Red Hat OpenShift Container Storage 4.3

4.3 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 4.3 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 4.3 (RHBA-2020:1438 and RHBA-2020:1437) is now available. New enhancements, features, and known issues that pertain to OpenShift Container Storage 4.3 are included in this topic.

Red Hat OpenShift Container Storage 4.3 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 release adds improvements related to the following components and concepts.

2.1. INCREASED FLEXIBILITY IN DEPLOYMENT

Customers can now set the OSD size during deployment according to their environment requirements and are allowed to increase the capacity only in the increment of the initial OSD size set. This feature is available only on OCP 4.3.2 or later.

Three different OSD capacities that are now allowed at the time of storage cluster creation are:

- 0.5 TiB (Small Scale)

- 2 TiB (Standard)

- 4 TiB (Large Scale)

For more information, see Supported Configurations in Planning your deployment guide.

2.2. DEPLOYMENT USING LOCAL STORAGE DEVICES

[Technology preview feature] Red hat OpenShift Container Storage can now be deployed using local storage devices to provide attached storage on the following platforms:

- Amazon EC2 storage optimized instances

- Bare metal

- VMware direct-attached drives

The Amazon EC2, bare metal, and VMware clusters can also be expanded to increase the storage capacity.

For more information, see Installing OpenShift Container Storage on local storage devices , Scaling up storage by adding capacity to your OpenShift Container Storage nodes using local storage devices, and Adding a node on a local storage device .

2.3. ENHANCED USER INTERFACE

The OpenShift console's Storage section has been modified to create object bucket claims and configure object buckets using the Multicloud Object Gateway.

The revised Add Capacity page design includes a storage class selection for the user as well as a clear and consistent user experience with a simplified interface for installing and performing dashboard operations.

2.4. MULTICLOUD OBJECT GATEWAY

- Red Hat OpenShift Container Storage now supports Amazon Simple Storage Service (Amazon S3) bucket policies. Bucket policies allow you to grant users access permissions for buckets and the objects in them. For more information, see Bucket policies in the Multicloud Object Gateway section of the Managing OpenShift Container Storage Guide.

- IBM Cloud Object Storage (COS) is now an available backingstore in the Multicloud Object Gateway.

- Object Bucket Claims can now be created using the OpenShift Console user interface. For more information, see Creating an Object Bucket Claim using the Multicloud Object Gateway user interface section of the Managing OpenShift Container Storage Guide.

2.5. SEAMLESS UPGRADE PROCESS FROM OPENSHIFT CONTAINER STORAGE VERSION 4.2 TO VERSION 4.3

OpenShift Container Storage 4.2 customers now have an easy to use straight forward method for upgrading their existing clusters to OpenShift Container Storage 4.3.

For more information, see Updating OpenShift Container Storage .

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 USING LOCAL STORAGE DEVICES

Red hat OpenShift Container Storage can now be deployed using local storage devices to provide attached storage on the following platforms:

- **Amazon EC2 storage optimized instances**
  It now supports the OpenShift Container Storage 4.3 which enables the operating system to run directly on underlying hardware, while providing access to other AWS cloud features.

- **Bare metal**

- **VMware direct-attached drives**
  Includes improved storage performance for customers running high Input/output operations per second (IOPS) workload.

The Amazon EC2, bare metal, and VMware clusters can also be expanded to increase the storage capacity.

For more information, see Installing 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 now 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

- 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#1769322)

- It is not possible to uninstall Red Hat OpenShift Container Storage from the user interface. (BZ#1760426)

- Persistent Volume Claim (PVC) expansion is not functional. (BZ#1743643)

- **Noobaa-core-0** does not migrate to other nodes when a node goes down. NooBaa will not work when a node is down as migration of **noobaa-core** pod is blocked. (BZ#1783961)

- When a worker node is down, the operator is blocked from responding to Custom Resource (CR) updates such as upgrades, adding storage, or creating new pools. (BZ#1778488)
  To resolve this issue, see Replacing storage nodes for OpenShift Container Storage .

- The reported size by OpenShift Container Platform for a node which is slightly less than the actual size (64 GiB free memory) results in a validation failure. For example, AWS M5.4xlarge machine has 16 core and 64 Gib memory of RAM but memory size reported by OpenShift node API is 61.xx GiB. Hence, an unexpected warning message is displayed for the expected configuration. (BZ#1823444)
  To resolve this, you are requested to ignore this warning message for OpenShift Container Platform and OpenShift Container Storage 4.3 release as this issue will be fixed in the future releases.

CHAPTER 5. NOTABLE BUG FIXES

Red Hat OpenShift Container Storage 4.3 introduces the following notable technical changes:

Table 5.1. List of fixed bugs

Bug	Description
BZ#1781146	When adding capacity from the user interface, you must select and then re-select a storage class from the drop-down list before selecting Add.
BZ#1781377	Red Hat OpenShift Container Storage 4.2 does not support cluster reduction.
BZ#1769689 and BZ#1776321	Recovering from a full cluster cannot be performed standalone. For more information, see Sizing and scaling recommendations.
B#1777384	With Red Hat Enterprise Linux worker nodes, a Permission denied error appears when writing in CephFS mount point for Amazon Web Services (user-provisioned infrastructure).
BZ#1780626	When a machine is deleted, OSD pod fails to run on the new node and stuck at Pending state.
BZ#1753109	Previously, the Multicloud Object Gateway had an inefficient deletion process. With this update, the deletion process has been improved, and time to delete has been reduced to a few seconds.
BZ#1764014	Previously, newly created bucket policies in the Multicloud Object Gateway were not updating existing Object Bucket Claims with BucketClass changes. With this update, when a bucket policy is created, the changes are applied to all existing Object Bucket Claims using the changed BucketClass.
BZ#1756426	Users can now log in to the NooBaa user interface using the OpenShift Container Platform SSO.
BZ#1765865	With this update, if an Object Bucket Claim is in error state, the errors are exposed, and in-depth messages are shown to help troubleshoot the issue.

Bug	Description
BZ#1777295	Previously, deleting backingstores that were being used by Object Bucket Claims resulted in no place to put existing objects and no option to upload new objects. With this update, backingstores can no longer be deleted if they are being used by Object Bucket Claims. If the user attempts to delete the backingstore, they will be presented with an error message explaining why the backingstore can not be deleted.
BZ#1781096	Previously, wrong status checks in the operator regarding backingstore status caused the displayed status on a backingstore to be wrong. With this update, the status checks have been fixed, and the correct status is displayed.
BZ#1791221	Anonymous phone home data is no longer being sent.
BZ#1813472	Previously, due to the addition of Tshirt sizing and some code refactoring on OpenShift Container Storage install page the StorageClassName is set to null in StoragCluster CR. Hence, users cannot install an OpenShift Container Storage cluster using the user interface because the StorageClassName is not set properly. With this release, this issue has been fixed and if the StorageClassName parameter in StorageCluster CR is null then you are requested to update to OpenShift Container Platform 4.3.10.