Modern Data Protection for Containers

Containers and microservices now play a central role in application development. According to IDC, 70 percent of organizations have a container-based application development environment and expect to be implementing containers in production within two years.[1] IDC also predicts that 95 percent of new microservices will be deployed in containers by 2021.[2]

Development and operations teams are moving to containers because they are far smaller than virtual machine (VM) images, which enables much more portability and requires less system resources. Containers also provide a consistent environment that readily follows applications from a developer's system to testing to final production deployment.

As containerized applications move into production, they require container-centric data protection solutions for data backup, recovery, reuse, retention and cyber resiliency.

Ideally these solutions offer support for container platforms, such as Red Hat OpenShift and Kubernetes, to provide a developer-friendly interface that accelerates adoption and fosters ease of use.

Unified Platform for Modern Data Protection

IBM Spectrum Protect Plus is an end-to-end, modern data protection solution that unifies operational backups, data replication and long-term data retention. IBM Spectrum Protect Plus provides an easy to use interface to manage multiple workloads including databases, applications, virtual machines (VMs) and containerized workloads.

Key IBM Benefits:

• Native integration with Kubernetes provides a developer-friendly self-service interface

• CSI snapshot support unifies container orchestration with storage

• Pre-defined policies help ensure SLA compliance

Developer-friendly

IBM Spectrum Protect Plus integrates with Kubernetes Environments via the Kubernetes APIs. This allows Kubernetes administrators and application developers to use the native command line interface (kubectl) to enable data protection for their containerized applications. Developers can assign SLAs to individual persistent volumes or an application by selecting the Kubernetes labels. When selecting a label, Spectrum Protect Plus will automatically identify all the association data volumes and protect it. Developers can also back up and recover logical persistent volumes associated with Kubernetes namespaces.

Common Storage Interface

To snapshot persistent container volumes, IBM Spectrum Protect Plus uses the Container Storage Interface (CSI). Support for CSI is significant because CSI unifies container orchestration with multiple storage systems.

SLA-based Policies

Spectrum Protect Plus enables policy definition and assignment from the IBM Spectrum Protect Plus user interface. This capability provides an easy way to apply the necessary governance and SLAs to container data. Developers can use policies to back up persistent volumes, to replicate data to secondary sites, and to copy data to object storage or IBM Spectrum Protect for secure long-term data retention.

Cyber Resiliency Support

IBM Spectrum Protect Plus provides the ability to securely store container data in immutable IBM Cloud Object storage, or companies can air-gap data using IBM tape, via IBM Spectrum Protect.
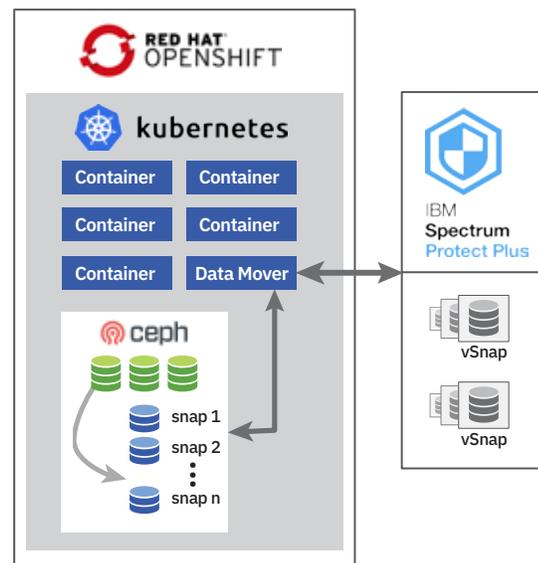
> "We must offer the very best data protection solutions possible to our customers, but they must also be cost-effective and easy to use. IBM Spectrum Protect Plus meets all these requirements, and more, because it supports containers and extends into multiple cloud environments. It has quickly become a foundation of our data protection portfolio."
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> **Christophe Lesur**
> *CEO, Cloud Temple*

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[1] *IBM webinar - Tackle the Modern Data Protection Challenge webinar featuring IDC, 2019 - https://tinyurl.com/y44xu825*
[2] *IDC Technology Spotlight, sponsored by IBM, Efficiently Automate and Orchestrate Your Hybrid/Multicloud Deployments with Next-Generation Infrastructure, February 2018- https://www.ibm.com/downloads/cas/V93QE3QG*

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