

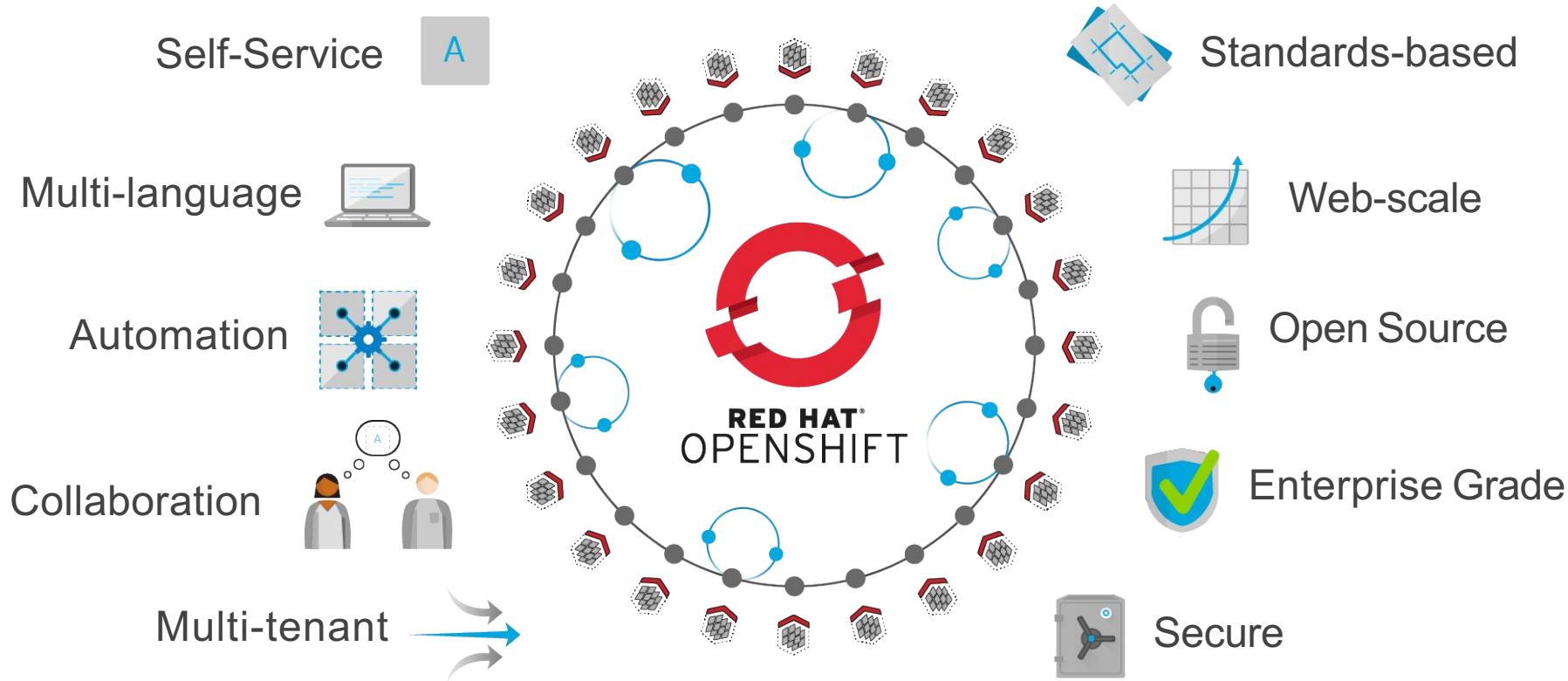


OpenShift Container Platform

Infrastructure

Hakam Abdelqader





INFRASTRUCTURE

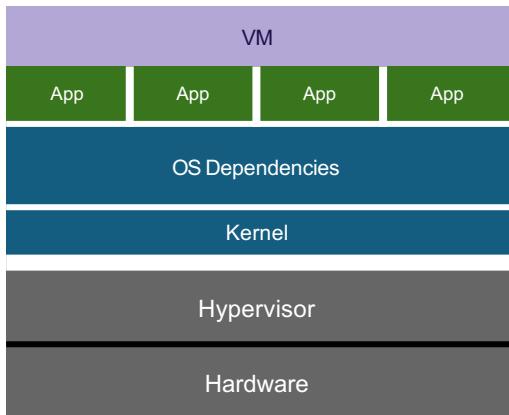
APPLICATIONS



- Application processes on a shared kernel
- Simpler, lighter, and denser than VMs
- Portable across different environments
- Package apps with all dependencies
- Deploy to any environment in seconds
- Easily accessed and shared

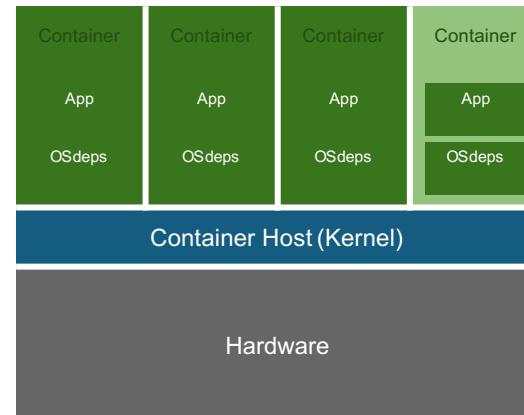
VIRTUAL MACHINES AND CONTAINERS

VIRTUAL MACHINES



virtual machines are isolated
apps are not

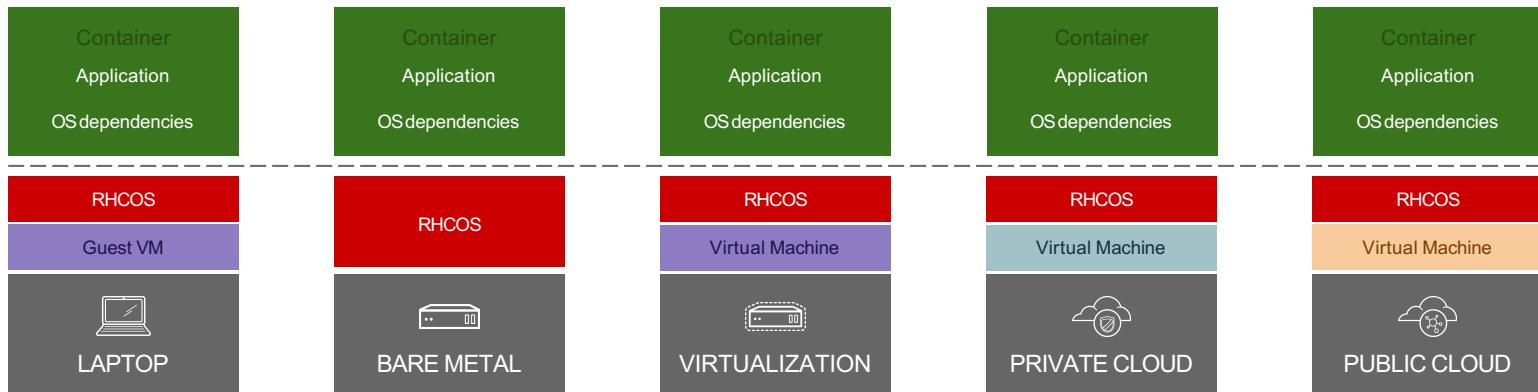
CONTAINERS



containers are isolated
so are the apps

APPLICATION PORTABILITY WITH CONTAINERS

RHCOS Containers + RHCOS Host = Guaranteed Portability
Across Any Infrastructure





cri-o

A lightweight, OCI-compliant container runtime

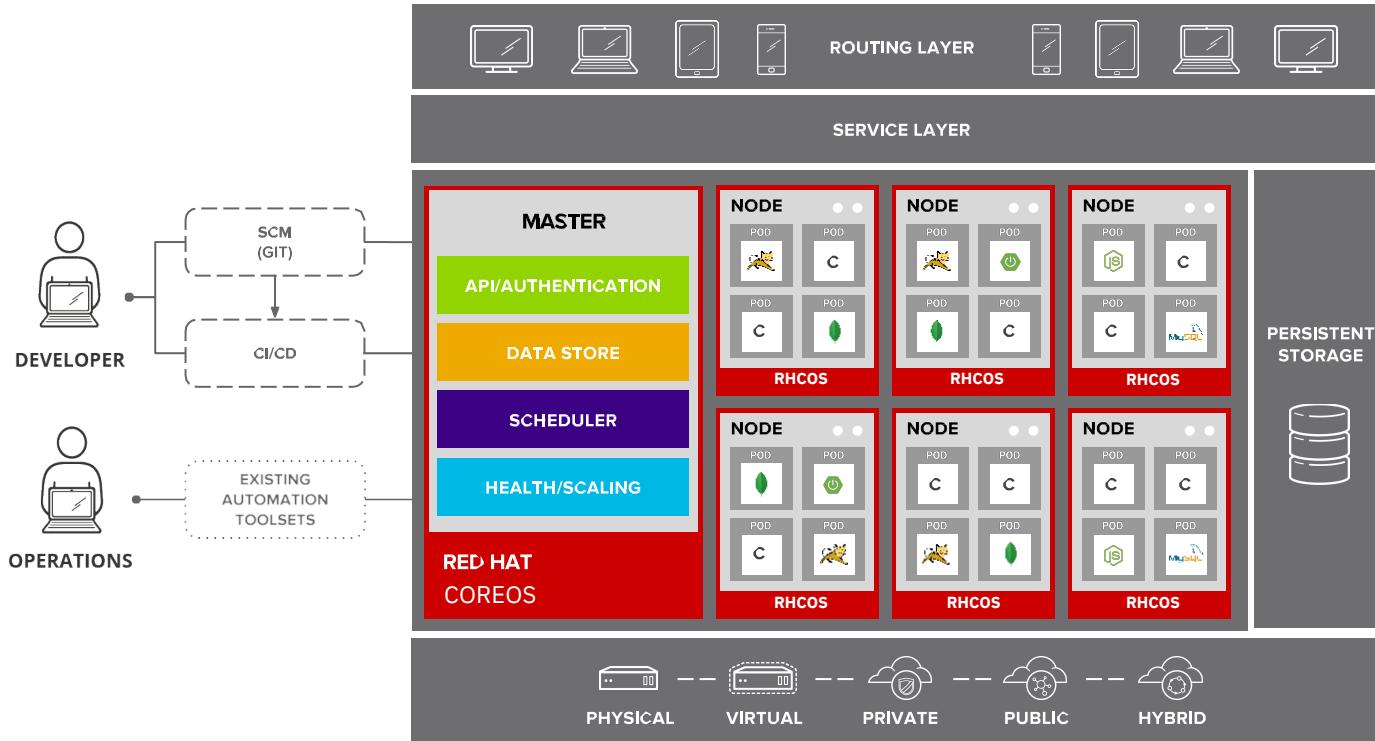
Optimized for
Kubernetes

Any OCI-compliant
container from any
OCI registry
(including docker)

Improve Security and
Performance at scale

OPENSHIFT ARCHITECTURE

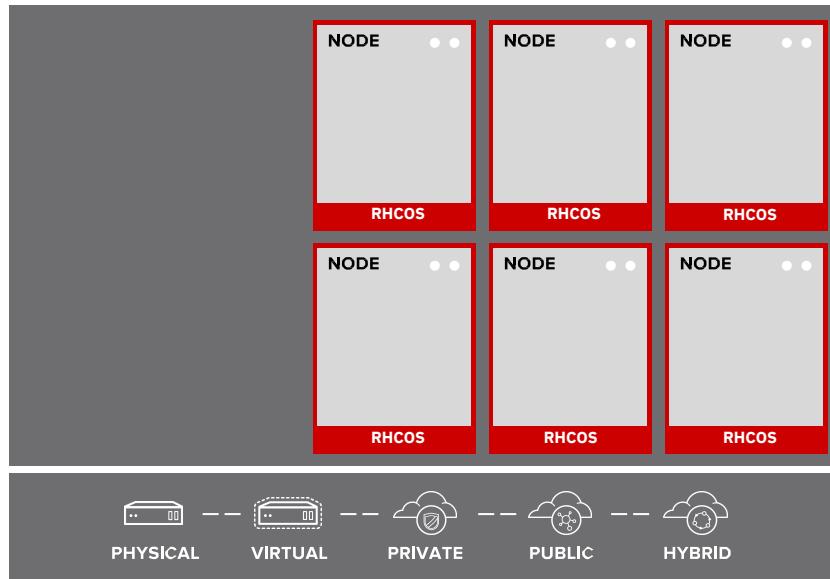
OPENShift ARCHITECTURE



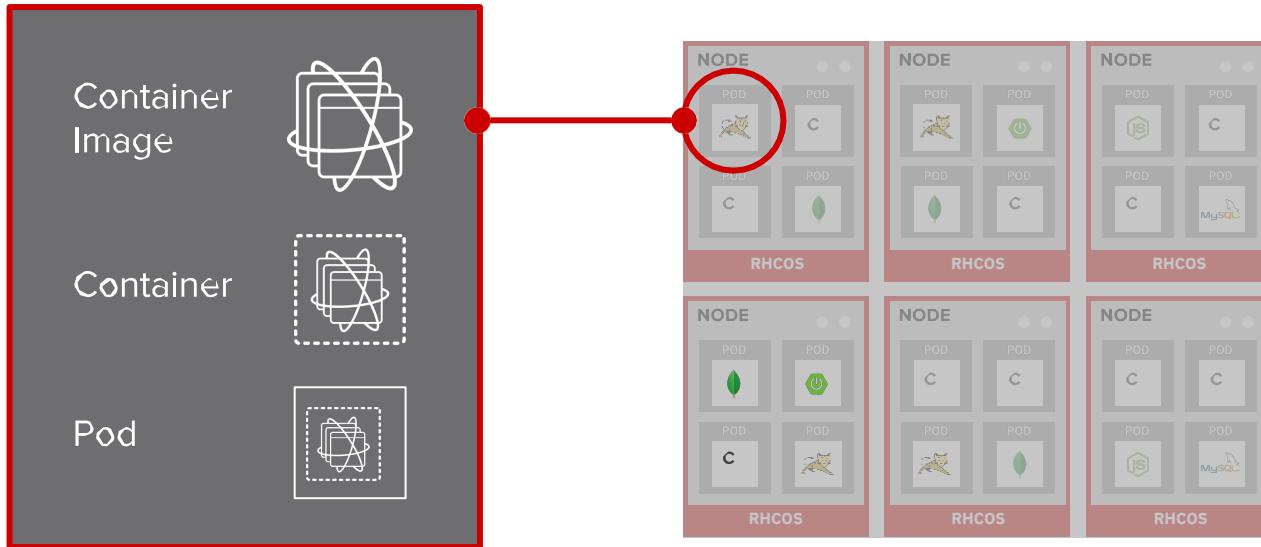
YOUR CHOICE OF INFRASTRUCTURE



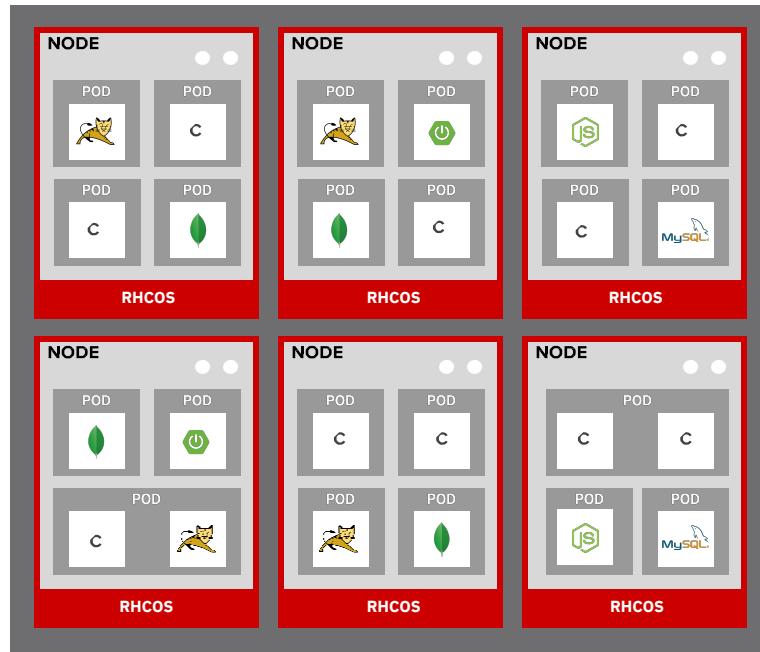
NODES RHEL INSTANCES WHERE APPS RUN



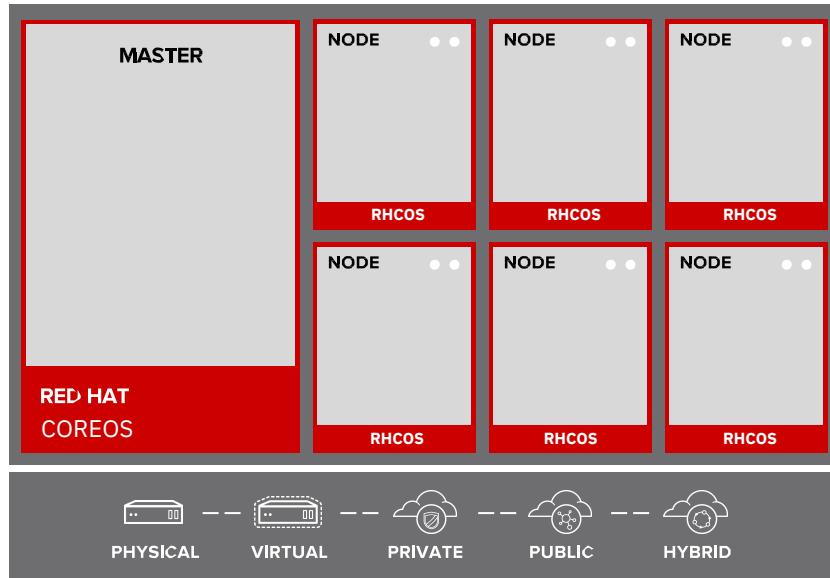
APPS RUN IN CONTAINERS



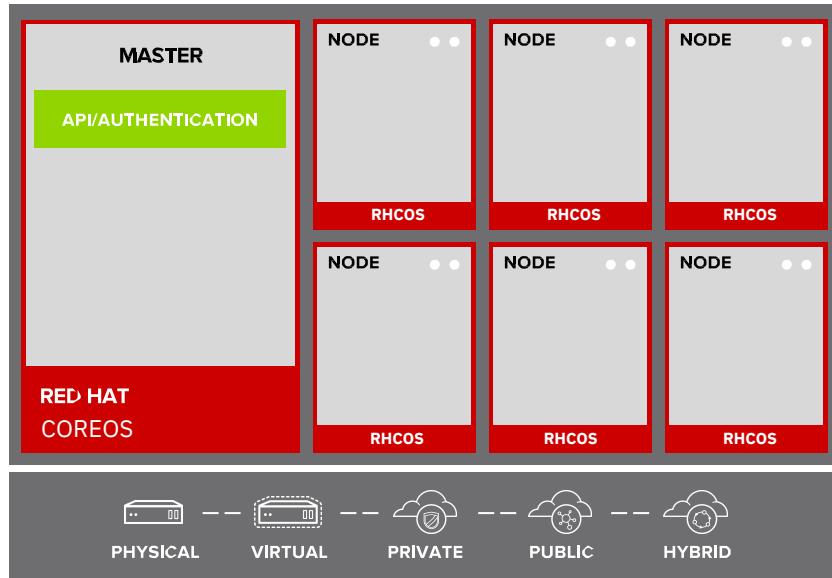
PODS ARE THE UNIT OF ORCHESTRATION



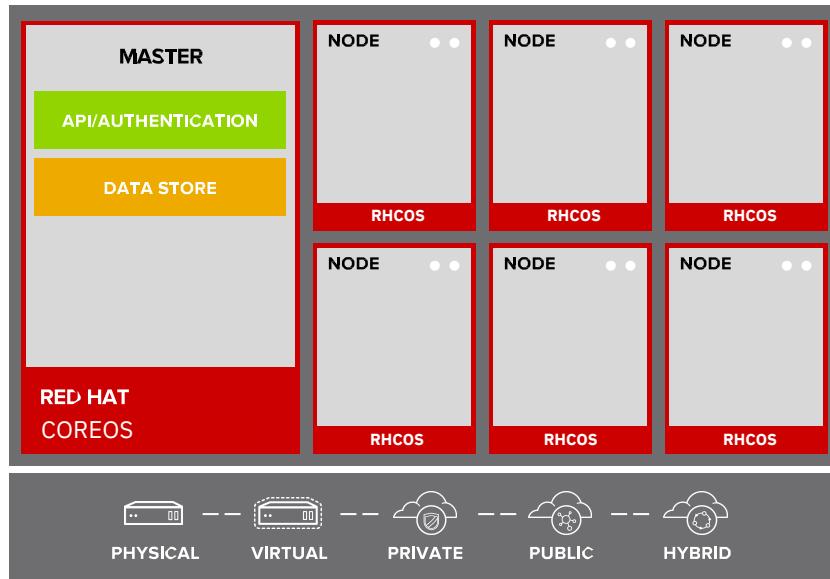
MASTERS ARE THE CONTROL PLANE



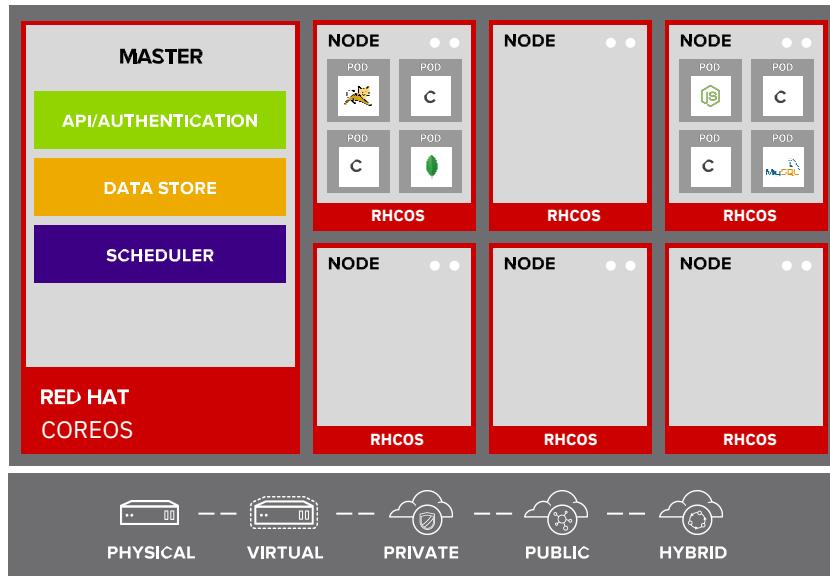
API AND AUTHENTICATION



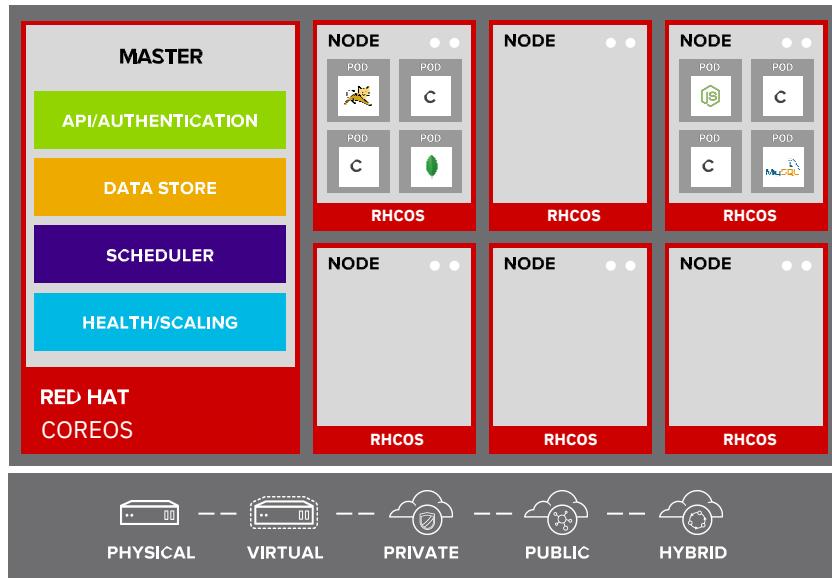
DESIRED AND CURRENT STATE



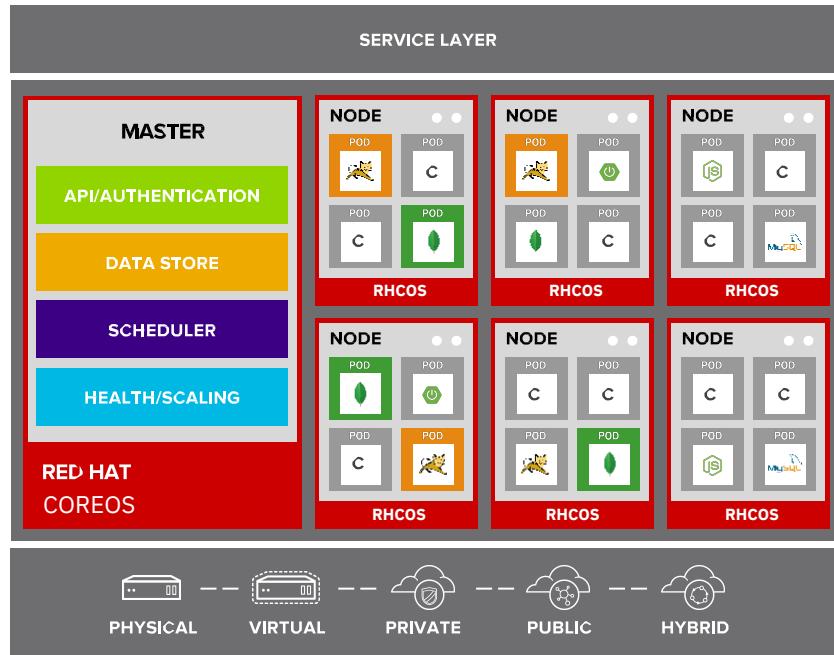
PLACEMENT BY POLICY



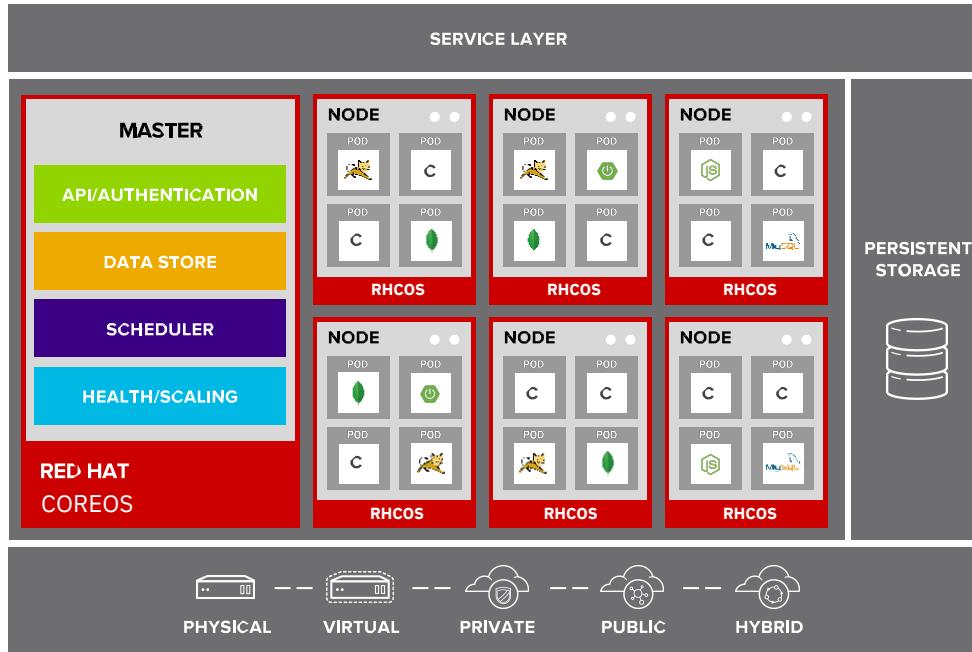
AUTOSCALING PODS



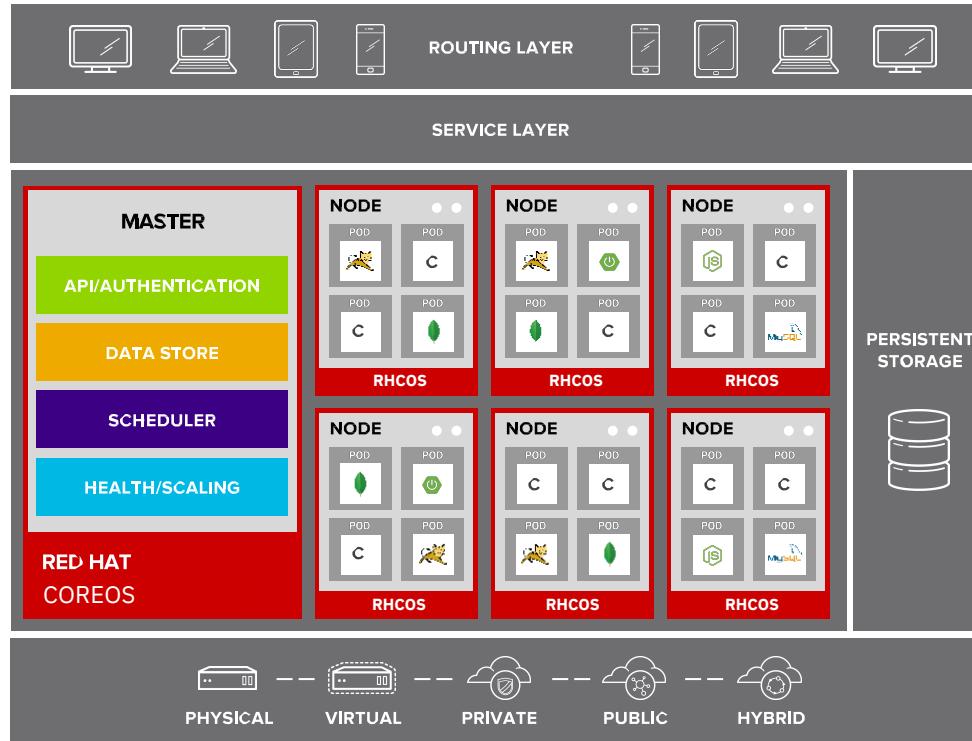
SERVICE DISCOVERY



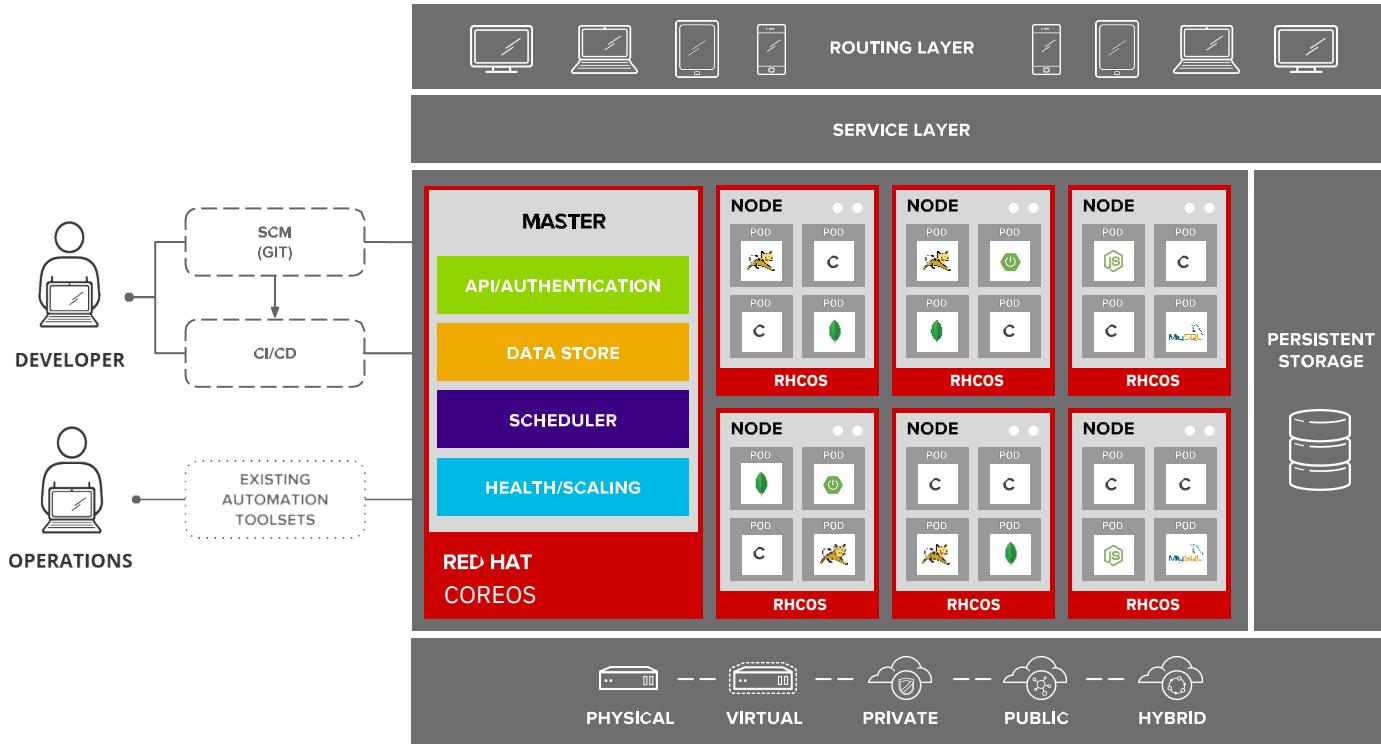
PERSISTENT DATA IN CONTAINERS



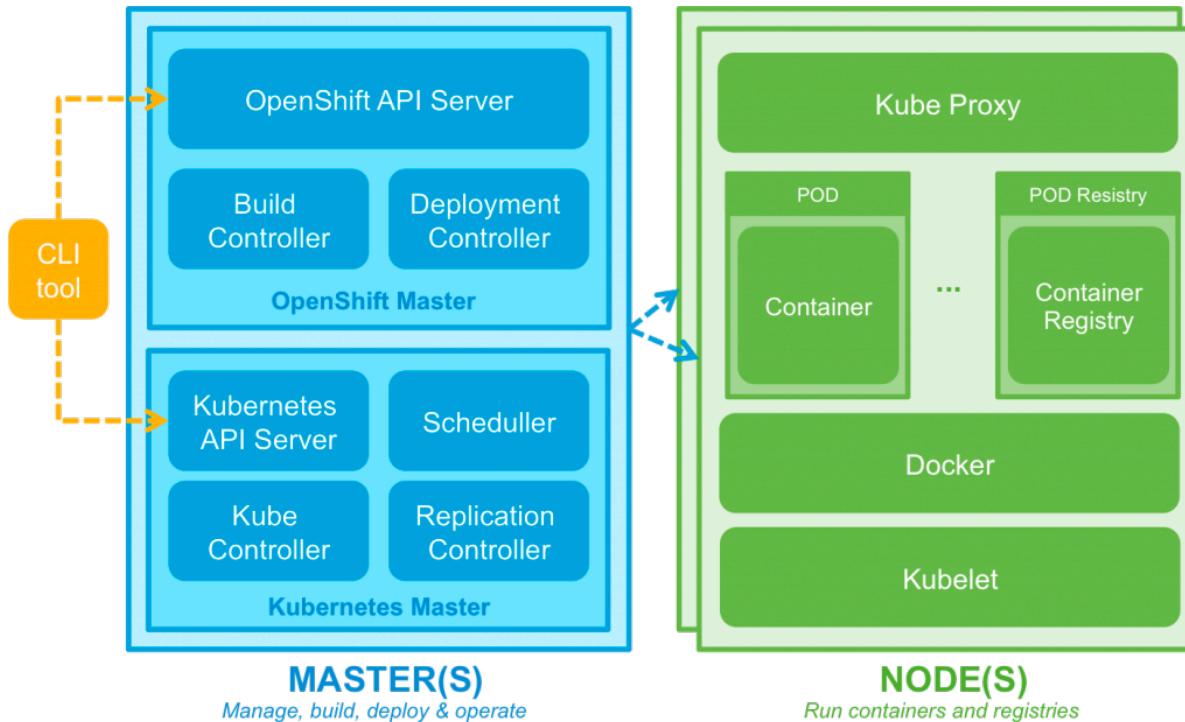
ROUTING AND LOAD-BALANCING



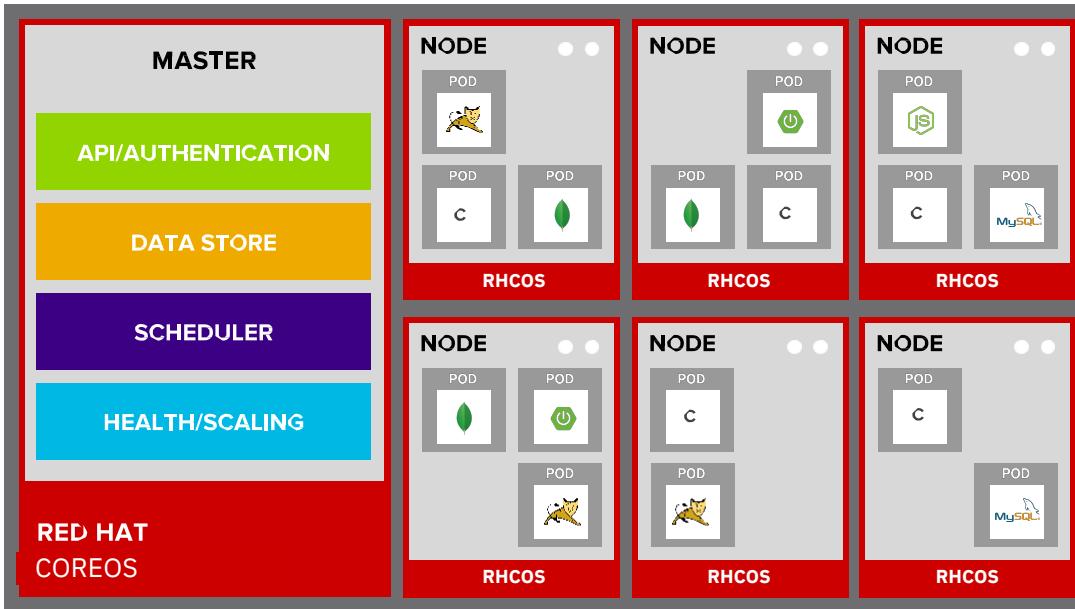
ACCESS VIA WEB, CLI, IDE AND API



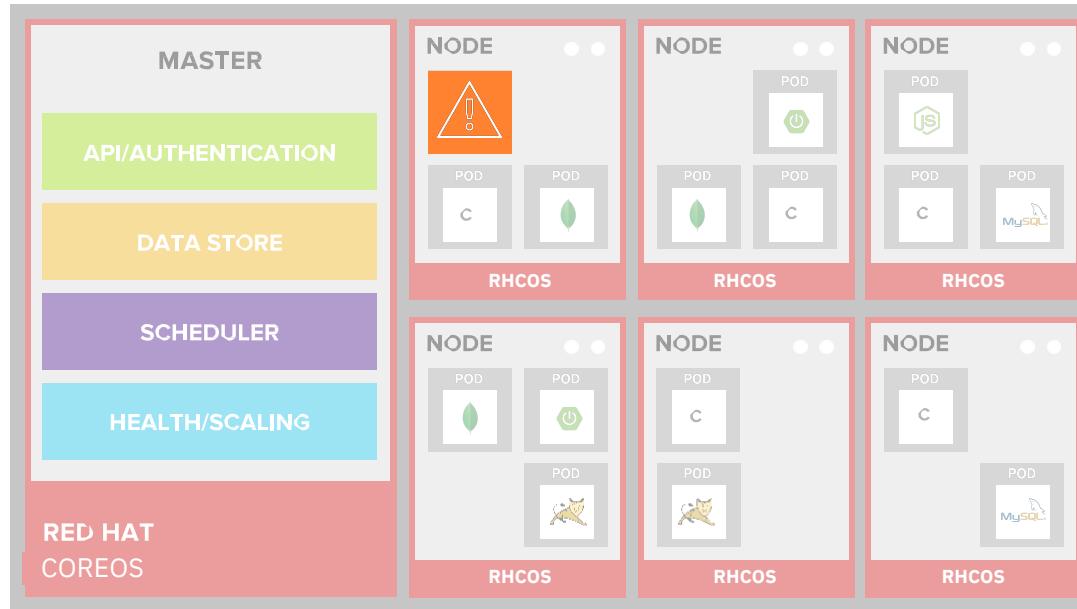
MASTER AND WORKER NODES



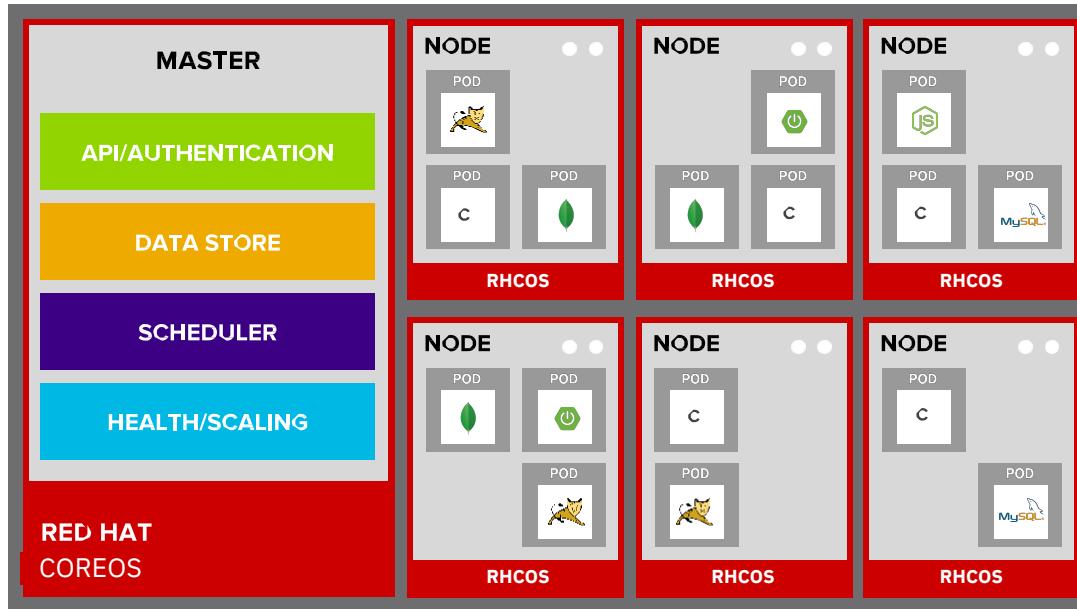
AUTO-HEALING FAILED PODS



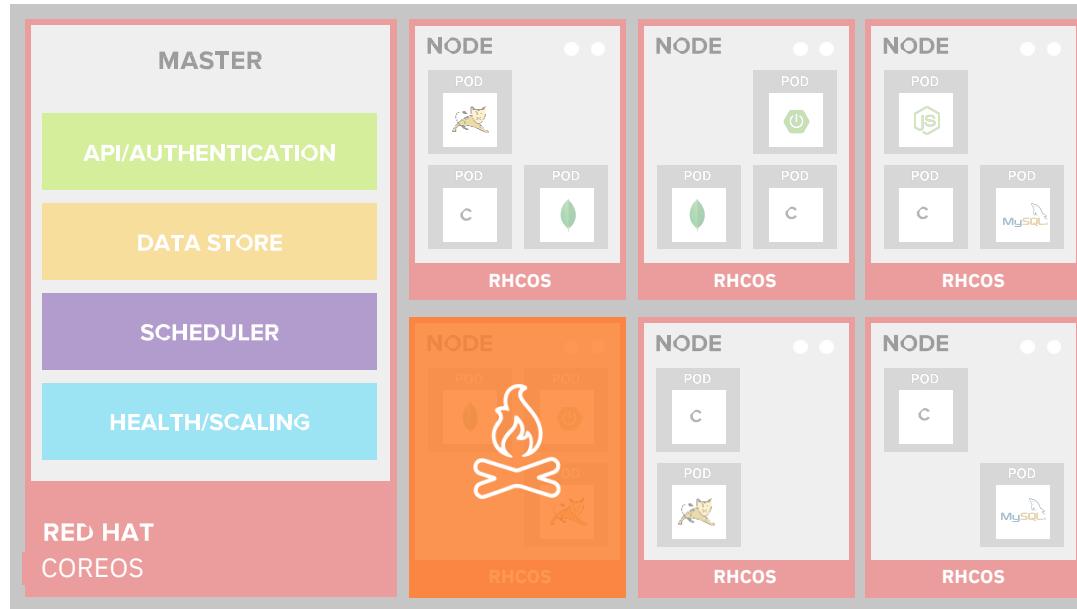
AUTO-HEALING FAILED CONTAINERS



AUTO-HEALING FAILED CONTAINERS



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AUTO-HEALING FAILED CONTAINERS

