Openshift overview

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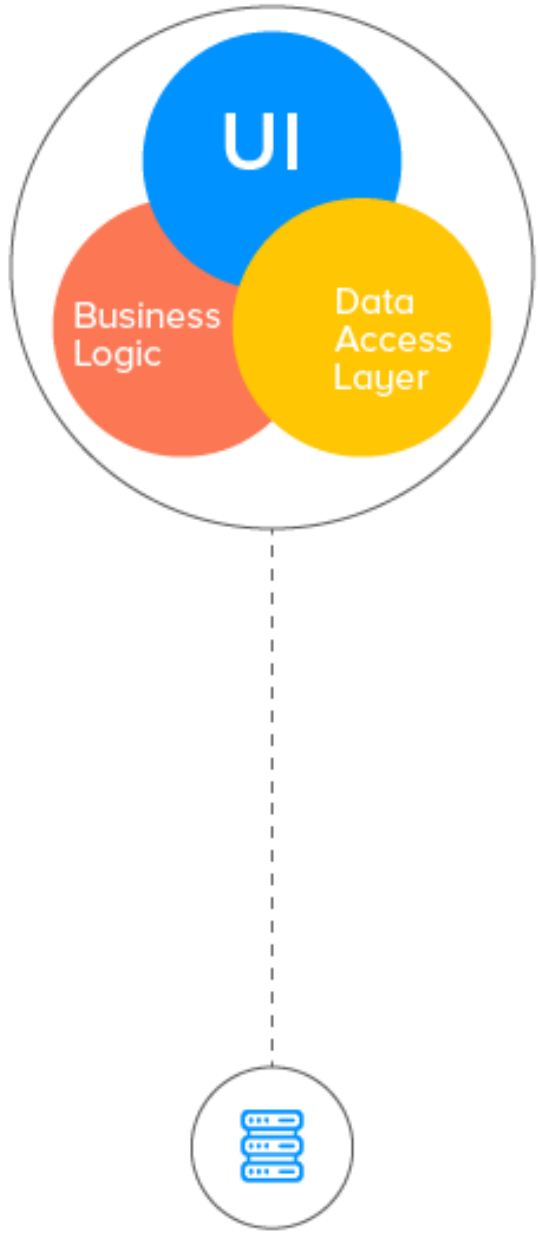
Agenda

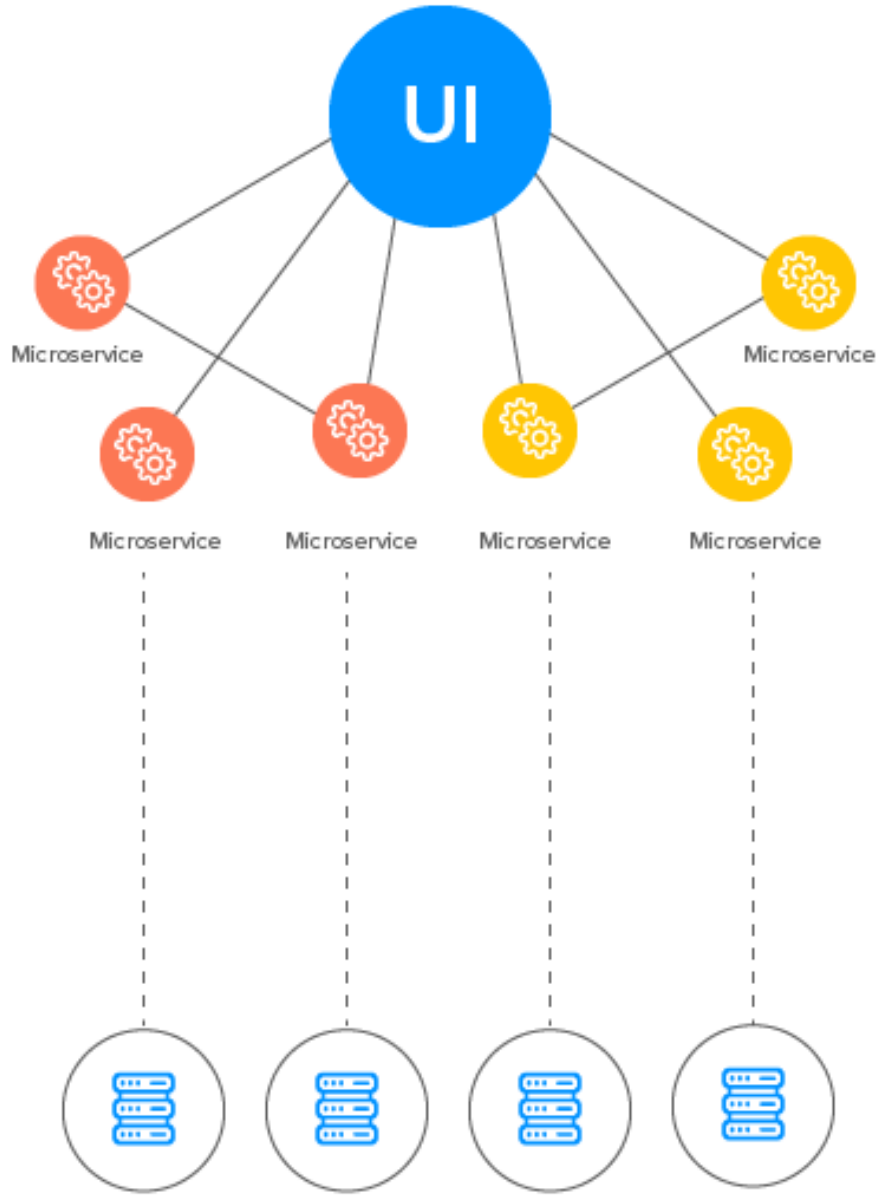
- Why OpenShift
- What is OpenShift
- Demo
- Run the lab yourself
- Resources

Why OpenShift

Monolithic Architecture



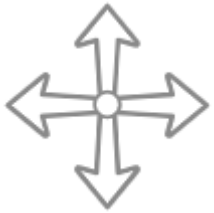
Micro-services Architecture



Avantages des micro-services

Agilité

Des modifications peuvent être appliquées à chaque service de façon indépendante



Evolutivité

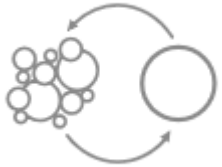
Chaque service peut être redimensionné indépendamment

Résilience

Isolation des pannes entre les micro-services

Déploiement

Déploiement simple car chaque service peut être déployé individuellement avec un temps d'arrêt minimal



Accessibilité

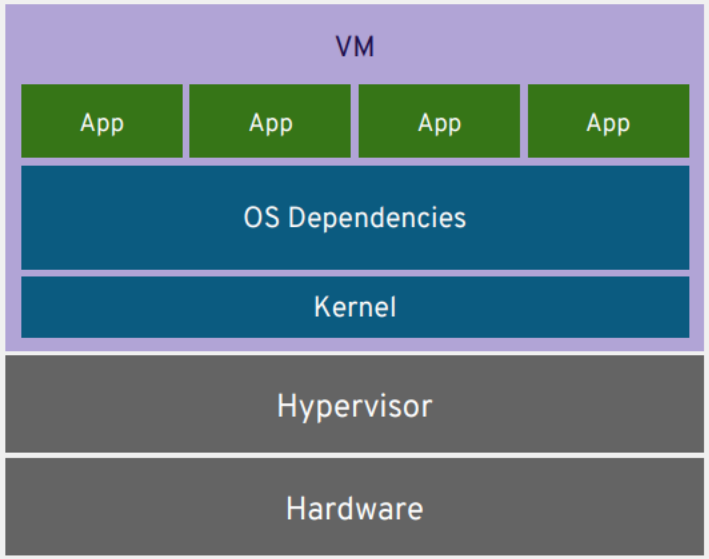
Des bases de code plus petites sont plus faciles à gérer

Ouverture

Chaque service peut être développé dans un langage de programmation différent

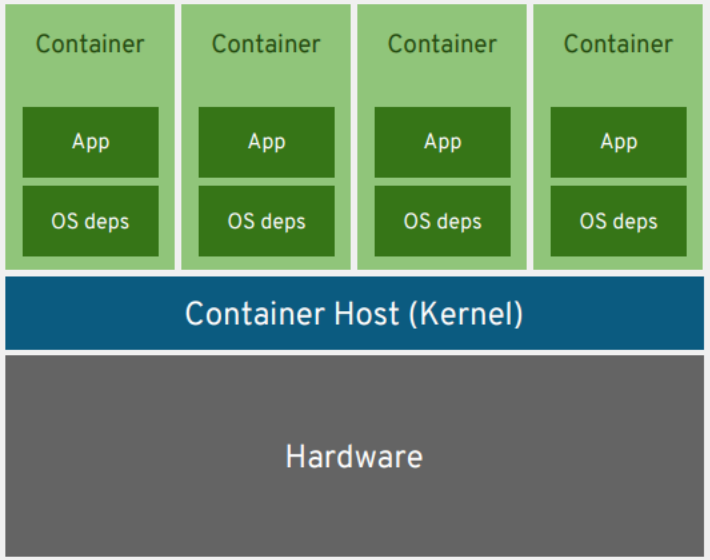
VIRTUAL MACHINES AND CONTAINERS

VIRTUAL MACHINES



virtual machines are isolated
apps are not

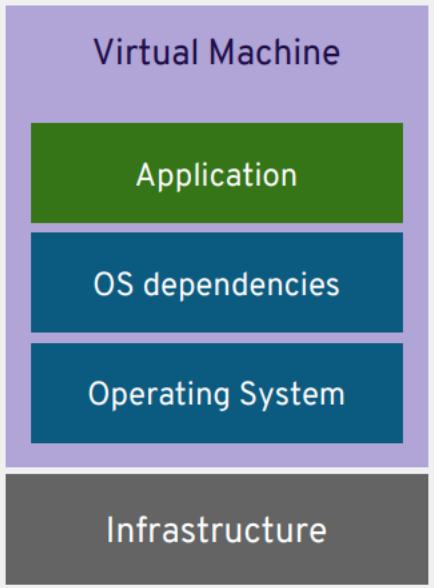
CONTAINERS



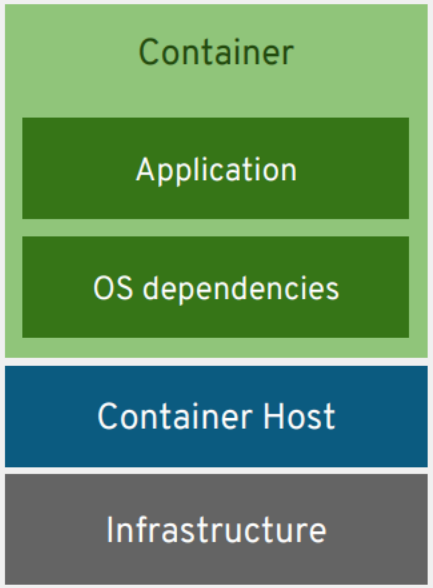
containers are isolated
so are the apps

VIRTUAL MACHINES AND CONTAINERS

IT Ops
(and Dev, sort of)



Clear ownership boundary between Dev and IT Ops drives DevOps adoption and fosters agility



Dev

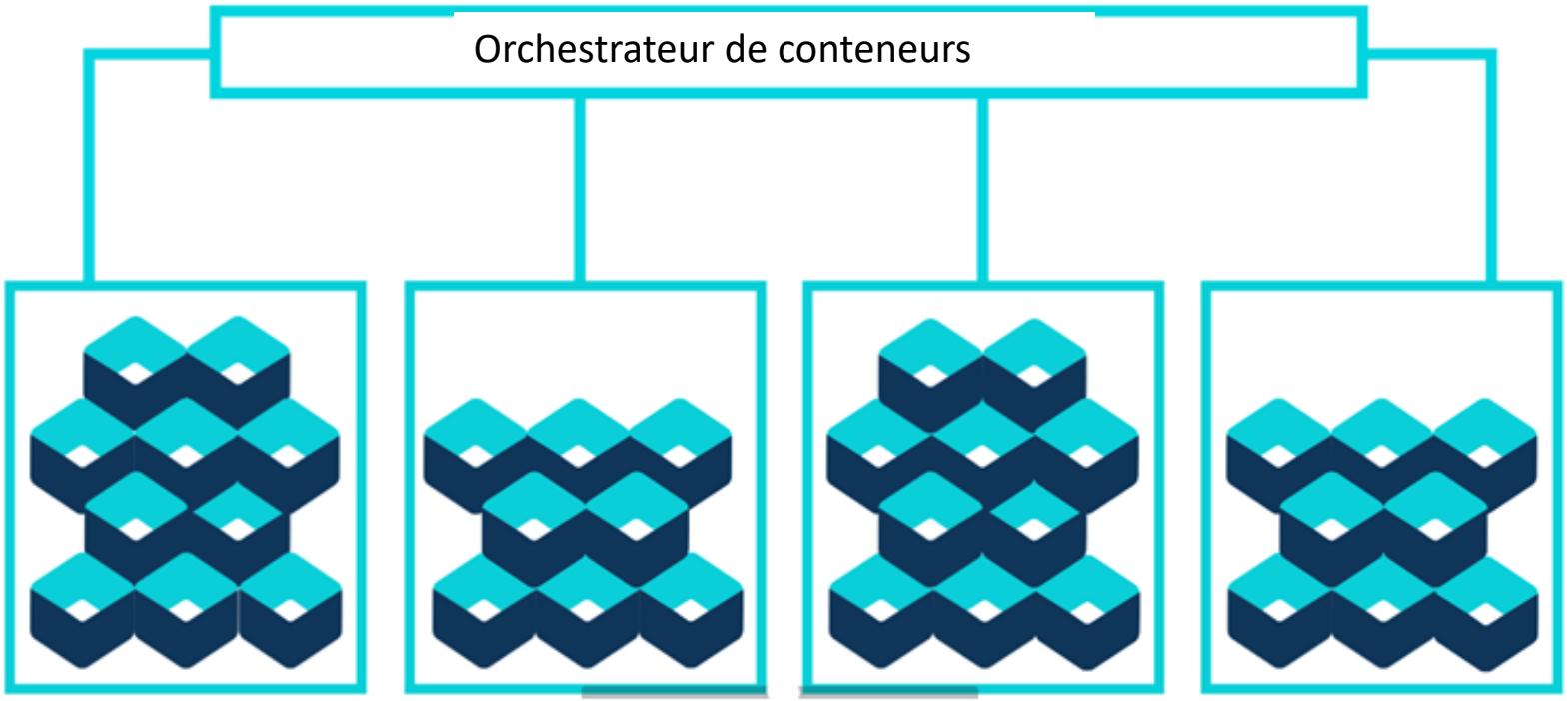
IT Ops

Optimized for stability

Optimized for agility

Un conteneur…

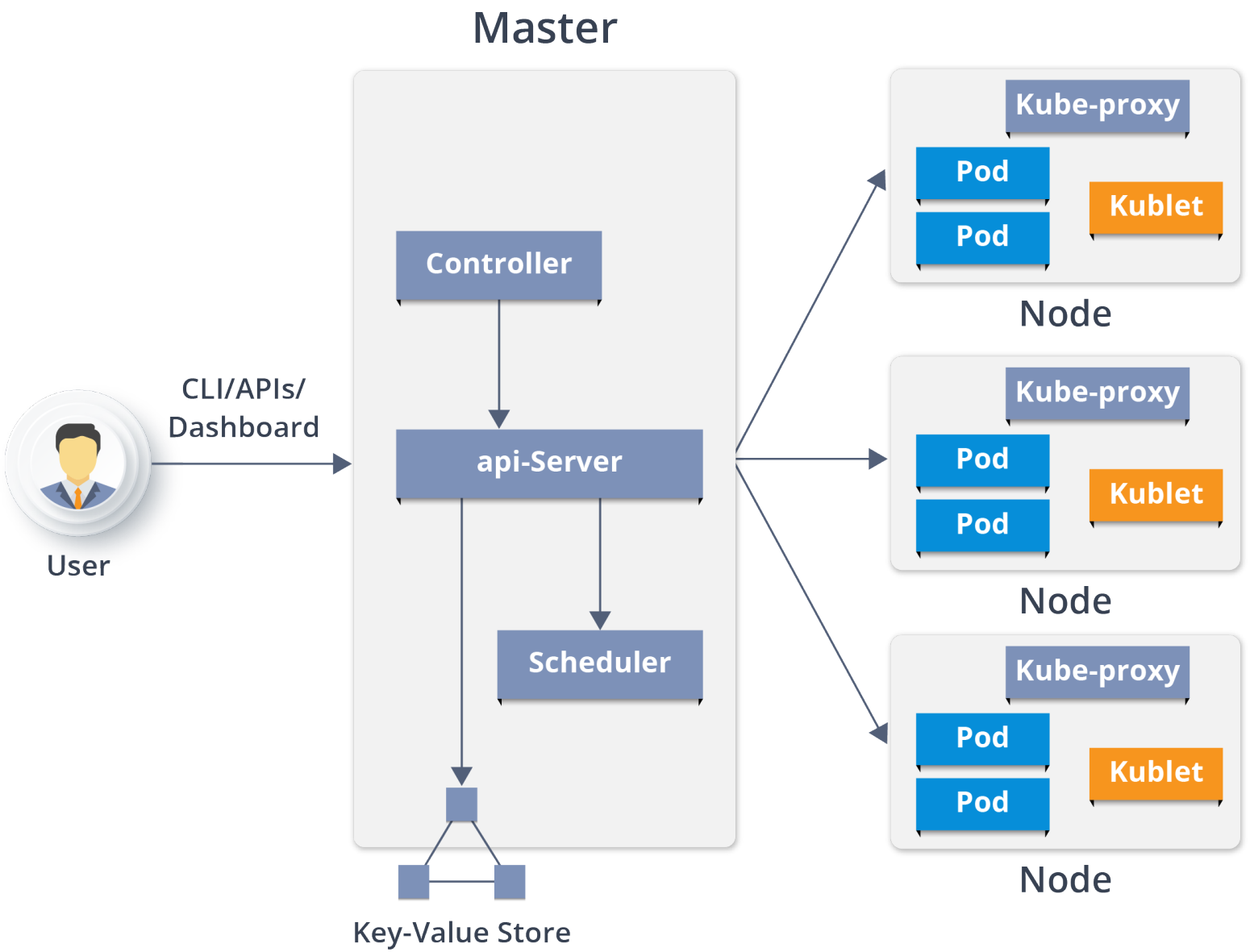
… est rapidement suivi de multiples conteneurs pour de multiples applications



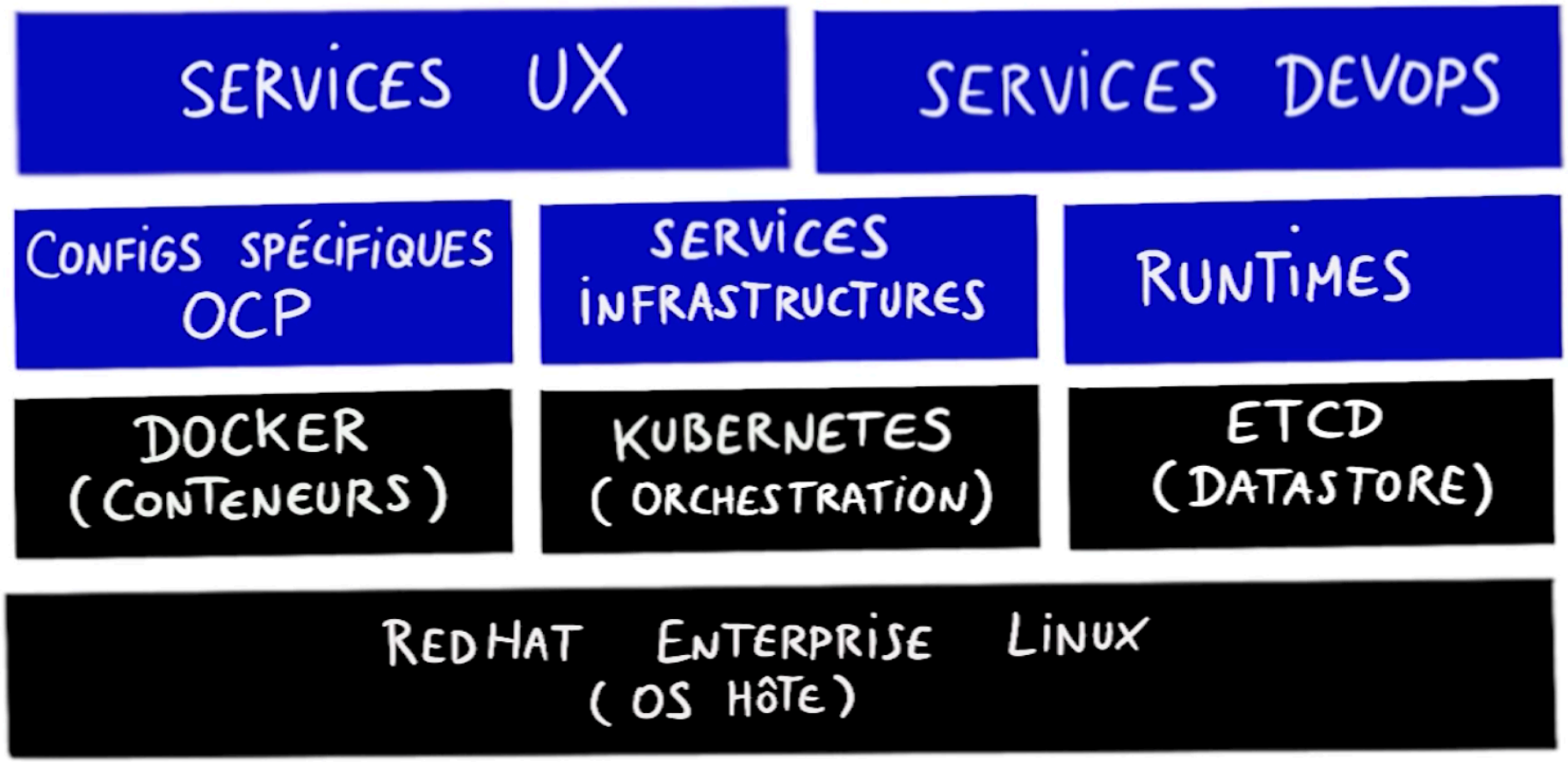
C’est pourquoi l’on a besoin d’un orchestrateur de conteneurs

kubernetes

Architecture de Kubernetes

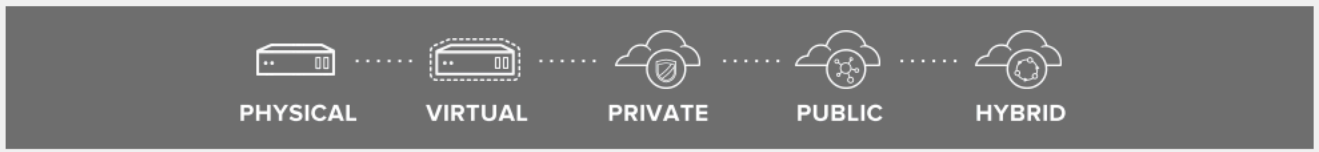


COMPOSANTS TECHNIQUES

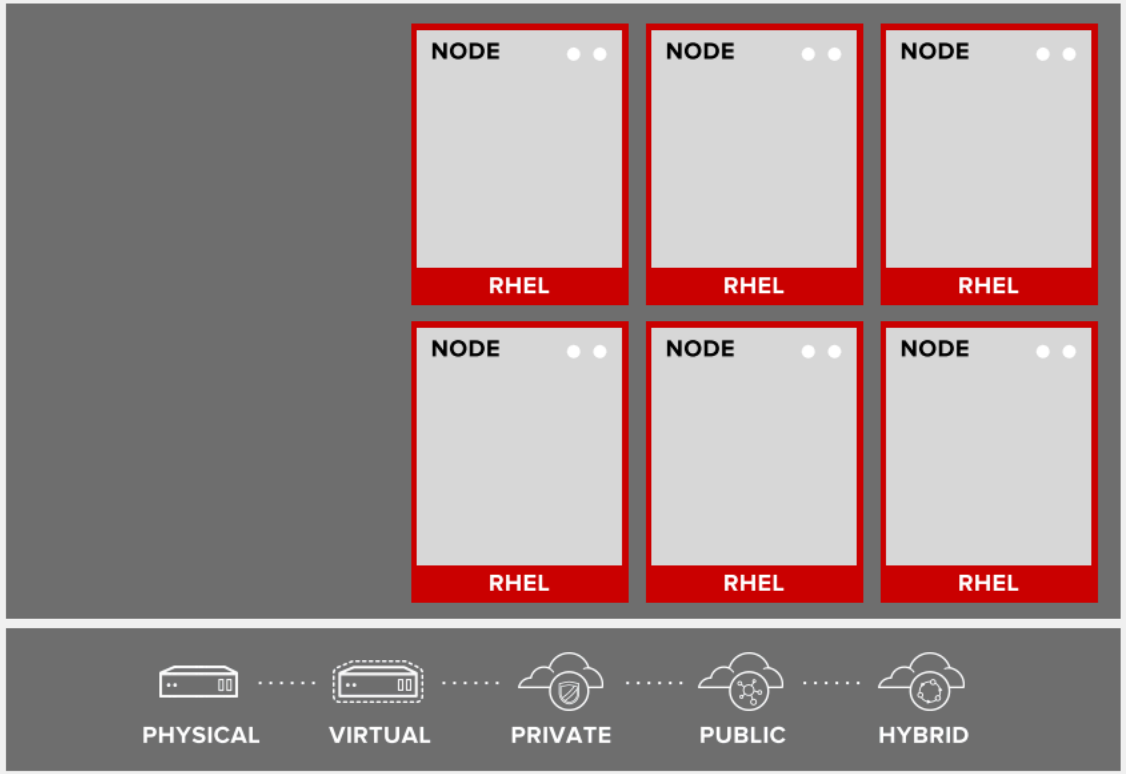


What is OpenShift

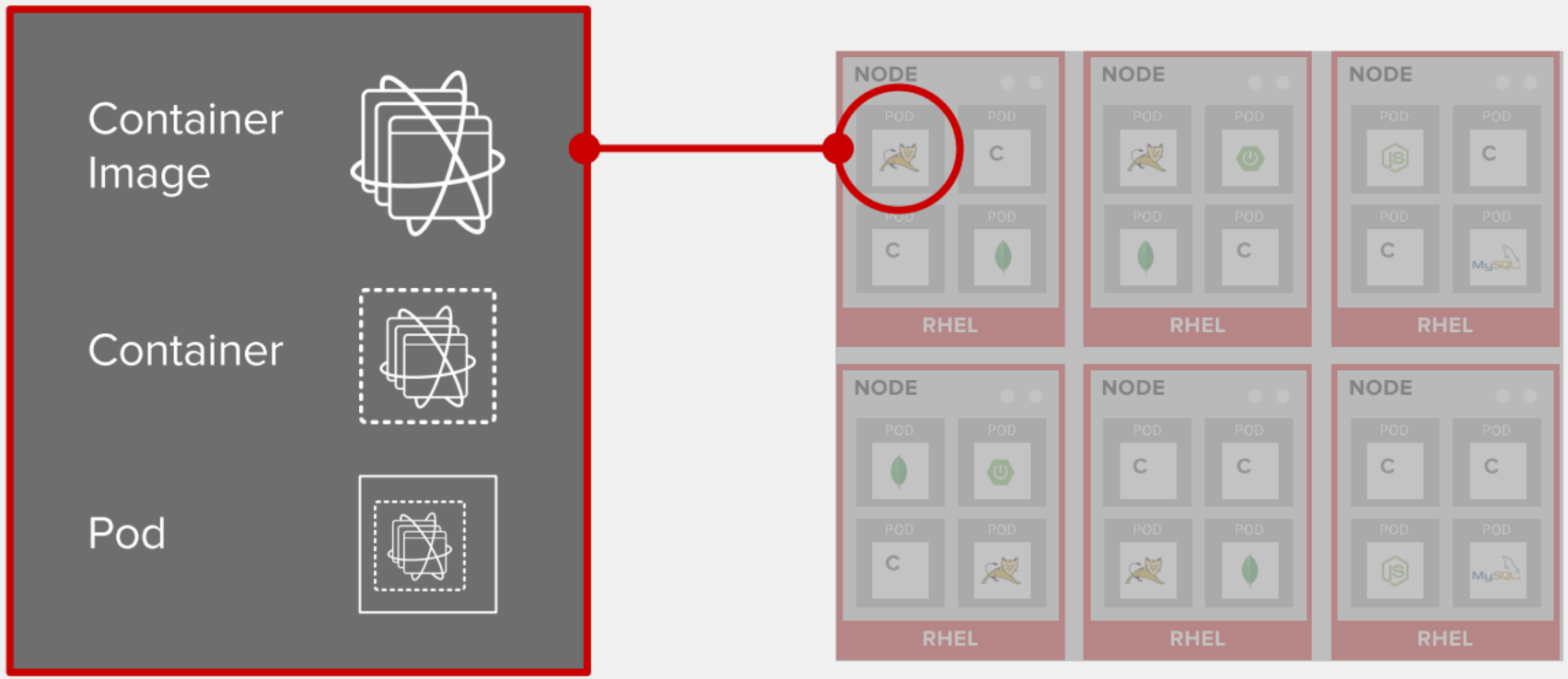
YOUR CHOICE OF INFRASTRUCTURE



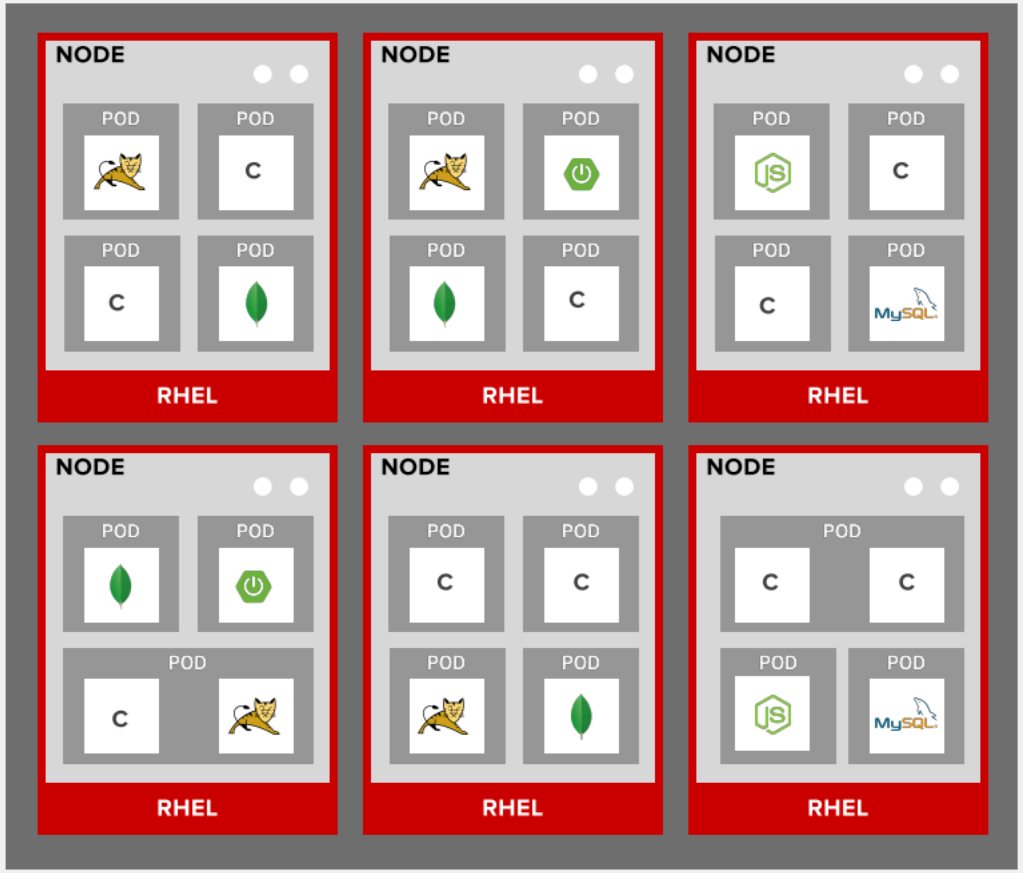
NODES RHEL INSTANCES WHERE APPS RUN



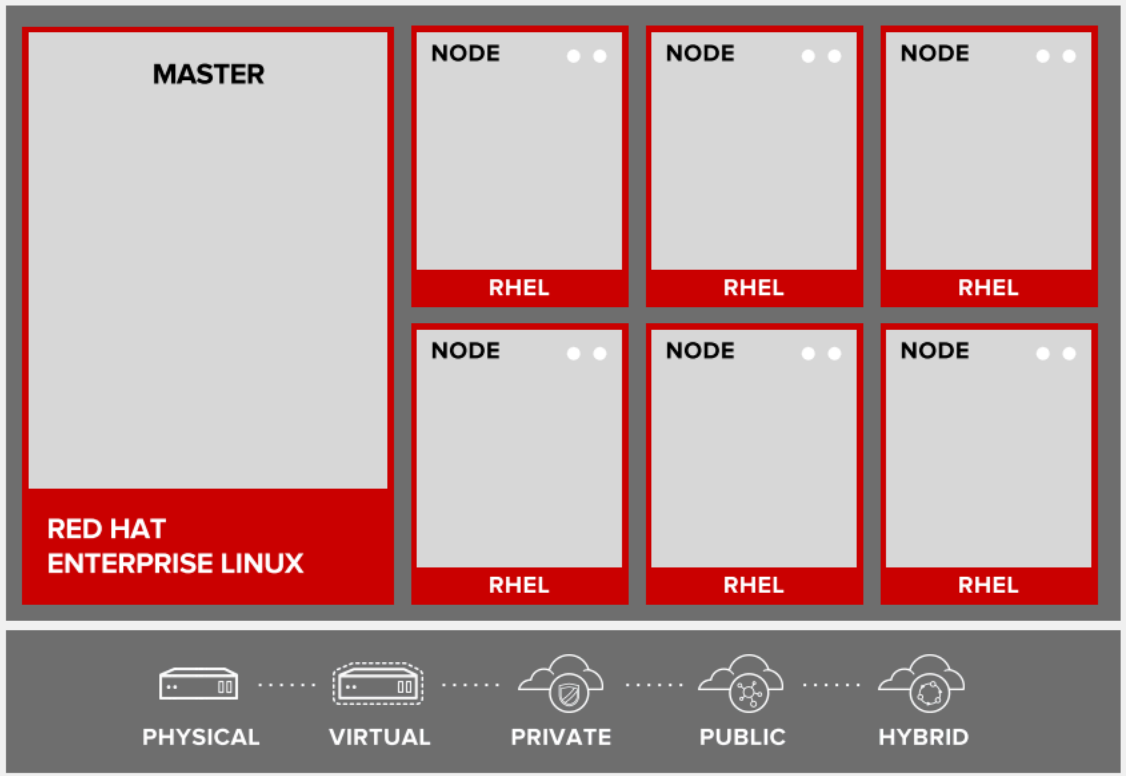
APPS RUN IN CONTAINERS



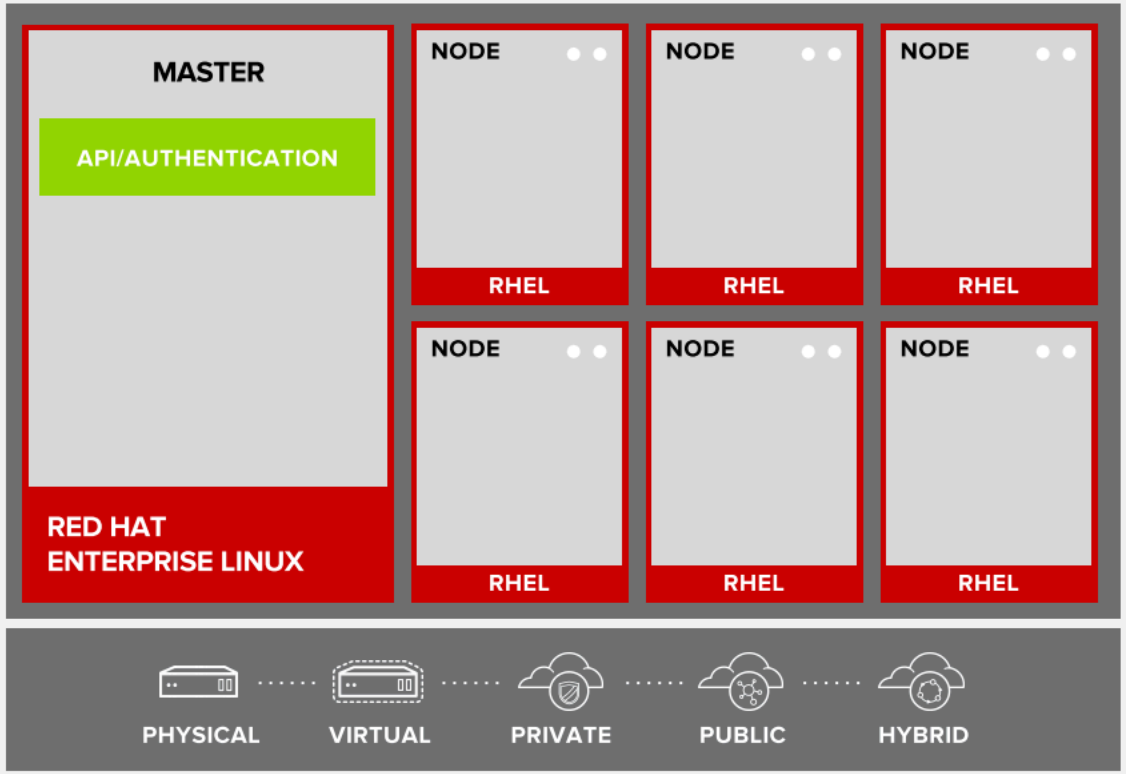
PODS ARE THE UNIT OF ORCHESTRATION



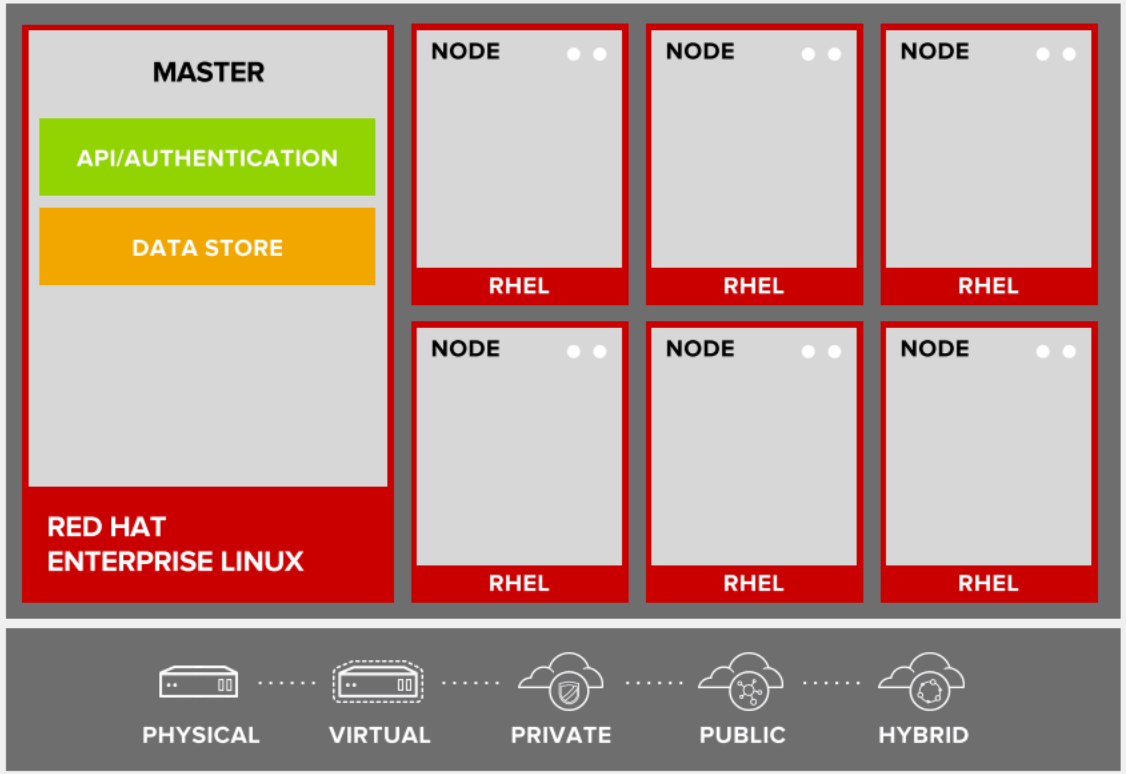
MASTERS ARE THE CONTROL PLANE



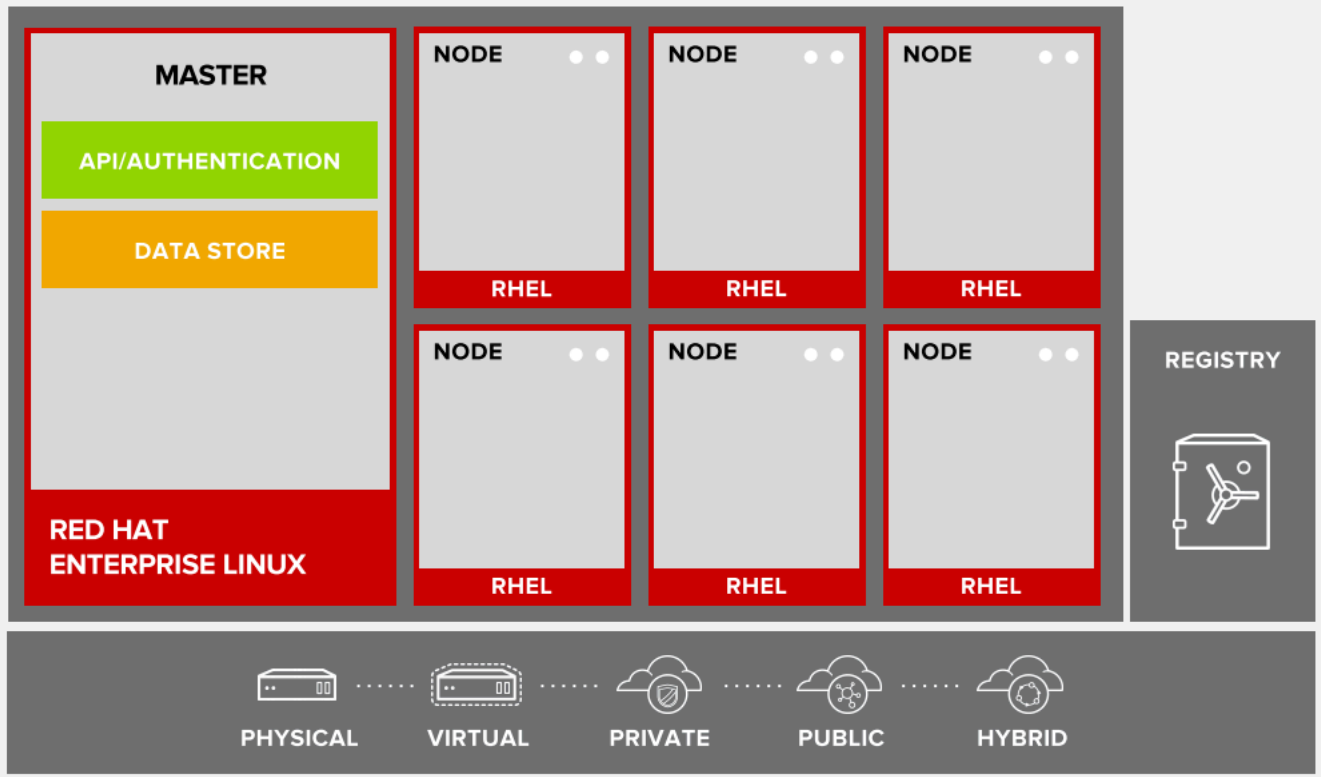
API AND AUTHENTICATION



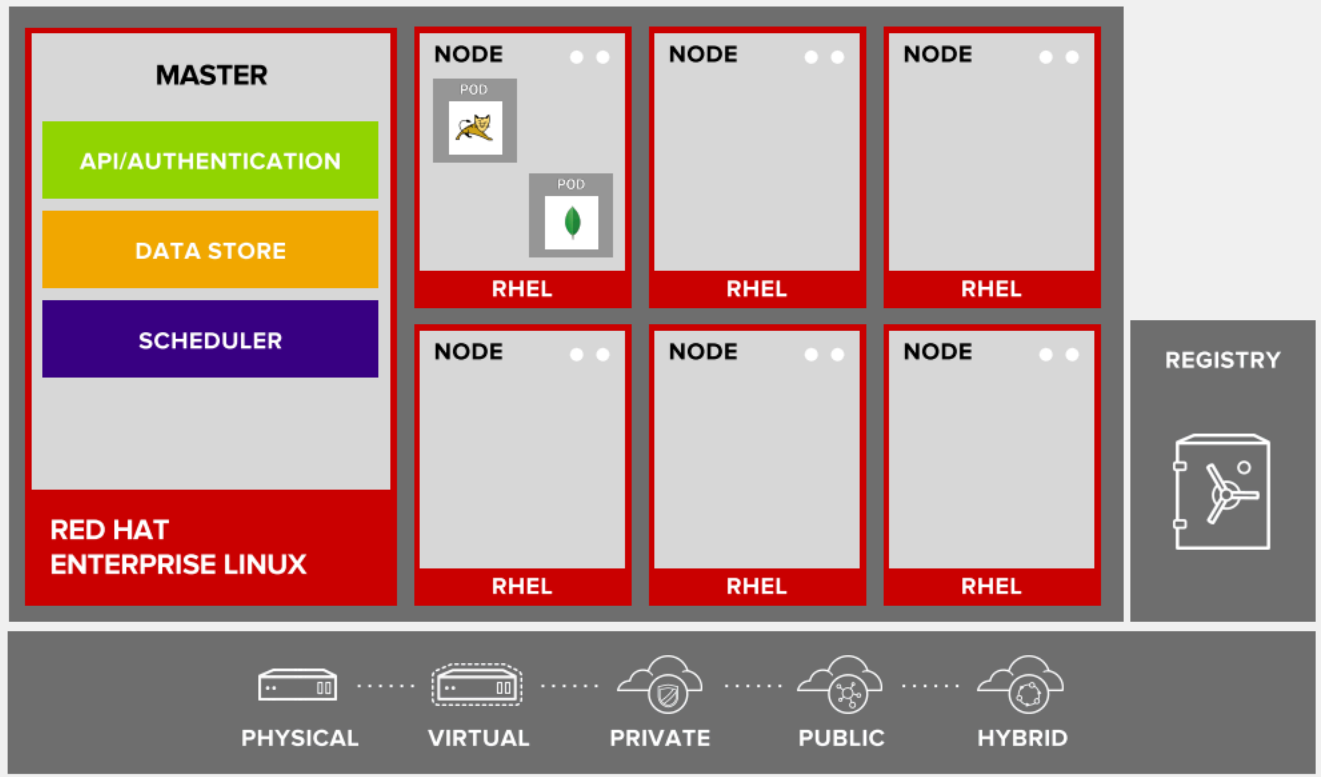
DESIRED AND CURRENT STATE



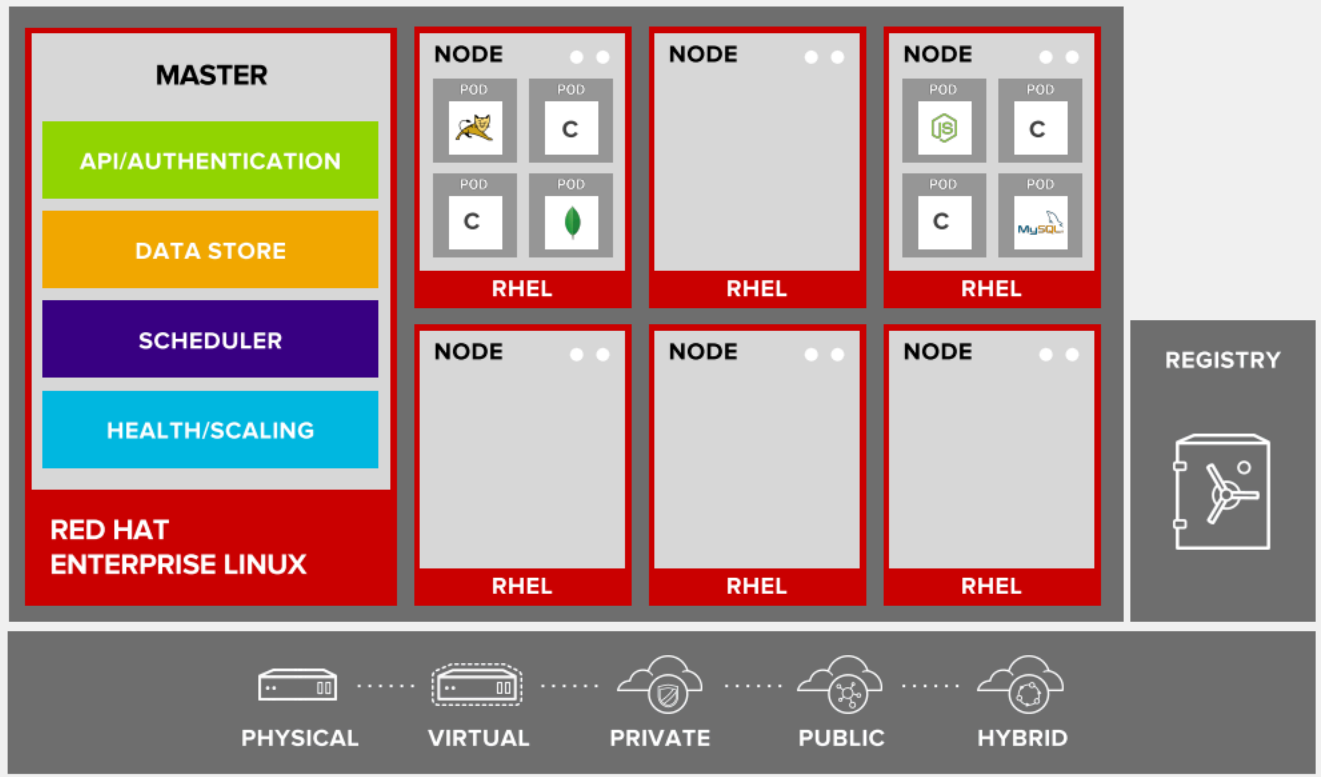
INTEGRATED CONTAINER REGISTRY



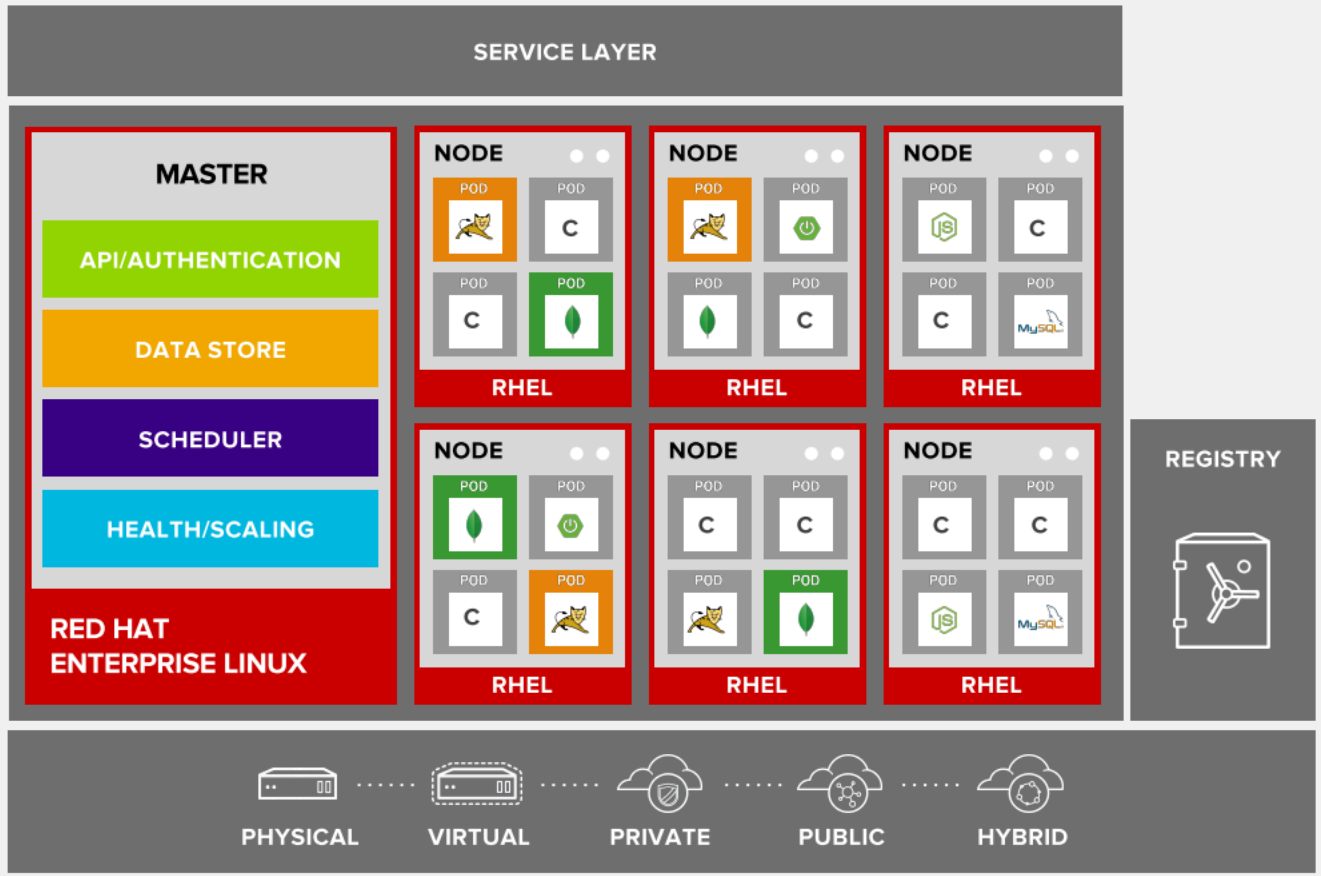
ORCHESTRATION AND SCHEDULING



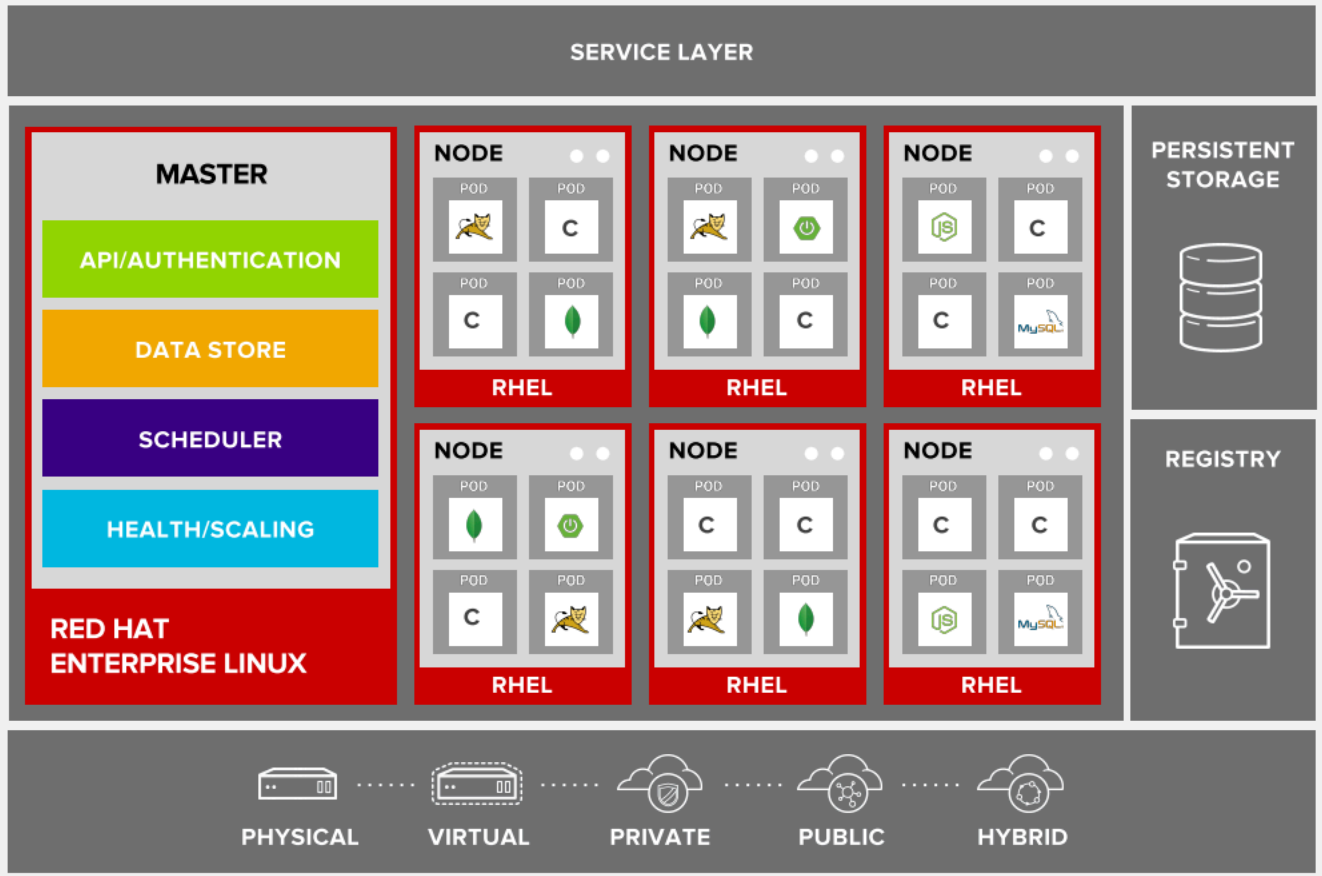
AUTOSCALING PODS



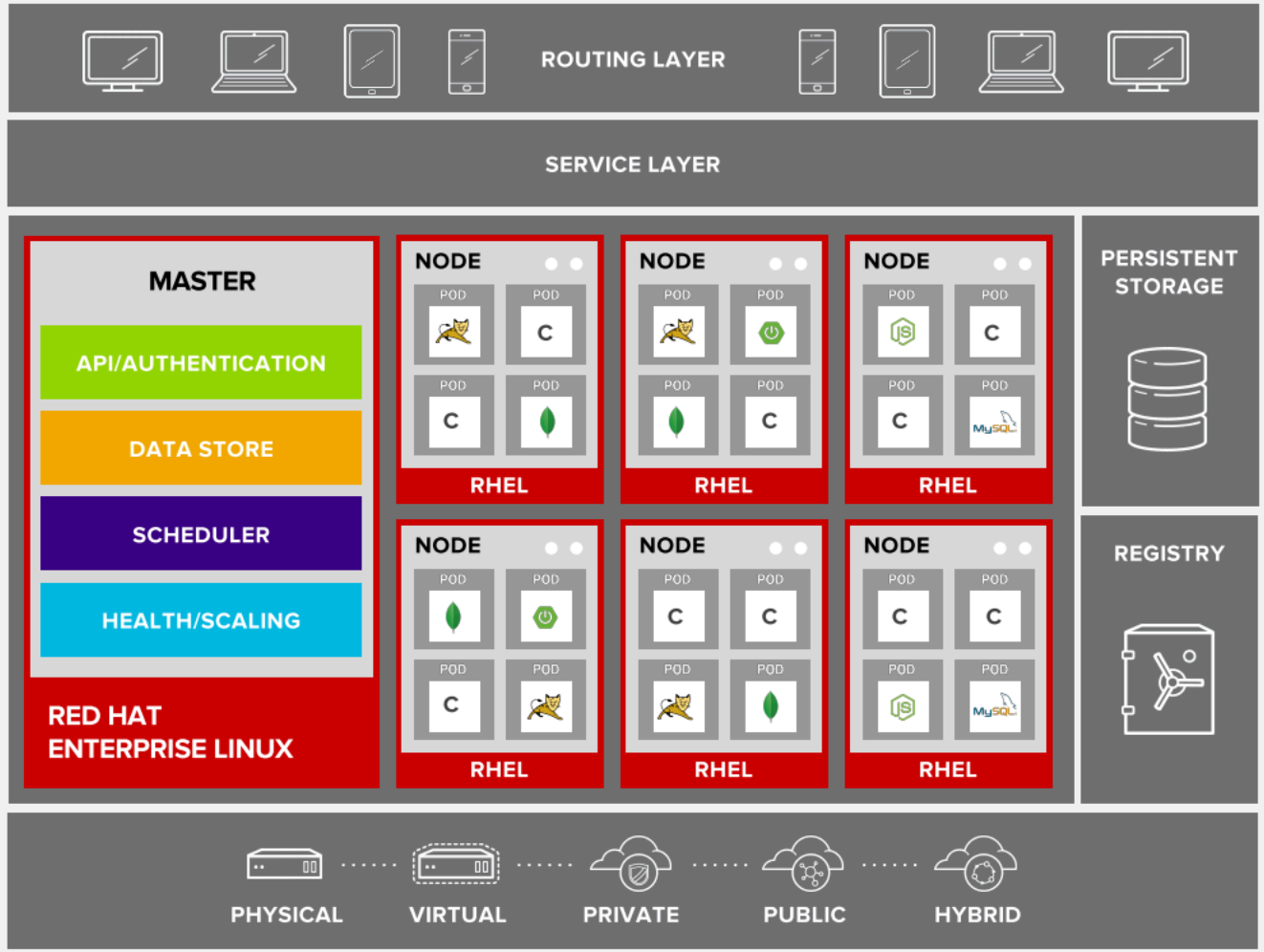
SERVICE DISCOVERY



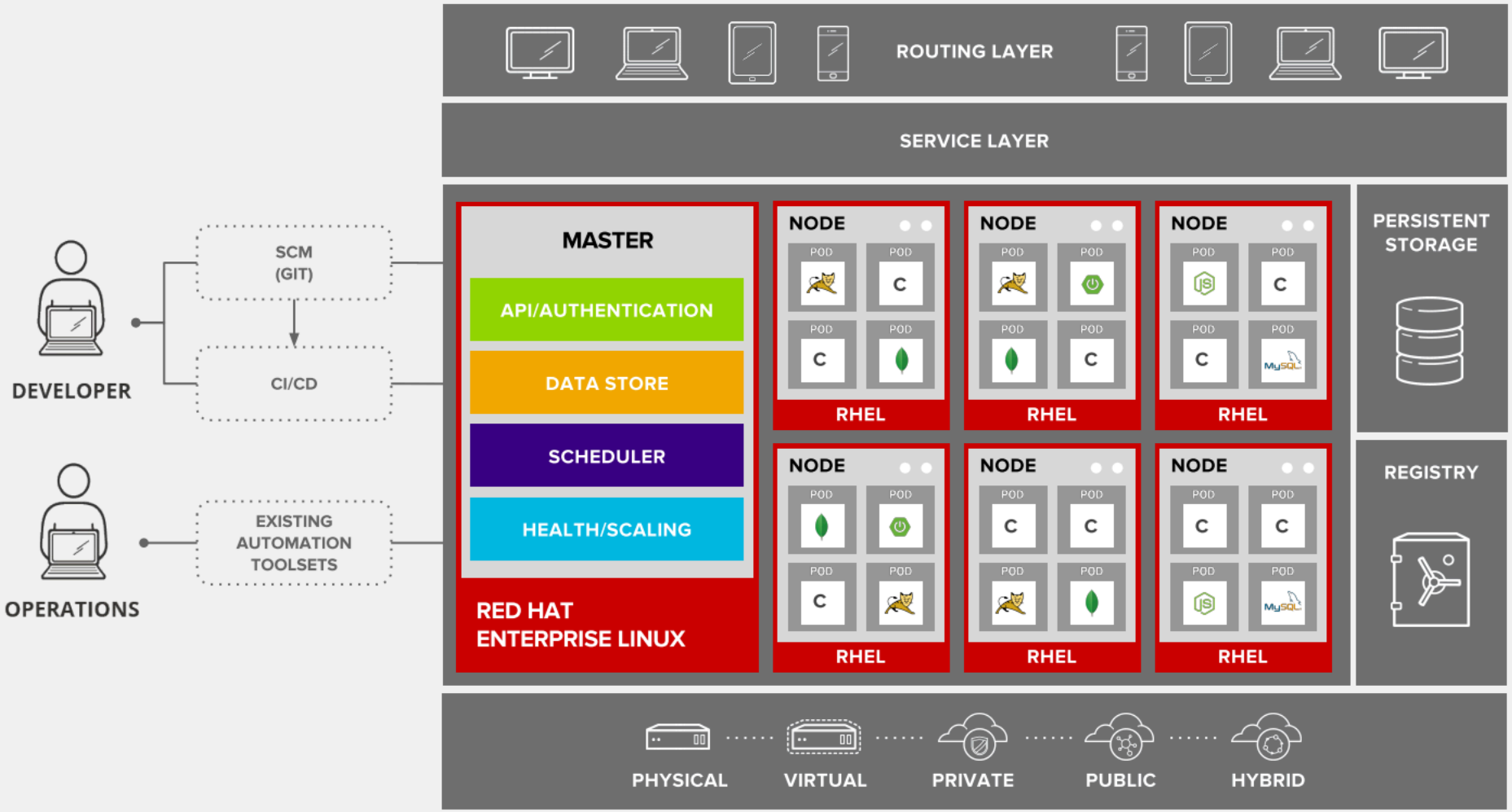
PERSISTENT DATA IN CONTAINERS



ROUTING AND LOAD-BALANCING



ACCESS VIA WEB, CLI, IDE AND API



Demo

Run the demo yourself

- You can get all instructions at this web page
- https://ronanb3.github.io/meetup-openshift-startup/

Resources

Some useful resources I used for this presentation

- Openshift Technical Overview
- Nice and quick video in French from Cookie connecté
  - Docker
  - Kubernetes
  - Openshift
- Discord Group for help on any matter on this presentation and lab.

Merci pour votre attention.

Des questions ?

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