Red Hat OpenShift Container Storage 4.4

4.4 Release Notes

Release notes for feature and enhancements, known issues, and other important release information

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Legal Notice

Abstract

The release notes for Red Hat OpenShift Container Storage 4.4 summarize all new features and enhancements, notable technical changes, and any known bugs upon general availability.

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PREFACE

Red Hat OpenShift Container Storage is a software-defined storage that is optimized for container environments. It runs as an operator on OpenShift Container Platform to provide highly integrated and simplified persistent storage management for containers.

Red Hat OpenShift Container Storage is integrated into the latest Red Hat OpenShift Container Platform to address platform services, application portability, and persistence challenges. It provides a highly scalable backend for the next generation of cloud-native applications, built on a new technology stack that includes Red Hat Ceph Storage, the Rook.io Operator, and NooBaa's Multicloud Object Gateway technology.

Red Hat OpenShift Container Storage provides a trusted, enterprise-grade application development environment that simplifies and enhances the user experience across the application lifecycle in a number of ways:

- Provides block storage for databases.
- Shared file storage for continuous integration, messaging, and data aggregation.
- Object storage for cloud-first development, archival, backup, and media storage.
- Scale applications and data exponentially.
- Attach and detach persistent data volumes at an accelerated rate.
- Stretch clusters across multiple data-centers or availability zones.
- Establish a comprehensive application container registry.
- Support the next generation of OpenShift workloads such as Data Analytics, Artificial Intelligence, Machine Learning, Deep Learning, and Internet of Things (IoT).
- Dynamically provision not only application containers, but data service volumes and containers, as well as additional OpenShift Container Platform nodes, Elastic Block Store (EBS) volumes and other infrastructure services.

CHAPTER 1. ABOUT THIS RELEASE

Red Hat OpenShift Container Storage 4.4 (RHBA-2020:2392 and RHBA-2020:2393) is now available. New enhancements, features, and known issues that pertain to OpenShift Container Storage 4.4 are included in this topic.

Red Hat OpenShift Container Storage 4.4 is supported on the latest Red Hat OpenShift Container Platform version. For more information, see Red Hat OpenShift Container Storage and Red Hat OpenShift Container Platform interoperability matrix.

CHAPTER 2. NEW FEATURES AND ENHANCEMENTS

This part describes new features and major enhancements introduced in Red Hat OpenShift Container Storage 4.4.

2.1. DEPLOYING RED HAT OPENSHIFT CONTAINER STORAGE USING LOCAL STORAGE DEVICES

2.1.1. Deployment on Bare metal

Red Hat OpenShift Container Storage can now be deployed on bare metal clusters with optimal performance. Bare metal clusters can also be expanded to increase the storage capacity.

For more information, see Creating OpenShift Container Storage cluster on bare metal .

2.1.2. Deployment on VMware direct-attached drives

Red Hat OpenShift Container Storage can now be deployed using local storage devices on VMware clusters with optimal performance. VMware clusters can also be expanded to increase the storage capacity. This includes improved storage performance for customers running high Input/output operations per second (IOPS) workload. This is in addition to VSAN and VMFS datastore support introduced in Openshift Container Storage 4.2.

For more information, see Creating OpenShift Container Storage cluster on VMware .

CHAPTER 3. TECHNOLOGY PREVIEW FEATURES

Technology Preview features are provided with a limited support scope, as detailed on the Customer Portal: Technology Preview Features Support Scope .

The features listed in this section are provided under Technology Preview support limitations.

3.1. DEPLOYMENT ON AMAZON EC2 STORAGE OPTIMIZED INSTANCES

Red Hat OpenShift Container Storage can be deployed using local storage devices on Amazon EC2 storage optimized instances with optimal performance. Amazon EC2 storage optimized instances can also be expanded to increase the storage capacity.

For more information, see Deploying OpenShift Container Storage on local storage devices and Adding a node on a local storage device.

3.2. DATA FEDERATION IN MULTICLOUD OBJECT GATEWAY

The Multicloud Object Gateway allows object federation across multiple cloud environments by stretching buckets across two different OpenShift Container Storage clusters that run on two separate infrastructures.

For more information, see Scaling Multicloud Object Gateway performance by adding S3 endpoints section of the Managing OpenShift Container Storage Guide.

CHAPTER 4. KNOWN ISSUES

This section describes issues you may encounter while installing, upgrading, or using Red Hat OpenShift Container Storage. Instructions for working around these issues are provided where possible.

Table 4.1. List of known issues

Bug	Description
BZ#1769322	In AWS environment, after a node reboot, the ***-mon-*** pods are stuck in the **init** state for an extended period. Should this occur, contact Red Hat support.
BZ#1760426	It is not possible to uninstall Red Hat OpenShift Container Storage from the user interface. See Uninstalling Openshift Container Storage for instructions on uninstall.
BZ#1743643	Persistent Volume Claim (PVC) expansion is not functional.
BZ#1783961	**noobaa-db** does not migrate to other nodes when a node goes down. NooBaa will not work when a node is down as migration of **noobaa-db** pod is blocked.
BZ#1788126	**PodDisruptionBudget** alert, which is an OpenShift Container Platform alert, is continuously shown for object storage devices (OSDs). You can ignore this alert. Also, you can silence this alert by following the instructions in Managing cluster alerts section of the Openshift Container Platform documentation. For instructions on how to do so, see the Managing cluster alerts sections of the Red Hat Openshift Container Platform documentation. For more information, refer to the Red Hat Knowledgebase article.
BZ#1836299	The autoscaling feature for the pod is not available in Red Hat OpenShift Container Storage, therefore the **MAX HPA** value can not be greater than 1. You can ignore these alerts. The Red Hat OpenShift Container Platform allows silencing the alerts to separate them from the list of active alerts. For instructions on how to do so, see the Managing cluster alerts sections of the Red Hat Openshift Container Platform documentation.

Bug	Description
BZ#1842456	After node replacement, the Ceph CRUSH map tree still contains the stale hostname entry of the removed node in the particular rack. While replacing a node in a different rack, if any node with same old hostname is added back to the cluster, it receives a new rack label from the **ocs-operator**, but is inserted into its old place in the CRUSH map, resulting in an indefinite **Ceph HEALTH_WARN** state. As a workaround, we recommend to use a new hostname for adding the replaced node back into the cluster.
	If your cluster was deployed over Local Storage Operator in Openshift Container Storage version 4.3, you must re-install the cluster and not upgrade to version 4.4. For details on installation, see Deploying OpenShift Container Storage using local storage devices.

CHAPTER 5. NOTABLE BUG FIXES

Red Hat OpenShift Container Storage 4.4 introduces the following notable technical changes:

Table 5.1. List of fixed bugs

Bug	Description
BZ#1778488	Previously, when a worker node was down, the operator was blocked from responding to CR updates such as upgrades, adding storage, or creating new pools. This issue has been resolved, and the operator works as expected.
BZ#1816820	When 'portable: false' was used in a StorageCluster CR; for example, Local Storage infrastructure, it was ignored and the PVC ID was used as the name for the host CRUSH bucket in Ceph. With this fix, "portable: false" is honored in the CephCluster and CRUSH bucket uses hostnames instead of PVC IDs for name of the host.
BZ#1821219	When an underlying disk of an OSD failed, the cluster always remained in WARNING state after data re-balancing as there was no way to remove the OSD from the cluster. The cleaning up of the failed OSD has now been simplified with a job that the administrator can launch.
BZ#1823444	Previously, the reported size by Red Hat OpenShift Container Platform for a node was slightly less than the actual size (64 GiB free memory) resulting in validation failure. For example, AWS M5.4xlarge machine had 16 core and 64 Gib memory of RAM but memory size reported by OpenShift node API was 61.xx GiB. Hence, an unexpected warning message was displayed for the expected configuration.