AI/ML workflows in Hybrid Cloud with Red Hat OpenShift Kubernetes Platform and CognitiveScale Cortex Certifai

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CognitiveScale

CognitiveScale
THE TRUSTED AI COMPANY

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What we'll discuss today

AI Enablement at Red Hat

OpenShift Overview

What is Cortex Certifai?

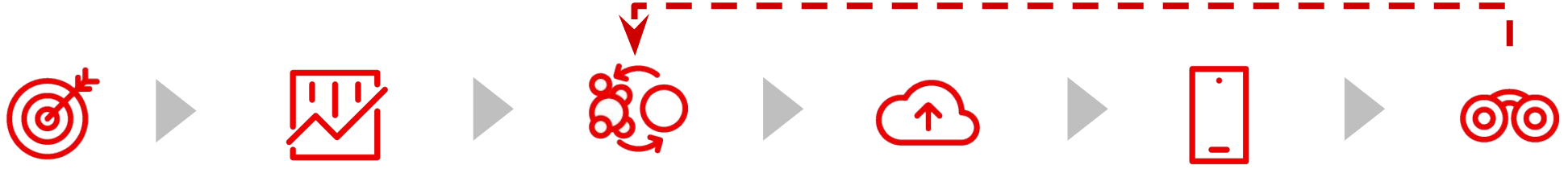
Cortex Certifai Walkthrough

Cortex Certifai WorkShop

Getting Started with AI on OpenShift

Questions and Answers

Desired Conceptual ML Architecture



Set goals

Gather and prepare data

Develop ML model

Deploy ML models in app dev process

Implement Apps & inference

ML models monitoring & management

ML and DevOps Tools (e.g. TensorFlow, Jupyter Notebooks, Python, Seldon, etc.)

ML data sources - databases (SQL, NoSQL, etc.), data lake, etc.

Hybrid, multi cloud platform with self service capabilities

Compute acceleration (GPU, FPGA, TPU)

Infrastructure

Physical · Virtual · Private · Public · Hybrid · Edge

Strategic partnerships within AI/ML ecosystem

AI/ML Lifecycle

IBM
PerceptiLabs
dotscience
CognitiveScale
H2O.ai
Labs.ai
UBIX
SELDON
NVIDIA

Data Governance and Security

CognitiveScale
dotscience
Lightbend

Data Processing

H2O.ai
Starburst
PerceptiLabs
Lightbend

Data Analytics

SAS

Databases

mongoDB.
Couchbase
redislabs
crunchy data
NUODB

AI Ops

PROPHETSTOR
Lightbend

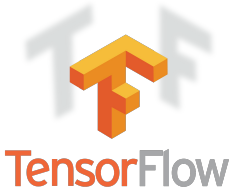
Hardware Infrastructure

Hewlett Packard Enterprise
DELL
SUPERMICRO
PENGUIN COMPUTING

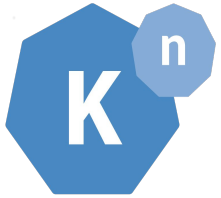
Hardware Acceleration

NVIDIA

Community development



Kubeflow

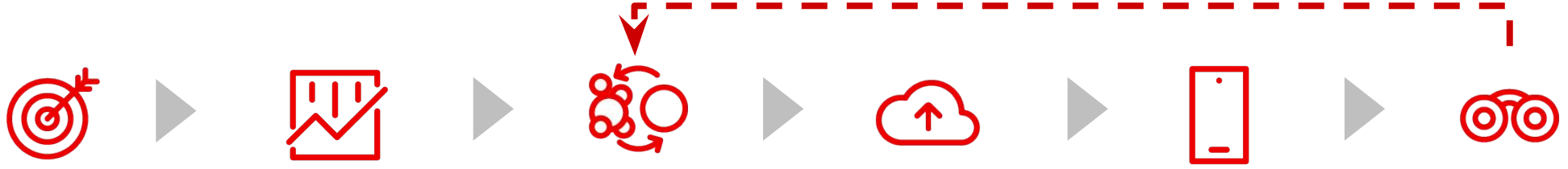


Data Lake

Open Data Hub

Red Hat

Desired Conceptual ML Architecture



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Red Hat OpenShift Container Platform

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OpenShift Overview

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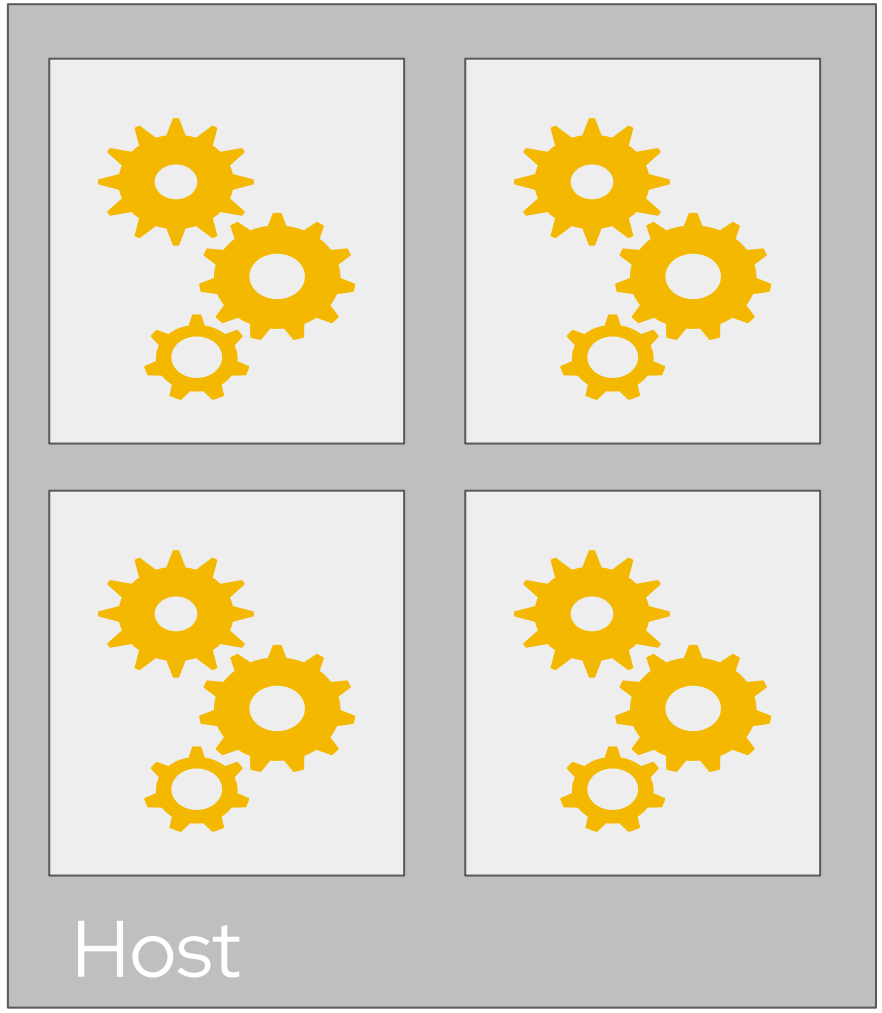
What is a container?



A unit of work (process) running on a host

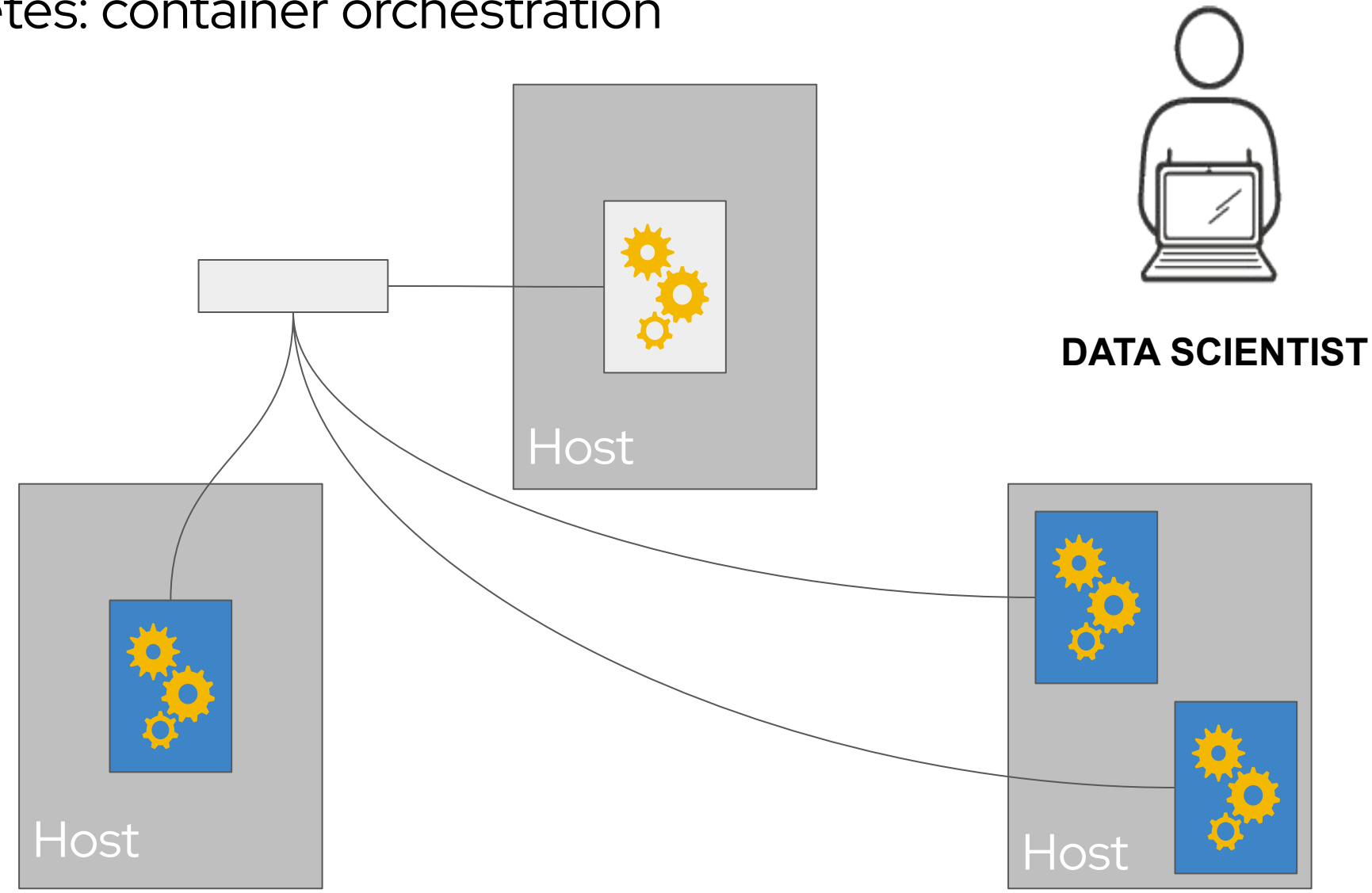
Isolated from other containers

Quick to start up and shut down

May be connected together to form complex applications

Repeatable

Kubernetes: container orchestration



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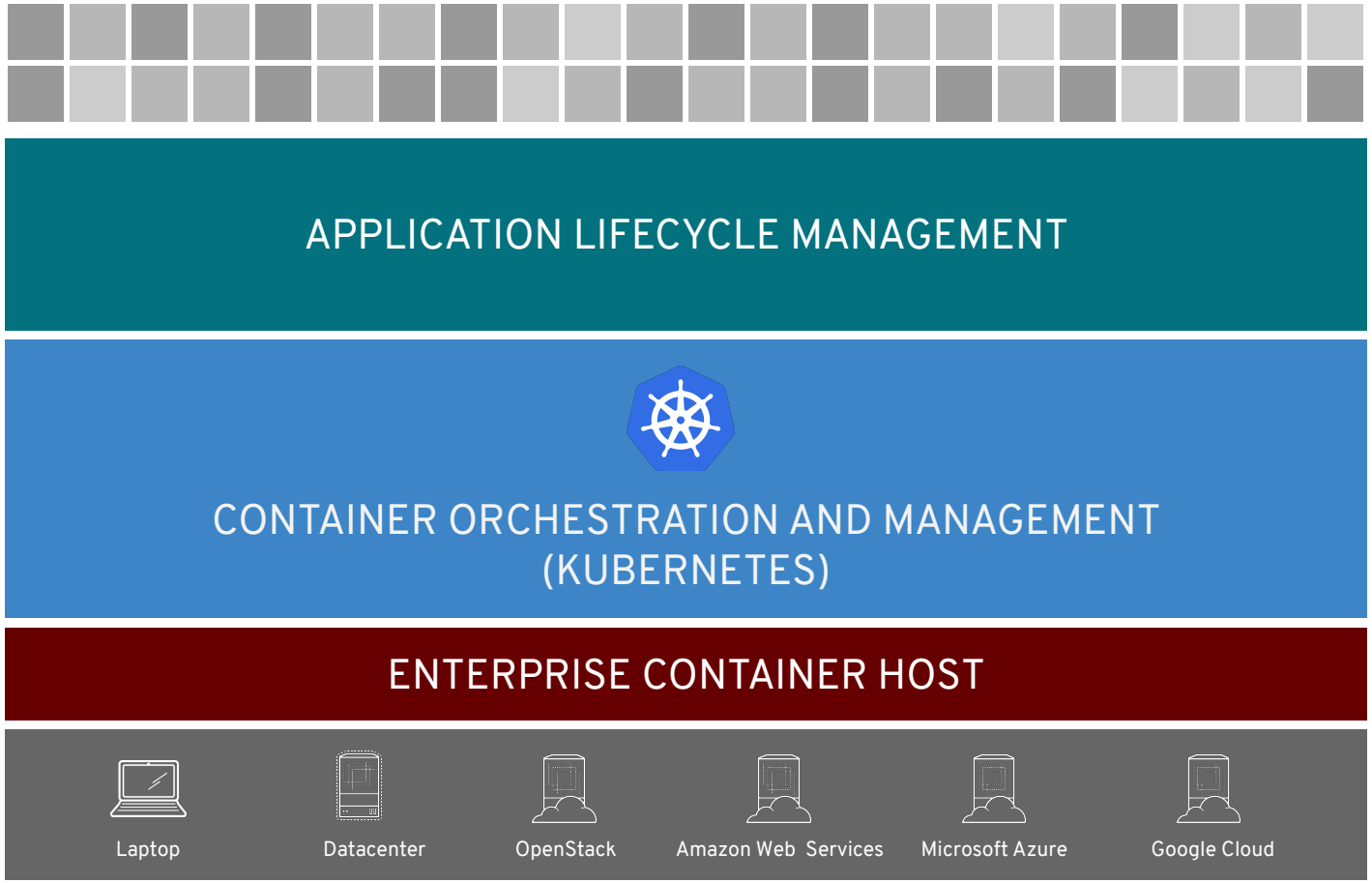
OpenShift is a distribution of Kubernetes



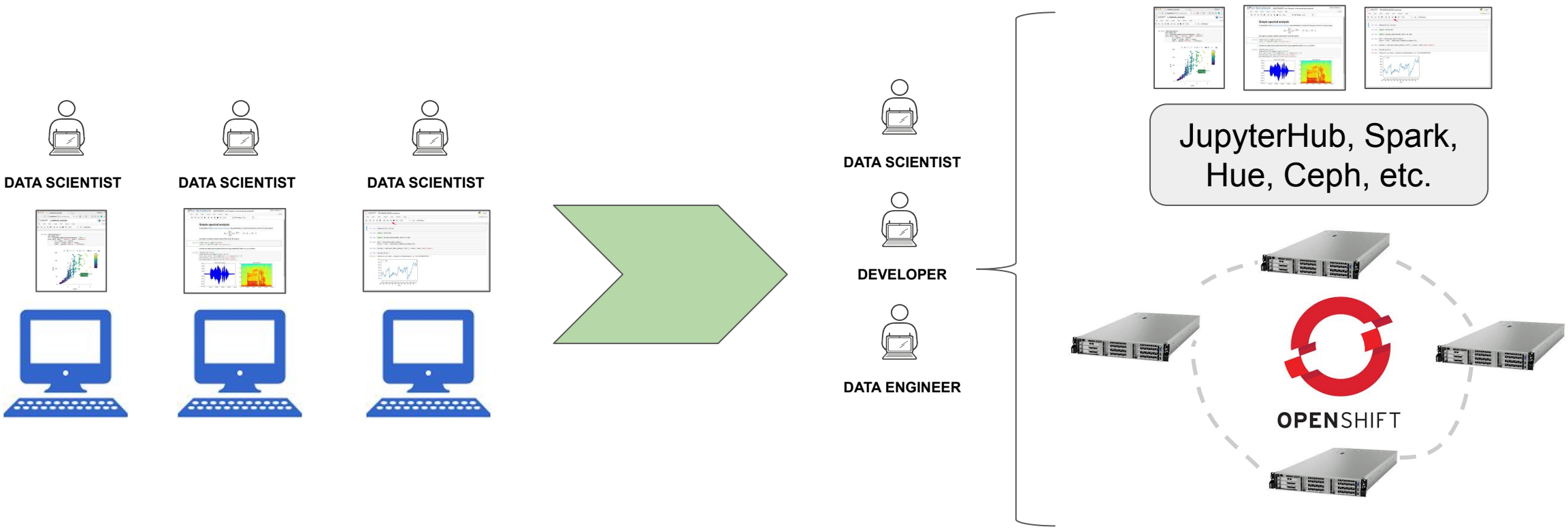
ANY
CONTAINER

RED HAT®
OPENSHIFT

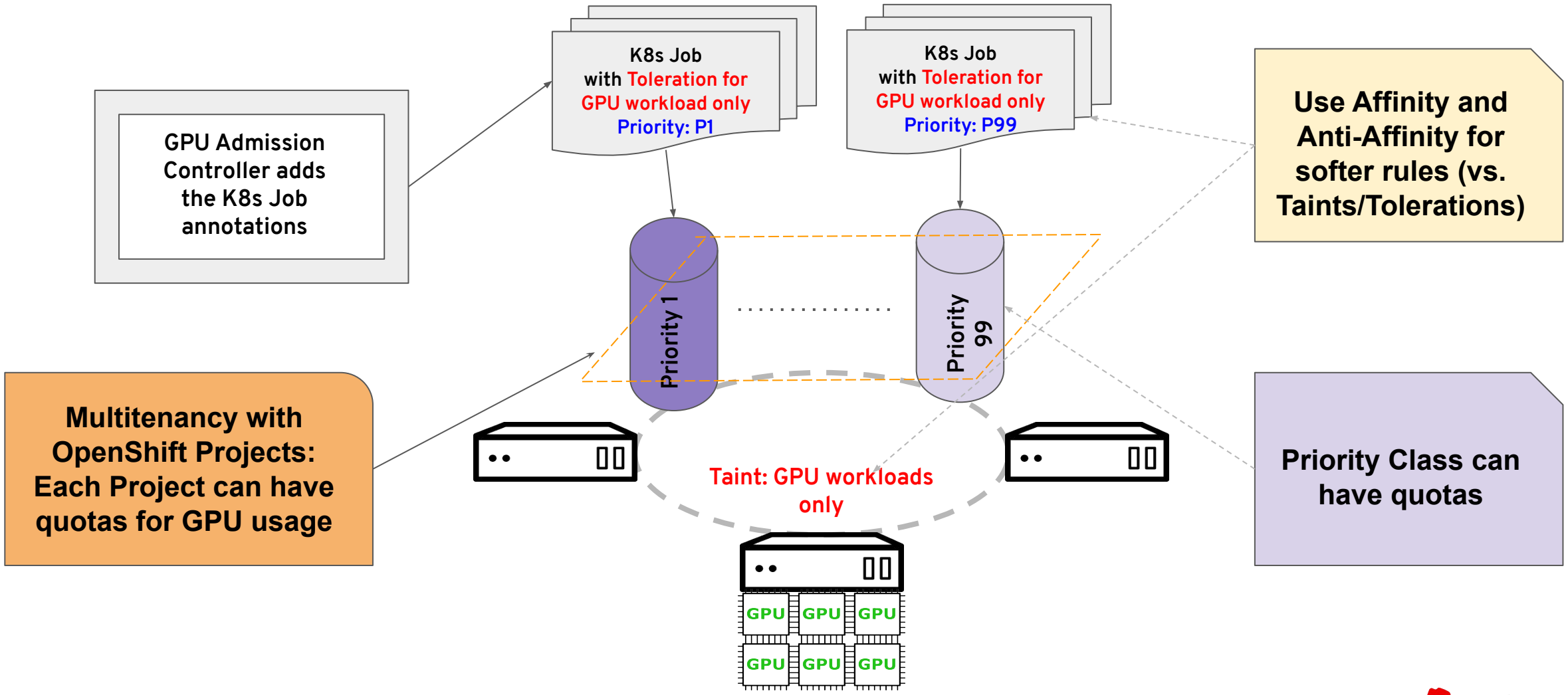
ANY
INFRASTRUCTURE

Red Hat

Data Scientists and Engineers Can Share Resources on OpenShift



Sharing GPUs in OpenShift for Model Training



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What does OpenShift provide?

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OPENSHIFT

OpenShift powered by Kubernetes provides a simple way to deploy and manage containerized applications in development and production,

on infrastructure shared across your organization,

with the ability to work independently or easily collaborate with colleagues in the same space

and utilize software tools created by Red Hat, its partners, and communities of developers.

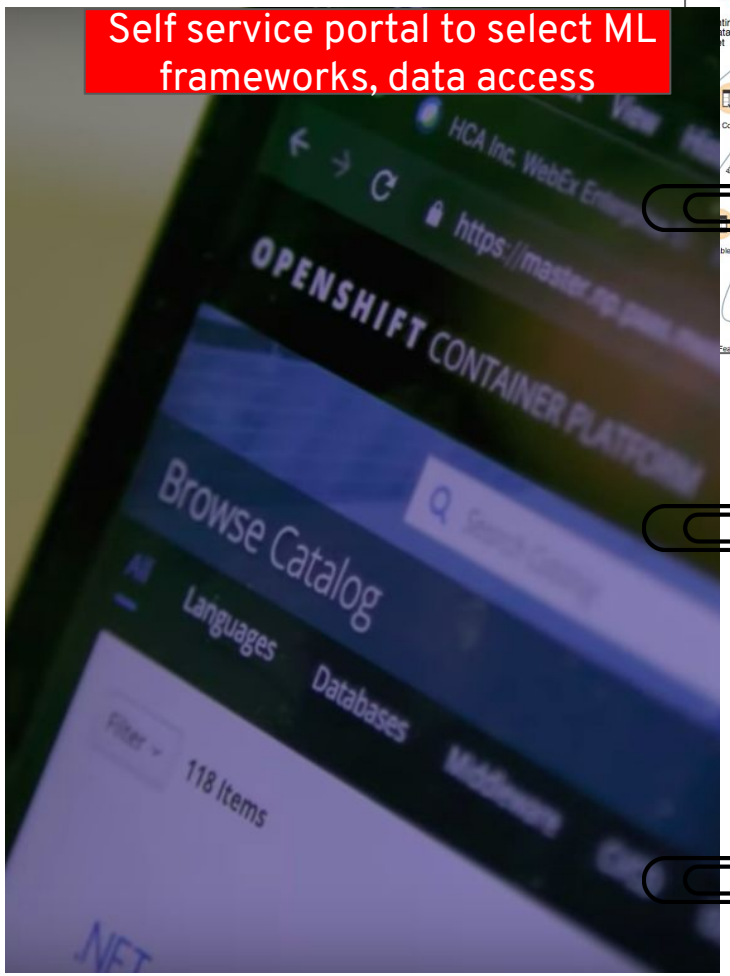
What do Data Scientists Want?

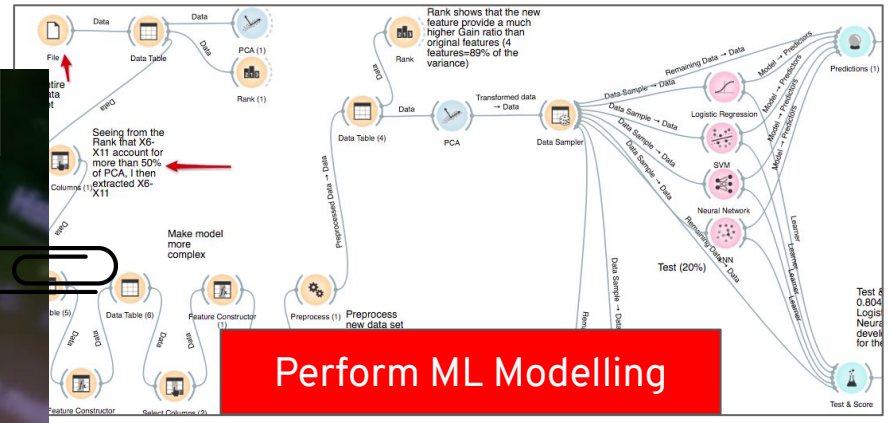
"Self-service cloud like" experience for my machine learning projects

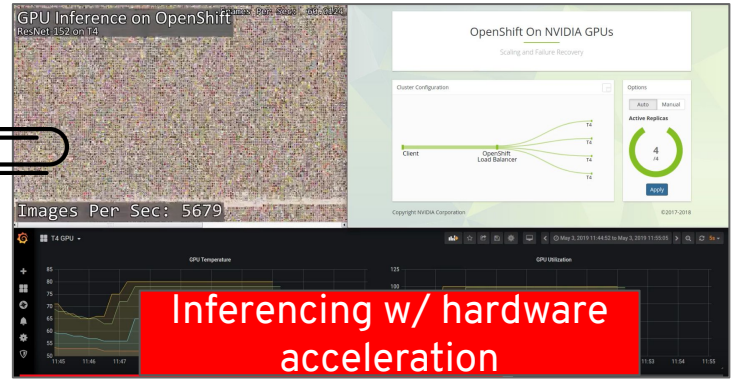
Access to a rich set of modelling frameworks, data, and computational resources

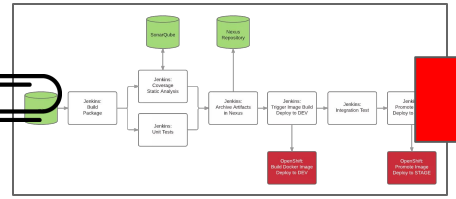
Collaborate with colleagues

Deliver my work into production with speed, agility and repeatability to drive business value









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