



RH Openshift Virtualization Opportunity

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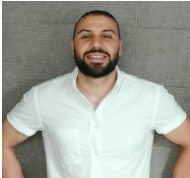



Sep 26




Agenda

- Architecture Overview
 - Openshift
 - Virtualization
- Installation
- Resources
- Demo




Interaktiv





Mohamed Tawfik <small>SPAIN</small> 	Alexandre Moreaux <small>FRANCE</small> 	Martin Roselieb <small>GERMANY</small> 	Iheanyi Obasi <small>UK</small> 
DATA BIZ APPS	AZURE HYBRID CLOUD	SAP ON AZURE	NETWORKING SECURITY

Claudio Cirotto <small>ITALY</small> 	Jeremy Ancelin <small>FRANCE</small> 	José Manuel Vaamonde <small>SPAIN</small> 
INFRA / HYBRID NETWORKING	APP MODERNIZATION DATABASES	DATA ANALYTICS AI / ML

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GCP GWS	RH OPENSIFT RH ANSIBLE	HPE GREENLAKE	HYBRID CLOUD

Davide Cappello <small>ITALY</small> 	Juraj Kurtulik <small>CZECH REPUBLIC</small> 	Sarina Stan <small>PORTUGAL</small> 
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TBH 	TBH 	TBH 	Carlos Medina <small>SPAIN</small> 
DATA ANALYTICS IaC / SAP	APP MODERNIZATION	SECURITY GOVERNANCE	GCP GWS

CoE

Pan-European virtual team of 30 regional SMEs that can be used by all countries

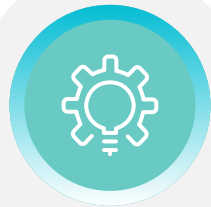


Awareness

Website, Blogs and Articles

Social Media (YouTube)

Success Stories

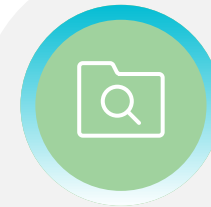


Enablement

Events and Workshops

Hands-on Labs & Demos

Certification Courses & Trainings
(ATP)



Pre-Sales

Architecture Design Solutions

POC

TCO / ROI assessments



Professional Services

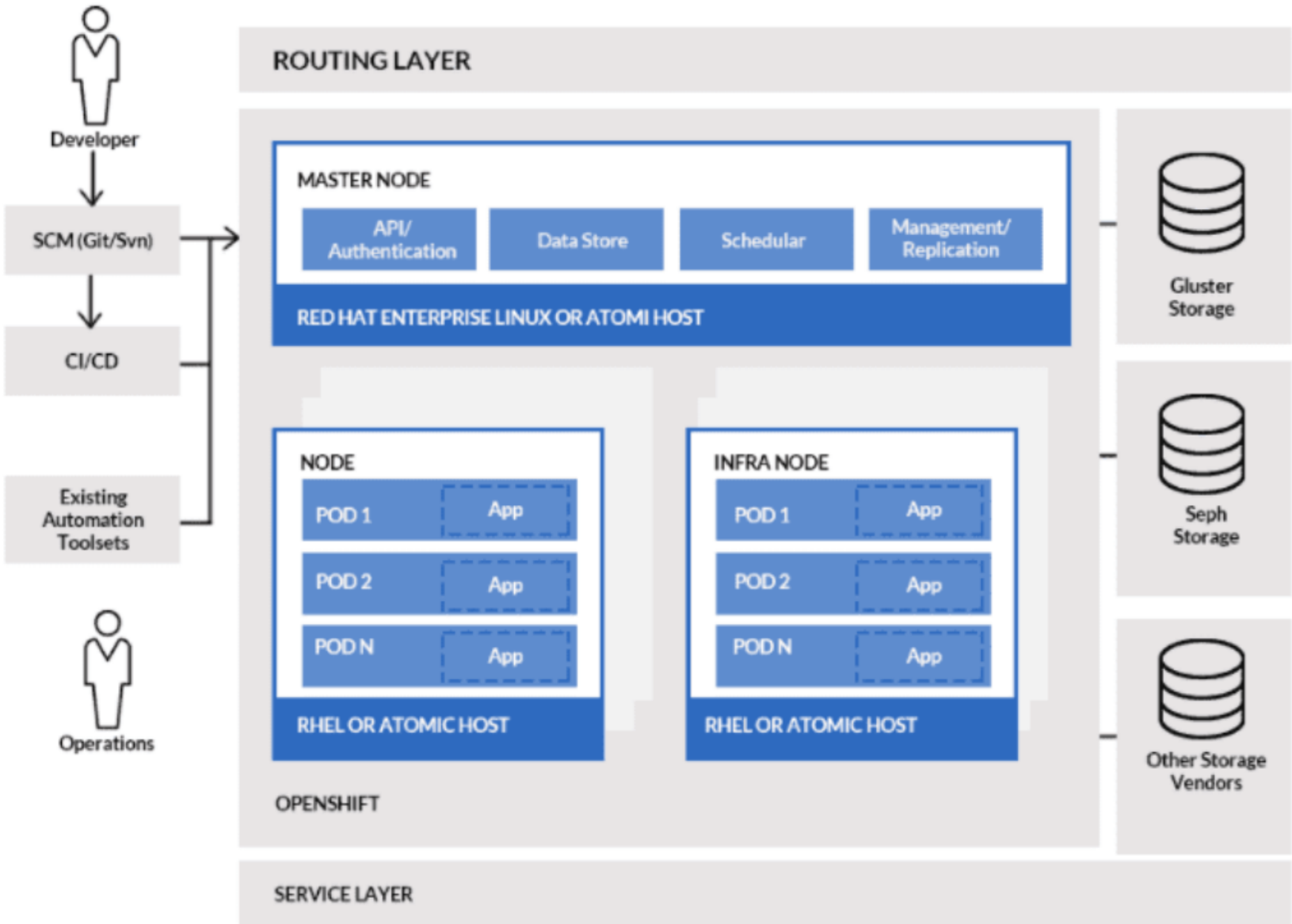
POV Development

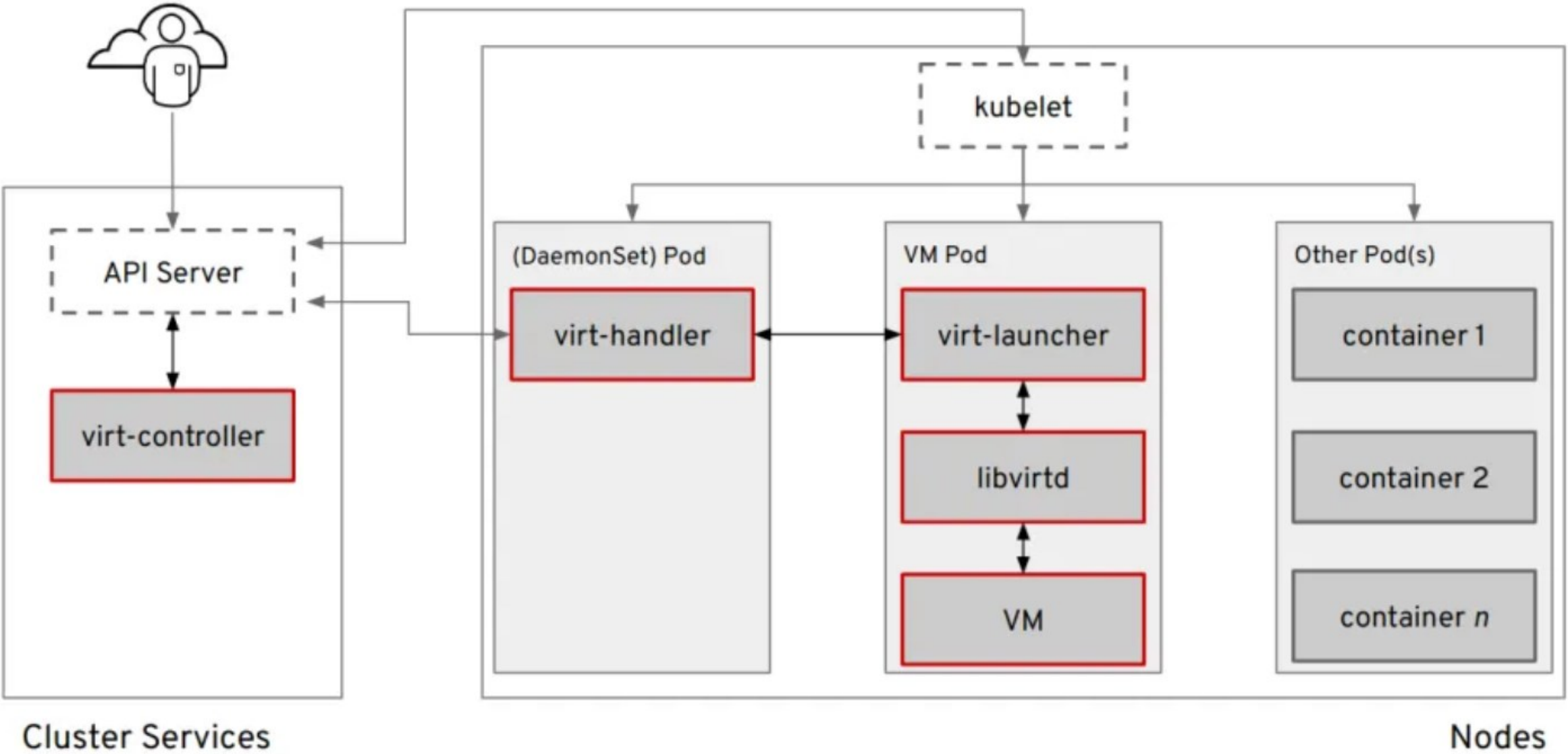
Migration planning and Assessment

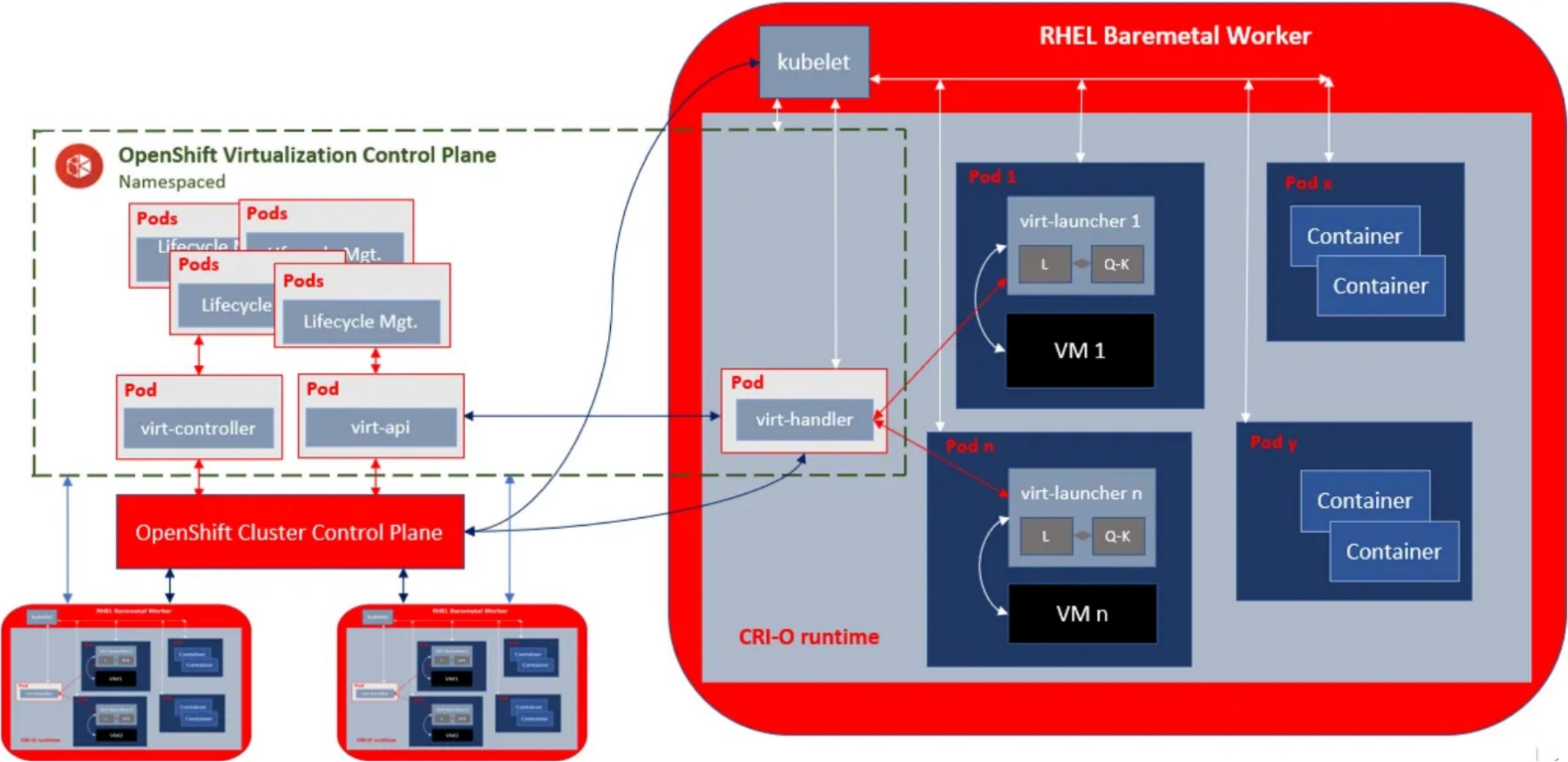
Optimization



OCPv - Architecture









OCPv - Installation

Components (simplified)

- Compute: virt-operator
- Storage: cdi-operator
- Network: cluster-network-addons-operator
- Scaling: ssp-operator
- Managing: hco-operator

Installed via OLM (Operation Lifecycle Manager)

[full RH documentation](#)


Installation

- Supported platforms
 - On-premise bare metal servers
 - Amazon Web Services bare metal instances
 - IBM Cloud® Bare Metal Servers
- Live Migration Requirements
 - Shared storage with ReadWriteMany (RWX) access mode.
 - Sufficient RAM and network bandwidth.
 - If the virtual machine uses a host model CPU, the nodes must support the virtual machine's host model CPU.
 - A dedicated Multus network (recommended)

Installation – via Webinterface


All Items

Virtualization ✕ 4 items

 Community


Forklift Operator
provided by Konveyor

Facilitates migration of VM workloads to OpenShift Virtualization

 Community


KubeVirt HyperConverged Cluster Operator
provided by KubeVirt project

A unified operator deploying and controlling KubeVirt and its supporting operators with...

 Red Hat

Migration Toolkit for Virtualization Operator
provided by Red Hat

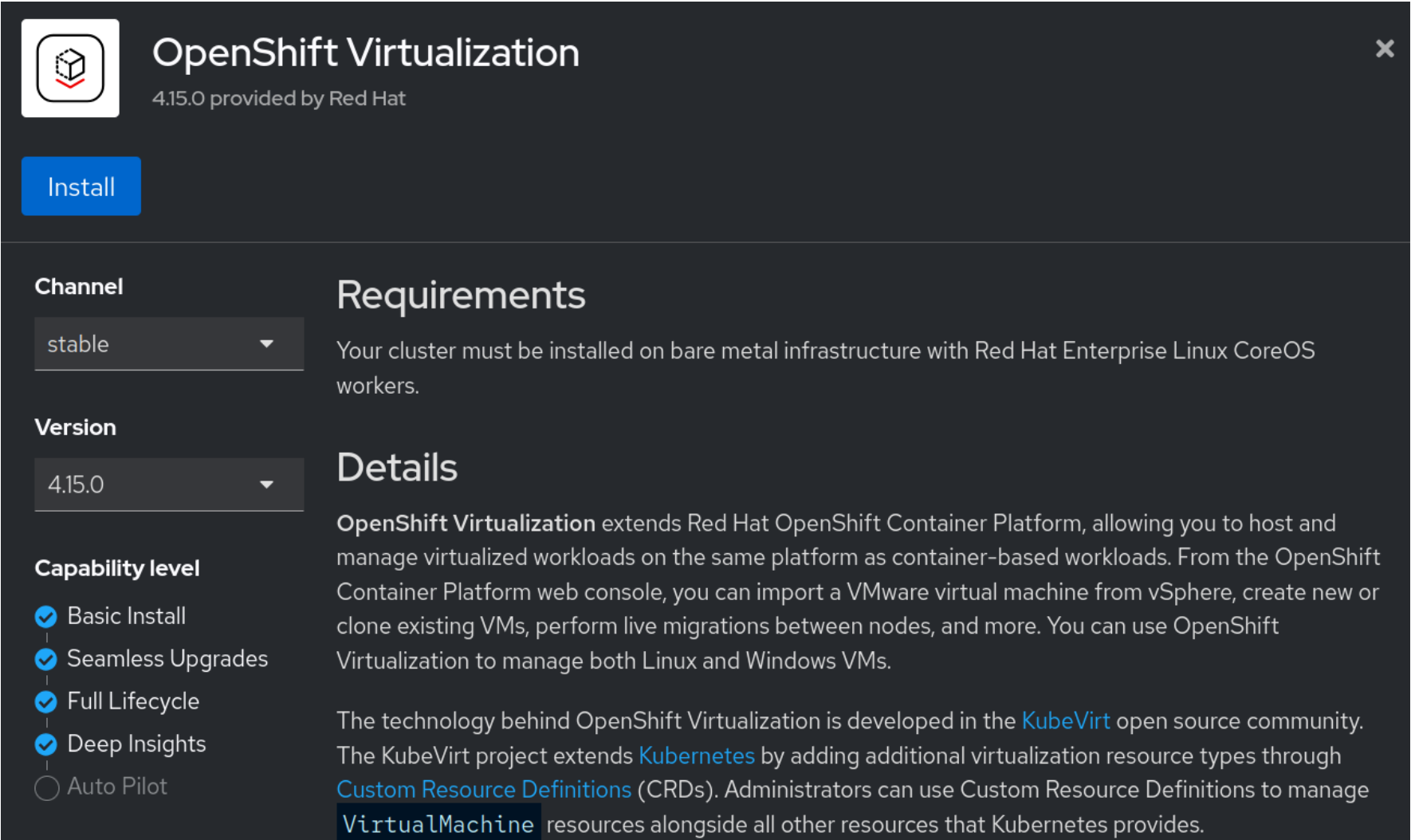
Facilitates migration of VM workloads to OpenShift Virtualization

 Red Hat

OpenShift Virtualization
provided by Red Hat

Creates and maintains an OpenShift Virtualization Deployment

Installation – via Webinterface



The screenshot shows the OpenShift Virtualization installation page. At the top left is the OpenShift logo, followed by the title "OpenShift Virtualization" and the version "4.15.0 provided by Red Hat". A blue "Install" button is prominently displayed. Below this, the interface is divided into several sections: "Channel" with a dropdown set to "stable", "Version" with a dropdown set to "4.15.0", and "Capability level" with four radio button options: "Basic Install", "Seamless Upgrades", "Full Lifecycle", and "Deep Insights" (all selected), and "Auto Pilot" (unselected). To the right, the "Requirements" section states that the cluster must be installed on bare metal infrastructure with Red Hat Enterprise Linux CoreOS workers. The "Details" section provides an overview of the technology, explaining that it extends the OpenShift Container Platform to host and manage virtualized workloads, and is developed in the KubeVirt open source community. The word "VirtualMachine" is highlighted in a dark box in the details text.

OpenShift Virtualization
4.15.0 provided by Red Hat

Install

Channel
stable

Version
4.15.0

Capability level

- Basic Install
- Seamless Upgrades
- Full Lifecycle
- Deep Insights
- Auto Pilot

Requirements




Your cluster must be installed on bare metal infrastructure with Red Hat Enterprise Linux CoreOS workers.

Details

OpenShift Virtualization extends Red Hat OpenShift Container Platform, allowing you to host and manage virtualized workloads on the same platform as container-based workloads. From the OpenShift Container Platform web console, you can import a VMware virtual machine from vSphere, create new or clone existing VMs, perform live migrations between nodes, and more. You can use OpenShift Virtualization to manage both Linux and Windows VMs.

The technology behind OpenShift Virtualization is developed in the [KubeVirt](#) open source community. The KubeVirt project extends [Kubernetes](#) by adding additional virtualization resource types through [Custom Resource Definitions](#) (CRDs). Administrators can use Custom Resource Definitions to manage **VirtualMachine** resources alongside all other resources that Kubernetes provides.


Installed OCPv Operator

	OpenShift Virtualization 4.15.0 provided by Red Hat	NS openshift-cnvr	NS openshift-cnvr	✓ Succeeded Up to date	🌐 10 Jun 2024, 10:46	OpenShift Virtualization Deployment HostPathProvisioner Deployment	⋮
	Local Storage 4.15.0-202402082307 provided by Red Hat	NS openshift-local-storage	NS openshift-local-storage	✓ Succeeded Up to date	🌐 8 Jun 2024, 05:56	Local Volume Local Volume Set Local Volume Discovery	⋮
	Migration Toolkit for Virtualization Operator 2.5.0 provided by Red Hat	NS openshift-mtv	NS openshift-mtv	✓ Succeeded Up to date	🌐 24 Sept 2024, 13:00	ForkliftController Hook Host Migration View 6 more...	⋮

OCPv - Instance

Project: openshift-cnv ▾

Installed Operators > Operator details



OpenShift Virtualization
4.15.0 provided by Red Hat

Actions ▾

Details YAML Subscription Events All instances OpenShift Virtualization Deployment HostPathProvisioner Deployment

HyperConvergeds

Create HyperConverged

Name ▾ Search by name...

Name ↑	Kind ↑	Status ↑	Labels ↑	Last updated ↑
HC kubevirt-hyperconverged	HyperConverged	Conditions: Reconcile Complete, Available, Upgradeable	app=kubevirt-hyperconverged	🌐 15 Mar 2024, 19:03

Demo

LIVE

Resources

- [OCPv](#)
- [Demonstration of Red Hat Migration Toolkit for Virtualization](#)
- [VMware to OCPv Migration](#)

- [Assessment Guide](#)
- [Assessment Document](#)

- [Make an Appointment with Me](#)

Resources

[Understanding the Red Hat OpenShift Virtualization Opportunity](#)

[Architecting OpenShift Virtualization](#)

[OpenShift Virtualization - Migration Methodology](#)

[Demystifying the VMware to Red Hat OpenShift Virtualization](#)

[Red Hat OpenShift Virtualization Technical Overview \(DO016\) v4.14](#)

Thank you

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