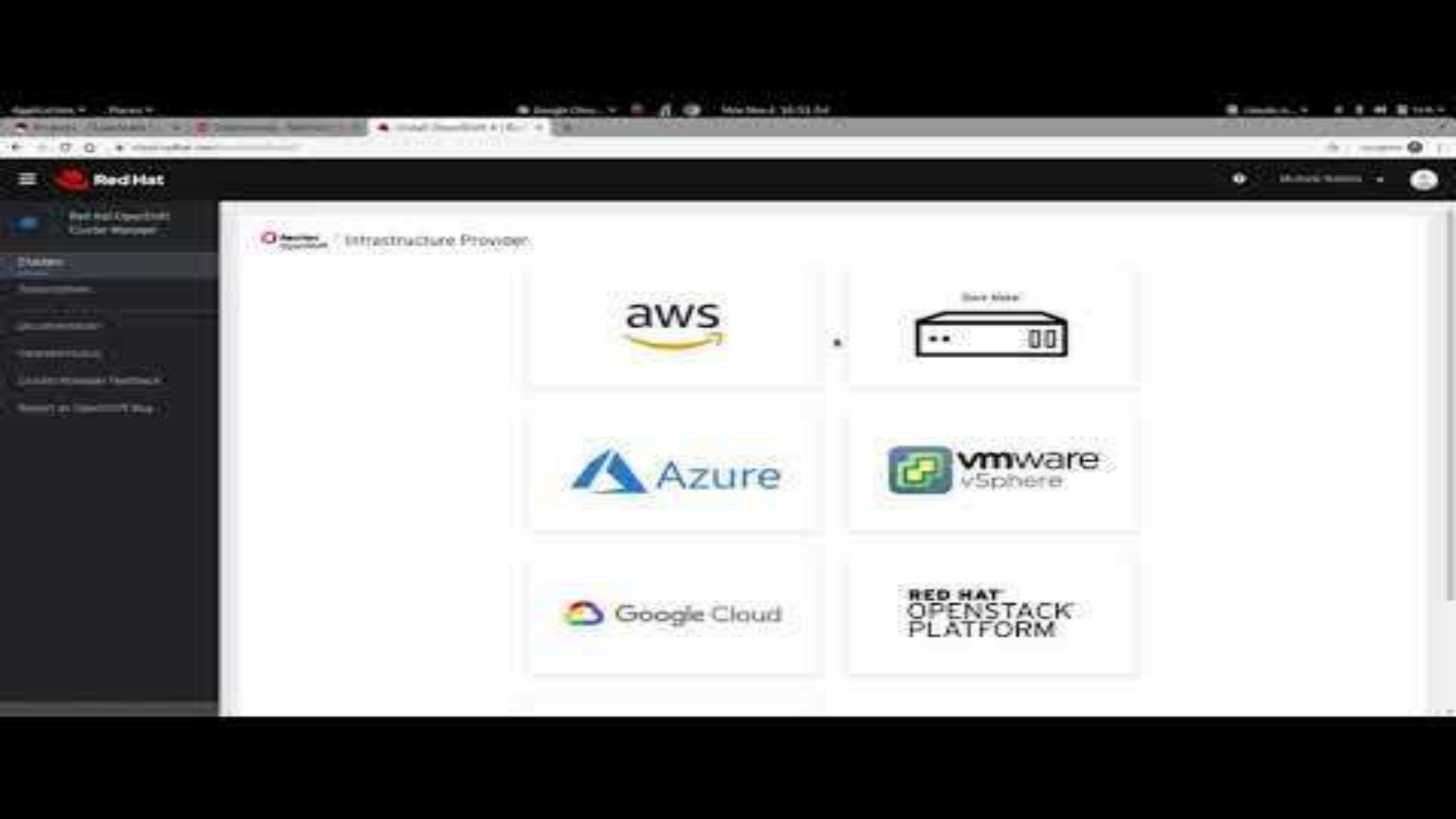
4.2 Supported Providers

Full Stack Automation (IPI)

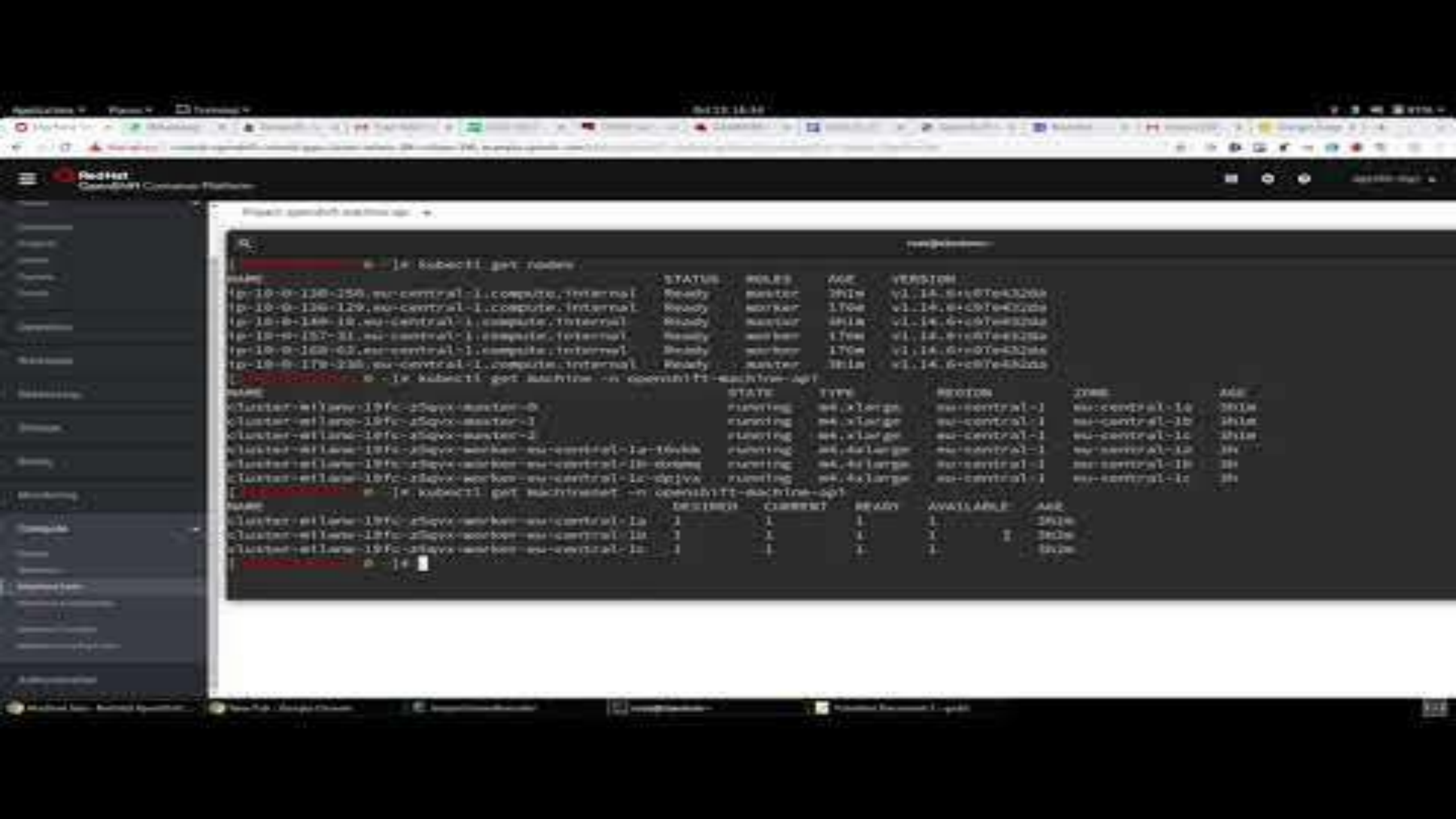
Pre-existing Infrastructure (UPI)

Red Hat

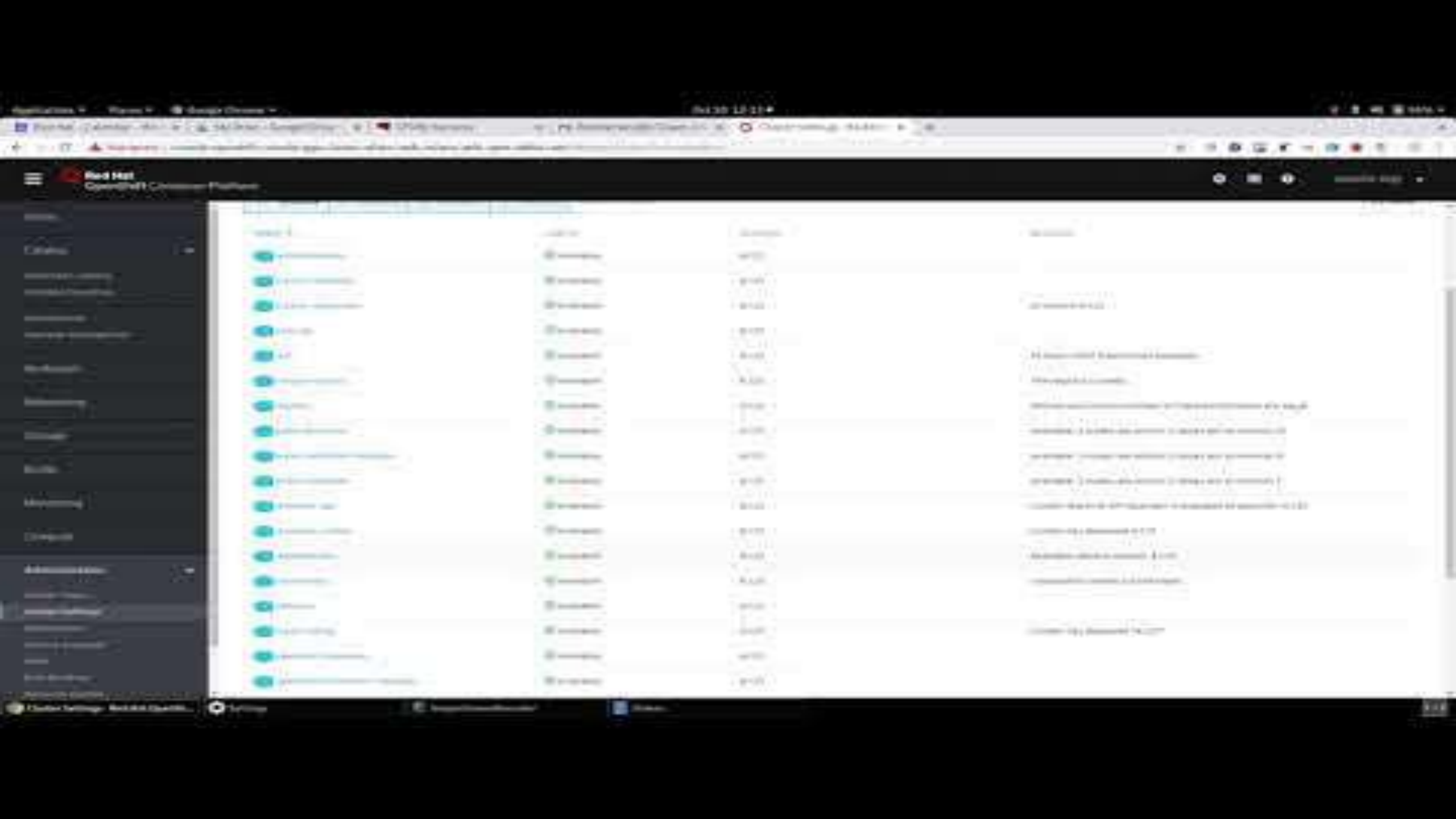
INSTALLATION


Red Hat
Infrastructure Provider
aws
Azure
vmware
vSphere
Google Cloud
RED HAT
OPENSTACK
PLATFORM

RESOURCES SCALING DEMO


Red Hat
OpenShift Container Platform
[redacted]# kubectl get nodes
NAME STATUS ROLES AGE VERSION
ip-10-0-138-158.eu-central-1.compute.internal Ready master 3h1m v1.14.6+cd7ec432bb
ip-10-0-136-129.eu-central-1.compute.internal Ready worker 170m v1.14.6+cd7ec432bb
ip-10-0-149-18.eu-central-1.compute.internal Ready master 3h1m v1.14.6+cd7ec432bb
ip-10-0-157-31.eu-central-1.compute.internal Ready worker 170m v1.14.6+cd7ec432bb
ip-10-0-168-62.eu-central-1.compute.internal Ready worker 170m v1.14.6+cd7ec432bb
ip-10-0-170-238.eu-central-1.compute.internal Ready master 3h1m v1.14.6+cd7ec432bb
[redacted]# kubectl get machine -n openshift-machine-api
NAME STATE TYPE REGION ZONE AGE
cluster-mllamo-19fc-z5qvx-master-0 running m4.xlarge eu-central-1 eu-central-1a 3h1m
cluster-mllamo-19fc-z5qvx-master-1 running m4.xlarge eu-central-1 eu-central-1b 3h1m
cluster-mllamo-19fc-z5qvx-master-2 running m4.xlarge eu-central-1 eu-central-1c 3h1m
cluster-mllamo-19fc-z5qvx-worker-eu-central-1a-tbvkb running m4.4xlarge eu-central-1 eu-central-1a 3h
cluster-mllamo-19fc-z5qvx-worker-eu-central-1b-dzmmq running m4.4xlarge eu-central-1 eu-central-1b 3h
cluster-mllamo-19fc-z5qvx-worker-eu-central-1c-qpjva running m4.4xlarge eu-central-1 eu-central-1c 3h
[redacted]# kubectl get machineset -n openshift-machine-api
NAME DESIRED CURRENT READY AVAILABLE AGE
cluster-mllamo-19fc-z5qvx-worker-eu-central-1a 1 1 1 1 3h1m
cluster-mllamo-19fc-z5qvx-worker-eu-central-1b 1 1 1 1 3h1m
cluster-mllamo-19fc-z5qvx-worker-eu-central-1c 1 1 1 1 3h1m
[redacted]#

UPGRADE DEMO


Red Hat
OpenShift Container Platform

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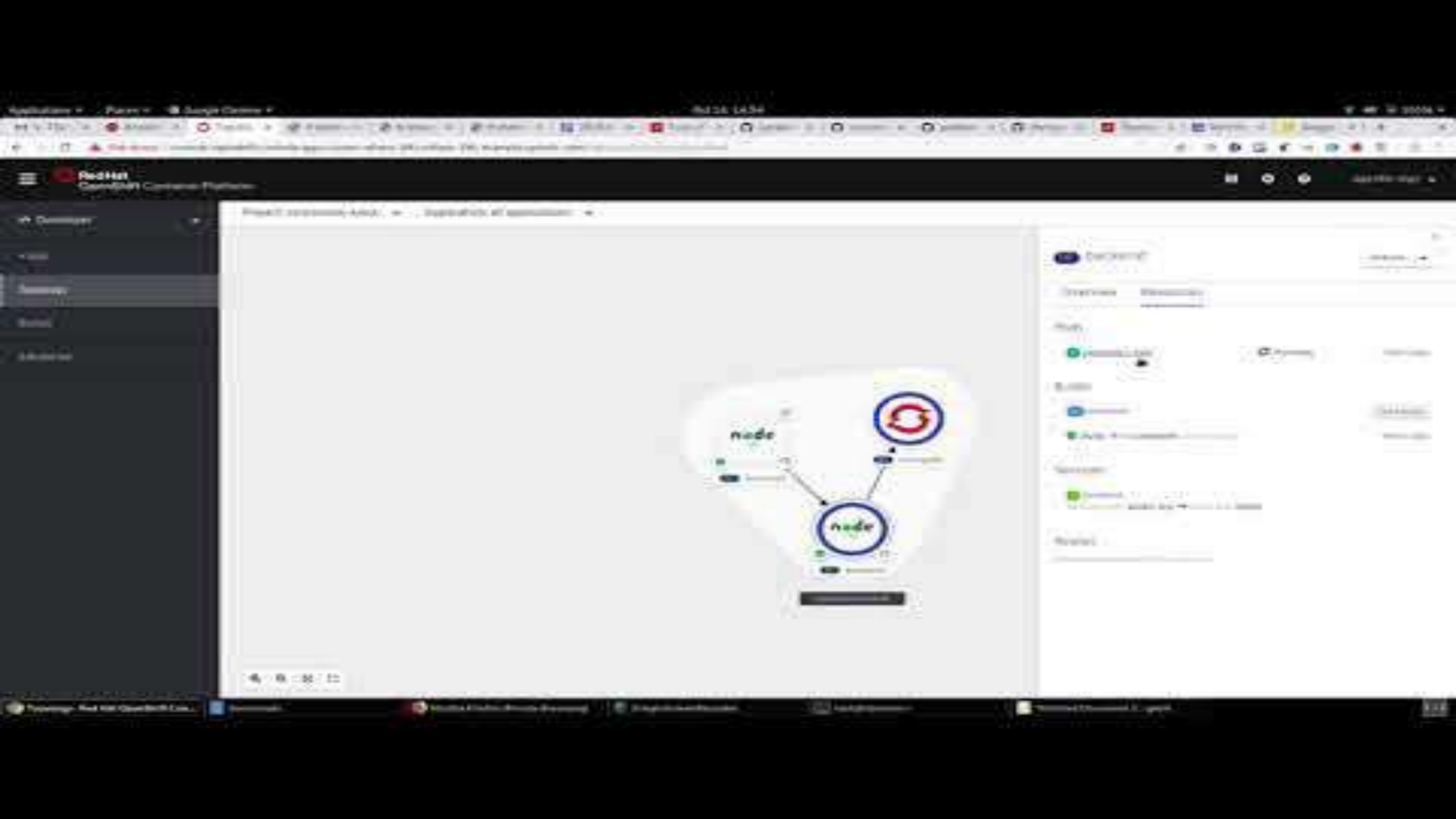
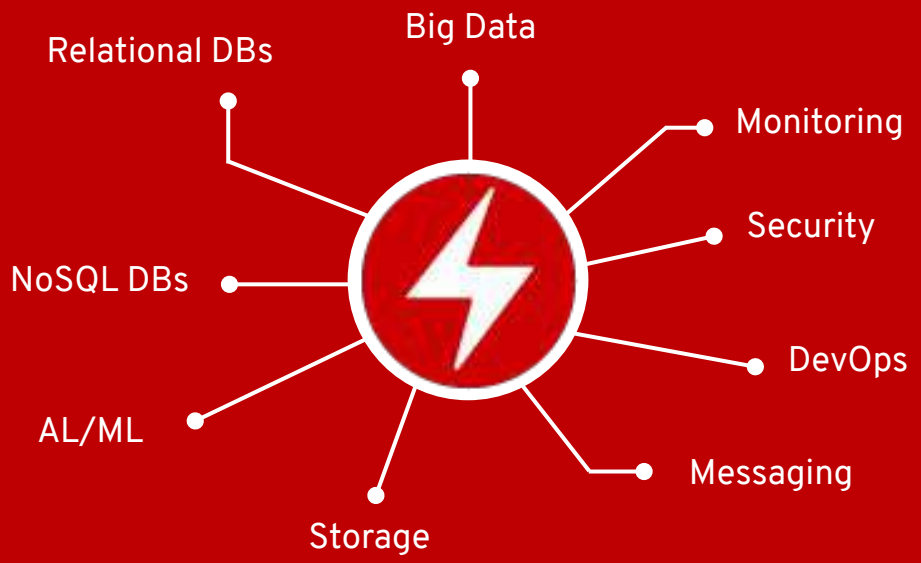
NEW DEVELOPER PORTAL DEMO

Red Hat

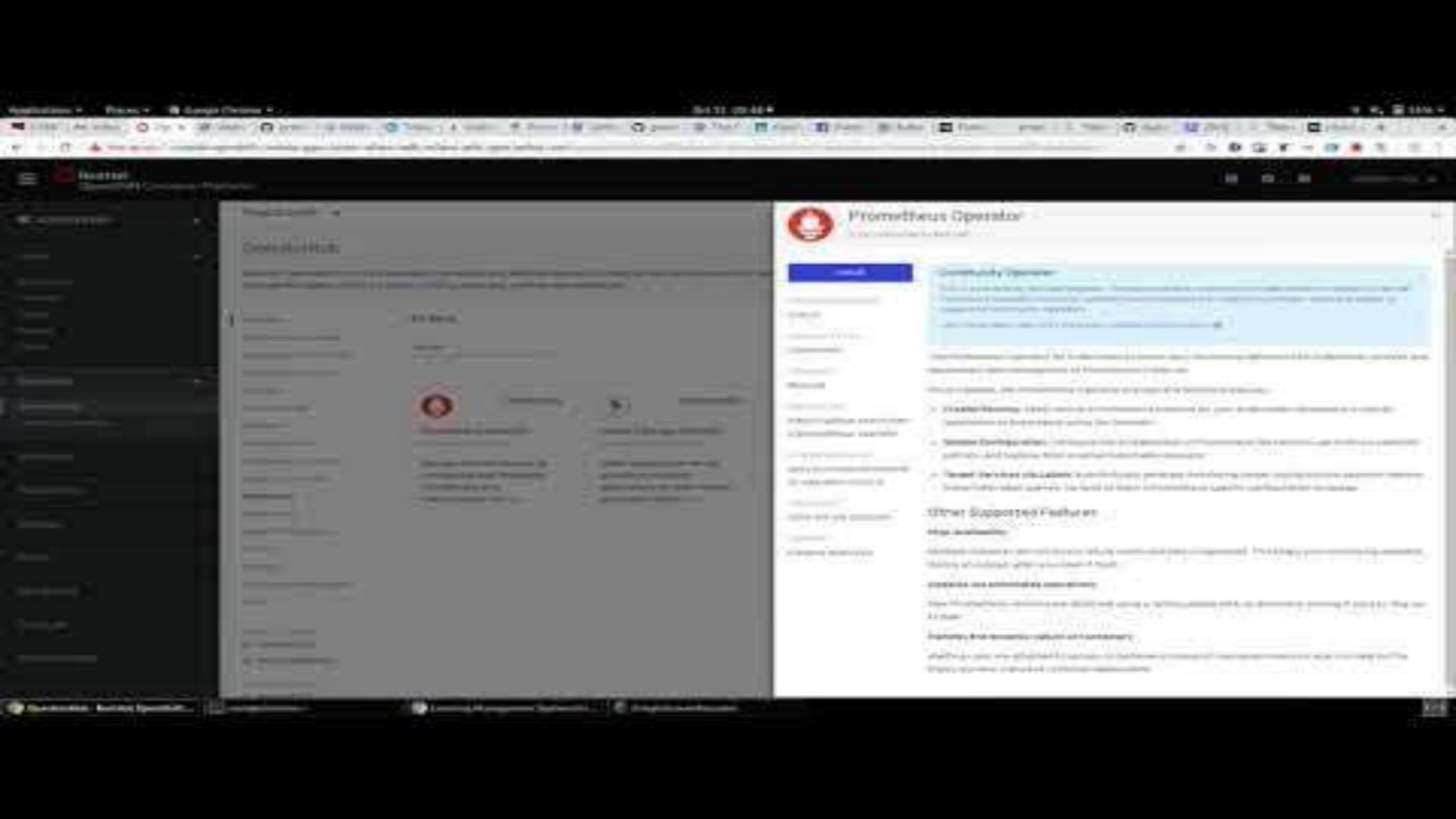

node
node

A broad ecosystem of workloads

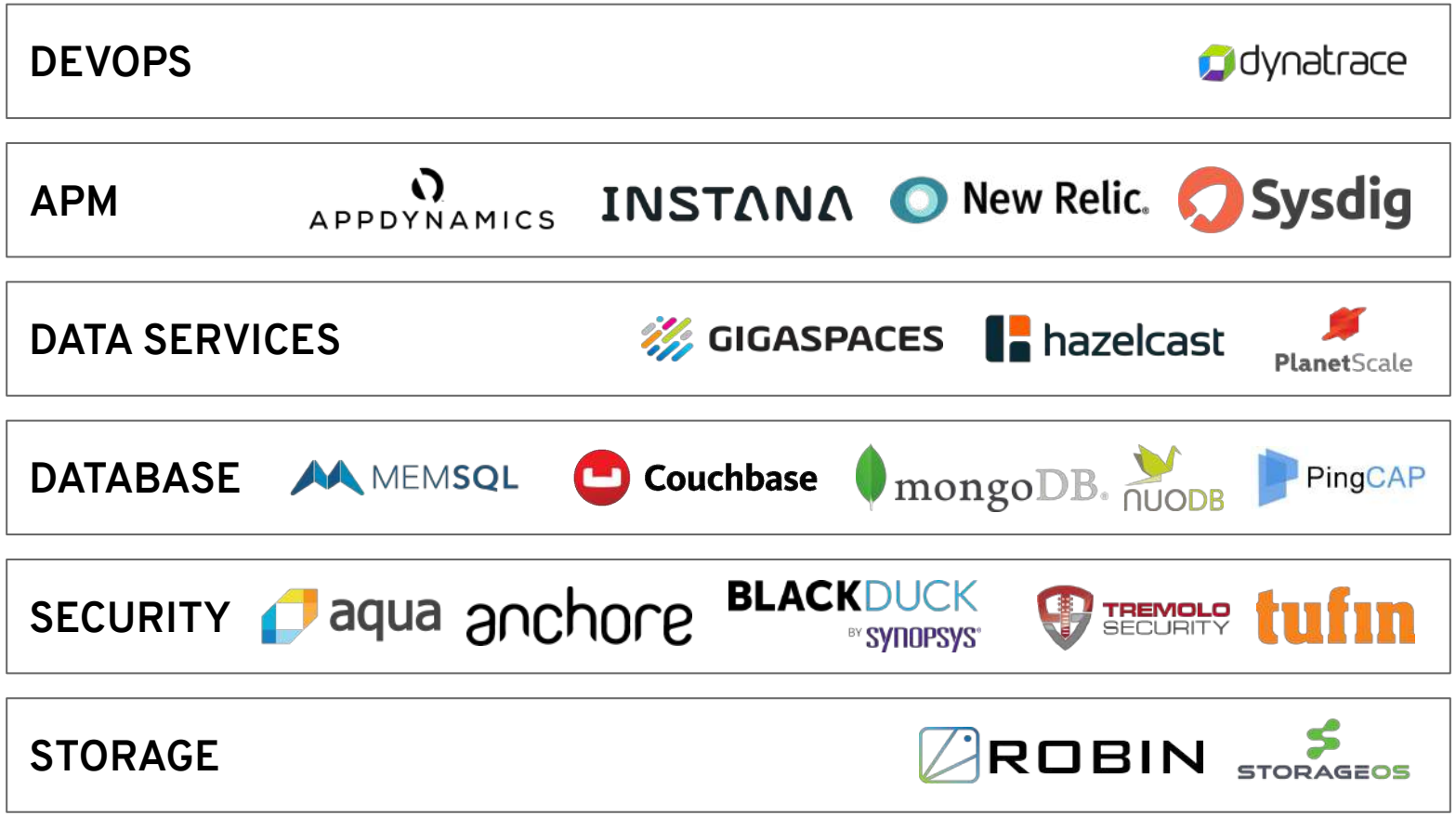
Operator-backed services allow for a
SaaS experience on your own infrastructure



OPERATORS
DEMO


Prometheus Operator

Red Hat Certified Operators



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