From Containers to OpenShift

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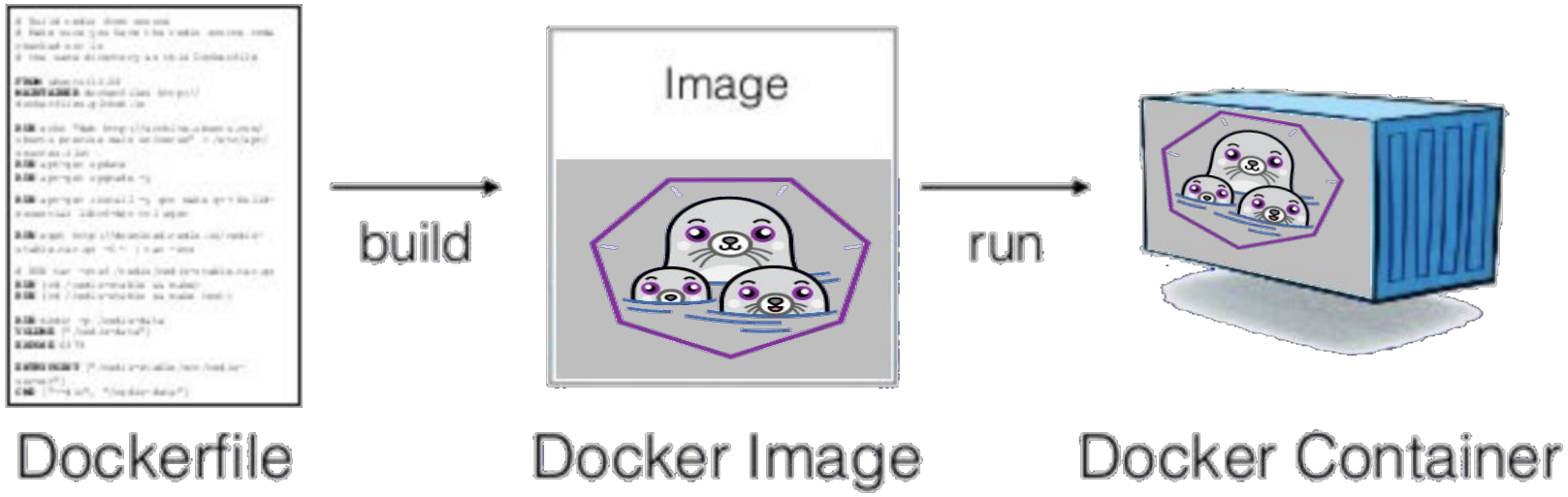
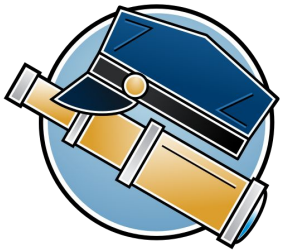
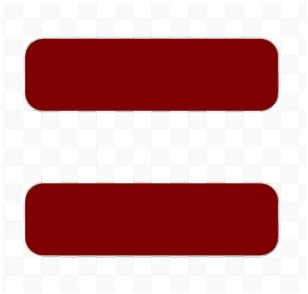
Red Hat

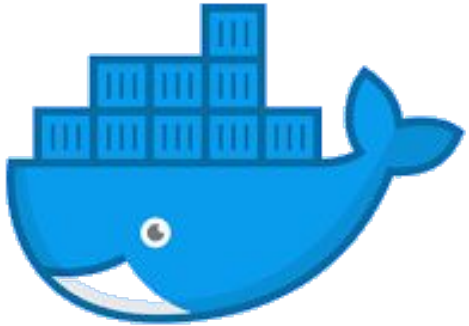
What is a Container ?



Basic Definitions



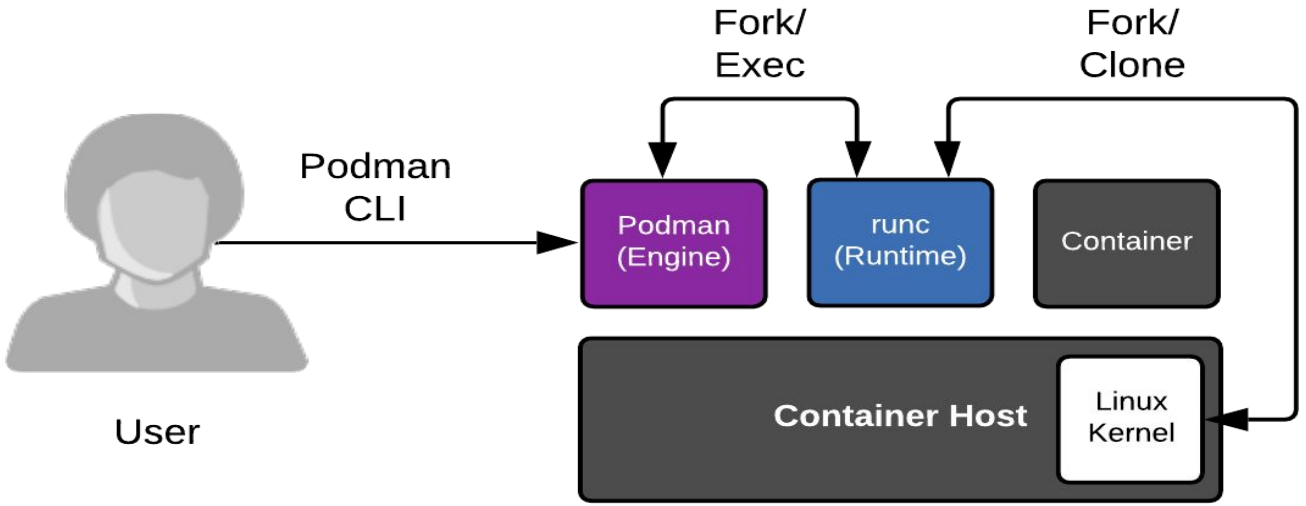




What is Podman?

Podman was released with Red Hat Enterprise Linux 7.6 and 8.0 as the next generation of Linux container tools, is designed to allow faster experimentation and development of features.

How does Podman work?



How containers run with a container engine

What is buildah?

Buildah - A tool that facilitates building Open Container Initiative (OCI) container images

buildah

What is skopeo?

skopeo is a command line utility that performs various operations on container images and image repositories.

skopeo does not require the user to be running as root to do most of its operations.

skopeo does not require a daemon to be running to perform its operations.

skopeo can work with OCI images as well as the original Docker v2 images.

Gartner

According to industry analyst firm Gartner, “By 2025, more than 85% of global organizations will be running containerized applications in production, which is a significant increase from fewer than 35% in 2019.”

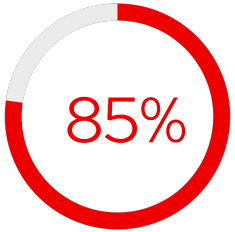
Is podman enough ?

Running multiple pods at mount

Can a Platform Engineer maintain a large amount of running pods using a multiple nodes with podman alone ?

2019

global organizations will be running containerized applications by 2019



2025

global organizations will be running containerized applications by 2025

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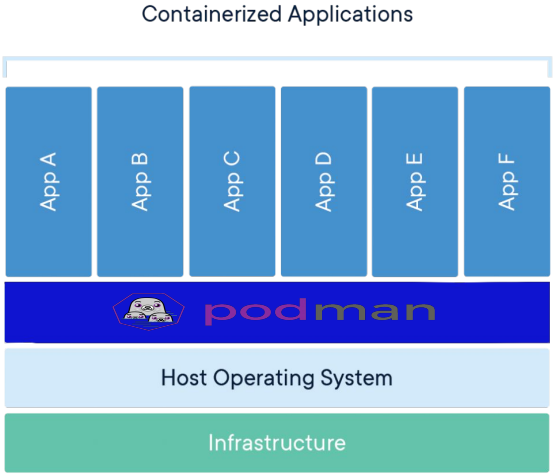
We need a Transition



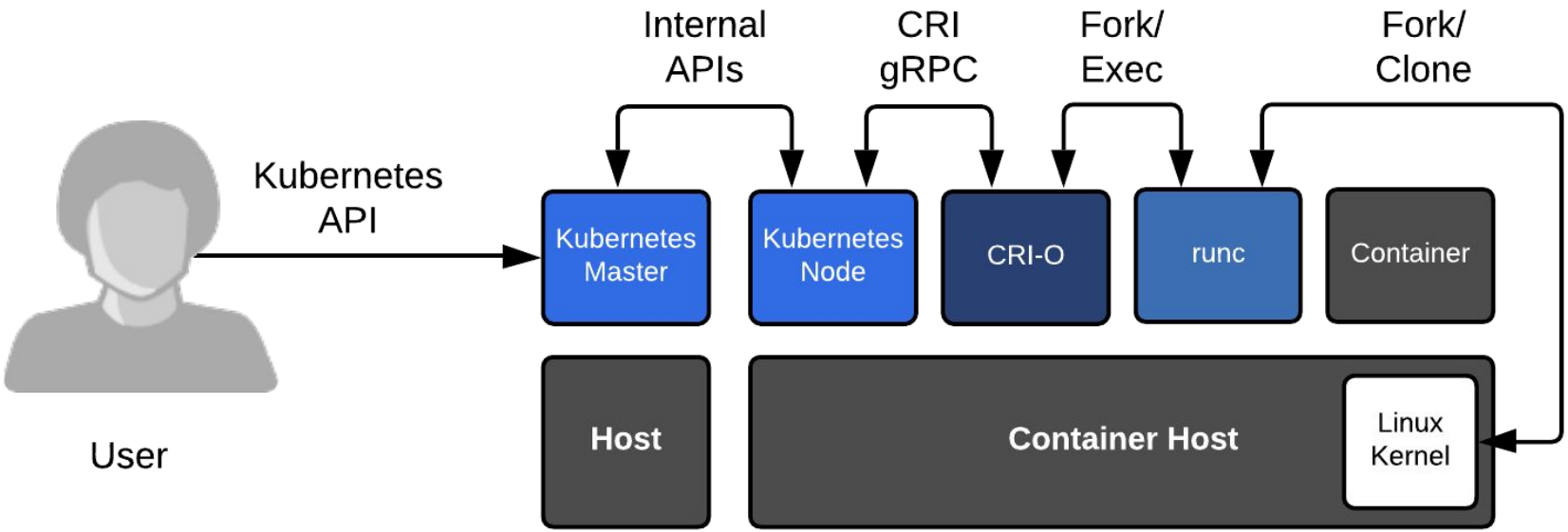
kubernetes

What is Kubernetes?

An open source orchestration system for implementing a microservices architecture as containerized applications run and coordinated across a cluster of nodes.

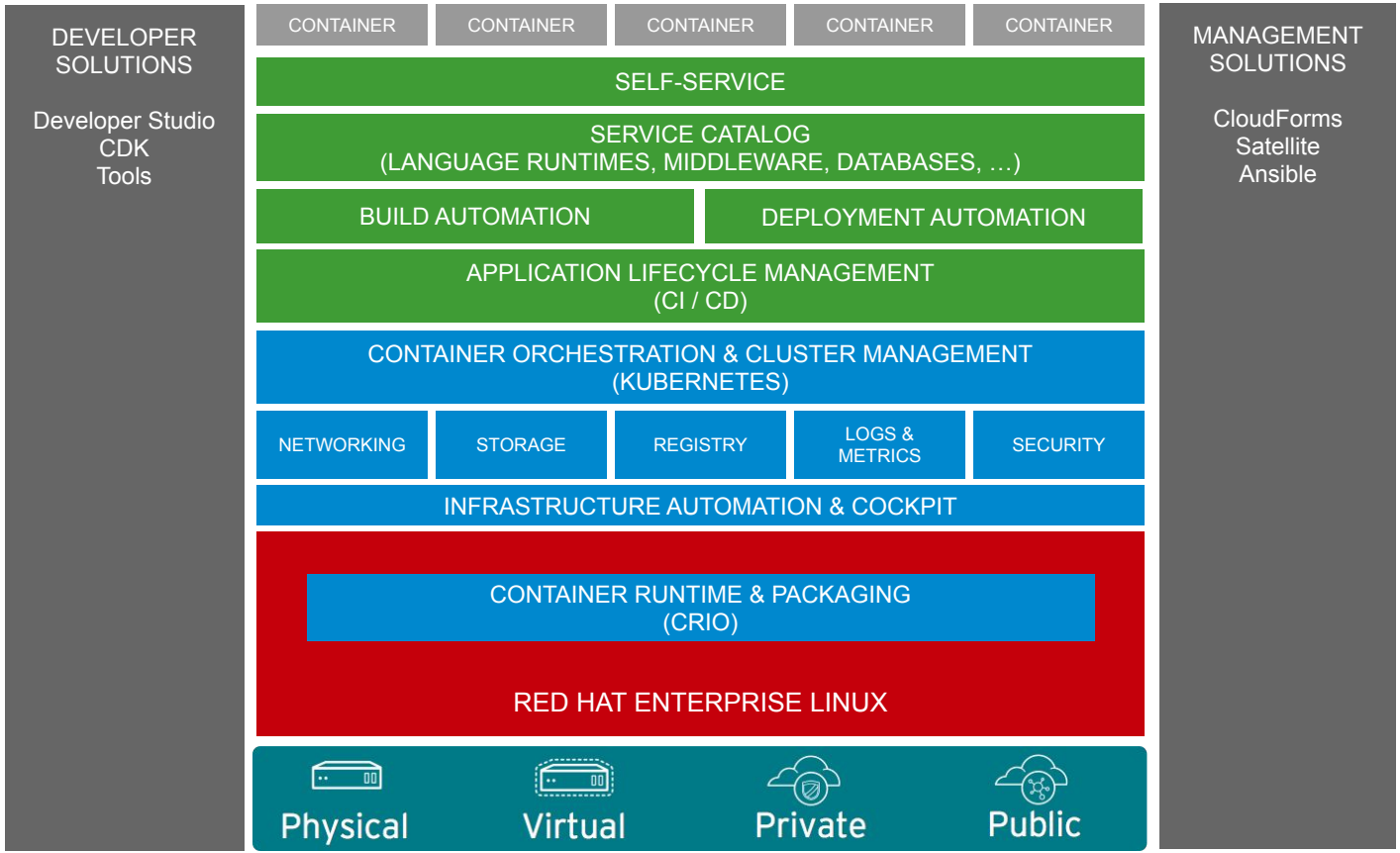
Red Hat® OpenShift® is a comprehensive enterprise-grade application platform built for containers with Kubernetes at its core.

How Kubernetes Works?



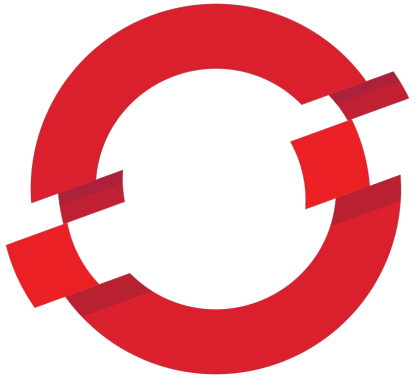
How containers run in a Kubernetes cluster

OpenShift Components



OpenShift vs. Kubernetes: The Seven Most Critical Differences

1. Product vs. Project
2. Security
3. Web-UI
4. Deployment Approach
5. CI/CD
6. Integrated Image Registry
7. Updates



Begin Exercise 2

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Red Hat