

# MIDDLEWARE TRACK

A cura del Middleware Solution Architect team di Red Hat

**#redhatosd**

# Agenda Middleware Track part 1

- **14.00 MicroServices, le dimensioni non contano**
  - Ugo Landini, Samuele Dell'Angelo
- **14.30 Wildfly Swarm, Spring Boot & Vertx.io: il nuovo che avanza**
  - Ugo Landini, Samuele Dell'Angelo
- **15.00 Microservices con JBoss EAP 7: innovare in continuità**
  - Giuseppe Bonocore
- **15.30 Microregole per grandi progetti con il BRMS**
  - Andrea Leoncini

# Agenda Middleware Track part 2

- **16.00 Integrazione e microservizi: come un cammello può passare dalla cruna di un ago**
  - Filippo Calà, Ugo Landini
- **16.30 API Management con 3Scale nell'era dei microservizi**
  - Luca Bigotta
- **17.00 SALA PLENARIA**
- **17.15 ESTRAZIONE FINALE PREMI**



RED HAT  
**OPEN SOURCE DAY**  
Europe, Middle East & Africa



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# MICROSERVICES con EAP7: Innovare in continuità

Giuseppe Bonocore

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# JBoss Enterprise Application Platform

#1 Open Source JEE Server

- **Basato su WildFly**
  - Hibernate, CXF, Infinispan...
- **Utilizzato da migliaia di aziende in Italia e nel mondo**
  - Banking, Telco, Utility, mission critical
- **Semplice e performante**
  - Packaging, boot time, performance



**RED HAT® JBOSS®  
ENTERPRISE  
APPLICATION PLATFORM**

# Enterprise Application Platform 7

Cosa c'è di nuovo

- JEE 7 certified
  - WebSocket, batch, JSon
- Semplificazione
  - Port reduction, graceful shutdown
- Consolidamento
  - Undertow, Artemis



# Enterprise Application Platform 7

## Tested Frameworks

- AngularJS
- Arquillian
- jQuery, jQuery Mobile
- Spring (Web Flow, WS, Security)



# Enterprise Application Platform 7

Scenari



**Applicazioni  
Tradizionali**

**Microservizi**

**RED HAT® JBOSS®  
ENTERPRISE  
APPLICATION PLATFORM 7**



**Fisico**



**Virtuale**



**Cloud**

# Enterprise Application Platform 7

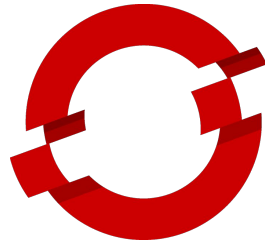
Scenari



**Applicazioni  
Tradizionali**

**Microservizi**

**RED HAT® JBOSS®  
ENTERPRISE  
APPLICATION PLATFORM 7**



**RED HAT®  
OPENSIFT**  
Container Platform

# Enterprise Application Platform 7

Microservices in JEE ?!?!

- Microservizi in Java: UberJar con Hibernate, CXF, Log4j...
  - Il rischio è di ricostruire un application server...
- EAP: Ottimizzato per i Microservizi
  - Boot time in 2 sec (circa), lazy loading modules, 2 (o 1) porte, containerizzabile, scriptabile

# Enterprise Application Platform 7

Microservices in JEE ?!?!

- Riutilizzo di codice e skills
  - JEE features in un microservizio  
(Clustering con OSE !)
- Hipster ready :-)
  - Wildfly Swarm, JS Server side



# EAP S2i

OPENSIFT CONTAINER PLATFORM

[osd-tests](#) > [Add to Project](#) > [eap70-basic-s2i](#)



## eap70-basic-s2i

Version 1.3.2  
Namespace: openshift  
Application template for EAP 7 applications built using S2i.

### Images

- \$(IMAGE\_STREAM\_NAMESPACE)/jboss-eap70-openshift:1.4
- \$(APPLICATION\_NAME)

### Parameters

\* APPLICATION\_NAME

The name for the application.

HOSTNAME\_HTTP

Custom hostname for http service route. Leave blank for default hostname, e.g.: <application-name>-<project>-<default-domain-suffix>

\* SOURCE\_REPOSITORY\_URL

Git source URI for application

SOURCE\_REPOSITORY\_REF

Git branch/tag reference

CONTEXT\_DIR

Path within Git project to build; empty for root project directory.

Nome App



Puntamenti  
GIT



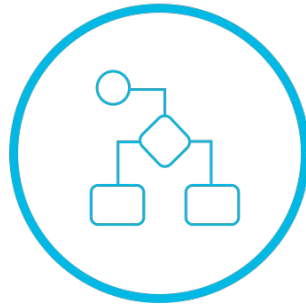
# Enterprise Application Platform 7

## Red Hat xPaaS



### **Application Container Services**

Enterprise Application Platform  
JBoss Web Server (Tomcat)  
JBoss Data Grid  
JBoss Developer Studio



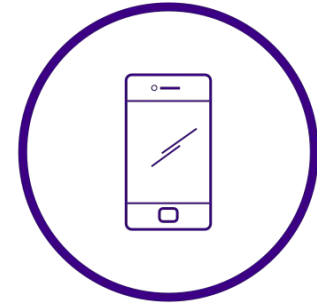
### **Integration Services**

Fuse  
A-MQ  
Data Virtualization \*



### **Business Process Services**

Business Process  
Management \*  
Business Rules  
Management System



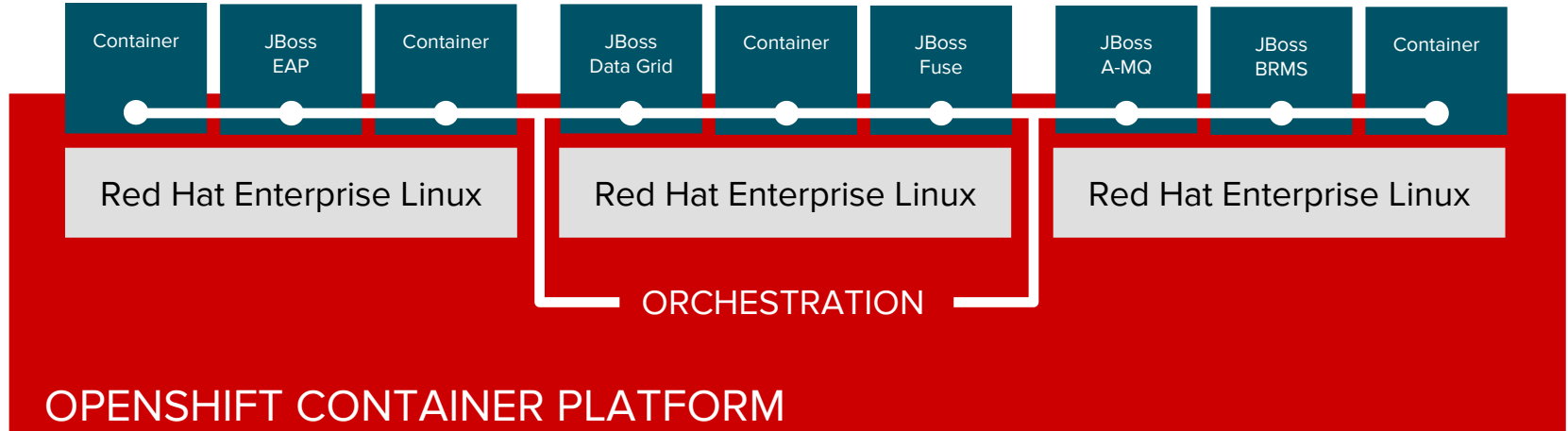
### **Mobile Services**

Red Hat Mobile /  
FeedHenry

\* Coming Soon

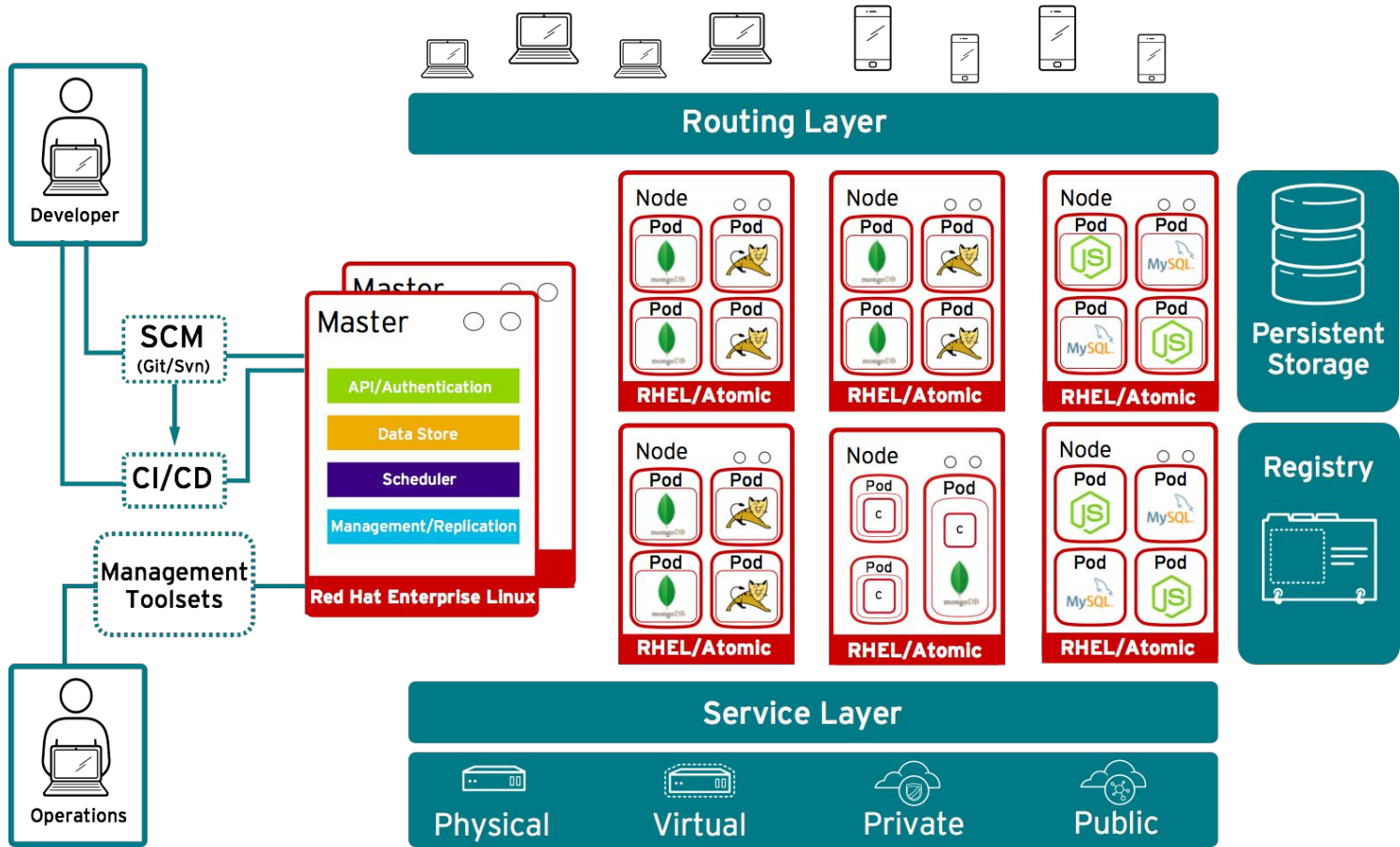
# Enterprise Application Platform 7

Red Hat xPaaS



# Architettura

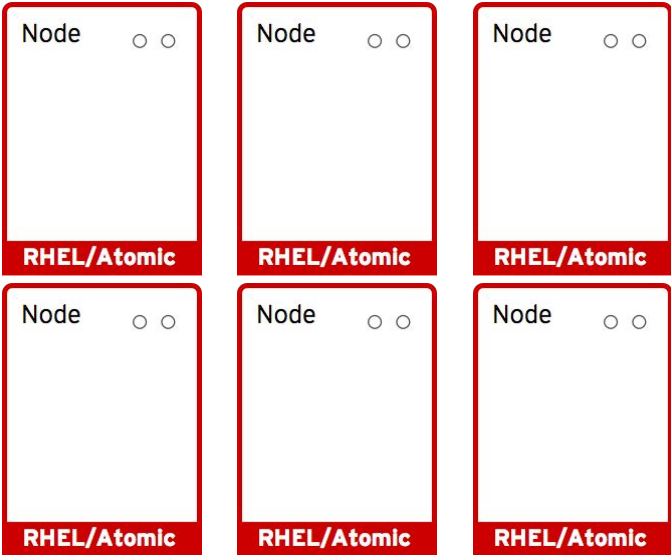




# OpenShift può girare su qualsiasi tipo di infrastruttura

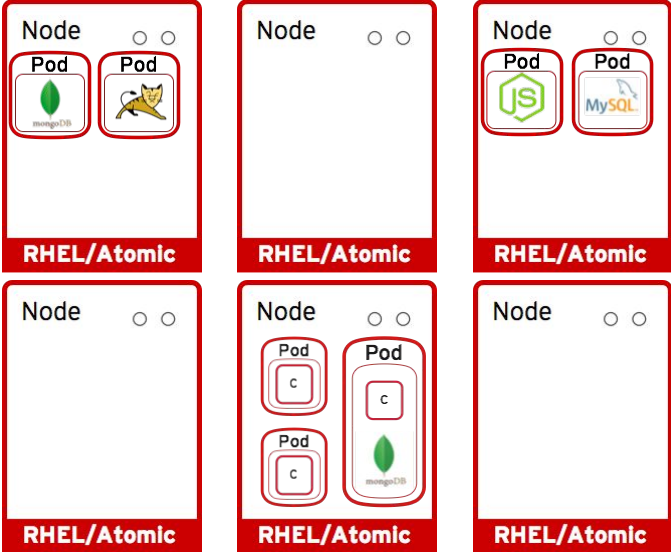


# I nodi sono istanze di RHEL



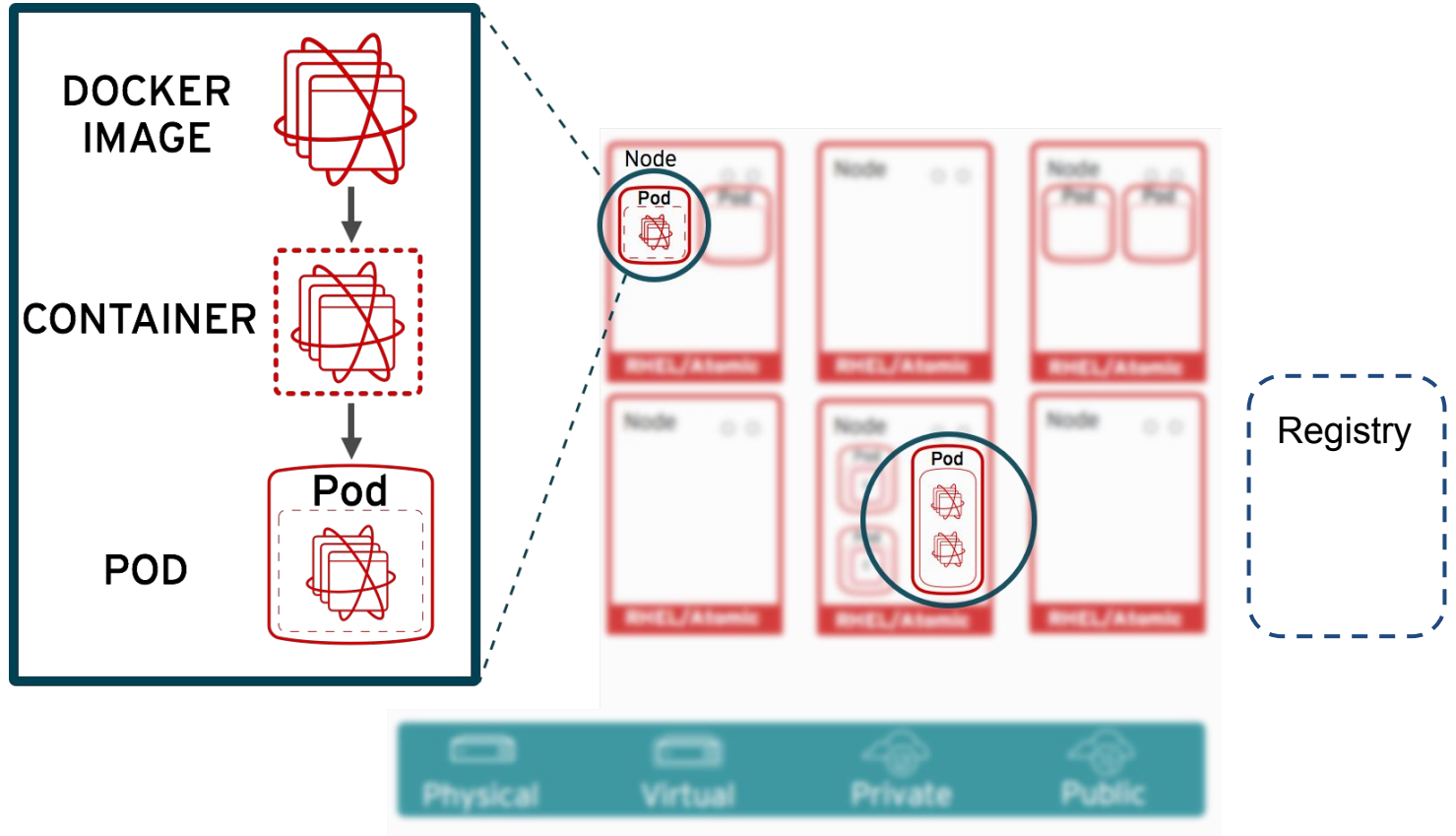
Physical Virtual Private Public

# I servizi girano in container Docker

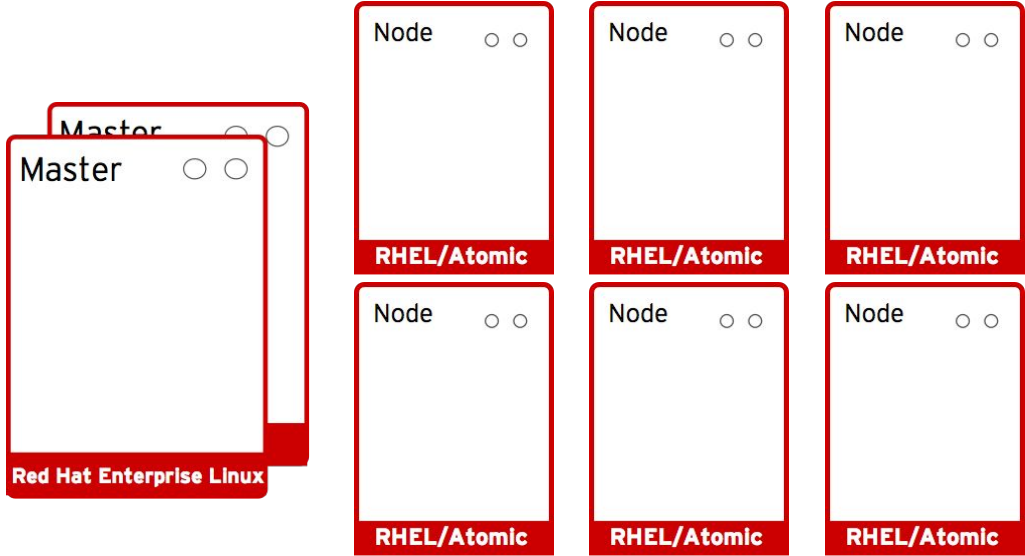


Physical      Virtual      Private      Public

# I Pod eseguono uno o più docker container

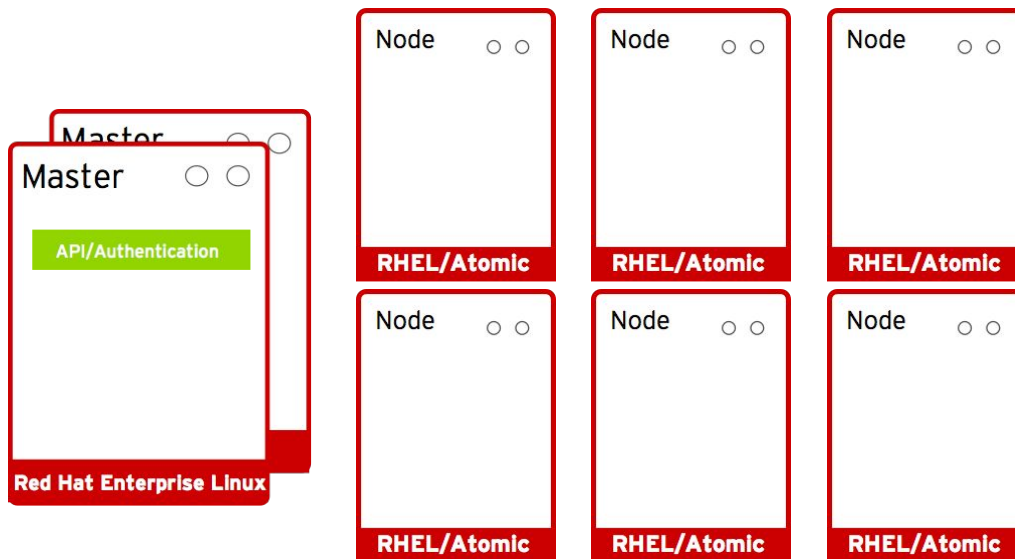


# I Master orchestrano i nodi e le app

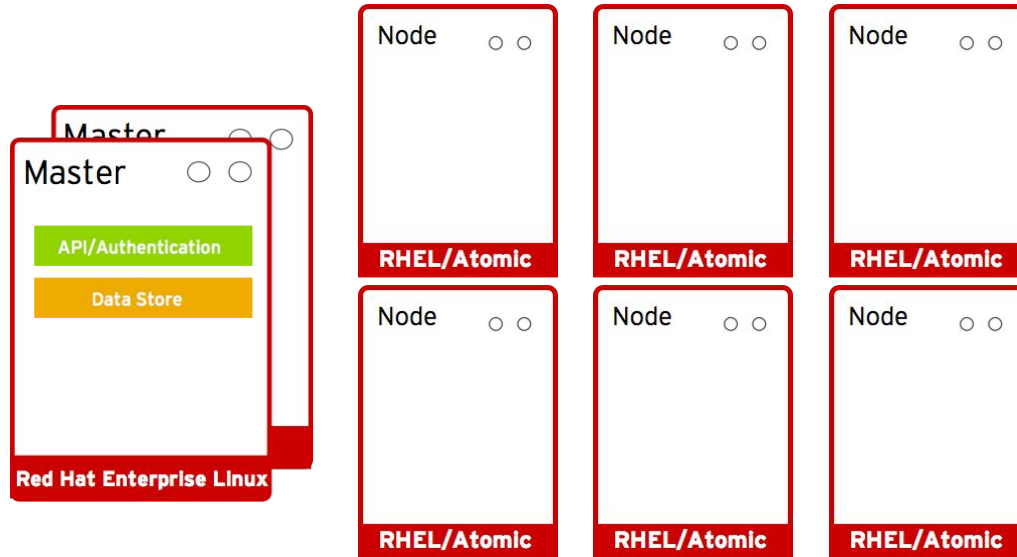


Physical Virtual Private Public

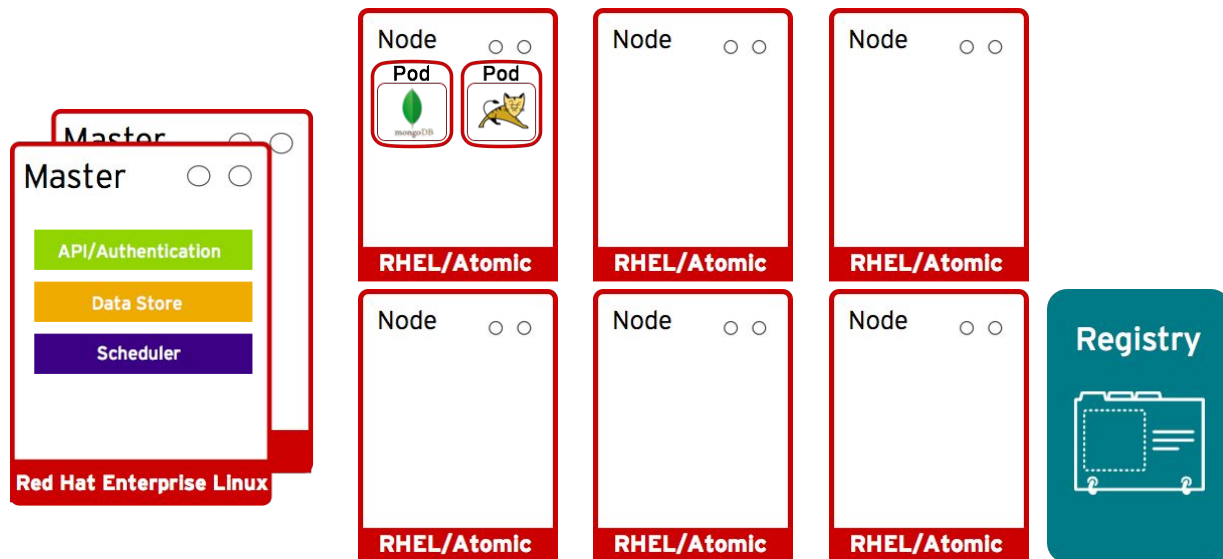
# I Master forniscono API per autenticazione di utenti & client



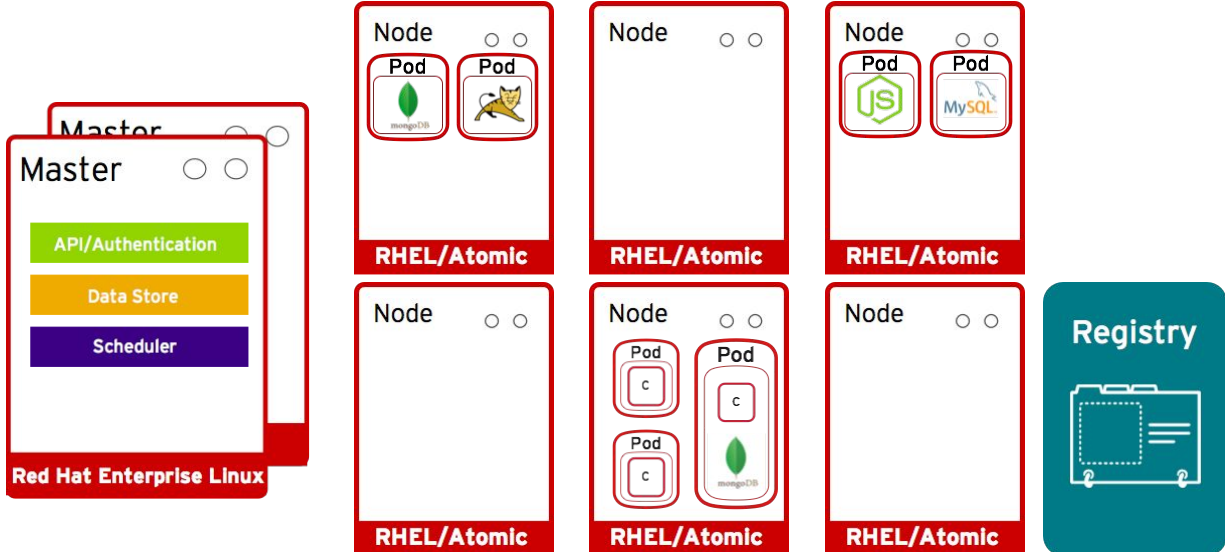
# I Master usano etcd per la persistenza



# I Master forniscono lo scheduler per la gestione dei pod sui nodi

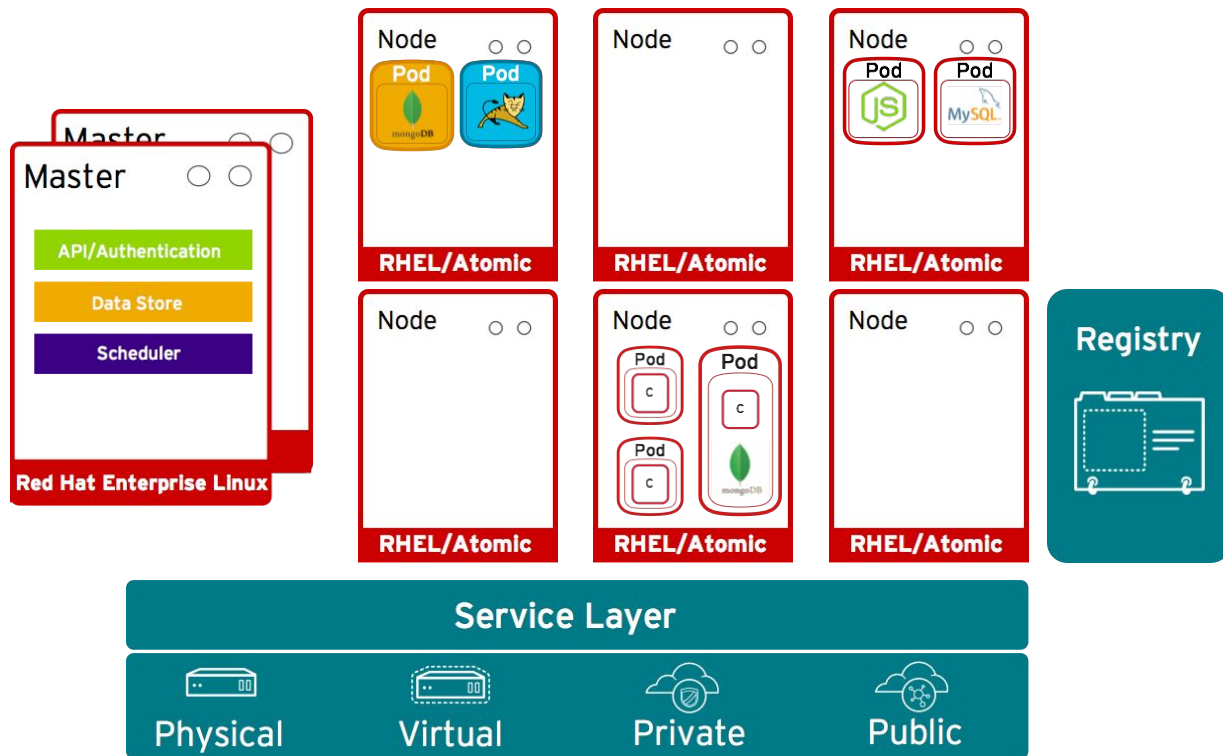


# Il posizionamento dei Pod è determinato da una policy

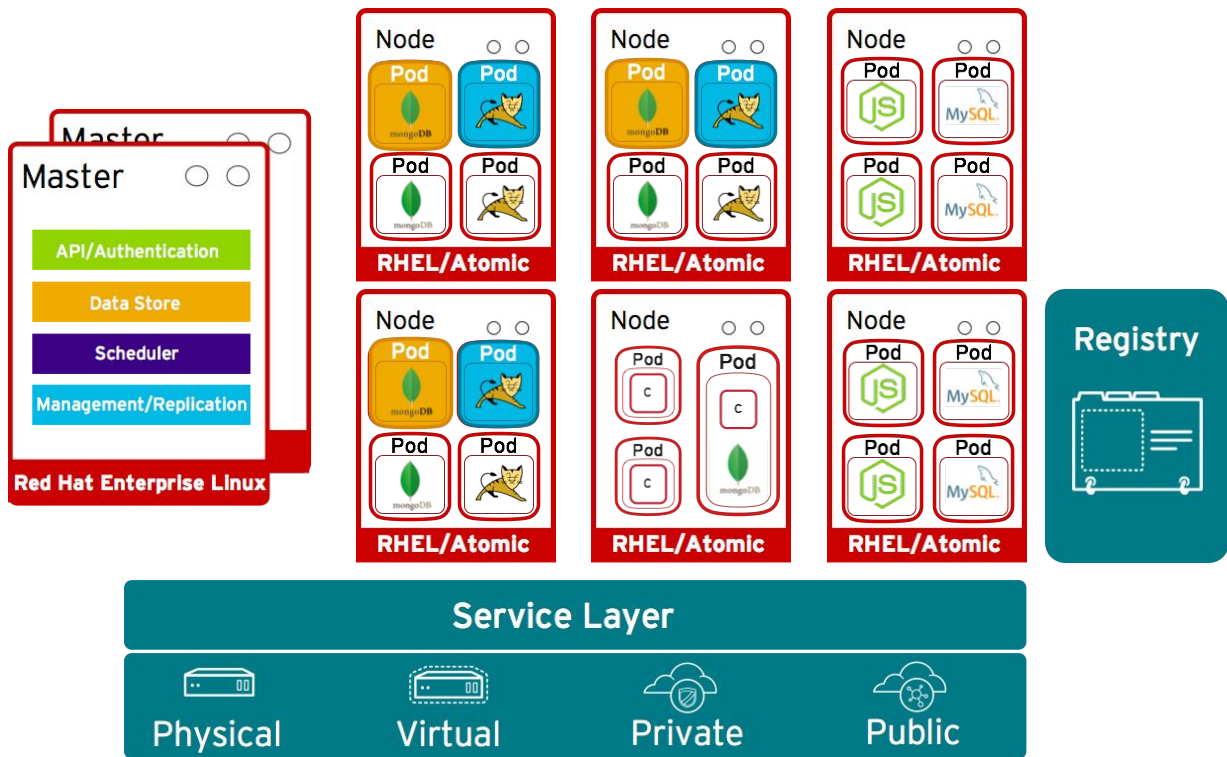


Physical Virtual Private Public

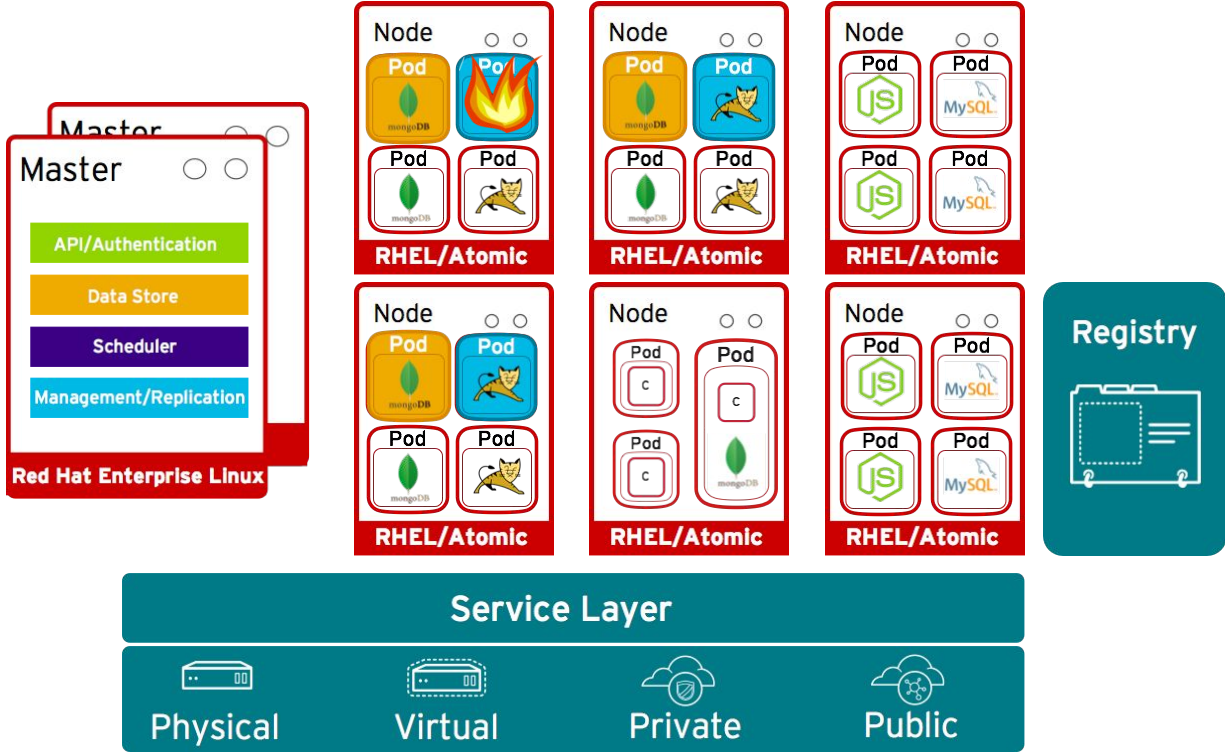
# I Service permettono ai pods di connettersi l'un l'altro



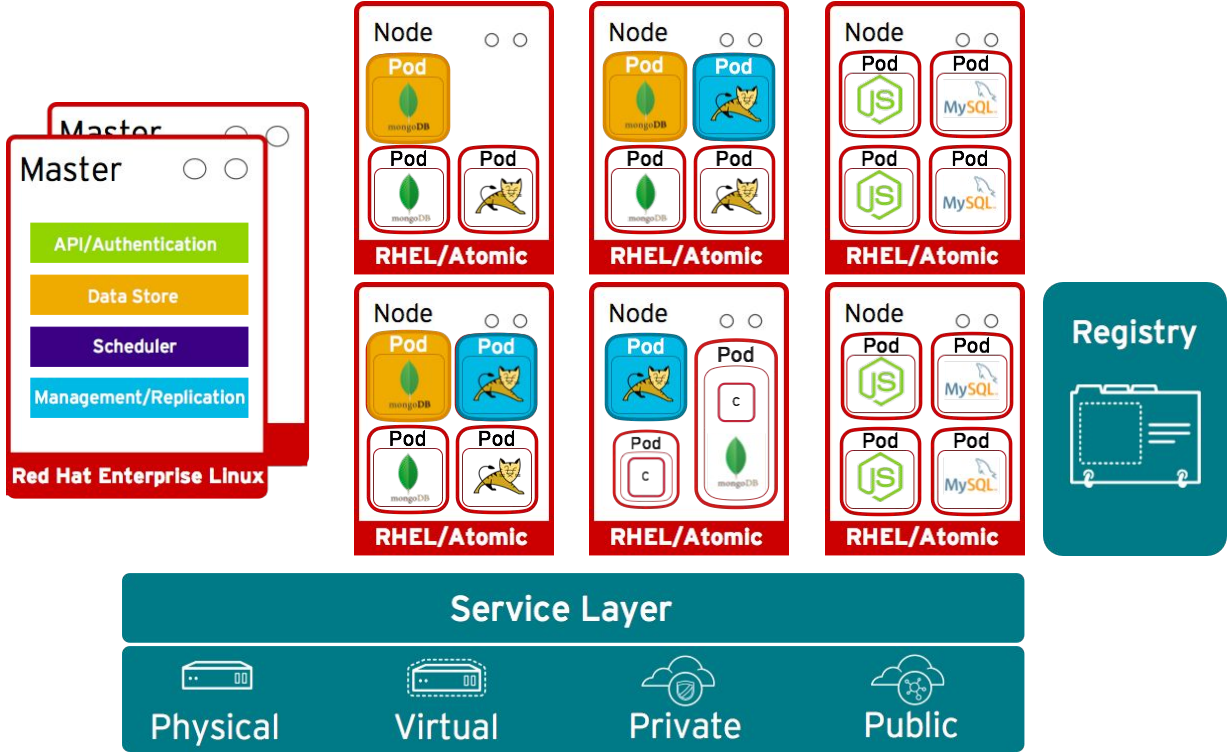
# I Management/Replication controller gestiscono il ciclo di vita dei pod



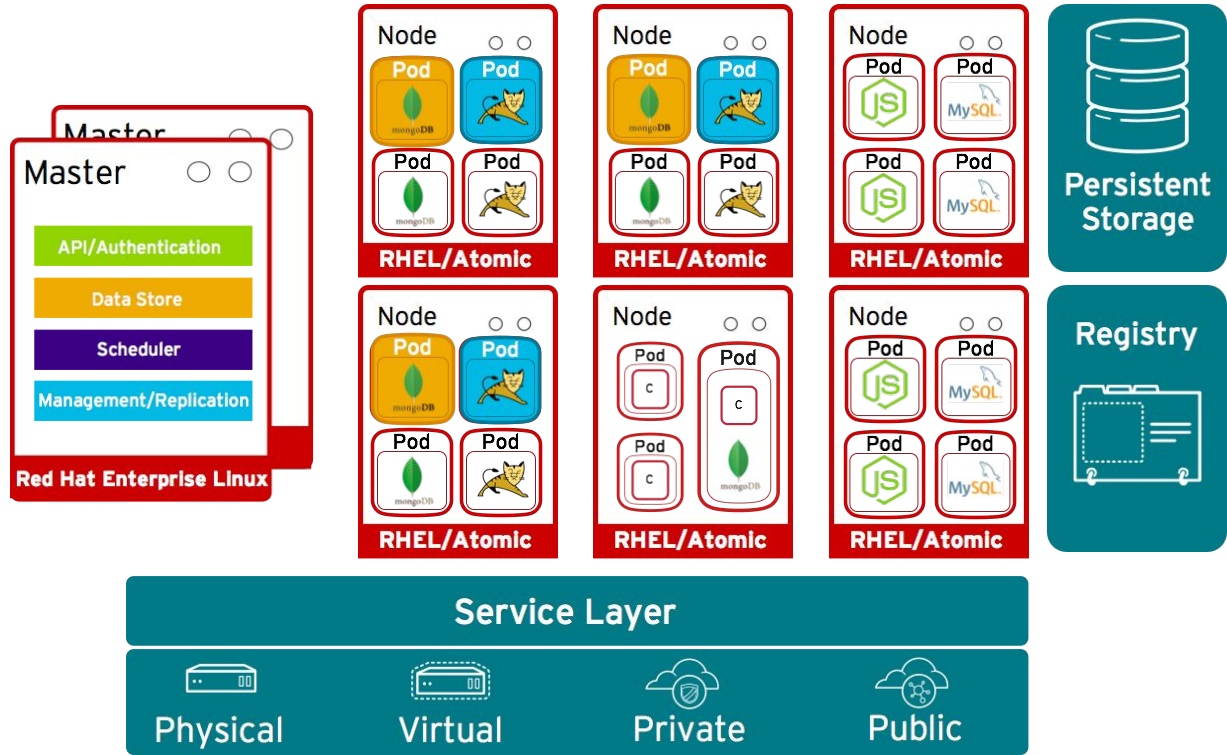
# OpenShift gestisce il recover in automatico



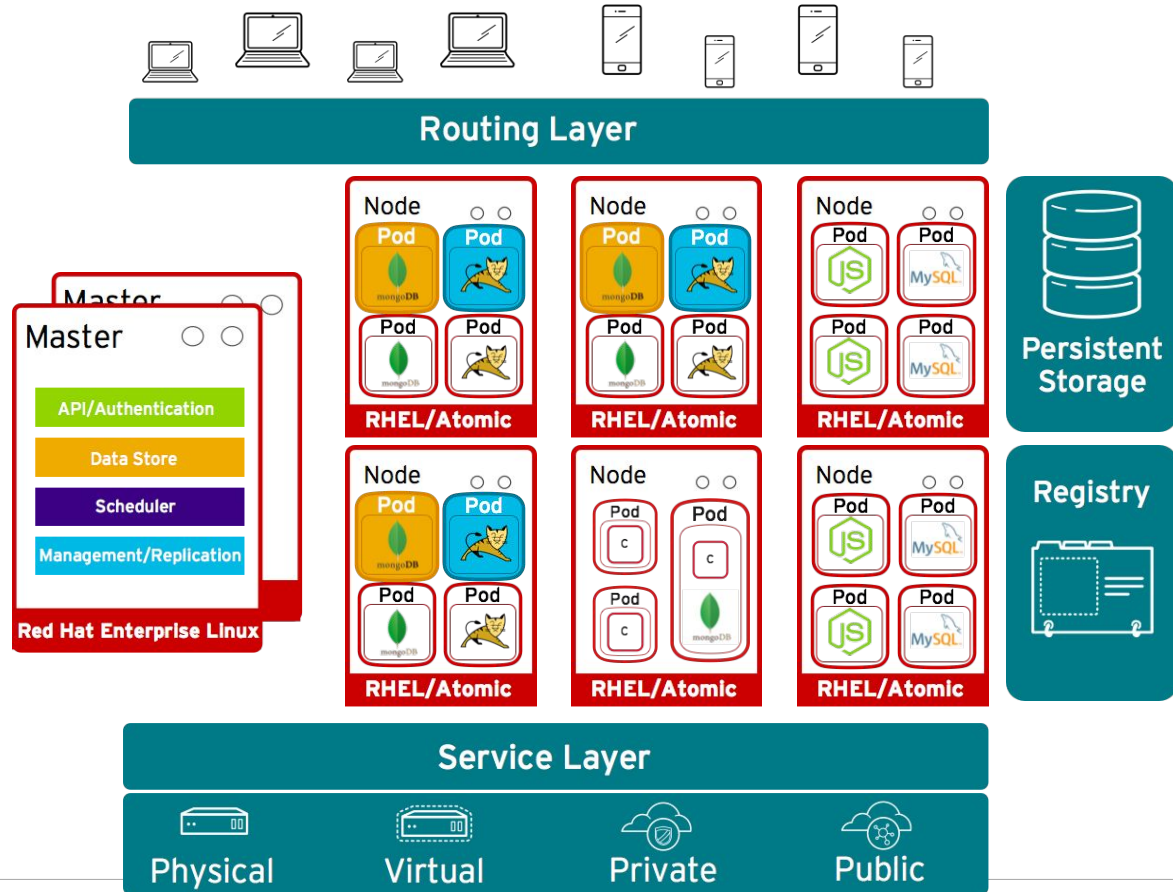
# OpenShift gestisce il recover in automatico



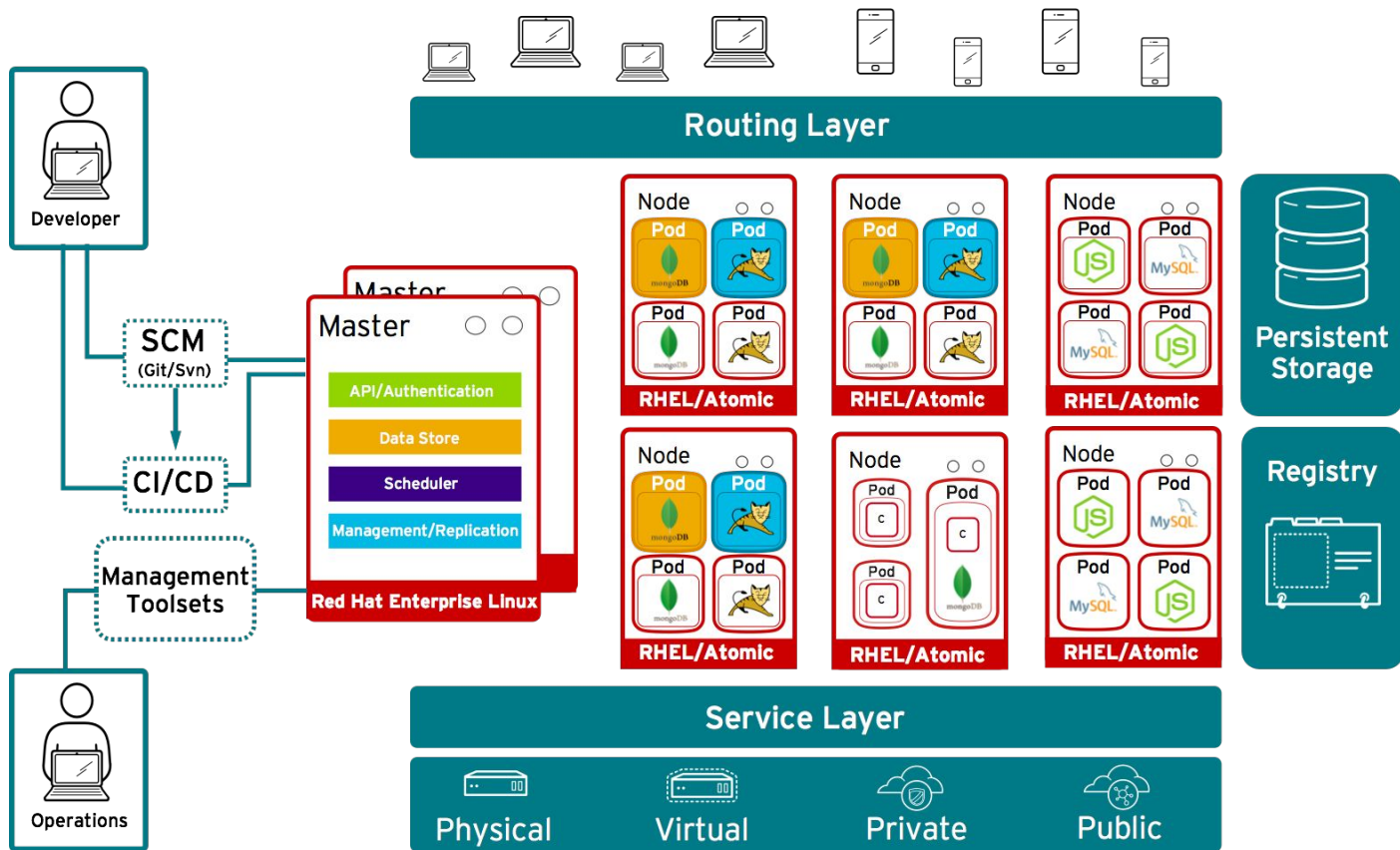
# I Pods possono connettersi ad uno shared storage



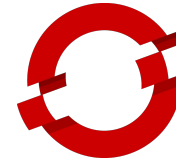
# Il Routing layer “ruota” richieste esterne ai pod



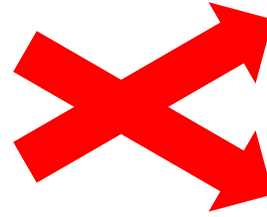
# I Dev accedono ad openShift via web, CLI o IDE



**App  
tradizionali**



**RED HAT®  
OPENS SHIFT**  
Container Platform



**Microservizi**



**Fisico**



**Virtuale**



**Cloud**

# Red Hat xPaas

## Application Server

Pivotal tc Server, VMware vFabric, Oracle WebLogic Server, IBM WebSphere

## In-memory data grid

IBM WebSphere eXtreme Scale, Oracle Coherence, Pivotal GemFire, Software AG Terracotta

## Application integration

IBM Integration Bus, Oracle SOA Suite and ESB, MuleSoft AnyPoint Platform, Sonic ESB, Tibco ActiveMatrix

## Business rules and process automation

IBM Operational Decision Manager and BPM, Oracle SOA Suite and BPM Suite, Pega BPM, FICO Blaze Advisor

## Messaging

IBM WebSphereMQ, Pivotal RabbitMQ, VMware vFabric, Tibco Enterprise Message Service

## Mobile

IBM MobileFirst, SAP Mobile Platform, Kony Mobility Platform, Telerik Platform, AnyPresence

## Data virtualization and data services

IBM InfoSphere, Progress DataXtend SI, Composite Information Server, Denodo

**JBoss EAP**  
**JBoss Web Server**

**JBoss Data Grid**

**JBoss Fuse**

**JBoss BRMS**  
**JBoss BPM Suite**

**JBoss A-MQ**

**Mobile Application Platform**

**JBoss Data Virtualization**

# Links

## OSD Demo Applications

<https://github.com/redhat-italy/osd-microservices-apps>

## Microservices Playground

[bit.ly/msa-instructions](http://bit.ly/msa-instructions)

<http://developers.redhat.com/downloads>

## Container Development Kit

Recorded Demo: <https://youtu.be/SPATMHP-xw8>