Red Hat Certified Specialist in Ceph Cloud Storage Exam (EX260)

ID EX260 **Price** 530.— €(excl. tax) **Duration** 1 day

Course Overview

The Red Hat Certified Specialist in Ceph Cloud Storage exam (EX260) tests the knowledge, skills, and ability to install, configure, and manage Red Hat® Ceph Storage clusters.

By passing this exam, you become a Red Hat Certified Specialist in Ceph Cloud Storage that also counts towards earning a Red Hat Certified Architect (RHCA®).

Objectives listed for this exam are based on the most recent Red Hat product version available. Click “Get started” to view all versions of this exam available for purchase.

Who should attend

These audiences may be interested in becoming a Red Hat Certified Specialist in Ceph Storage Administration:

- Red Hat Certified Engineers who wish to pursue Red Hat Certified Architect (RHCA)
- System administrators who want to demonstrate the ability to configure Red Hat Ceph Storage clusters
- Cloud administrators who need to configure Red Hat Ceph Storage for Red Hat OpenShift Container Platform or Red Hat OpenStack Platform

Prerequisites

- Red Hat Certified System Administrator (RHCSA) or have comparable work experience and skills (Red Hat Certified Engineer (RHCE) would be even better)
- Participants must have taken Red Hat Ceph Storage for OpenStack (CL260) or have comparable work experience
- Review the Red Hat Certified Specialist in Ceph Cloud Storage exam objectives

Preparation

Red Hat encourages you to consider taking Red Hat Ceph Storage for OpenStack (CL260) to help prepare.

Attendance in these classes is not required; students can choose to take just the exam.

While attending Red Hat classes can be an important part of your preparation, attending class does not guarantee success on the exam. Previous experience, practice, and native aptitude are also important determinants of success.

Many books and other resources on system administration for Red Hat products are available. Red Hat does not endorse any of these materials as preparation guides for exams. Nevertheless, you may find additional reading helpful to deepen your understanding.

Course Content

To help you prepare, these exam objectives highlight the task areas you can expect to see covered in the exam. Red Hat reserves the right to add, modify, and remove exam objectives. Such changes will be made public in advance.

You should be able to perform these tasks:

Install Red Hat Ceph Storage server

- Install a containerized Red Hat Ceph Storage server on both physical and virtual systems
- Utilize and modify Red Hat Ansible Automation Platform installation files provided with Red Hat Ceph Storage to configure and install Red Hat Ceph Storage server

Work with existing Red Hat Ceph Storage server appliances

- Be able to change a Red Hat Ceph Storage server configuration
- Add monitor (MON) nodes and object storage device (OSD) nodes

Configure Red Hat Ceph Storage server

- Configure a replicated storage pool
- Store objects in storage pool
- Store objects within a namespace within a storage pool
- Create and configure erasure-coded pools

- Create an erasure-coded pool profile with specified parameters
- Upload a file to an erasure-coded pool
- Change default settings in the Red Hat Ceph Storage configuration files
- Manage Red Hat Ceph Storage authentication
- Create a Red Hat Ceph Storage client with restricted read or write access to MONs, OSDs, pools, and namespaces
- Managing OSDs Using Ceph-volume
- Configure placement group auto-scaling

Provide block storage with RBD

- Create a RADOS block device image
- Obtain information about a RADOS block device image
- Map a RADOS block device image on a server
- Use a RADOS block device image
- Create an RBD snapshot
- Create an RBD clone
- Configure RBD mirrors
- Deploy a RBD mirror agent
- Configure one-way RBD mirroring in pool mode
- Configure one-way RBD mirroring in image mode
- Check the status of the mirroring process
- Import and export RBD images
- Export a RADOS block device to an image file
- Create an incremental RBD image file
- Import a full RBD image file
- Import a full RBD image file updated with an incremental RBD image file

Provide object storage with RADOSGW

- Deploy a RADOS gateway
- Deploy a multisite RADOS gateway
- Provide object storage using the Amazon S3 API
- Be able to create a RADOSGW user that will use the S3 client commands
- Be able to upload and download objects to a RADOSGW using the S3 client commands
- Export S3 objects using NFS
- Provide object storage for Swift
- Be able to create a RADOSGW user that will use the Swift interface
- Be able to upload or download objects to a RADOSGW using Swift commands
- Configure Ceph Object Gateway for In-Transit Encryption

Provide file storage with CephFS

- Create a Red Hat Ceph Storage file system
- Mount a Red Hat Ceph Storage file system on a client node persistently
- Configure CephFS quotas
- Create a CephFS snapshot

Configure a CRUSH map

- Be able to create a bucket hierarchy in a CRUSH map that can be used in an erasure profile or a replicant rule
- Be able to remap a PG
- Be able to remap all PG's in a pool for an optimal redistribution

Manage and update cluster maps

- Manage MON and OSD maps
- Be able to monitor and change OSD storage limits for monitoring available space on an OSD

Manage a Red Hat Ceph Storage cluster

- Determine the general status of a Red Hat Ceph Storage cluster
- Troubleshoot problems with OSDs and MONs

Tune Red Hat Ceph Storage

- Specify and tune key network tuning parameters for a Red Hat Ceph Storage cluster
- Control and manage scrubbing and deep scrubbing
- Control and manage recovery and rebalancing processes
- Control and manage RAM utilization against I/O performance

Troubleshoot Red Hat Ceph Storage server problems

- Troubleshoot client issues
- Enable debugging mode on RADOS gateway
- Optimize RBD client access using key tuning parameters

Integrate Red Hat Ceph Storage with Red Hat OpenStack Platform

- Integrate Red Hat Ceph Storage using both Glance and Cinder
- Modify key Glance configuration files to use Red Hat Ceph Storage
- Configure Glance to use Red Hat Ceph Storage as a backend to store images in the Red Hat Ceph Storage cluster
- Modify key Cinder configuration files to use Red Hat Ceph Storage
- Configure Cinder to use Red Hat Ceph Storage RBDs for block storage backing volumes

As with all Red Hat performance-based exams, configurations

must persist after reboot without intervention.

Exam format

This exam is a performance-based evaluation of skills and knowledge required to configure and manage Red Hat Ceph Storage clusters. You perform the configuration and administrative tasks necessary to deploy Red Hat Ceph Storage on multiple systems and are evaluated on whether they have met specific objective criteria. Performance-based testing means that you must perform tasks similar to what you would perform on the job.

Scores and reporting

Official scores for exams come exclusively from Red Hat Certification Central. Red Hat does not authorize examiners or training partners to report results to candidates directly. Scores on the exam are usually reported within 3 U.S. business days.

Exam results are reported as total scores. Red Hat does not report performance on individual items, nor will it provide additional information upon request.

You are eligible for one exam retake if you are unsuccessful on your first attempt.

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