

# THE FUTURE OF BIG DATA: SAP VORA 2.0 ON RED HAT OPENSIFT CONTAINER PLATFORM

PARTNER TECHNOLOGY BRIEF



SAP Vora 2.0 running in Kubernetes clusters on Red Hat OpenShift Container Platform empowers companies to orchestrate data of any volume, velocity, and variety.

Red Hat OpenShift Container Platform provides a complete container infrastructure solution, helping organizations of all sizes run scalable, containerized applications.

## INTRODUCTION

Kubernetes is the leading open source container orchestration framework. Its support for rapid innovation, broad use cases, and ease of use have resulted in significant community activity and market adoption by governments, cloud providers, and other enterprises and vendors.

Together, Red Hat and SAP have developed an integrated solution for Kubernetes. SAP<sup>®</sup> Vora is an in-memory, distributed computing solution that provides actionable business insights from big data. Red Hat<sup>®</sup> OpenShift Container Platform delivers an enterprise Kubernetes environment for deploying and managing container-based workloads in production.

Running in Kubernetes clusters on Red Hat OpenShift Container Platform, SAP Vora 2.0 empowers companies to orchestrate data of any volume, velocity, and variety. As a result, companies can progress toward an integrated big data landscape founded on an enterprise hub for all types of data—including streaming, Apache Hadoop, transactional, Internet of Things (IoT), and location data.

## SUPPORTING THE FUTURE OF BIG DATA

### SAP VORA

SAP Vora provides interactive analytics on stored data from various sources, including traditional storage, Hadoop, and Amazon Simple Storage Service (Amazon S3). Its specialized engines provide high-performance distributed analysis tailored by data category—such as relational data, graph data, semistructured JavaScript Object Notation (JSON) documents, and time series data.

With SAP Vora, you can easily package analysis from disparate data types with a common SQL interface, easy-to-use modeling tools, and extension of Apache Spark to include SAP HANA<sup>®</sup> platform access. As a result, you can gain insight based on relevant information from across your data environment.

### RED HAT OPENSIFT CONTAINER PLATFORM

Red Hat is a leading contributor to the Kubernetes open source project and the Cloud Native Computing Foundation (CNCF). Red Hat OpenShift Container Platform is optimized for continuous application development and multitenant deployment. With developer- and operations-centric tools, OpenShift Container Platform supports rapid, easy app development, deployment, and scaling, as well as life-cycle maintenance.

### INTEGRATED RED HAT AND SAP SOLUTION

SAP Vora on OpenShift Container Platform is a continuation of the strong partnership between SAP and Red Hat to support enterprise applications and use cases.

SAP Vora 2.0 runs in Kubernetes clusters, with all services built into docker-formatted containers. These clusters can run in a set of docker containers and in a Kubernetes environment. Hadoop components of SAP Vora, primarily SAP Vora Spark Extension, are deployed on Hadoop clusters.

SAP Vora 2.0 then runs analytics engines and services in containers orchestrated by Kubernetes and collects big data via Spark, Hadoop, or directly from cloud environments (Figure 1).



## ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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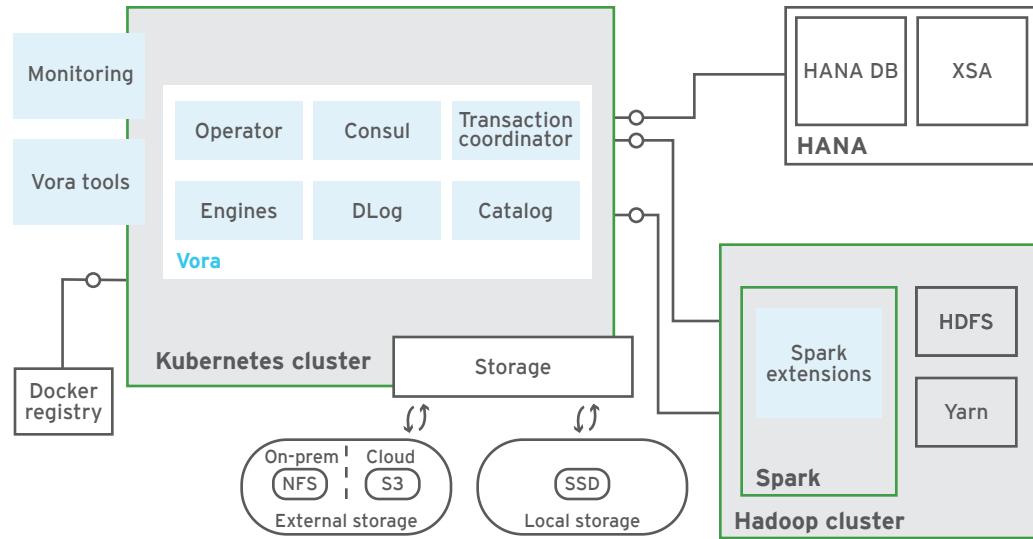


Figure 1. SAP Vora 2.0 Architecture

Red Hat OpenShift Container Platform provides a complete container infrastructure solution, helping organizations of all sizes run scalable, containerized applications. Containers let teams create apps as lightweight microservices, with application instances quickly spun up or down as needed. OpenShift Container Platform simplifies management of these containers at scale, integrating containers and SAP Vora resources to work together seamlessly.

As a result, organizations can:

- Orchestrate data of any volume, variety, and velocity.
- Support agile development.
- Spin up in-memory big data analytics resources as needed.
- Manage big data analytics at scale.
- Easily integrate SAP Vora data with SAP HANA.

## LEARN MORE

Learn more about SAP Vora at [sap.com/vora](http://sap.com/vora).

Learn more about Red Hat OpenShift Container Platform at [openshift.com/container-platform](http://openshift.com/container-platform).

Learn more about the innovative partnership of Red Hat and SAP at [redhat.com/sap](http://redhat.com/sap).

## ABOUT SAP

As market leader in enterprise application software, SAP (NYSE: SAP) helps companies of all sizes and industries run better. From back office to boardroom, warehouse to storefront, desktop to mobile device, SAP empowers people and organizations to work together more efficiently and use business insight more effectively to stay ahead of the competition. SAP applications and services enable more than 365,000 business and public sector customers to operate profitably, adapt continuously, and grow sustainably.

For more information, visit [www.sap.com](http://www.sap.com).