Red Hat

Datasheet

Red Hat OpenShift Container Storage

Dynamic, shared, and highly available storage for OpenShift applications

Key benefits

- An integrated platform, including container host, Kubernetes, application life-cycle management, and storage, using your choice of infrastructure
- Greater value from operations and development teams, with the ability to easily deploy storage in container-based environments
- Storage that is validated, integrated, tested, and supported with Red Hat OpenShift Container Platform
- Simpler installation and upgrades, leading to faster application development cycles and more frequent software deployments
- Portability across hybrid cloud and multicloud environments, resulting in lower IT operations costs

Overview

As cloud deployments move from stateless to stateful and distributed applications, effective persistent storage becomes essential. Red Hat® OpenShift® Container Storage offers tightly integrated, persistent data services for OpenShift and the hybrid multicloud, supporting dynamic, stateful, and highly available container-native storage that can be provisioned and deprovisioned on demand. Data storage abstraction enables portability across multiple environments so that the user can write once and deploy across on-premise, hybrid, or public cloud platforms.

Red Hat OpenShift Container Storage

Red Hat OpenShift Container Storage has been engineered, tested, and qualified to work with Red Hat OpenShift Container Platform on any infrastructure (Figure 1). Together, these technologies provide everything needed for hybrid cloud, enterprise container, and Kubernetes development and deployment. This certification removes the guesswork from running Red Hat OpenShift across multiple cloud platforms while providing data storage functionality, data services, and data protection that enterprises require.

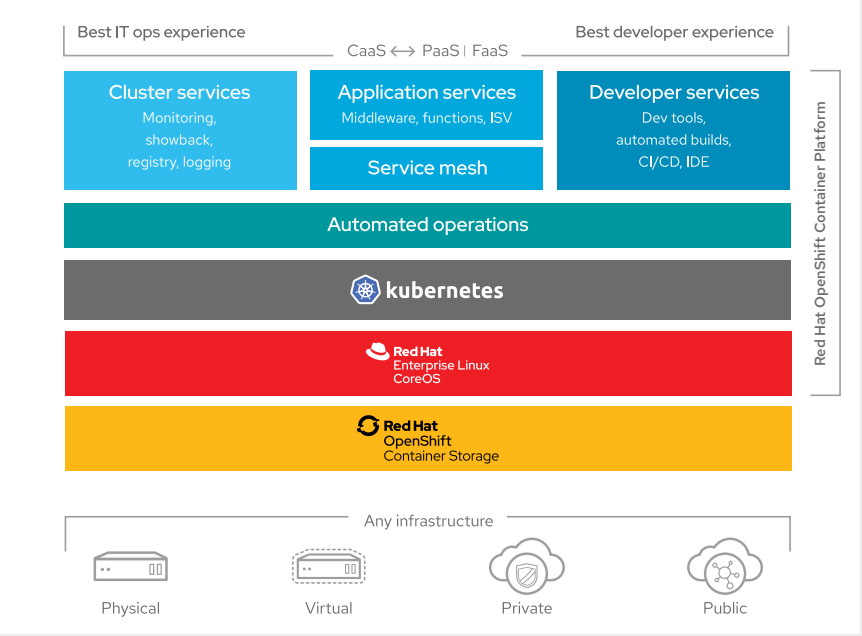

Figure 1. Red Hat OpenShift Container Storage is engineered, tested, and qualified to work with Red Hat OpenShift Container Platform across any infrastructure.

Tight integration with Red Hat OpenShift Container Platform

Most storage infrastructure was not developed or optimized for microservices and containers. Red Hat OpenShift Container Storage was created specifically for container-based environments, and it is tightly integrated with Red Hat OpenShift Container Platform. With this innovation, Red Hat can provide support for the entire container-based environment, including containers, orchestration, and storage, yielding:

Enterprise-class storage for Kubernetes. Enterprise-class applications require enterprise-class storage. For a stateful app to exhibit high availability, its data must first be highly available. Red Hat OpenShift Container Platform supports important features like replication, allowing application data to be placed across different availability zones.

A cloud-like experience, everywhere. Circumstances are constantly changing, favoring one cloud provider over another, or in-house deployment vs. the public cloud. Organizations need to be able to move quickly to take advantage of favorable pricing or respond to other business pressures. Red Hat OpenShift Container Storage provides software-defined storage that allows organizations to deploy their apps and storage as needs dictate, adjusting as they move forward.

Increased developer productivity. Cloud developers want to innovate without arbitrary limitations. Traditional storage has been an impediment to cloud development, requiring separate time-consuming arrangements. Red Hat OpenShift Container Storage provides common functionality across all cloud platforms, dramatically simplifying life for developers.

Features and benefits

Feature	Benefit
High availability	Supports critical storage features like mirroring, arbiter volumes, and stretched clusters for high availability and protection of persistent container-based data.
Multiprotocol support	Supports multiple workloads backed by block, file, and object storage. Multiprotocol support enables the use of OpenShift Container Storage for storage of Red Hat OpenShift metrics, logging, and registry, as well as container application data in the environment.
Portability	Deploys on bare metal, virtual machines, containers, or in the public cloud. The storage management experience for a containerized environment remains the same regardless of where it is deployed. OpenShift Container Storage can run anywhere OpenShift Container Platform is deployed.
Red Hat OpenShift integration	Installs with Red Hat OpenShift (via Red Hat Ansible® Automation Platform) and is developed, qualified, tested, and versioned coincident with OpenShift Container Platform releases.
High scalability	Supports up to 2,000 persistent volumes (PVs) per OpenShift Container Storage cluster.
Single-vendor support model	Provides support for the entire container-based environment—with a single vendor (Red Hat).

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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