RED HAT OPENSHIFT CONTAINER STORAGE

Storage for and in your Kubernetes-based container environment

DATASHEET

KEY BENEFITS

- Integrates fully with Red Hat OpenShift across on-premise, private, and public cloud infrastructures

- Provides persistent storage for container-based applications

- Allows management of the entire container environ-ment—apps and storage—from a single user interface (UI)

- Offers single-vendor support for the entire container-based environment - containers, orchestration, and storage

ANALYST PERSPECTIVE:

"As developers look to provide easily portable applications that can be consistently managed in hybrid cloud environments, the need for scalable, persistent, container-based storage is becoming more important."

ERIC BURGENER
RESEARCH VICE PRESIDENT,
STORAGE, IDC[1]

INTRODUCTION

Applications are increasingly built and delivered with containers, across on-premise and cloud footprints. Containers are ephemeral, not permanent—if the process dies or the container is rebooted, all the data for the resident applications are lost. Business-critical applications require that container data remain available beyond the life of the container. The underlying storage layer for containers needs to be highly elastic, easily provisioned by developers and administrators, and, ideally, managed with the Kubernetes container orchestration framework.

PRODUCT OVERVIEW

Red Hat® OpenShift® Container Storage is flexible, cost-effective, and developer-friendly storage for containers. It helps organizations standardize storage across multiple environments and easily integrates with Red Hat OpenShift to deliver a persistent and foundational storage layer for contain-erized applications that require long-term storage.

OpenShift Container Storage is the de facto storage technology for Red Hat OpenShift and allows containers to access a persistent, software-defined, and distributed storage system. It provides a permanent place for data to live while containers spin up and down.

OpenShift Container Storage is multiprotocol, working with file, block, and S3 object storage. It is ideal for not only the container application data, but also as the infrastructure underlying the Red Hat OpenShift environment, including storage for Red Hat OpenShift metrics, logging, and registry.

Unlike traditional proprietary storage systems that were not designed with container environments in mind, OpenShift Container Storage can easily run anywhere the OpenShift environment is deployed: bare metal, virtual machines, containers, and cloud deployments. This flexibility helps customers standardize storage across multiple environments. OpenShift Container Storage, when paired with Red Hat OpenShift Container Platform, gives organizations the freedom to build and run applications anywhere with consistent and standardized development, test, and production environments.

Figure 1. Red Hat OpenShift Container Storage provides application portability and a consistent user experience
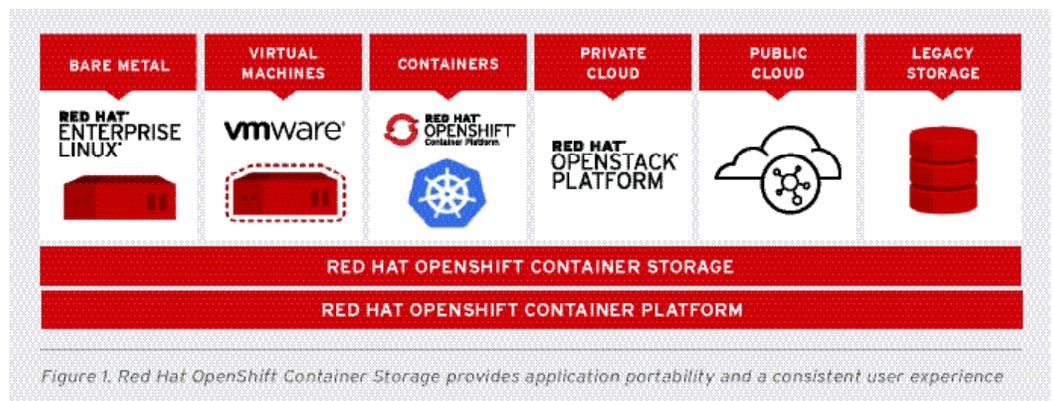
1 Red Hat press release, "Growing Number of Organizations Around the World Choose Red Hat Container-Native Storage with Red Hat OpenShift Container Platform." May 7, 2018. https://www.redhat.com/en/about/press-releases/growing-number-organizations-around-world-choose-red-hat-container-native-storage-red-hat-openshift-container-platform
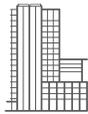
RED HAT OPENSHIFT
Container Storage

redhat

NORTH AMERICA
1 888 REDHAT1

EUROPE, MIDDLE EAST, AND AFRICA
00800 7334 2835
europe@redhat.com

ASIA PACIFIC
+65 6490 4200
apac@redhat.com

LATIN AMERICA
+54 11 4329 7300
info-latam@redhat.com

facebook.com/redhatinc
@redhat
linkedin.com/company/red-hat

redhat.com
#f13255_0718

FEATURES AND BENEFITS

OpenShift Container Storage enables application portability, allowing customers to make the most of their investment in containers and hybrid cloud technologies. Prominent use cases range from messaging and continuous integration and continuous delivery (CI/CD) applications to persistence for SQL and NoSQL databases and web applications.

FEATURE	BENEFIT
Highly available	Supports critical storage features like mirroring, arbiter volumes, and stretched clusters for high availability and protection of persistent container-based data.
Multiprotocol	Supports multiple workloads backed by block, file, and/or object storage. Multiprotocol support enables the use of OpenShift Container Storage for storage of Red Hat OpenShift metrics, logging, registry, as well as container application data in the environment.
Portable	Deploys on bare metal, virtual machines, containers, or in the public cloud. The experience managing storage 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®) and is developed, qualified, tested, and versioned coincident with OpenShift Container Platform releases.
Highly scalable	Supports up to 1,000 persistent volumes (PVs) per OpenShift Container Storage cluster.
Single vendor support model	Support for the entire container-based environment—containers, orchestration, and storage—with a single vendor (Red Hat).

Most storage infrastructure used by development teams was not developed or optimized for microservices and containers. Development teams need software-defined, container-based storage that is easy to use, highly available, flexible, and allows for faster development cycles for their stateful applications and services. Red Hat OpenShift Container Storage was created specifically for container-based environments and is highly integrated with Red Hat OpenShift Container Platform. Now you can have a single vendor in Red Hat to provide support for the entire container-based environment, including containers, orchestration, and storage.