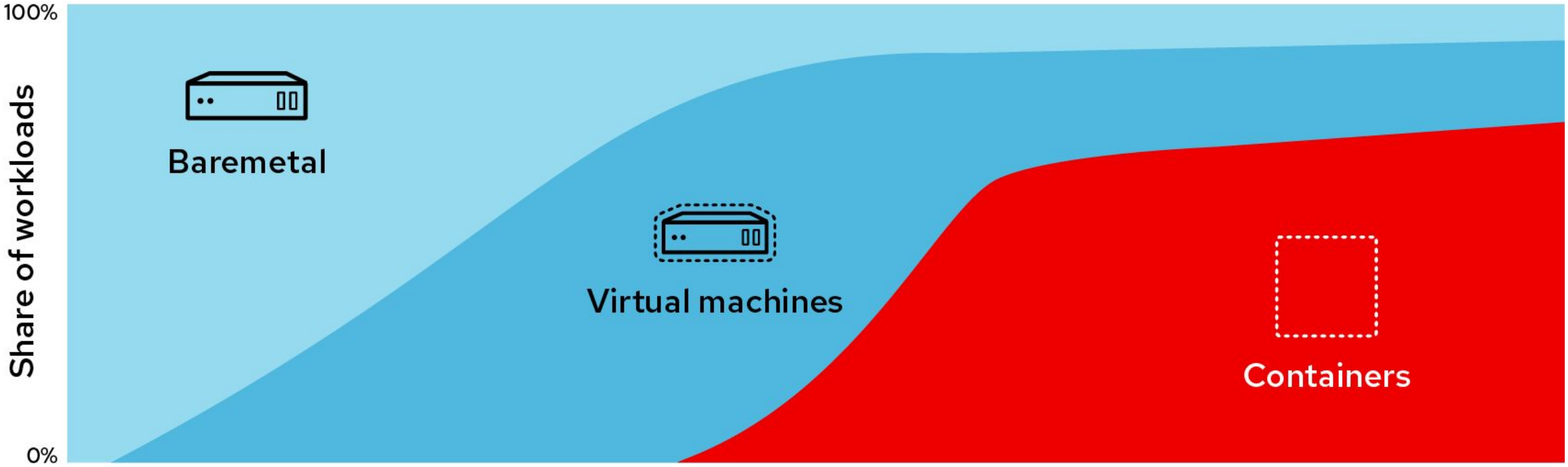
OpenShift Container Platform

Container-native virtualization

Red Hat

Applications Require Multiple Technologies

Where are you? Where do you want to be?



Use Cases for Mixing Virtual Machines and Containers

Different states of adoption, same complexity

Leverage VMs for new development

Build new applications relying on existing virtual machines and APIs

Applications can’t shift to containers

Users with mature applications not in a position to significantly change

Deliver Kubernetes-native

Use Kubernetes to manage VMs when required

Use Case 1: Leverage VMs for New Development

Why: Work on applications with new containers and existing virtual machines side by side while maintaining existing CI pipelines

- User Needs:
  - Operations:
    - Preserve existing virtual machine functionality for complexity, cost or compliance
  - Developers: Build new functionality around existing VM-based APIs while using a common pipeline
- Typical application workload: ~90% virtual machines, 10% containers

Use Case 2: Applications Can't Migrate to Containers

Why: Some applications will require virtual machines for the foreseeable future, some architectures incorporate components that are not yet container aware

- User Needs:
  - Operations:
    - Maintain existing databases through virtual machines
    - Deliver multi-tenancy
    - Require containers clusters and infrastructure clusters be seperate user types
  - Developers: Build new application features in containers, require easy access to data no matter where it lives
- Typical application workload: ~80% virtual machines, 20% containers

Use Case 3: Deliver Kubernetes-native

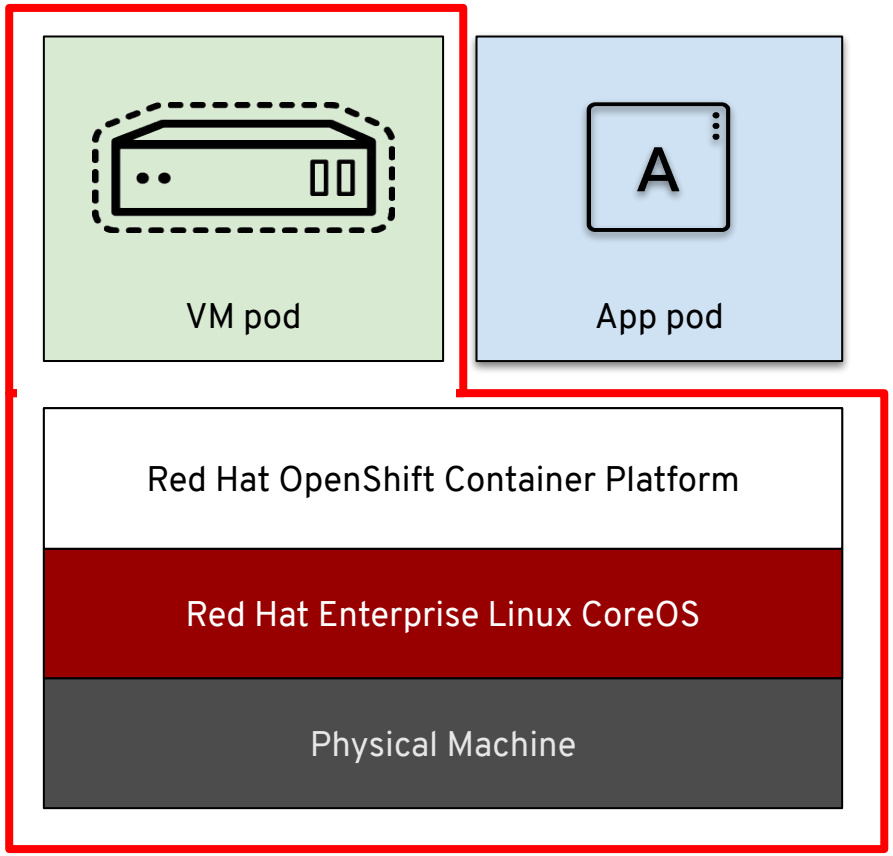
Why: Business born in the cloud not tied to specific infrastructure or processes

- User Needs:
  - Operations: Visibility into resource consumption
  - Developers: Immediate access to resources, open development platforms
- Typical application workload: ~10% virtual machines, 90% containers

Red Hat OpenShift Platform acknowledges organizations use both containers and virtualization today and delivers an efficient process to manage both in one centralized platform

Container-native virtualization

The benefits of virtualization, the performance and agility of containers



VMs and Containers Managed by Kubernetes

- Manage VMs and containers from a single platform
- Realize Kubernetes benefits even for application components which can't be directly containerized
- Support immediate and long term goals for container adoption

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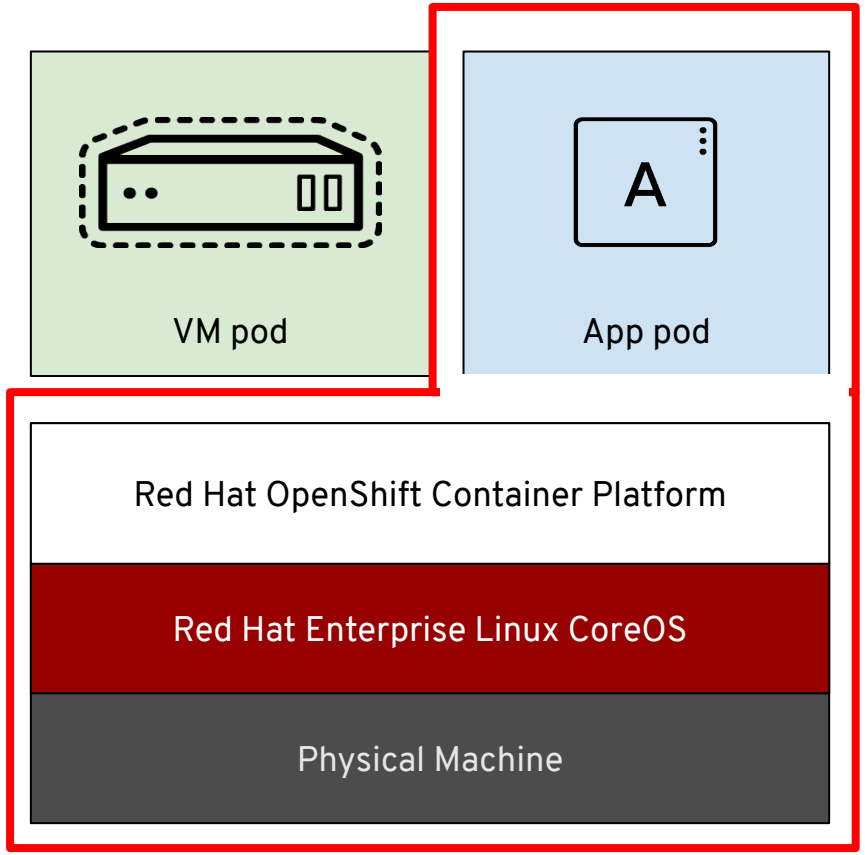
Container-native virtualization

The benefits of virtualization, the performance and agility of containers



Realize Kubernetes-native benefits in virtual machines

- Schedule, connect, and consume VM resources as container-native
- Seamlessly scale and automate deployments and updates on-prem or in the cloud
- Integrate with container orchestrators and resources

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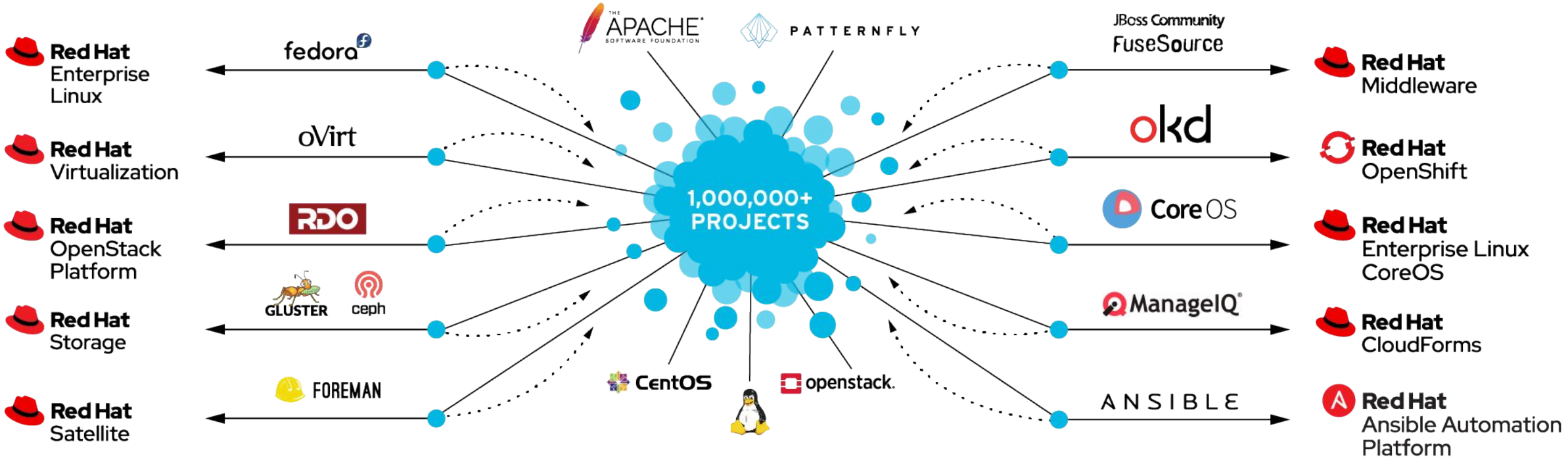
From communities to enterprise



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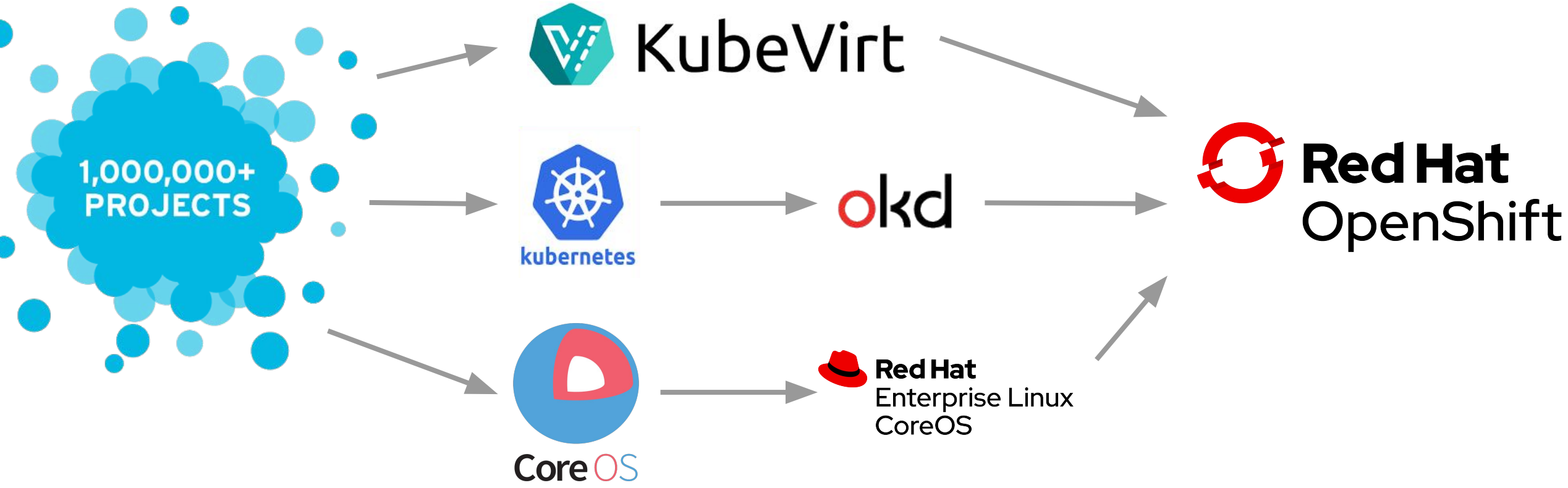
Open source and OpenShift

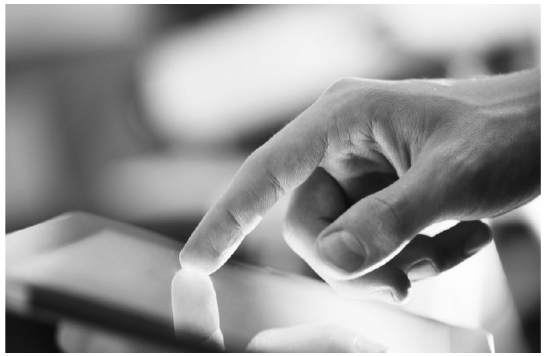


Container-native virtualization

Meeting business, customer AND developer needs

Meets Developer Needs: Faster Time to Market

Deliver ability to modernize applications over time and slowly deconstruct existing virtual machines



Delivers Operational Flexibility: Simplified Management

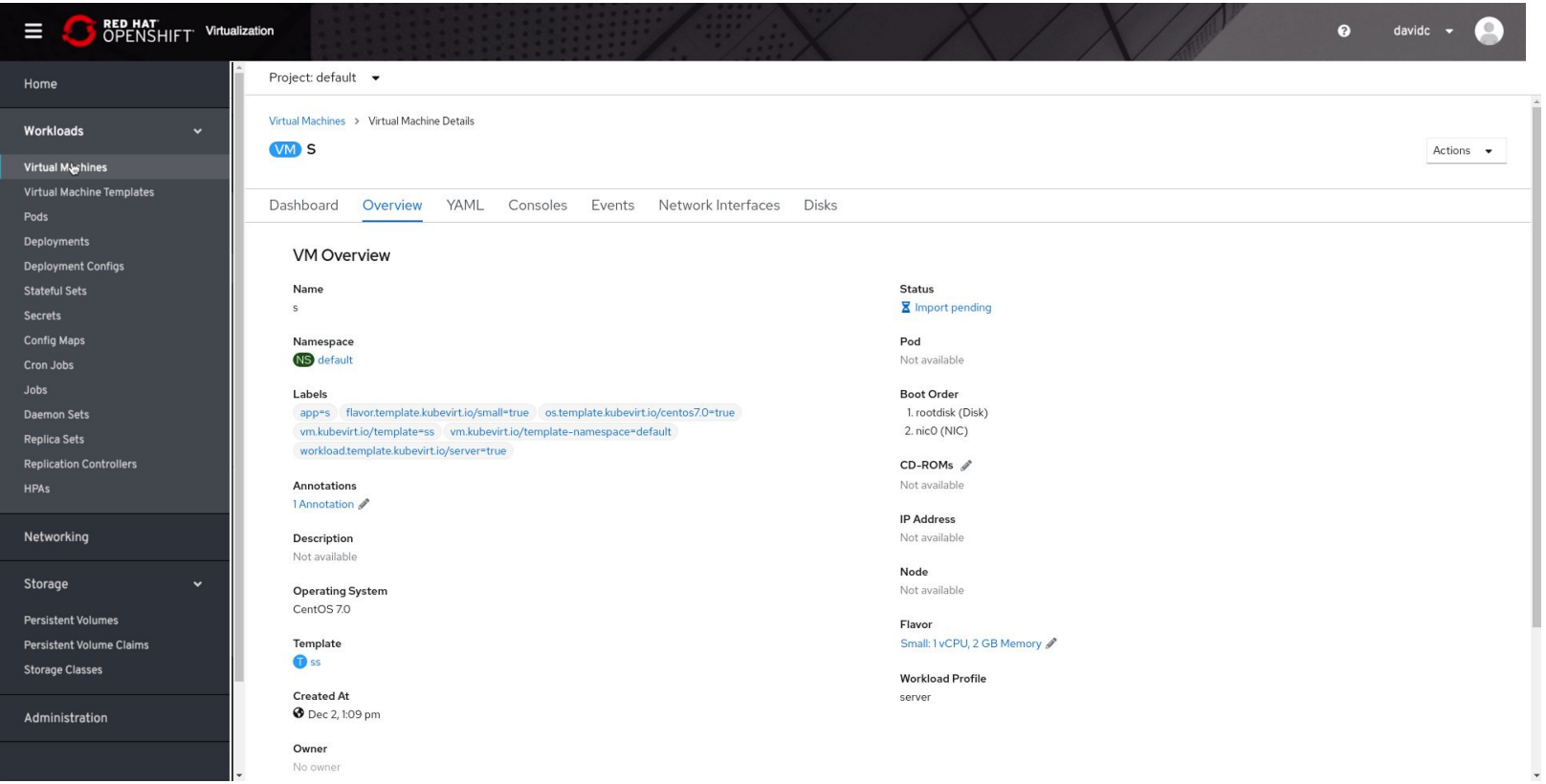
Reduce overhead by simplifying the management of virtual machines and containers with a single platform.

Standardized Deployment: Reduced Cost

Avoid unnecessary application refactoring and build services with the right platform and existing resources

Get Started with OpenShift

OpenShift.com/trycnv



- Add virtualized applications from the service catalog - the same way you would a containerized application
- Newly created VMs run in parallel on the same nodes as existing OpenShift containers
- Add new objects to your OpenShift Container Platform cluster via Kubernetes to enable virtualization tasks
- Get Started: openshift.com/trycnv

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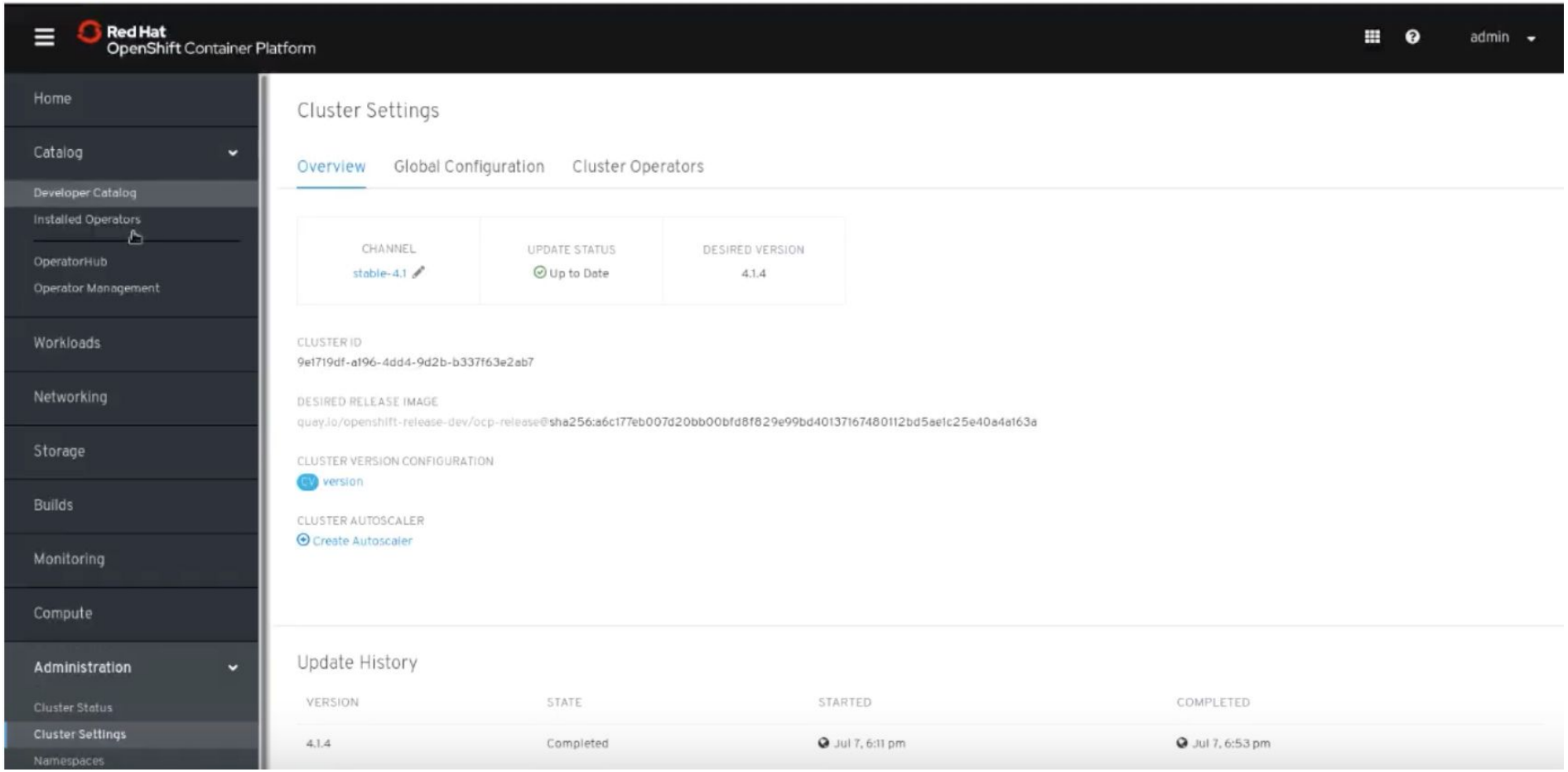
Deploy Container-native virtualization on OpenShift

View the demo



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Thank you

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