Michael Surbey
Solutions Architect
msurbey@redhat.com

October 2016

redhat.

Agenda

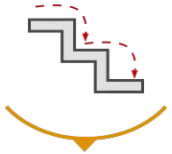
- Introduction/Background
- Key Terminology
- Red Hat OpenShift
- How It Works
- Summary
- Workshop

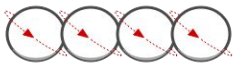
redhat.

I.T. Must Evolve

Development Process

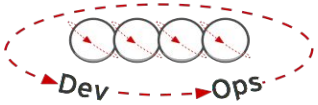
Waterfall





Agile

DevOps



Application Architecture

Monolithic

N-Tier

Microservices

Deployment & Packaging

Physical Servers

Virtual Servers

Containers

Application Infrastructure

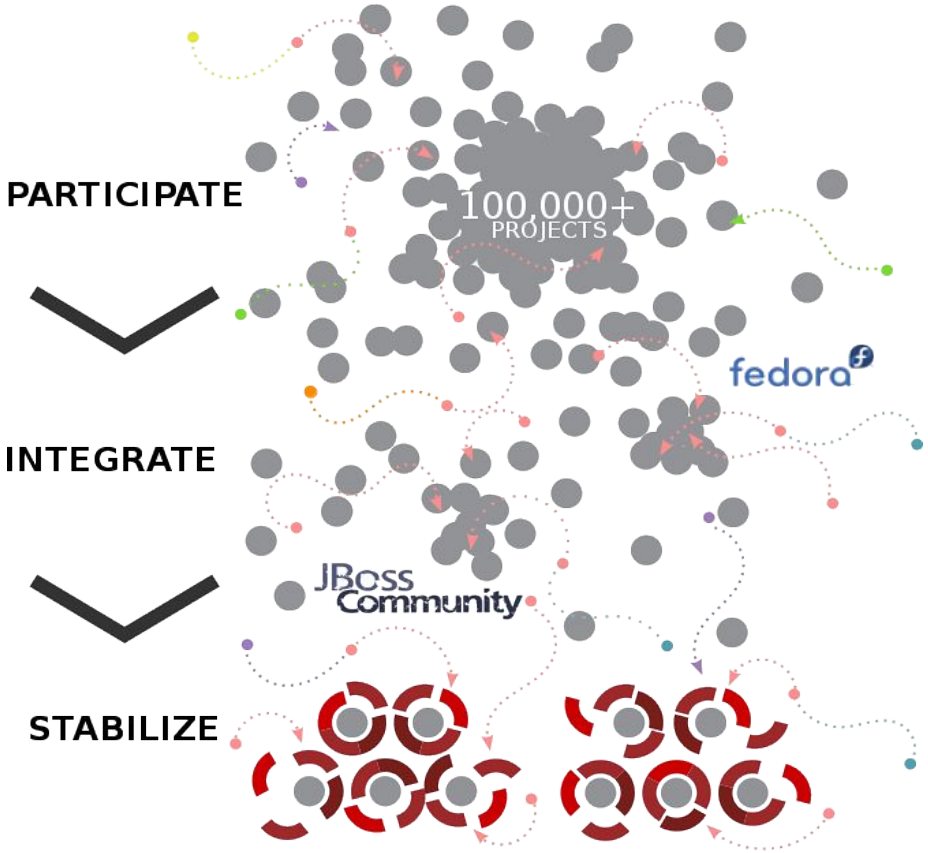
Datacenter

Hosted

Cloud

redhat.

Community Backed Innovation



- We build & support open communities around integrated projects
- We enable software & hardware partners to participate at every stage of development
- We commercialize these innovations together with a rich ecosystem of services & certifications

redhat.

RED HAT & YOUR BUSINESS: SUBSCRIPTION MODEL

TECHNICAL SUPPORT

- 24 HOURS / 7 DAYS A WEEK
- UNLIMITED INCIDENTS
- MULTI-LINGUAL
- MULTI-VENDOR CASE OWNERSHIP
- MULTI-CHANNEL

ONGOING DELIVERY

- STABILITY WITH A PRODUCT LIFE CYCLE OF UP TO 10 YEARS
- PATCHES
- UPDATES
- UPGRADES
- SECURITY RESPONSE TEAM

EXPERTISE

- CUSTOMER PORTAL & FORUMS
- KNOWLEDGEBASE
- ACCESS LABS
- TRAINING CURRICULA

COMMITMENTS

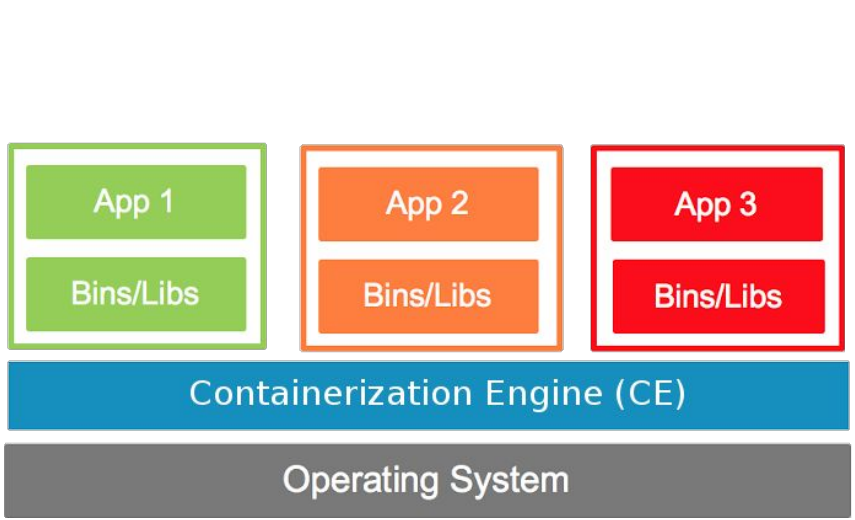
- HARDWARE CERTIFICATION
- SOFTWARE CERTIFICATION
- CLOUD PROVIDER CERTIFICATION

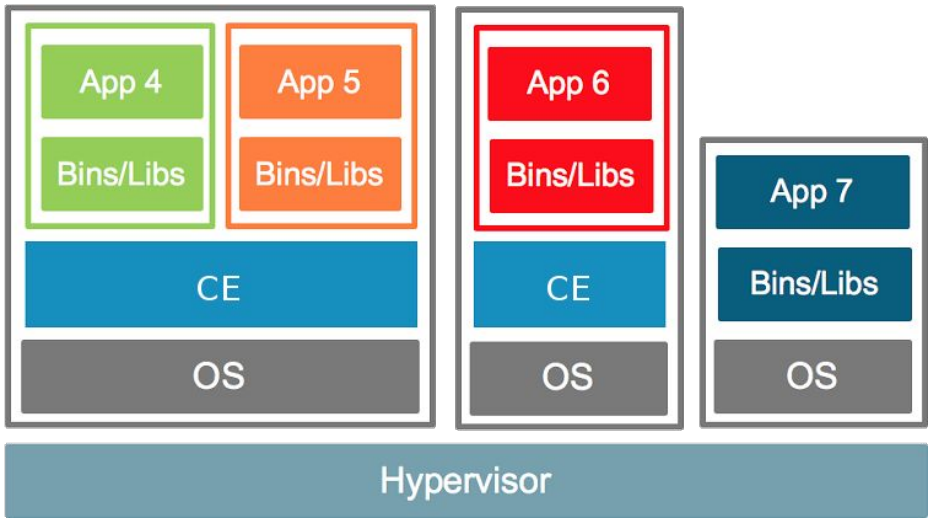
Visit link for more:
http://red.ht/1QOfnSR

OpenShift Product Process

redhat.

What Are Containers?





redhat.

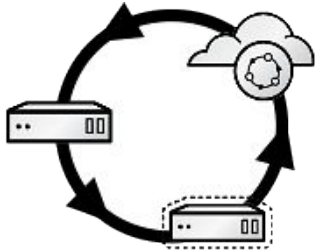
Kubernetes

- Open source container cluster manager
- Inspired by technology that drives Google
- Can run anywhere:
  - Public Cloud
  - Private Cloud
  - Bare Metal
- Strong ecosystem of participants

redhat.

The Value of Container Technologies

FASTER APP DELIVERY



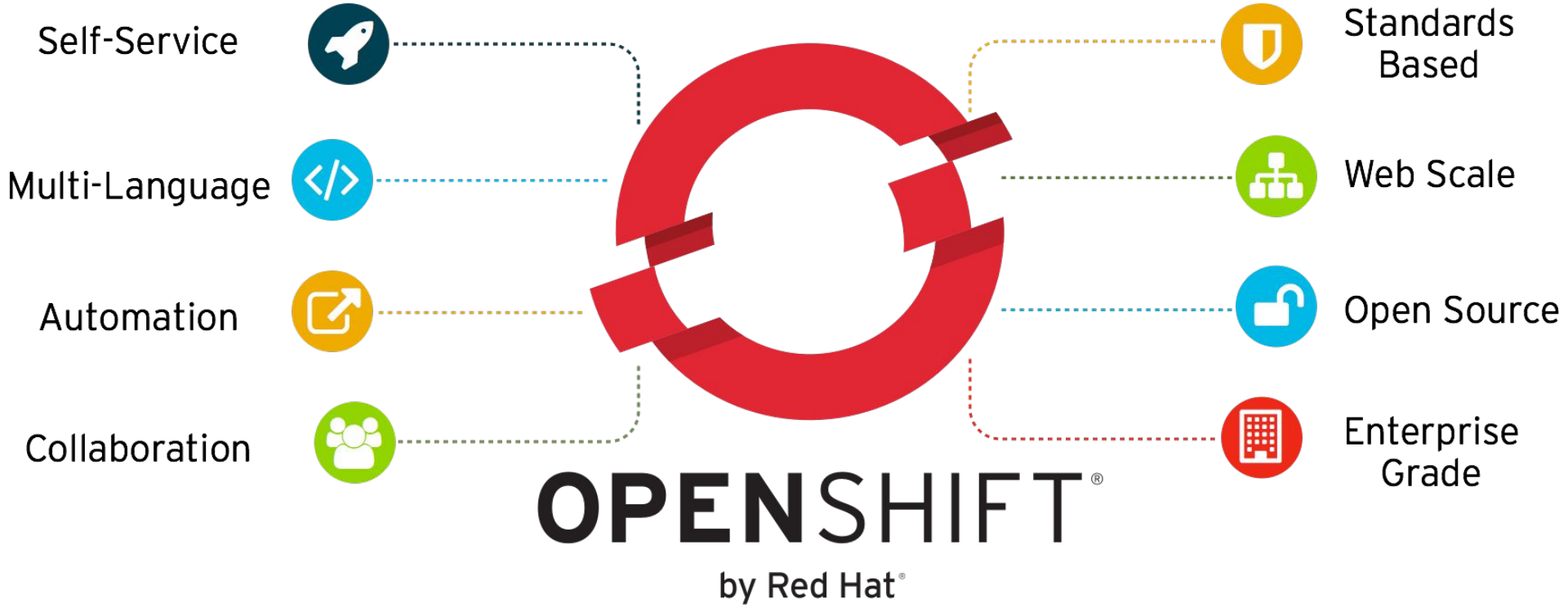
DEPLOYMENT FLEXIBILITY

OPERATIONAL EFFICIENCY

LOWERED DEPLOYMENT COSTS

redhat.

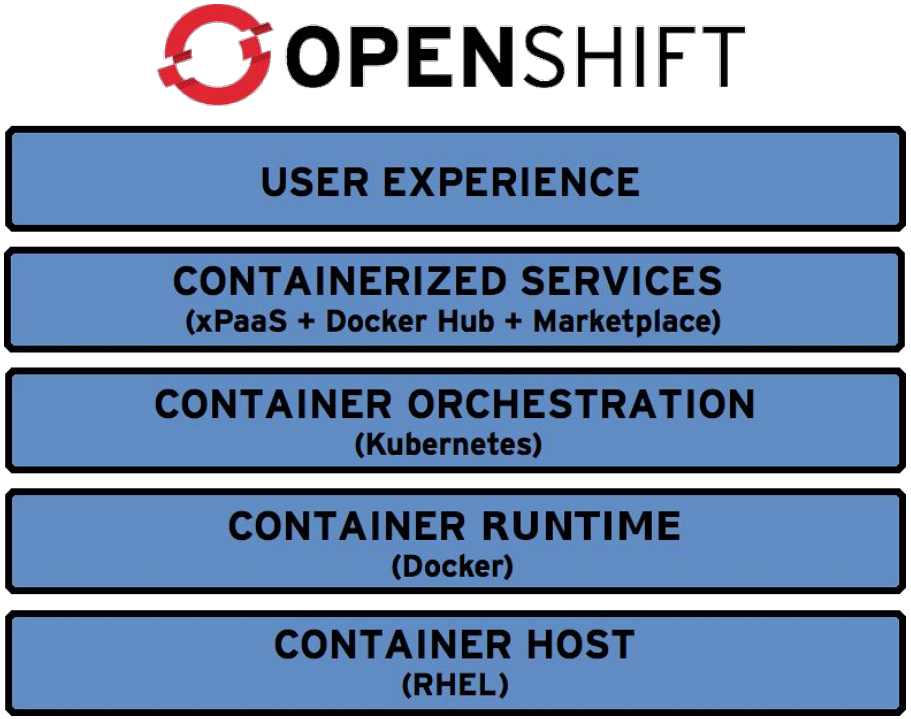
Red Hat's Container Application Platform



redhat.

OpenShift Container Platform (OCP)

- Standard container runtime
- Web-scale orchestration
- Container optimized OS

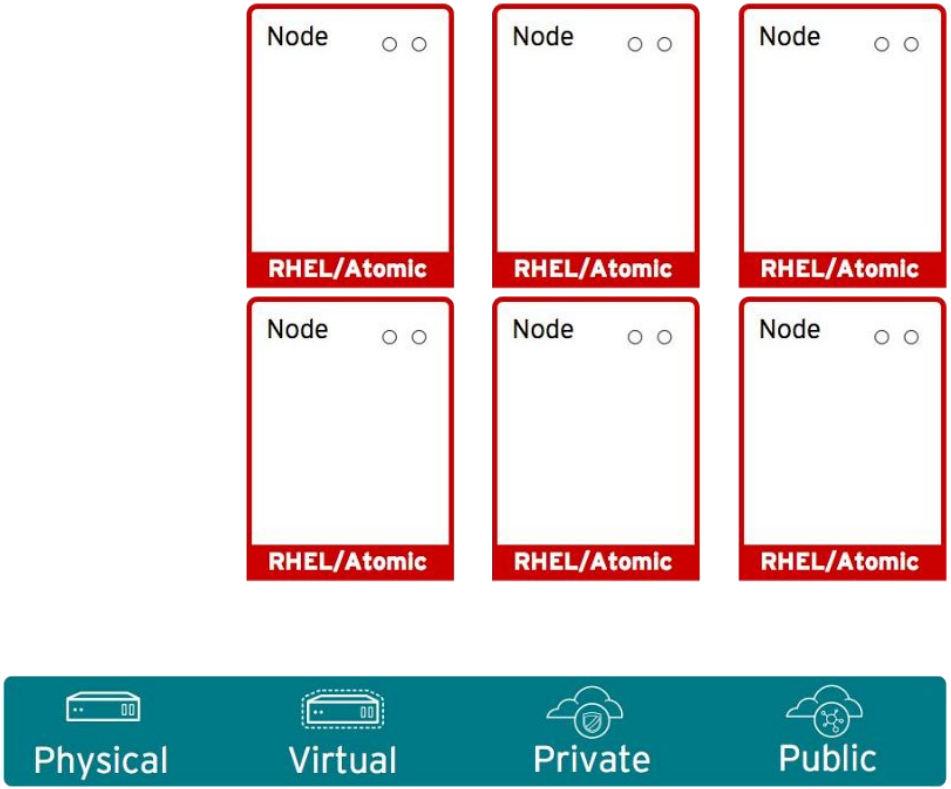


redhat.

OpenShift Runs Anywhere RHEL7 Is Supported

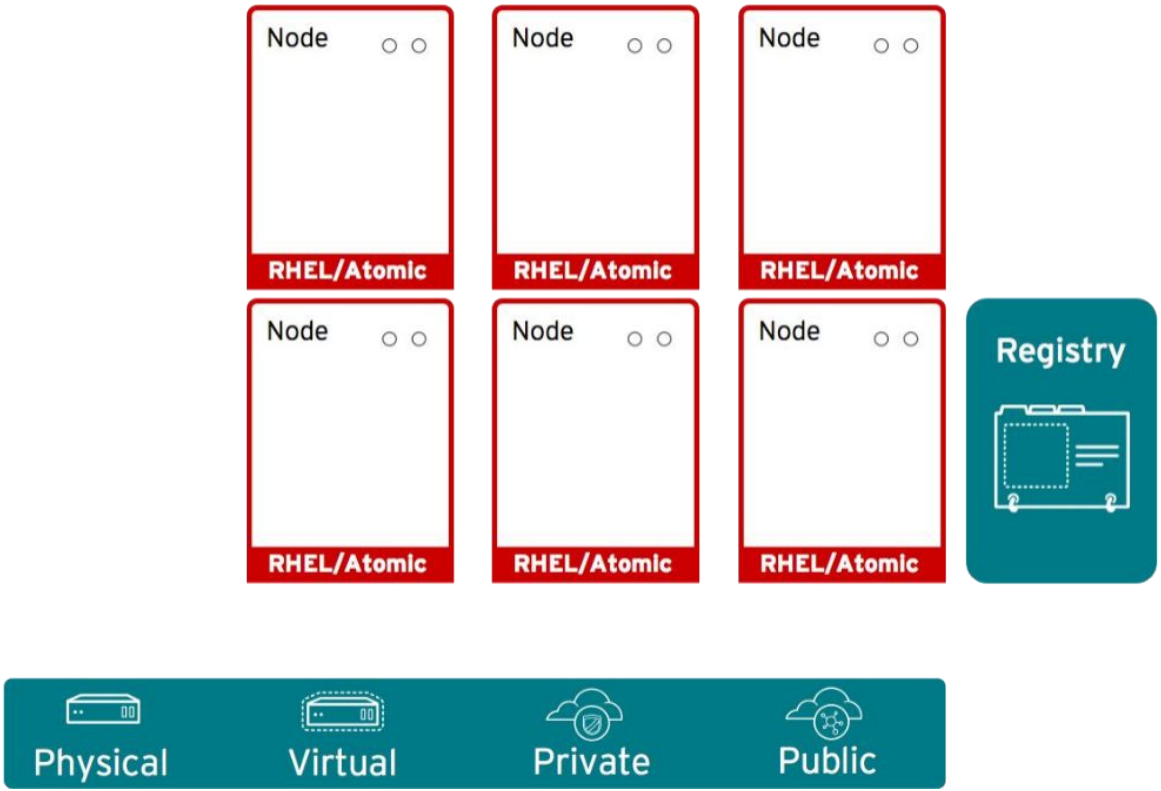
redhat.

OpenShift Nodes Host Containerized Apps



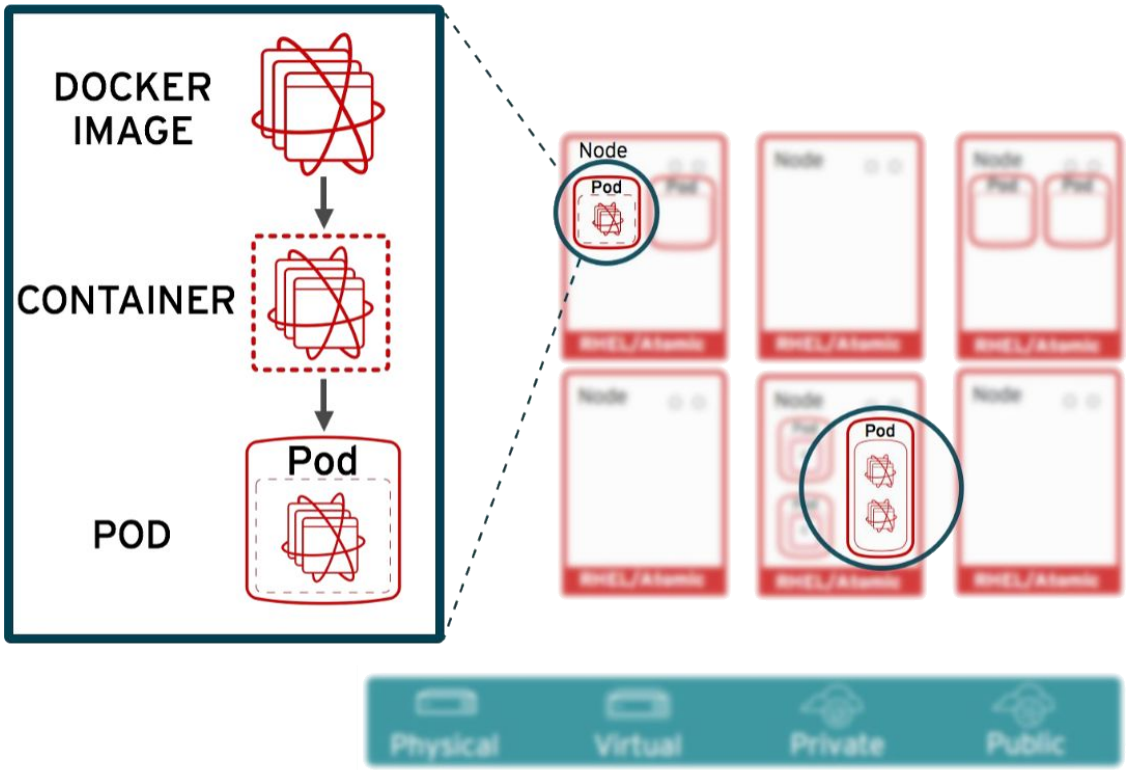
redhat.

OpenShift Registries Store Container App Images



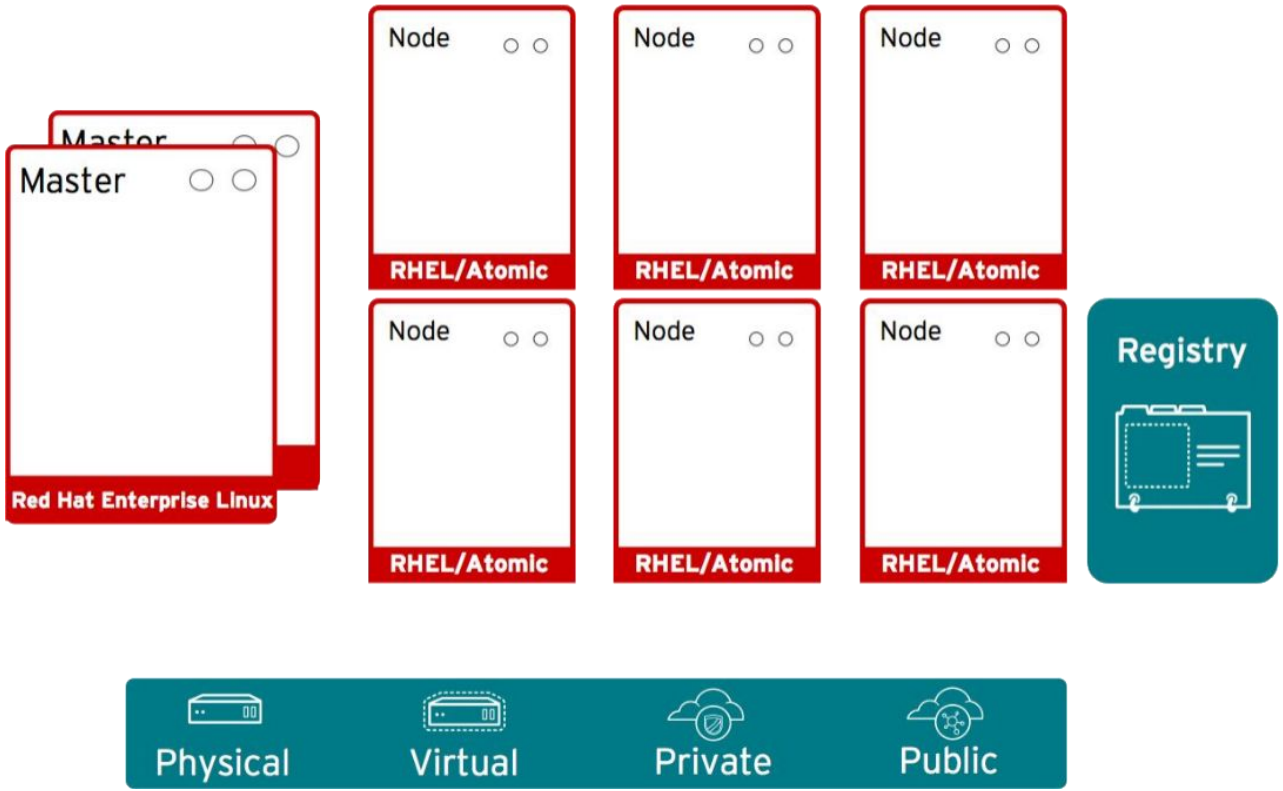
redhat.

OpenShift Deploys Container Apps In Pods On Nodes



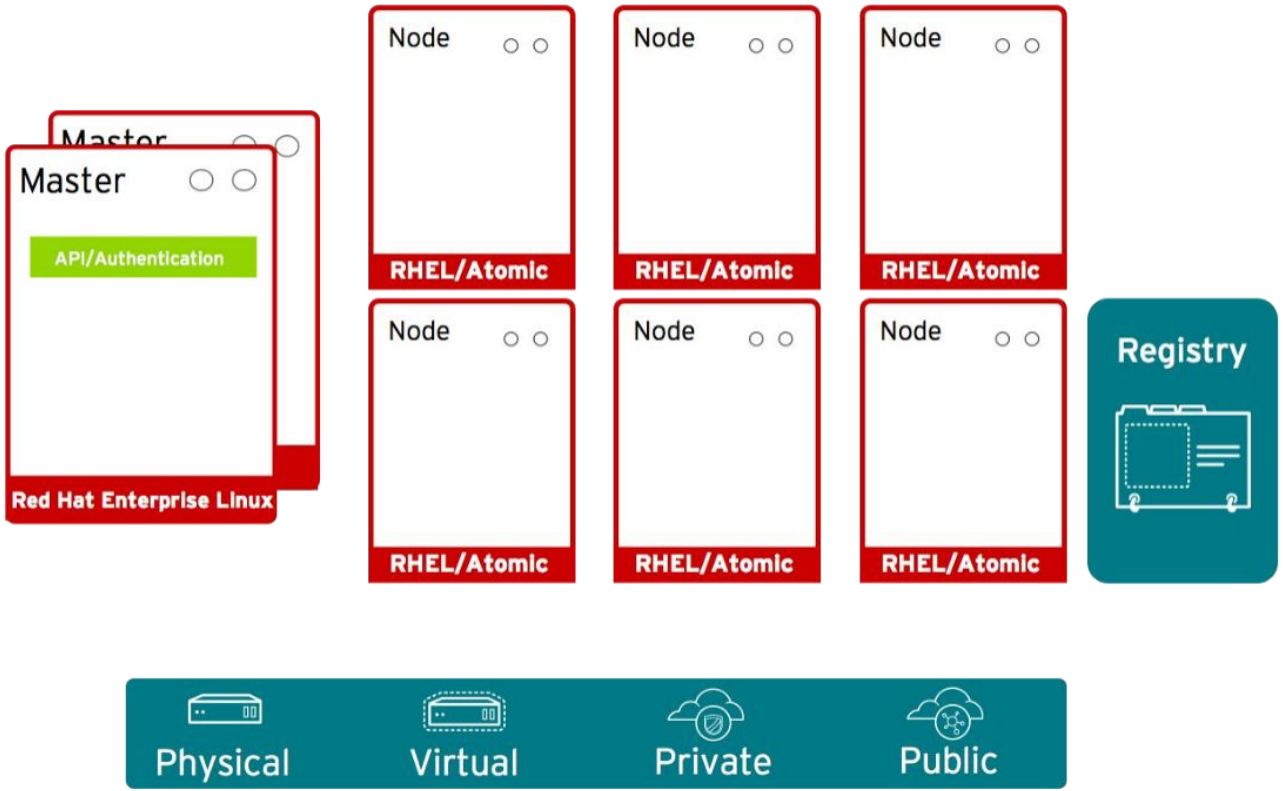
redhat.

OpenShift Masters Manage The Cluster



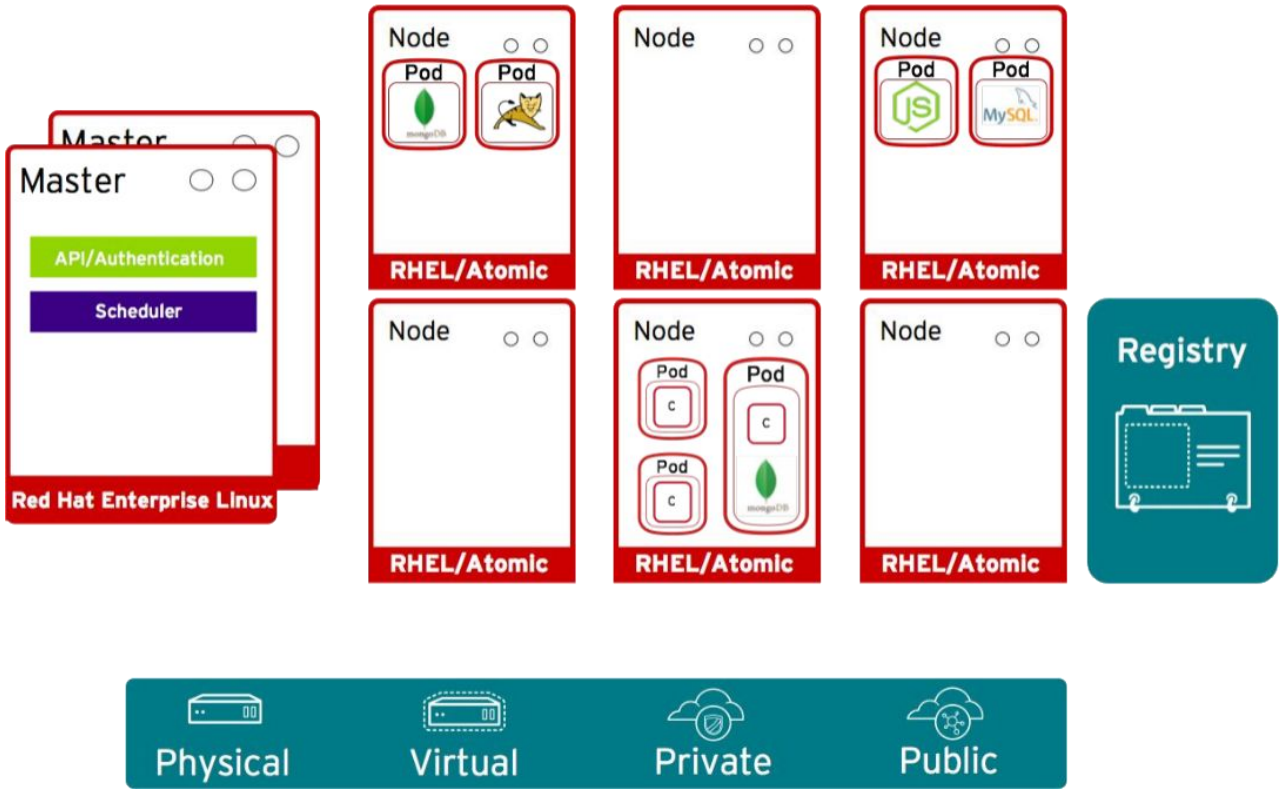
redhat.

OpenShift Masters Expose API, AuthN, & AuthZ Services



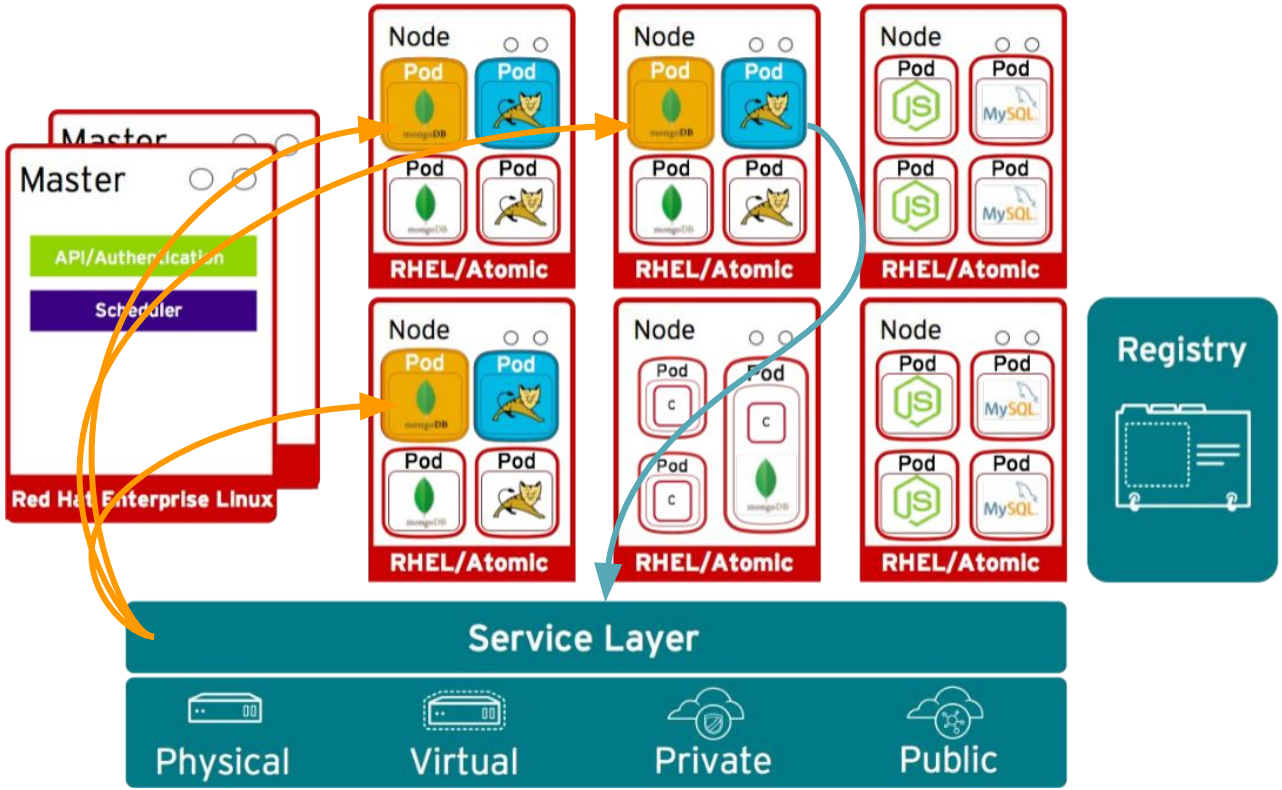
redhat.

OpenShift Masters Schedule Pod Placement On Nodes



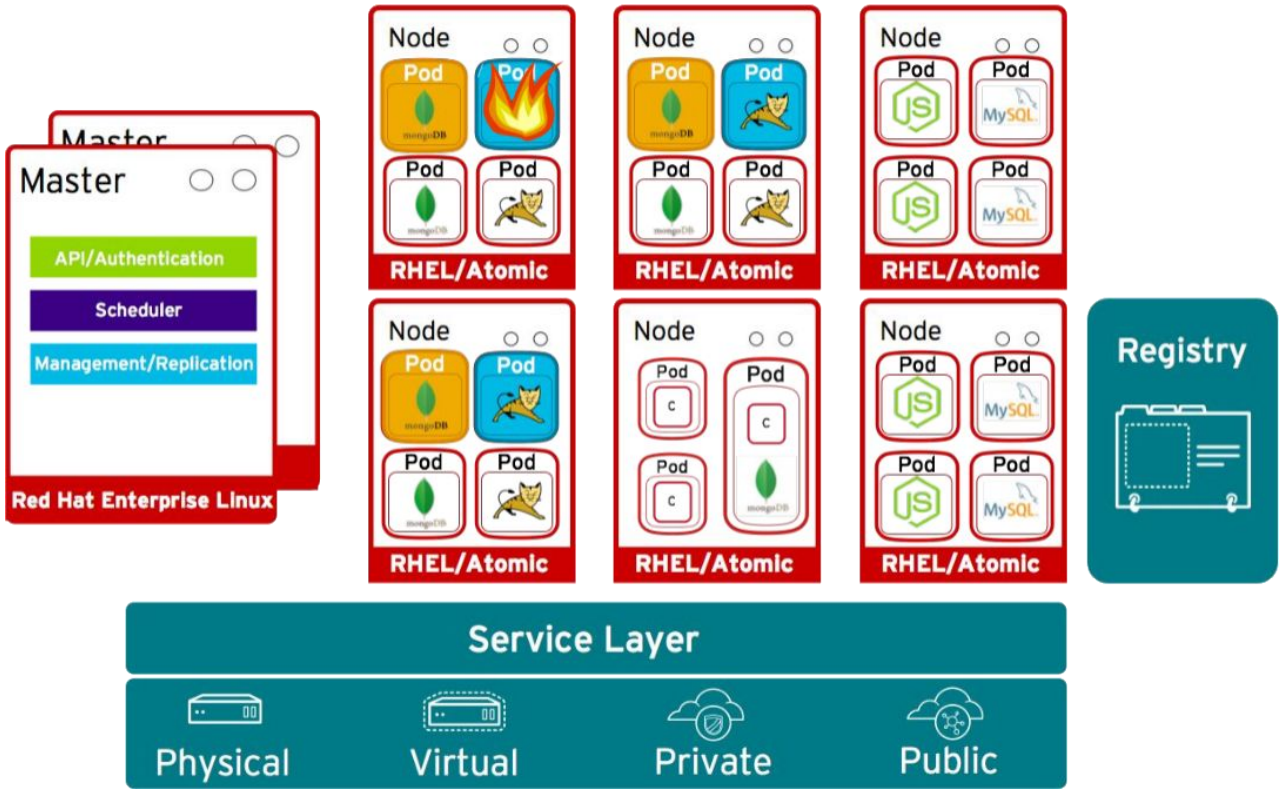
redhat.

OpenShift Connects Pods With Services



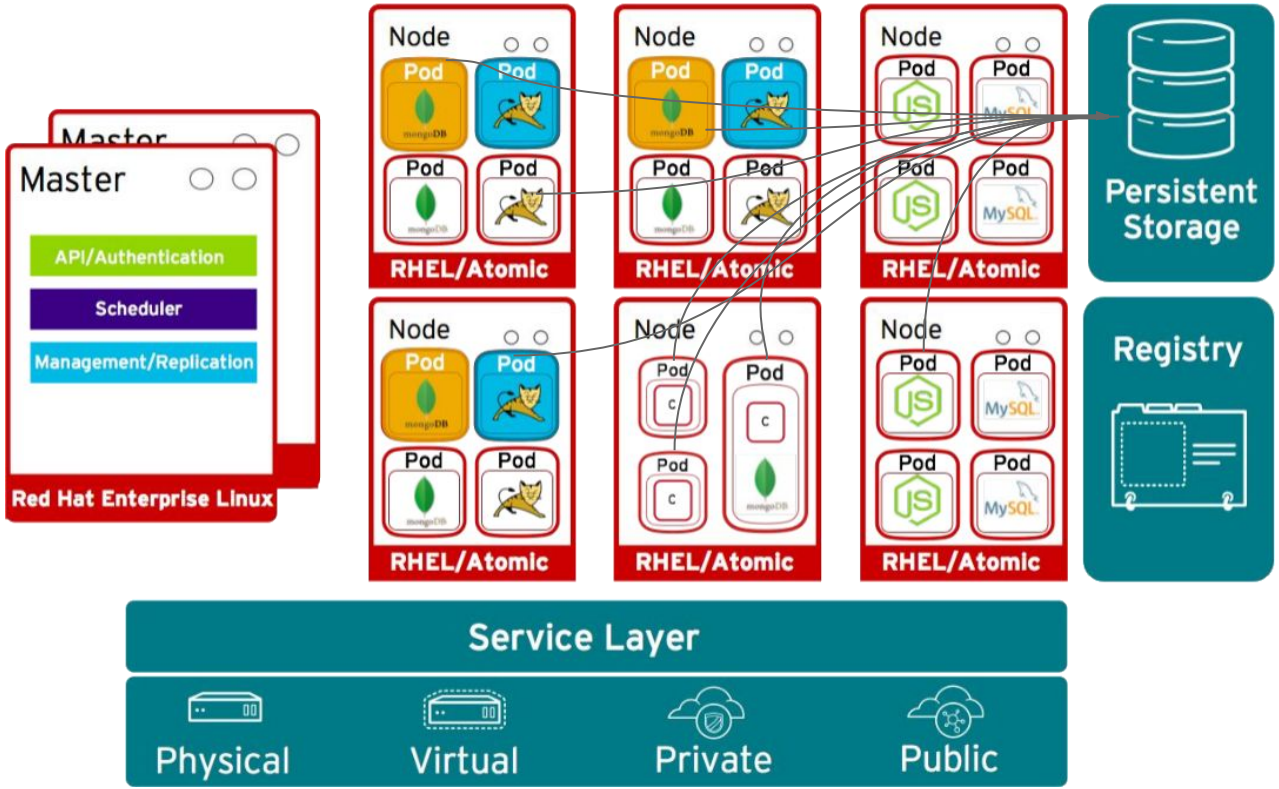
redhat.

OpenShift Masters Recover, Autoscale, & Rollback



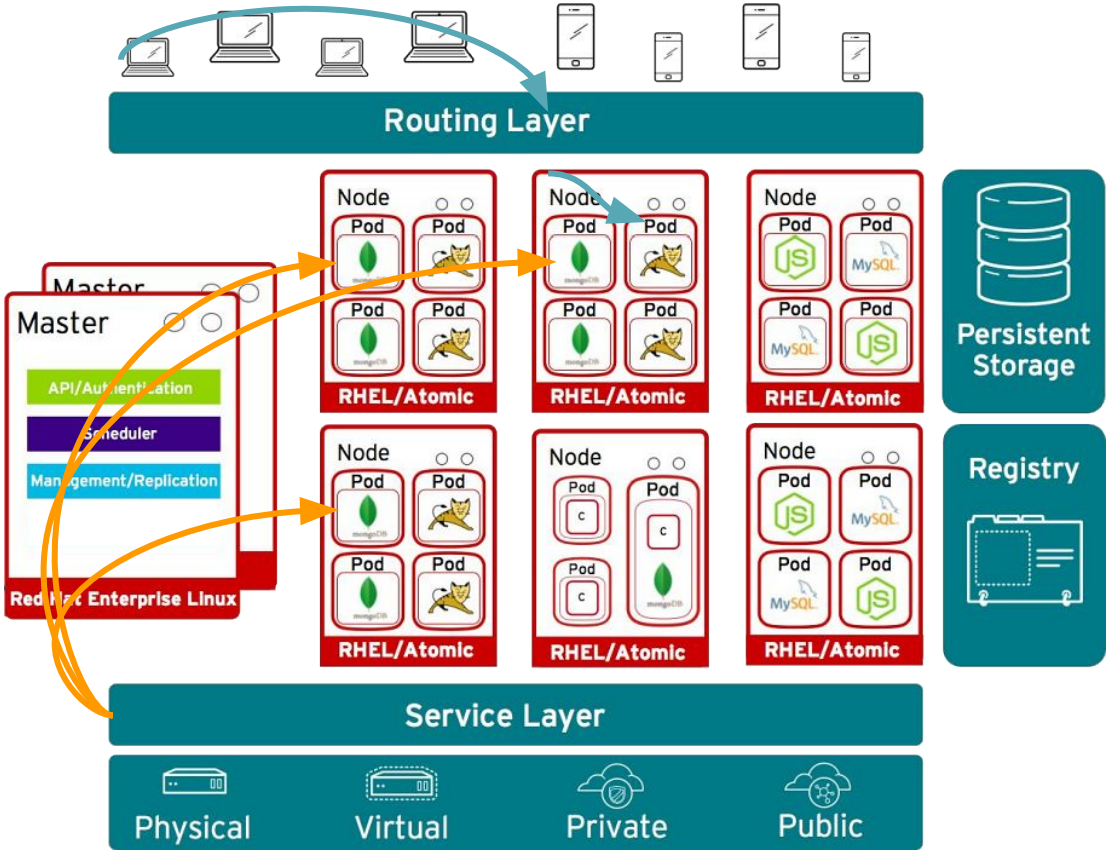
redhat.

OpenShift Pods Support Persistent Storage

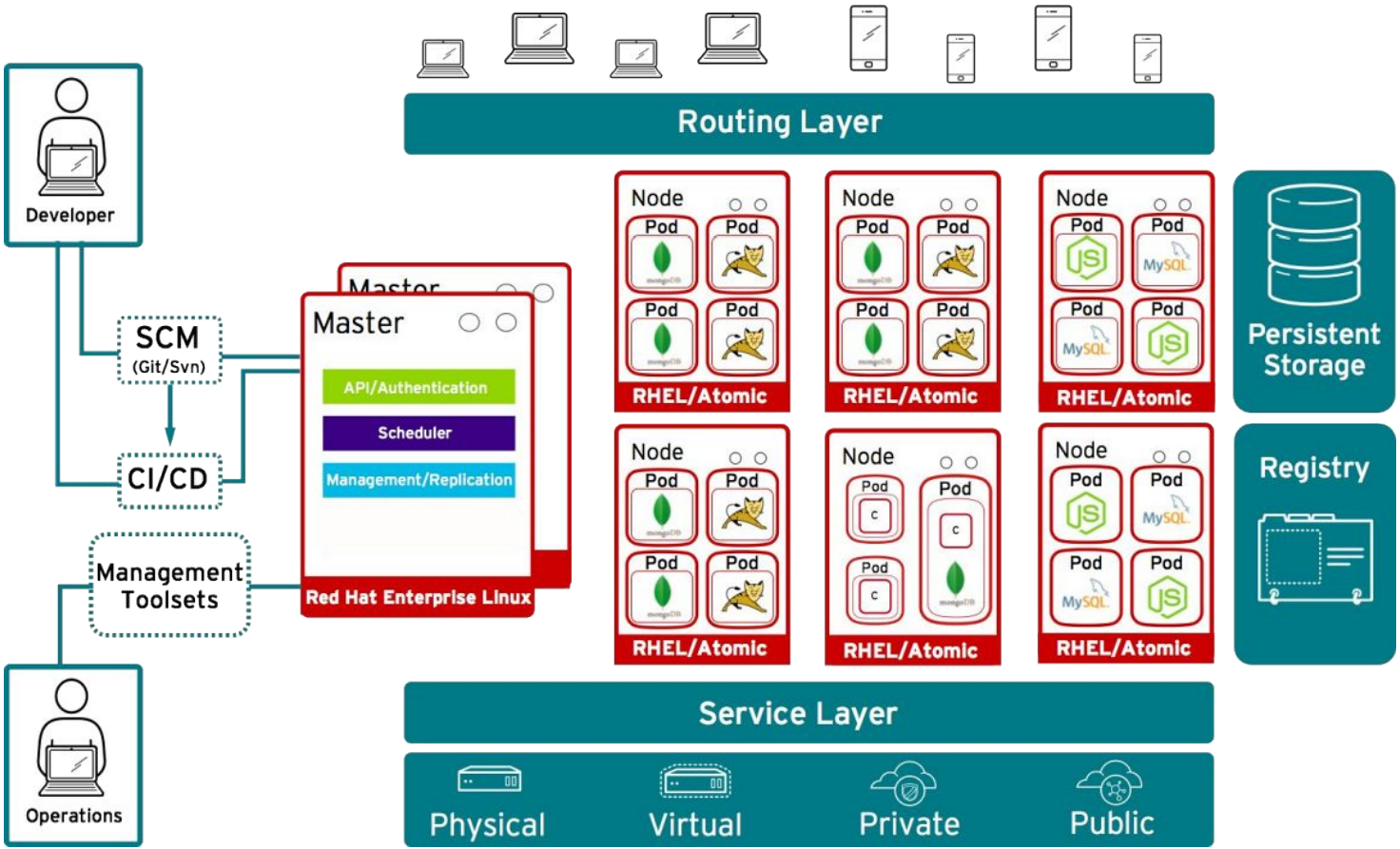


redhat.

OpenShift Exposes Pods With Routes



redhat.


Routing Layer
Developer
SCM
(Git/Svn)
CI/CD
Management
Toolsets
Operations
Master
API/Authentication
Scheduler
Management/Replication
Red Hat Enterprise Linux
Node
Pod
RHEL/Atomic
Persistent
Storage
Registry
Service Layer
Physical
Virtual
Private
Public

redhat.

OCP 3.3 — Feature Highlights

- Kubernetes 1.3 & Docker 1.10
- Enterprise Registry enhancements
- Web Console navigation & usability
- Add to Project from Docker image or template via Web Console
- A/B deployment routing configuration
- Scale certified to 1,000 Node clusters
- Continuous Deployment Pipelines based on Jenkins Pipelines (Tech Preview - see next slide)
- And many more!

redhat.

JBoss Middleware Services on OpenShift

Java EE Application Server
By JBoss EAP

Integration Services
By JBoss Fuse

Real time Decision Service
By JBoss BRMS

In Memory Data Grid
By JBoss Data Grid

Messaging Services
By JBoss A-MQ

Intelligent Process Server
By JBoss BPM Suite

Tomcat
By JBoss Web Server

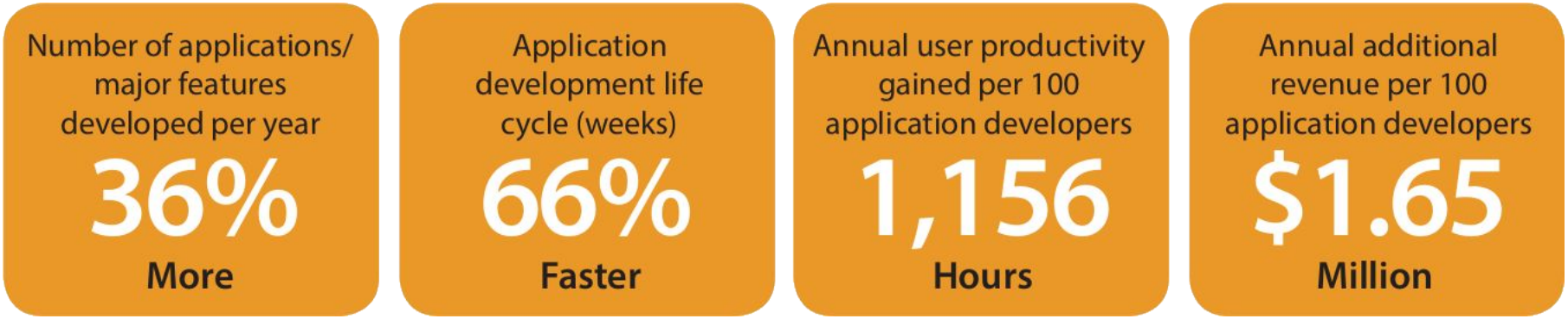
Single Sign On
By RH SSO

API Management

Data Services
By JBoss Data Virtualization

redhat.

App Development and Business Ops Impact



Source: IDC, 2016

redhat.

Key Takeaways

- Enterprise-grade security, stability & reliability
- Operational efficiency
- Accelerated application development
- Architectural flexibility at scale

redhat.

Thank You!

plus.google.com/+RedHat

facebook.com/redhatinc

linkedin.com/company/red-hat

twitter.com/RedHatNews

youtube.com/user/RedHatVideos