



OpenShift Origin Administration (OR-ADM)

Keywords

PaaS, OpenShift Origin,
OpenShift Enterprise, OpenShift Online,
Master, Node, OKD

References



OpenShift Origin Documentation
<https://docs.openshift.org/>

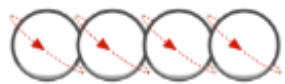


Introduction

IT Must Evolve to Stay Ahead of Demands

Development Process

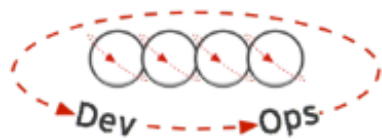
Waterfall



Agile



DevOps



Application Architecture

Monolithic



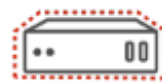
N-Tier

Microservices



Deployment & Packaging

Physical Servers



Virtual Servers



Containers



Application Infrastructure

Datacenter



Hosted



Cloud



Kubernetes Distributions (1)

- **Community-supported** distributions are the free and open source packages with which you can deploy the platform yourself and give it a go. Minikube is a genuine Kubernetes environment for local, experimental deployments on a single computer.
- **Vendor distro (no value-add)** shows companies that deliver software solutions, or cloud-based platforms, that include pure Kubernetes plus vendor-backed support.

Kubernetes Distributions (2)

- **Vendor distro (with value-add)** shows companies that offer more complete environments, including scheduling, development, and lifecycle management, featuring Kubernetes at the core of their systems.
- **App Platforms / PaaS** shows full-scale Platforms as a Service, including Red Hat OpenShift, that actively abstract away the management and maintenance of Kubernetes behind end-to-end, automated development and deployment environments.

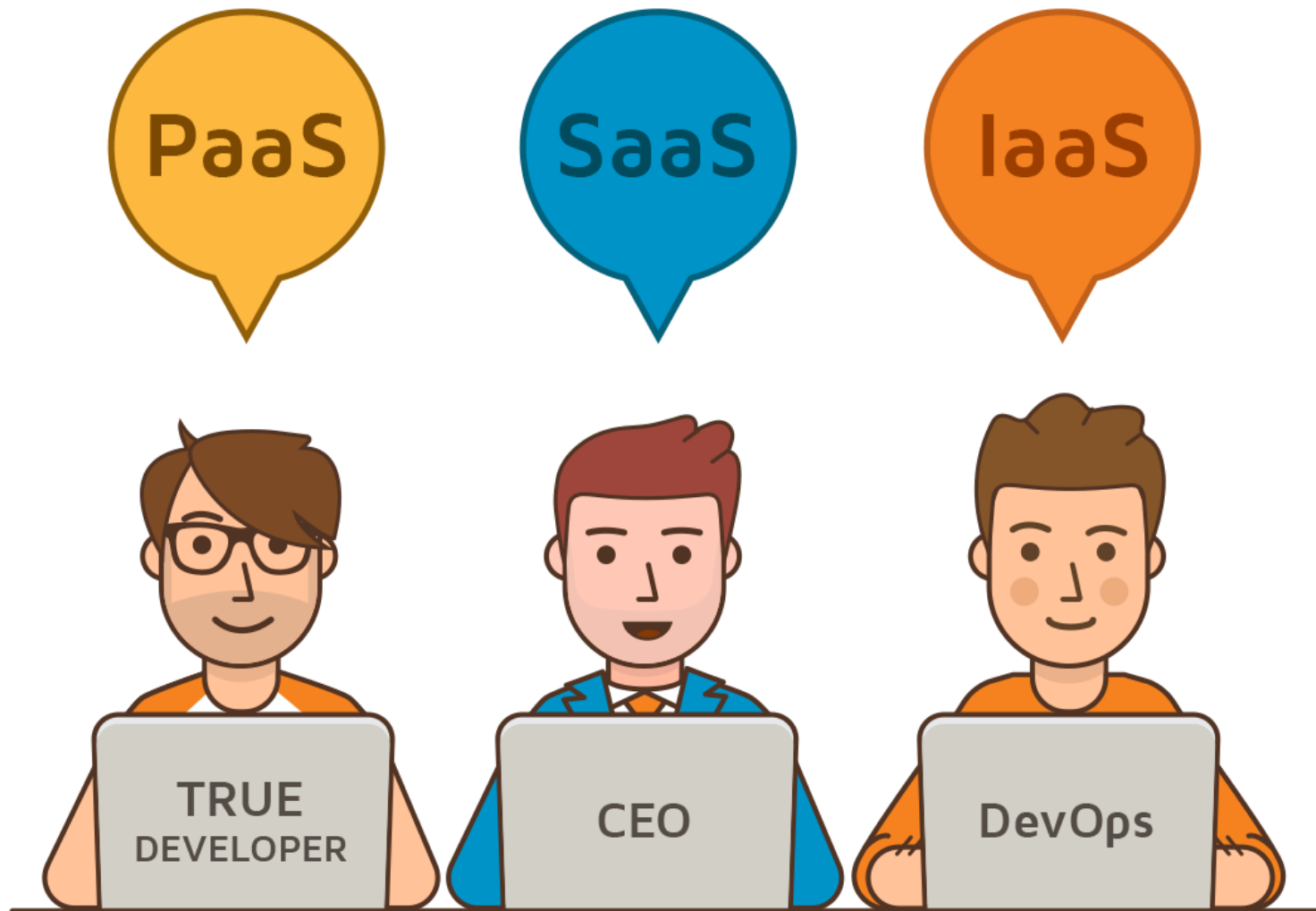
Kubernetes Distributions (3)

 Community Supported	 Vendor Distro (no value add)	 Vendor Distro (with value add)	 App Platforms / PaaS
 CNCF kubernetes/kops	 APPREND A	 Caicloud	 APPUIO
 kubernetes	 CANONICAL juju-solutions/ bundle-canonical-kubernetes	 fabric8	 IBM Bluemix™
 minikube	 Diamanti	 fission	 FusionStage
	 ElasticKube	 samsung-cnct/k2	 getup
	 Giant Swarm	 pivotal.io/kubo	 HASURA
	 Google Container Engine	 LIVEWYER	 Kel
	 HYPER.SH	 vmware/photon-controller	 KONTENA
	 JETSTACK	 PLATFORM9	 LAST.BACKEND
	 KUBE2GO	 qstack	 OPENSIFT
	 RANCHER	 Shape Blue	 RED HAT OPENSIFT Container Platform
	 SUPERGIANT	 STACK POINT CLOUD	 RED HAT OPENSIFT Dedicated
	 SUSE	 STRATOSCALE	 ORIGIN
	 tenxcloud.com	 TECTONIC by CoreOS	
		 Telekube	
		 weavecloud	

PaaS Software



Cloud Users





OPENSIFT
origin



What is OpenShift Origin?

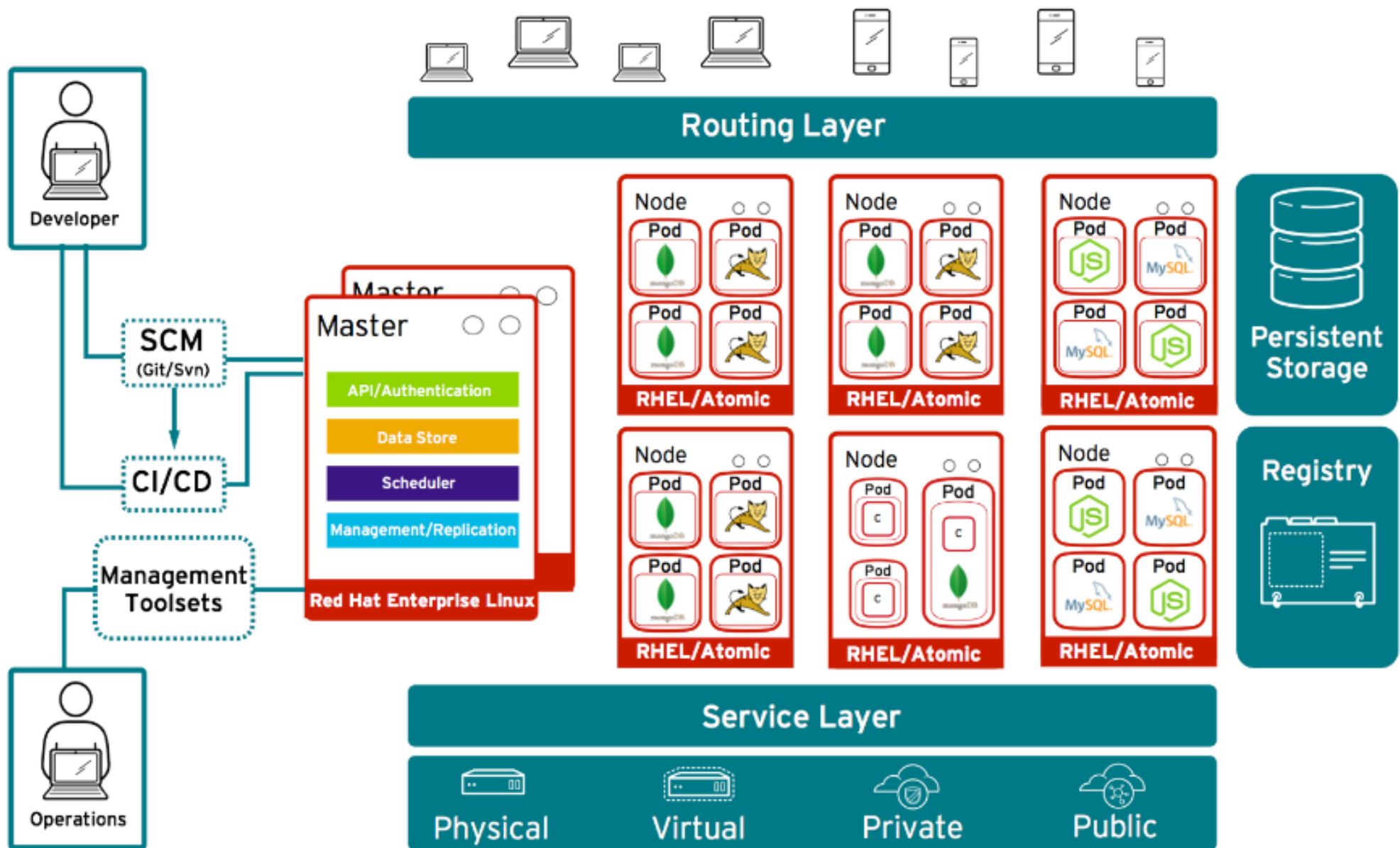
- OpenShift Origin is a **distribution of Kubernetes** optimized for continuous application development and multi-tenant deployment.
- OpenShift adds **developer and operations-centric** tools on top of Kubernetes to enable rapid application development, easy deployment and scaling, and long-term lifecycle maintenance for small and large teams.



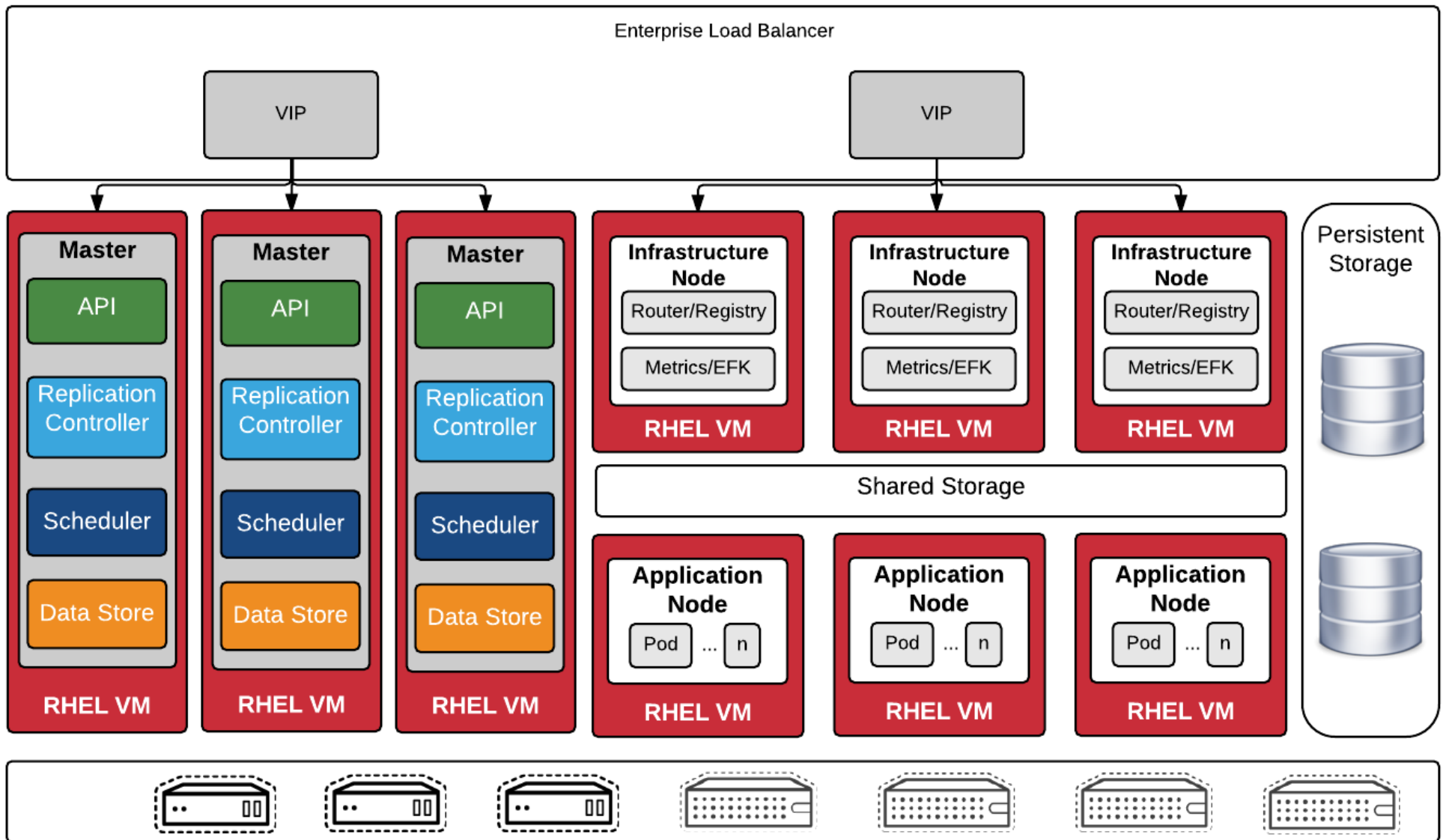
Open Source Container Application Platform

- Origin is the upstream community project that powers OpenShift.
- Built around a core of Docker container packaging and Kubernetes container cluster management, Origin is also augmented by application lifecycle management functionality and DevOps tooling.
- Origin provides a complete open source container application platform.

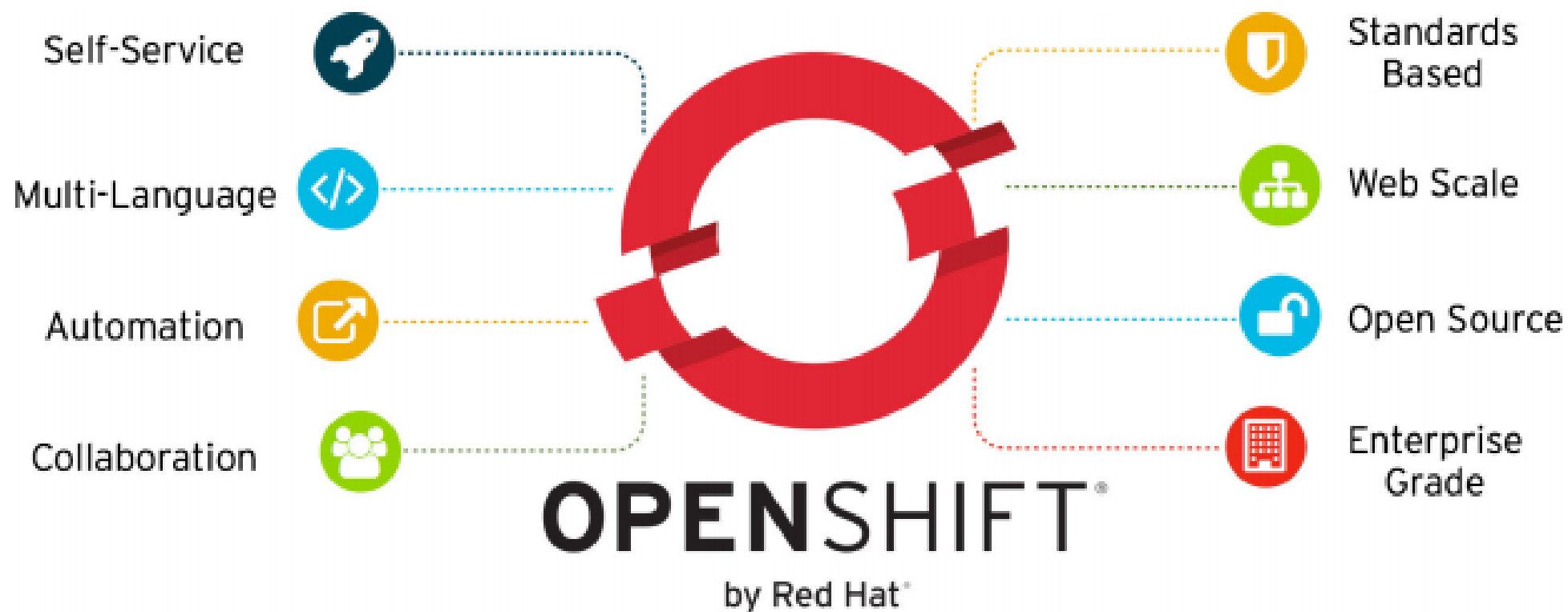
OpenShift Architecture



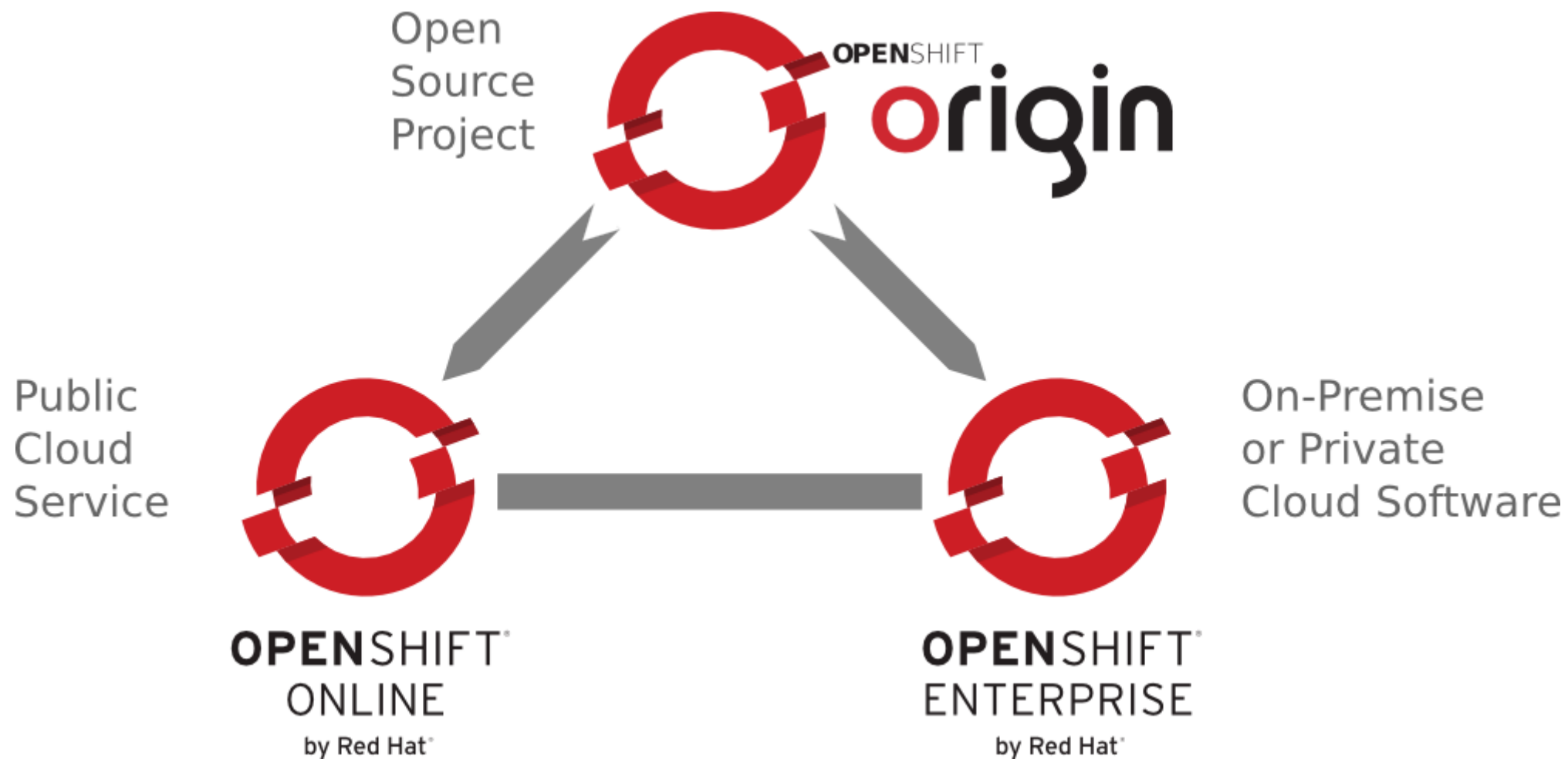
Highly-Available OpenShift Origin Cluster



Why OpenShift



Flavors of OpenShift



Flavors of OpenShift (2)

- **OpenShift Enterprise**

It's the platform software to deploy and manage OpenShift on your own infrastructure of choice. It integrates with Red Hat Enterprise Linux 6 and is tested via Red Hat's QA process in order to offer a stable, supportable product with may be important for enterprises.

- **OpenShift Online**

is managed by Red Hat's OpenShift operations team, and quickstart templates enable developers to push code with one click, helping to avoid the intricacies of application provisioning. You can view it as OpenShift delivered as a SaaS (*Software as a Service*)

Community Powered Innovation



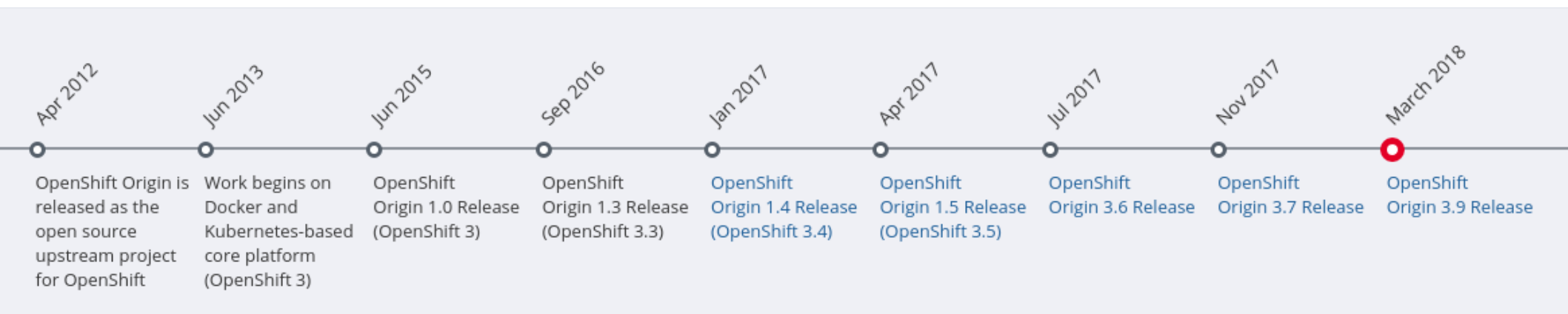




Minishift

- Minishift is a tool that helps you run OpenShift locally by launching a single-node OpenShift cluster inside a virtual machine. With Minishift you can try out OpenShift or develop with it, day-to-day, on your local machine.
- Minishift can run on Windows, macOS, and GNU/Linux operating systems.
- Minishift uses `libmachine` for provisioning virtual machines, and OpenShift Origin for running the cluster.

OpenShift Releases



OpenShift → OKD



- We're continuing that effort by introducing a naming change to OKD to better represent our project as a distribution of Kubernetes, align our terminology with the larger cloud-native community naming conventions, and clarifies how this upstream project functions within the **Red Hat OpenShift** product line.



OKD

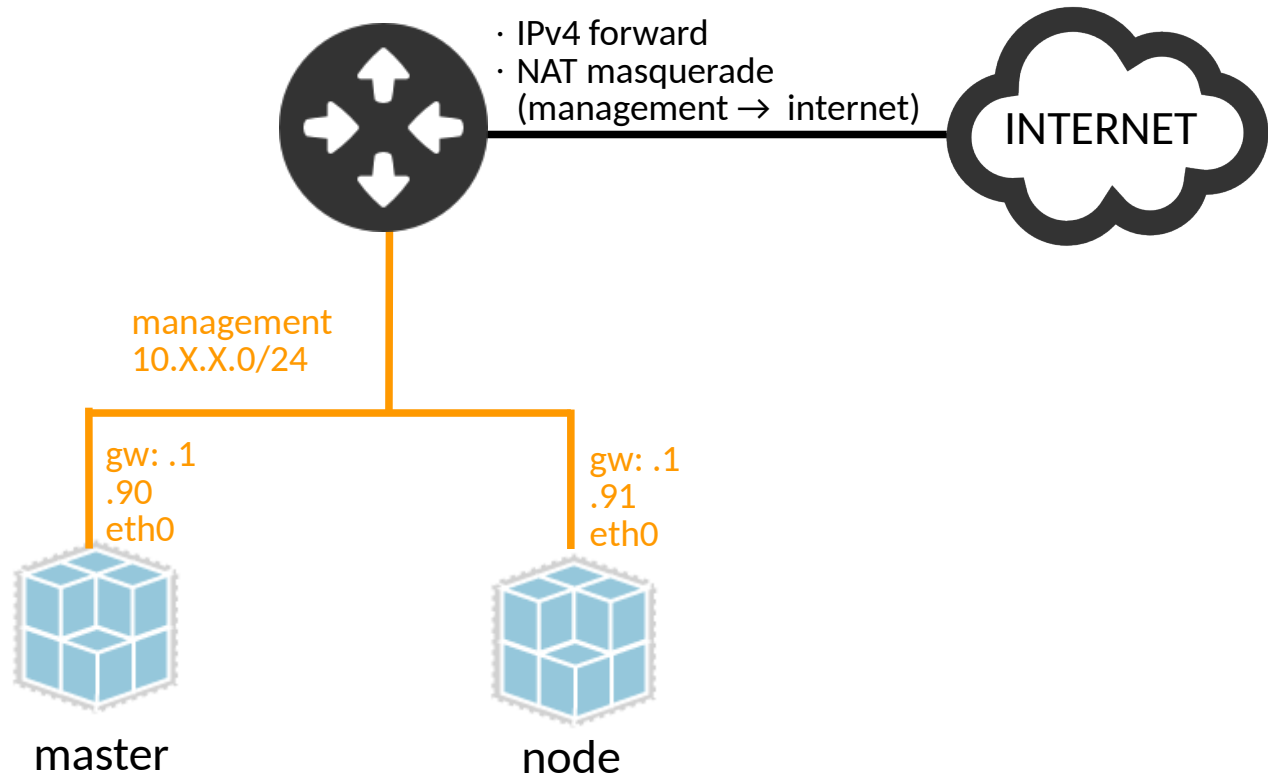
- OKD is here as of today (Aug. 3, 2018) as we release our next version (3.10). Beyond the great features in Kubernetes 1.10 and the user and customer focused stability, the most visible change in this release will be the introduction of the new name: OKD and the re-launch of the community website as OKD.io. You'll also see the new logo appear in the web console, on the documentation and on our new website: <https://okd.io>



Lab

OpenShift Installation

Lab Topology





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