Red Hat OpenShift Container Storage

Scalable, software-defined storage for IBM Db2

**Highlights**

- Depend on a tested, verified, and integrated persistent storage solution for IBM Db2 on OpenShift.
- Deploy software-defined storage the same way you deploy cloud-based computational resources— with modern Kubernetes orchestration.
- Provide unified data placement and access across private, public, and hybrid clouds.
- Support emerging data-intensive workloads at scale on any cloud.

**Supporting IBM Db2 on Red Hat OpenShift**

The IBM Db2 team has transformed its delivery and infrastructure toward a container-based Db2, tailored for hybrid and multi-clouds and managed by Red Hat® OpenShift®. Integration with Red Hat OpenShift Container Storage is a vital aspect of this transformation, and IBM and Red Hat have worked to ensure performance and reliability of this joint solution. Beyond providing persistent cloud-based storage for IBM Db2, OpenShift Container Storage delivers a flexible container-native storage with the specific file and block formats and performance that IBM Db2 requires.

**Container-native storage for IBM Db2**

Organizations delivering production IBM Db2 workloads need scalable and performant persistent storage that offers application and data mobility. Cloud and container-based solutions must support all data without forcing arbitrary compromises that limit IBM Db2 scalability or lock vital corporate data into proprietary solutions. Red Hat OpenShift Container Storage offers a complete data services platform for apps running on Red Hat OpenShift— providing agile, scalable, portable, and highly available storage that can be provisioned and deprovisioned on demand.

Designed and tested in tandem with Red Hat OpenShift, organizations can provide a consistent application experience— wherever the application and data reside. Deploying IBM Db2 and OpenShift Container Storage together offers distinct benefits, including:

- **Reduced operational complexity.** Traditional network-attached storage (NAS) or storage area networks (SANs) do not provide standard storage services to IBM Db2 when running on cloud or on-site platforms. Operators, developers, and data scientists can provision software-defined OpenShift Container Storage as easily as computational resources, utilizing the same administrative skill set and Kubernetes orchestration mechanism.

- **Increased agility.** Businesses need to respond to rapidly changing global market conditions with the flexibility to run critical workloads on private or public clouds. Deploying IBM Db2 on OpenShift backed by Red Hat OpenShift Container Storage provides a tested and validated platform with a consistent experience on private, public, or hybrid clouds.

- **Lower operational costs.** Simplifying infrastructure management can reduce expenses and minimize or eliminate costly configuration errors. With Red Hat OpenShift Container Storage, the unified OpenShift control plane can manage both compute and storage from a single pane of glass.

- **Scale with changing business demands.** Organizations rely on IBM Db2 to provide application performance under any workload. Recent testing by IBM and Red Hat engineers shows Red Hat OpenShift Container Storage is the preferred storage solution for IBM Db2 Warehouse MPP on OpenShift— the most resource-intensive version of IBM Db2.

“We have been delighted with the ease of use and outstanding performance of Red Hat OpenShift Container Storage, prompting us to consider it our preferred data platform for running Db2 Warehouse on OpenShift.”

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Piotr Mierzejewski
Director Db2 Development,
IBM Data and AI

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1 For full details and testing results, see “Red Hat document IBM Db2 Warehouse MPP on Red Hat OpenShift Container Storage”.

redhat.com Brief Red Hat OpenShift Container Storage
“With no prior experience with OpenShift Container Storage, our team was able to set up two distinct OpenShift clusters and conduct full Db2 Warehouse performance validation in less than two weeks. This experience far exceeded our expectations, as tests involving other Kubernetes storage services proved to be much more difficult to configure and validate.”

Piotr Mierzejewski
Director Db2 Development,
IBM Data and AI

A reliable and validated storage solution

Organizations launching enterprise solutions in the cloud want assurances that selected technologies will work together reliably. With backing from IBM and Red Hat, IBM Db2 Warehouse on Red Hat OpenShift Container Storage provides a reliable cloud-based environment that offers:

- **Independently scalable database and storage performance.** With IBM Db2 and Red Hat OpenShift Container Storage, database performance and storage capacity can scale independently as dictated by the needs of the application.

- **Support for file, block, and object storage.** Red Hat Ceph® Storage provides the storage services data plane inside Red Hat OpenShift Container Storage, supplying all essential data protocols for IBM Db2.

- **Integrated life-cycle management.** OpenShift Container Storage is designed for and tightly integrated with Red Hat OpenShift, allowing organizations to manage compute resources for IBM Db2 and the Db2 storage layer consistently.

- **Security for the storage layer.** IBM Db2 and Red Hat OpenShift Container Storage are more secure offerings, providing multilayer protection for Db2 applications.

Conclusion

Deploying enterprise solutions reliably in the cloud requires technologies that are proven to work together. IBM Db2 and Red Hat OpenShift Container Storage offer a modern data architecture integrated with Red Hat OpenShift and based on containers and Kubernetes orchestration. With proven best practices gleaned from extensive IBM and Red Hat testing, OpenShift Container Storage provides a reliable, cloud-based environment for your most demanding workloads running on IBM Db2.

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About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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