CoreOS and Red Hat

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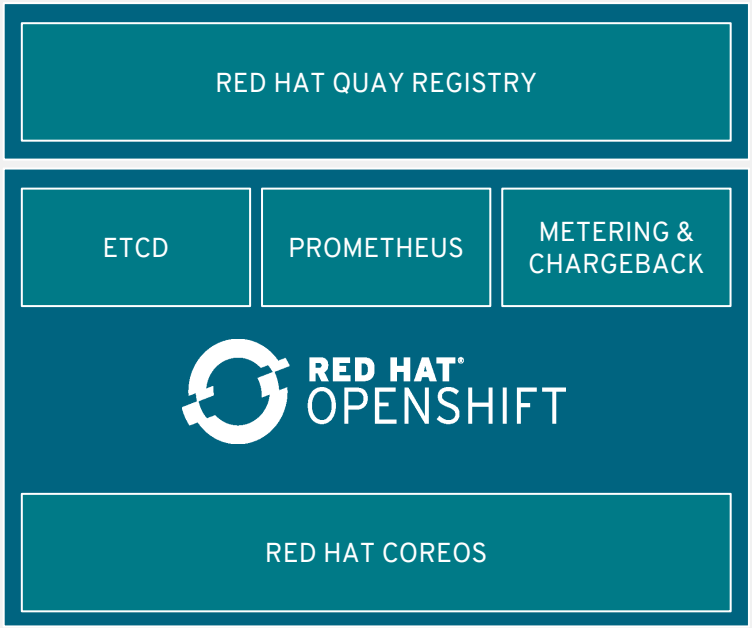
CoreOS

Combining Industry Leading Container Solutions



CoreOS Tectonic

- Fully integrated and merged with OpenShift
- Adds automated operations and day 2 management (install, upgrades, monitoring, metering and chargeback)
- Best-in-class support for CaaS/KaaS/PaaS use cases

CoreOS Container Linux

- Red Hat CoreOS inspired by Container Linux & RHEL/Atomic
- Fully immutable, container optimized, automatically updated Linux host foundation for OpenShift

CoreOS Quay Registry

- Enterprise container registry; self managed & as-a-service
- Premium offering usable standalone or with OpenShift
- Geo-replication, vulnerability scanning, build automation

Bringing Automated Operations to OpenShift

- App/Service Operations
- Multi-Cluster/Kubernetes Platform Operations
- Linux Host Operations

OPENSHIFT & TECTONIC
+
OPERATOR FRAMEWORK

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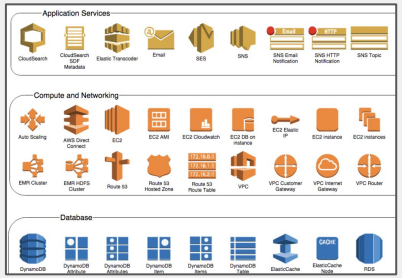
Large Cloud Providers



Single cloud and sticky

Infrastructure and Middleware

Hybrid and open

Open Source

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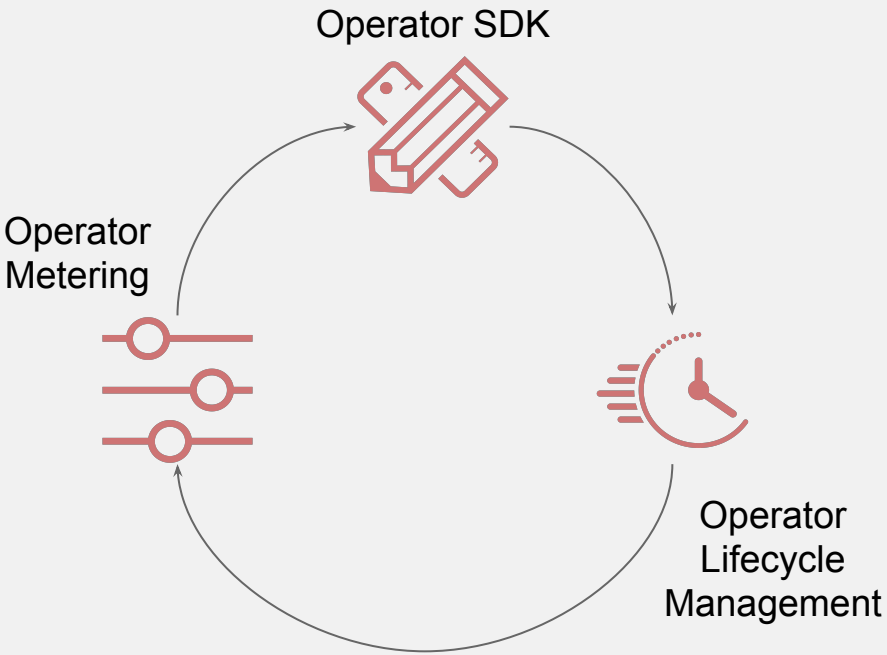
Introducing the Operator Framework

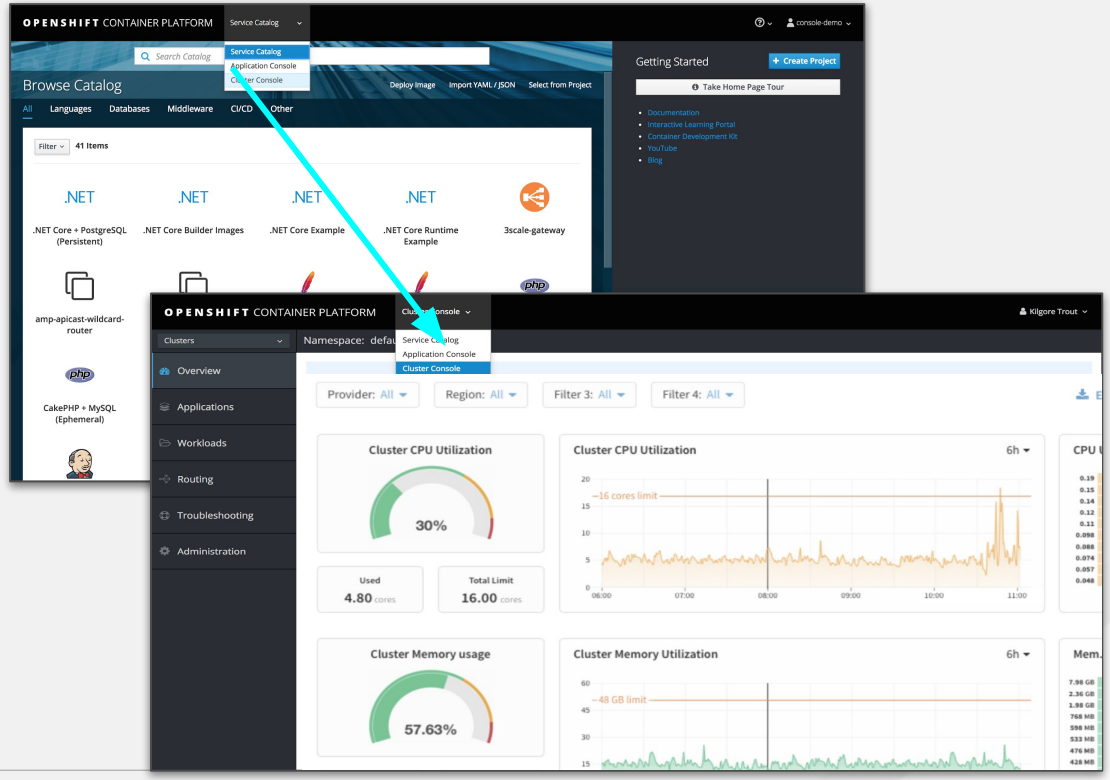


OPERATOR FRAMEWORK

Operator Framework is an open source toolkit to manage application instances on Kubernetes in an effective, automated and scalable way.

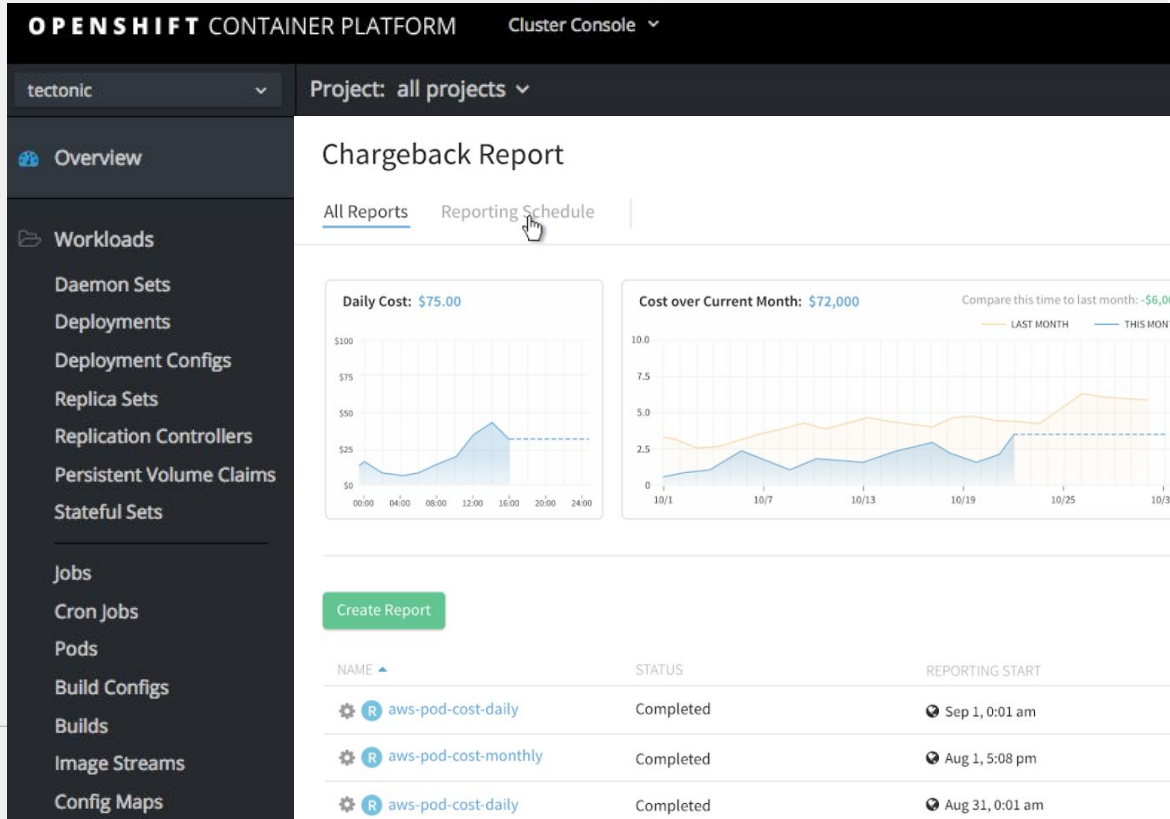
New OpenShift Admin Console

- OpenShift will introduce an Admin centric console that leverages the Tectonic console
- The Operator Lifecycle Management and Metering capabilities of Tectonic will be exposed in this new console



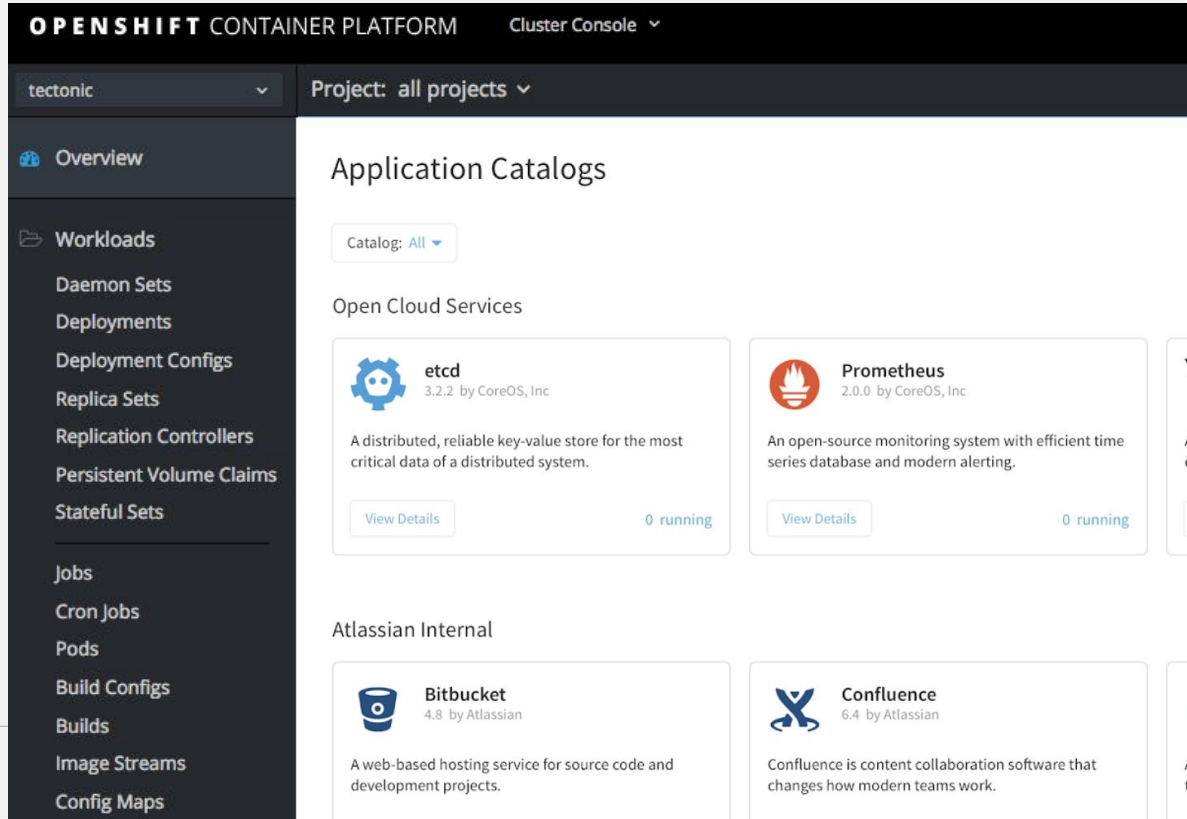
Operator metering - In OpenShift Admin console

- CPU, Memory, networking, and storage tracking + reports
- Actual and reserved usage
- By namespace, pod, label, cloud service, and app type
- Correlated to underlying IaaS cost



Operator Lifecycle Manager - In OpenShift Admin console

- Administrative view of Operator based services
- Includes catalogue of certified ISV services
- Customers can build/bring their own operator backed apps
- Helm apps are operator backed with zero coding



No need for operator development

Requires custom Operator - can be facilitated with SDK

Installation

Automated application provisioning and configuration management

Upgrades

Patch and minor version upgrades supported

Lifecycle

App lifecycle, storage lifecycle (backup, failure recovery)

Insights

Metrics, alerts, log processing and workload analysis

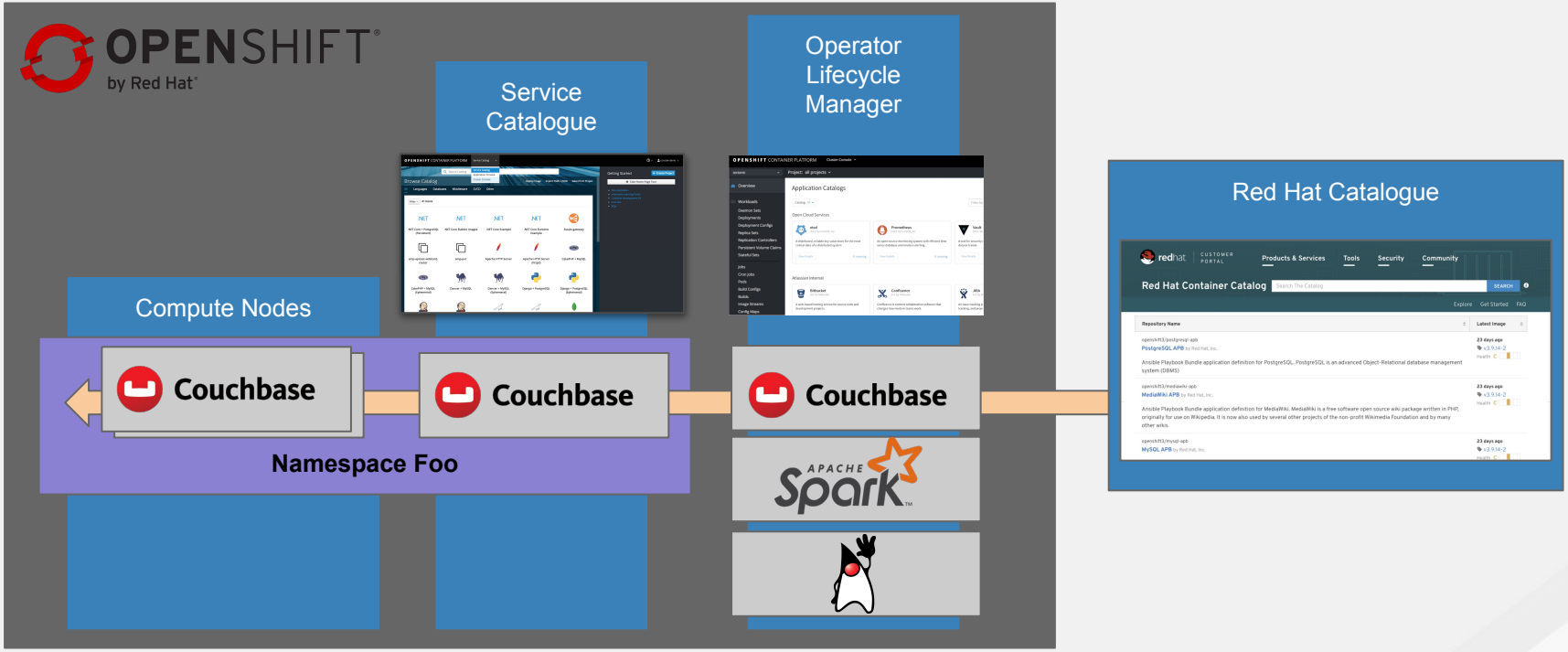
Auto-pilot

Horizontal/vertical scaling, auto config tuning, abnormal detection, scheduling tuning...

60+ ISVs planning to provide initial certified operators

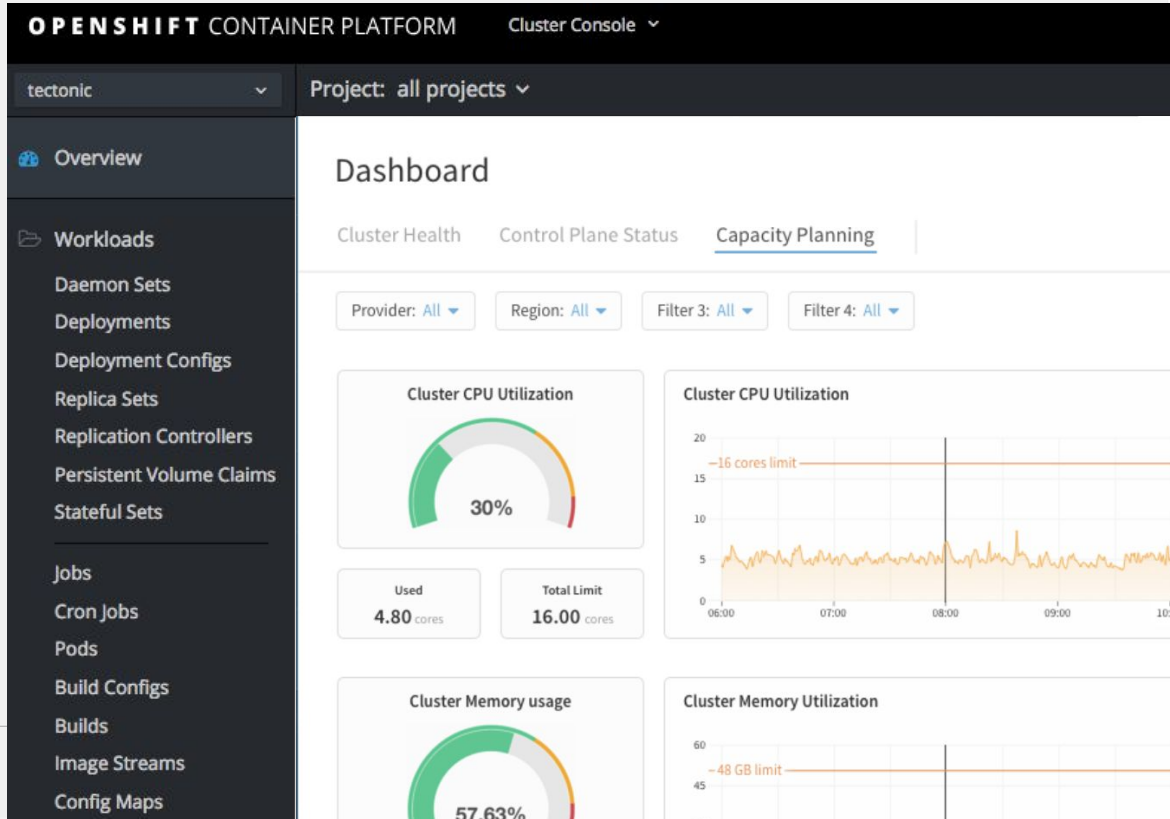
- Certified operators will be available on Red Hat Container Catalog
- Can be imported into OpenShift Operator Lifecycle Manager
- Then exposed in OpenShift Service Catalogue

End-to-end workflow



Out of the box infrastructure monitoring

- Cluster management for OpenShift Admins
- Cluster health, control plane status, and capacity planning
- Prometheus alerting with pre-configured alerts



OpenShift Installation/Upgrade Experience

Immutable platform on traditional RHEL host	Fully immutable infra on Red Hat CoreOS host
More customization	More automation
Manage own RHEL/infra, automated w/ Ansible	Full stack management, from infra to app services

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RED HAT COREOS

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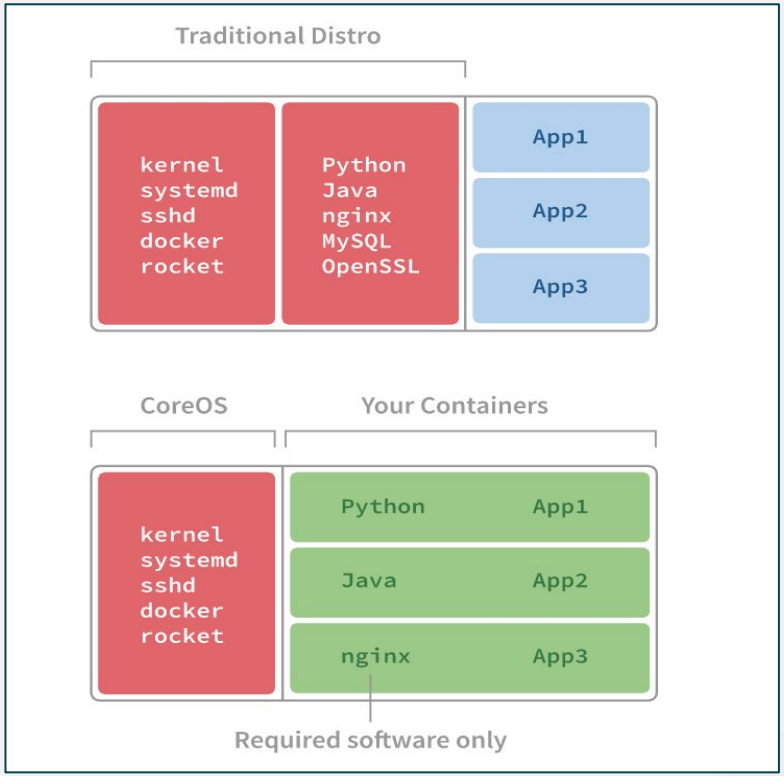
Container Linux

- Minimal Linux distribution
- Optimized for running containers
- Decreased attack surface
- Over-the-air automated updates



DELIVERING IMMUTABLE INFRASTRUCTURE WITH RED HAT COREOS

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

Container Linux and Red Hat Enterprise Linux: The road ahead

Ben Breard, Red Hat, Brandon Philips, Red Hat

Now that CoreOS has joined Red Hat, what does the future hold for Container Linux? What about Red Hat Enterprise Linux Atomic Host? Will there be four Linux distributions in the Red Hat family?

In this session, we'll put an end to the speculation and dive into our strategy and roadmap for creating the next chapter in Linux history. Find out how we're changing the game around immutable infrastructure and automating the foundation of Red Hat OpenShift.

Date: Wednesday, May 9

Time: 11:45 AM - 12:30 PM

Room: 2014

Location: Moscone West - 2014

Session Type: Breakout

Session Code: S2704

QUAY

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Quay Enterprise Registry

What is Quay?

Quay is the container and application registry developed by CoreOS. It builds, analyzes and distributes container images, and is used by thousands of companies, large and small, as part of their containerized infrastructure.

Securely store your containers

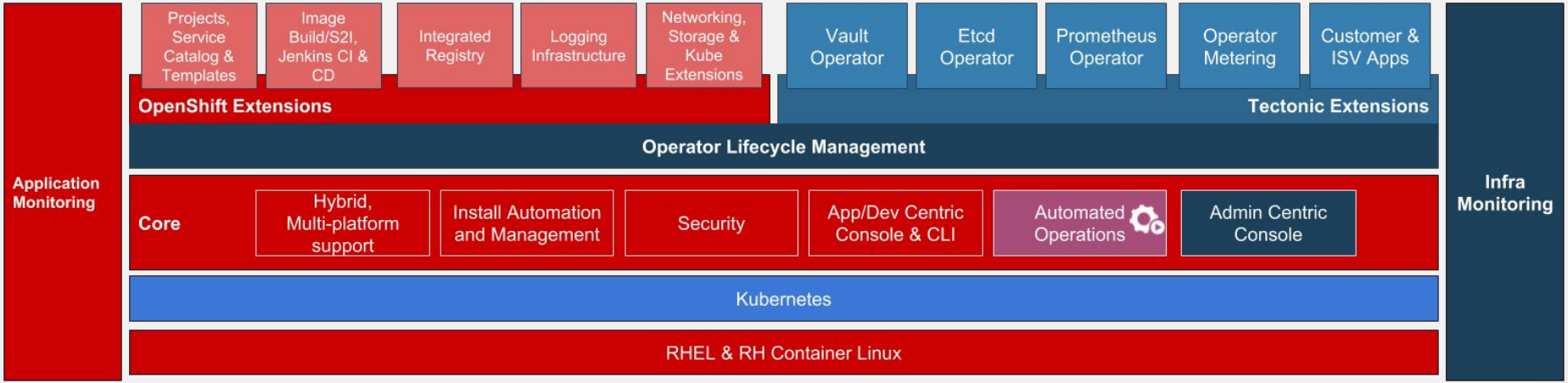
Easily build and deploy new containers

Automatically scan and secure containers

Red Hat Quay

- **Vulnerability Scanning (powered by Clair)**
  continually scan your containers for vulnerabilities, giving you complete visibility into known issues and how to fix them
- **Geographic Replication**
  Reliably store, build and deploy a single set of container images across multiple geographies
- **Build Image Triggers**
  As push actions happen in your code repo (GitHub, Bitbucket, GitLab and Git), Quay will automatically build a new version of your app
- **Image Rollback with Time Machine**
  View history of images and quickly and easily switch image builds

OPENSHIFT® by Red Hat®



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