



IBM Spectrum Protect Plus on Red Hat OpenShift Container Storage

Highlights:

Use proven IBM Spectrum Protect Plus for data protection as you move to containerized applications.

Unify protection for physical, virtual, and containerized workloads with a single data protection platform.

Employ SLA-based policies to automate data protection processes.

Protect, back up, replicate, and restore complete containerized applications including persistent volumes, namespaces, resources, and metadata for disaster recovery or development/testing efforts.

Red Hat OpenShift Container Storage provides:

Dynamic scale on demand with flexibility and control.

Consistent data experiences across hybrid cloud environments.

Simplified shared access to an integrated data platform.



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Data resilience for cloud-native applications

Virtual machines (VMs) and containerized workloads are becoming more common as organizations move from traditional to increasingly popular hybrid cloud environments. While these trends enable digital transformation and tremendous innovation in application development, they can complicate processes needed to more securely and effectively back up and recover applications and their data.

IBM Spectrum Protect Plus provides recovery, replication, and reuse for VMs, databases, applications, file systems, software-as-a-service (SaaS) workloads, containers, and cloud environments. When coupled with Red Hat® OpenShift® and Red Hat OpenShift Container Storage, the solution is easy to deploy as a virtual appliance or as a container application, and the agentless architecture is easy to maintain. Service level agreement (SLA)-based policies can be used to automate data protection processes, including operational backups, data replication, and data retention. Role-based access control (RBAC) and application integration provide more secure self-service capability to improve efficiency of analytics, development, and testing.

IBM Spectrum Protect Plus on Red Hat OpenShift Container Storage

IBM Spectrum Protect Plus protects Red Hat OpenShift environments with an integrated approach that starts with the ability to deploy IBM Spectrum Protect Plus Server as a container using a Red Hat OpenShift (Kubernetes) operator. IBM enhanced and modernized Red Hat OpenShift and Kubernetes data protection by adding the flexibility to protect application, namespace, and cluster metadata. This approach lets you back up and recover applications, namespaces, resources, and clusters to the same or a different location. It is highly effective for disaster recovery and also supports data reuse for development, testing, and analysis.

Unified management capability

IBM Spectrum Protect Plus unifies protection for multiple workloads, including VMs, databases, applications, file systems, SaaS workloads, and containers. The IBM Spectrum Protect Plus dashboard provides timely status information and built-in alert functions. SLA-based policies automate data protection processes including operational backups, data replication, and data retention.

Enhanced cloud and container protection

IBM Spectrum Protect Plus provides modern data protection for hybrid cloud environments that span private and public clouds. For example, Amazon Web Services (AWS) workload support includes EC2 instances and databases like Microsoft SQL Server, Oracle, and MongoDB. IBM Spectrum Protect Plus can be used on-premise to manage protection of AWS EC2 instances with snapshots or be deployed entirely within the cloud.

“IBM recognized the importance of meeting both IT and application development needs for container protection early on. Thanks to a strong collaborative effort between **IBM Storage** and **Red Hat Data Services**, we have tightly integrated IBM Spectrum Protect Plus with Red Hat OpenShift and Kubernetes to strengthen data protection and data resilience in container environments.”

—
Sam Werner
 Vice President, Storage
 Offering Management, IBM

Rapid data recovery

The IBM Spectrum Protect Plus proactive catalog and global search helps administrators protect the right data and quickly identify the data they want to recover across multiple VM hosts, file systems, hypervisors, applications, and containers. Developers can back up, recover, and reuse logical persistent volume (PV) groupings using Kubernetes labels or convenient organization and selection criteria.

Cost-effective data retention

IBM Spectrum Protect Plus offers cost-effective data retention via data copy and archival to both on-premise and cloud-based object storage, as well as IBM Spectrum Protect for data archival on physical or virtual tape. In addition, IBM Spectrum Protect Plus provides compression and deduplication for total data reduction efficiency.

Red Hat OpenShift integration and standard interfaces

IBM Spectrum Protect Plus uses open and standard technology to integrate with Red Hat OpenShift and OpenShift Container Storage, including:

- ▶ **Container storage interface (CSI) snapshots.** CSI snapshots capture the state of a storage volume in a Red Hat OpenShift cluster at a particular point in time. Cluster administrators use CSI snapshots through IBM Spectrum Protect Plus to back up and restore PVs. App developers can use volume snapshots to rapidly roll back to previous versions.
- ▶ **OpenShift APIs for Data Protection (OADP).** OADP is an operator that creates backup and restore APIs in Red Hat OpenShift clusters. IBM Spectrum Protect Plus uses OADP to backup and restore OpenShift cluster resources (YAML files), internal images, and persistent volume data. Using OADP, IBM Spectrum Protect Plus can back up an entire container-based application, including all of its resources, metadata, and PVs. Fully functional applications can be cloned to other Red Hat OpenShift clusters for disaster recovery or development purposes.

Conclusion

The unique combination of IBM Spectrum Protect Plus, Red Hat OpenShift, and Red Hat OpenShift Container Storage provides a powerful data resilience solution for cloud-native applications.



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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