CLOUDERA

Red Hat

Everything You
Need to Know About
the Red Hat and
Cloudera Integration

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Everything You Need to Know About the Red Hat and Cloudera Integration

On April 28, 2020, Cloudera announced it chose Red Hat for an integration that is revolutionizing enterprise efficiency. Red Hat OpenShift is now the preferred container solution for Cloudera Data Platform (CDP) Private Cloud.

What does this mean for organizations? With the integration of Red Hat OpenShift and CDP Private Cloud, enterprises will leverage an essential hybrid, multi-cloud data architecture that enables them to rapidly onboard applications and run them anywhere with zero disruption. This integration is of particular importance for public sector agencies as they seek to keep pace in the digital era and modernize their data strategies for better agility.

CLOUDERA

WHO IS CLOUDERA? Cloudera is The Enterprise Data Cloud Company that believes data can make what is impossible today possible tomorrow. The organization empowers people to transform complex data into clear and actionable insights by delivering cloud-native services to manage and secure the data lifecycle in any cloud or data center. Cloudera is a trusted advisor and strategic partner for the public sector.

ANY CLOUD   DATA LIFECYCLE   SECURE & GOVERNED   OPEN

Red Hat

WHO IS RED HAT? Red Hat is the world's leading provider of enterprise open-source solutions.
The company believes in open source values, including meritocracy, community-building, and transparency.
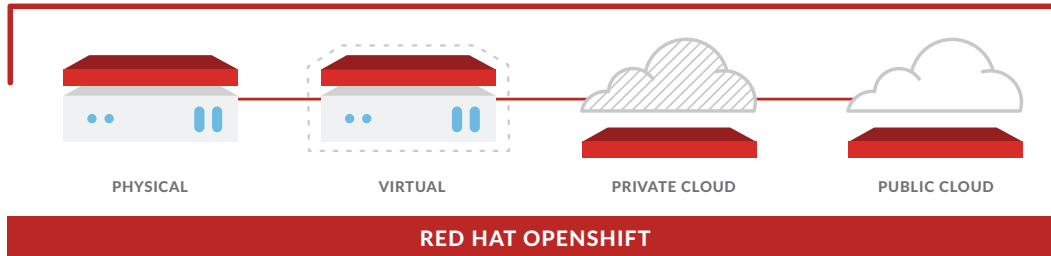
Everything-as-a-service   Modern apps   Containers & microservices   ISV

PHYSICAL   VIRTUAL   PRIVATE CLOUD   PUBLIC CLOUD

RED HAT OPENSHIFT

Between these two industry leaders, they have helped thousands of organizations adopt trusted open-source solutions.

Why This Integration?

Cloudera and Red Hat recognized that important challenges in the public sector were going unaddressed, and their combined powers could help. The convergence of digital transformation with data-centric challenges has brought the following challenges to light:

LEGACY SYSTEMS

Older technology that is rife throughout the public sector is not equipped for today's volume, variety, and data velocity. This problem limits agencies in their ability to modernize data strategies.

Legacy infrastructure and overtaxed analytics teams can stifle the potential of data —a problem that is amplified as data is collected from additional sources and sectors inside and outside the business. Modern businesses require a modern data strategy to provide all employees and functions with the real-time information they need to succeed. To serve such a broad set of stakeholders, a successful data strategy must include the operationalization of data through a flexible, scalable platform that is easily accessed by users and analytic applications alike.
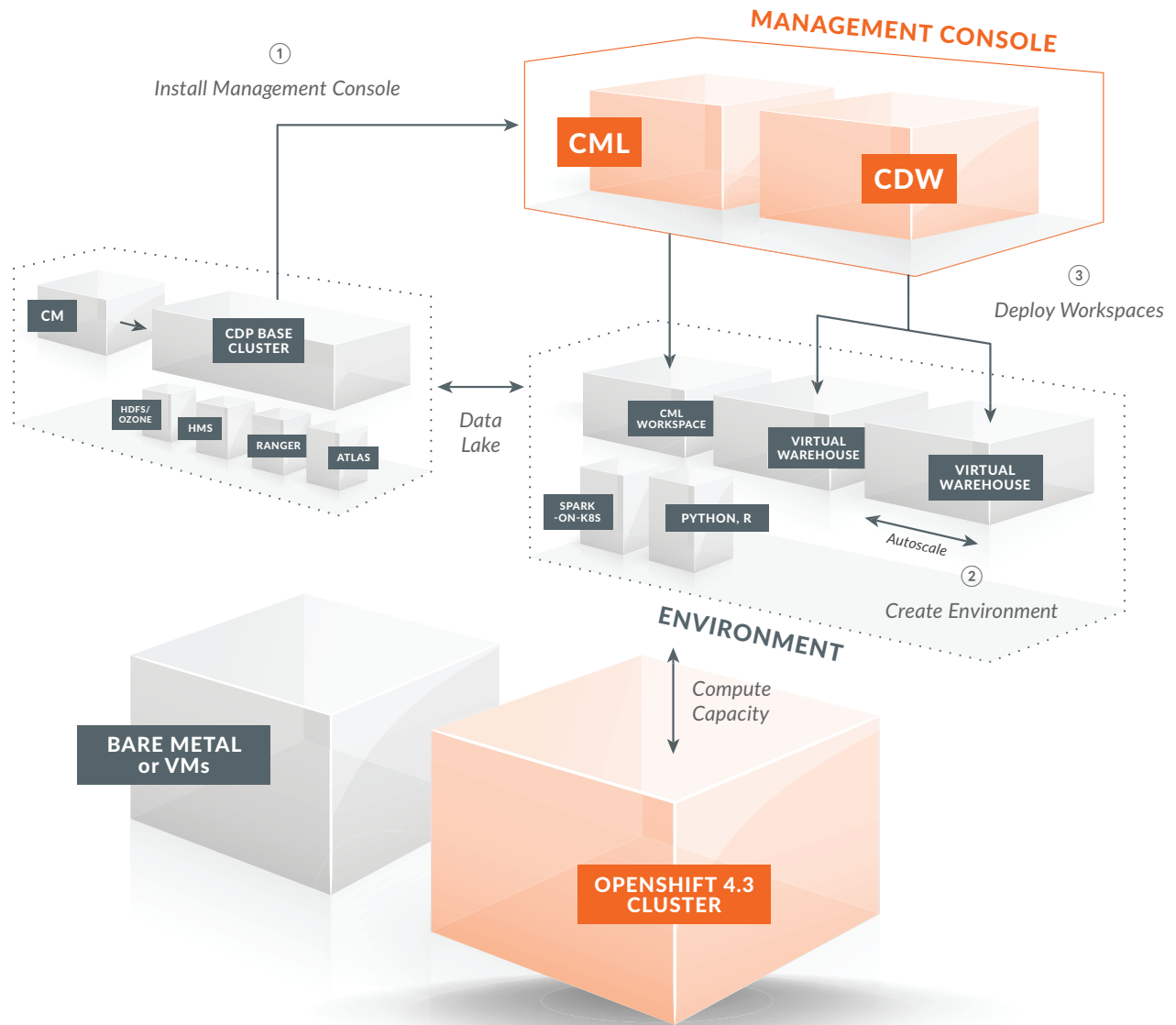
SILOS AND CULTURE

Organizational silos directly impede the ability of government agencies to modernize their data strategies. Business cultural differences can also hold back data modernization – for example, when employees cannot collectively buy into digital transformation initiatives.

THE CLOUD

The introduction of the cloud has presented unique challenges for the public sector. How do you avoid vendor lock-in? How do you combine cloud strategies with data strategies? Can you bring a multi-cloud strategy into your current system? These are complex questions the cloud has raised for government.

With CDP Private Cloud running on Red Hat OpenShift, these challenges can see resolution.

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MANAGEMENT CONSOLE

CML

CDW

① Install Management Console

③ Deploy Workspaces

② Create Environment

CM

CDP BASE CLUSTER

HDFS/ OZONE

HMS

RANGER

ATLAS

Data Lake

CML WORKSPACE

VIRTUAL WAREHOUSE

VIRTUAL WAREHOUSE

SPARK -ON-K8S

PYTHON, R

Autoscale

ENVIRONMENT

Compute Capacity

BARE METAL or VMs

OPENSHIFT 4.3 CLUSTER

CDP Platform provides customers with

• Enterprise-grade security and governance
• A consistent experience across all environments

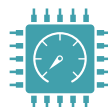## THE VALUE COMES FROM SOLVING THESE CHALLENGES WITH THE MONOLITHS

NOISY NEIGHBORS

COMPLEX UPGRADES

LACK OF ELASTICITY

CLUSTER SPRAWL

TIME TO VALUE

FIERCE SOFTWARE

Using This Integration to Support a Vital Hybrid Cloud Strategy

ORGANIZATIONS TODAY MUST ADDRESS THE HYBRID CLOUD AND ITS DATA STRATEGY WITHIN IT.

Why? Because data is being generated faster, and enterprises are scattering it everywhere. The Harvard Business Review has reported that organizations deploy their data into multiple environments – a trend that accelerated in 2020.

But a hybrid cloud strategy is not just about supporting multiple environments. It's driven by how you can integrate apps and data. It's about creating consistency and portability so workloads can move freely and so an organization isn't locked into one cloud. Open standards are key to this flexibility.

To achieve this continuous flow of work, an organization can leverage Open Shift as an enterprise data platform that deploys to multiple environments – whether it's on-premise, virtual, or any number of clouds. The Cloudera-Red Hat integration enables organizations to make connections into disparate applications and data storage environments. With the same platform, you can analyze that data, deliver meaningful results, and follow a consistent flow.

The CDP Private Cloud-Open Shift integration enables the public sector to analyze data flow to create consistency in any work environment – from identifying goals through implementation.

How This Integration Solves These Challenges

WE BEGIN TO ADDRESS THESE CHALLENGES USING FOUR PILLARS AND AS PART OF AN ITERATIVE PROCESS. THE ANSWER IS NOT JUST ONE SOLUTION, BUT A COMBINATION OF THE FOLLOWING:

First, the enterprise data cloud has to be hybrid and multi-cloud by default. This allows for maximum flexibility. Second, we have to have the capability to move data and applications without rewriting and retraining them. We can't have multiple data tools under the same infrastructure. Third – and this is especially important for our government customers – it's essential to manage everything from a single pane of glass. And lastly, the strategy has to have an open-source component.

We also must consider the organization's "data journey" to solve the aforementioned challenges. This journey spans collection through machine learning, and it's crucial for a successful data strategy. First, the organization must collect the data. It then must enrich it to develop the right reports and have a good data warehouse. From there, you can serve up that data to the right business units – followed by leveraging machine learning and artificial intelligence capabilities. Many organizations have one or a couple of these components, and they lack the full lifecycle.

Cloudera's SDX is the shared data experience that provides the security, governance, lineage, management, and automation to streamline this data journey for the public sector. It's a single pane of glass that manages all of those experiences – wherever employees are. An agency can set the right governance and provide access to the right users and the right business unit. There is no other solution in the industry that can offer this management today, and it is certified to run on Red Hat OpenShift. Any existing Red Hat customer today running a containerized environment can take advantage of these experiences for a more holistic data strategy.

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Believe It When You See It — Two Case Studies

HCA HEALTHCARE

In an example of this work in action, HCA Healthcare delivered on a platform that collects data across 200+ hospital sites across the world. The organization can monitor 30,000 patients a day and use machine learning to determine if patients are susceptible to sepsis five hours before traditional screening methods. Using their hybrid cloud data platform, they can deploy across multiple environments. By analyzing and getting results in real-time, they can alert clinicians and care managers to respond to patients who are highly sensitive to sepsis outbreaks.

BOSTON CHILDREN'S HOSPITAL

The hospital used Red Hat OpenShift to build and launch ChRIS – a platform for storing, analyzing, and sharing imagery data among doctors throughout a number of hospitals. BCH was able to do analytics on top of thousands of images. They could discover deviations from the norm and were able to look at various regions of the brain to have meaningful analysis and produce more rapid delivery while conducting their research – all while meeting with a patient.

If you think your organization could benefit from the revolutionary possibilities with the Cloudera-Red Hat integration, contact Fierce Software today. Our experts will bring this solution seamlessly to your organization, and we offer time-tested experience in the public sector. As a Public Sector Partner of the Year award winner for both Cloudera and Red Hat, we stand ready to help your organization with its unique needs.

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