

## Red Hat Ceph Storage for OpenStack

Duration: 4 Days    Course Code: CL260

### Overview:

#### **Build, expand and maintain cloud-scale, clustered storage for your applications with Red Hat Ceph Storage**

Cloud Storage with Red Hat Ceph Storage (CL260) is designed for storage administrators and cloud operators who deploy Red Hat Ceph Storage in a production data center environment or as a component of a Red Hat OpenStack Platform or OpenShift Container Platform infrastructure. Learn how to deploy, manage, and scale a Ceph storage cluster to provide hybrid storage resources, including Amazon S3 and OpenStack Swift-compatible object storage, Ceph-native and iSCSI-based block storage, and shared file storage. This course is based on Red Hat Ceph Storage version 5.

#### Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

### Target Audience:

This course is intended for storage administrators and cloud operators who want to learn how to deploy and manage Red Hat Ceph Storage for use by servers in an enterprise data center or within a Red Hat OpenStack Platform environment. Developers writing applications who use cloud-based storage will learn the distinctions of various storage types and client access methods.

### Objectives:

- Deploy and manage a Red Hat Ceph Storage cluster on commodity servers.
- Perform common management operations using the web-based management interface.
- Create, expand, and control access to storage pools provided by the Ceph cluster.
- Access Red Hat Ceph Storage from clients using object, block, and file-based methods.
- Analyze and tune Red Hat Ceph Storage performance.
- Integrate Red Hat OpenStack Platform image, object, block, and file storage with a Red Hat Ceph Storage cluster.
- Integrate OpenShift Container Platform with a Red Hat Ceph Storage cluster.

### Prerequisites:

- Red Hat Certified Engineer (RHCE) certification, Red Hat Certified Specialist in Ansible Automation certification, or equivalent experience.
- Some experience with storage administration is recommended but not required.

### Follow-on-Courses:

- EX260 - Red Hat Certified Specialist in Ceph Cloud Storage exam
- CL310 - Red Hat OpenStack Administration III: Networking & Foundations of NFV

## Content:

| Introducing Red Hat Ceph Storage Architecture                                                                                           | Creating and Customizing Storage Maps                                                                                                          | Managing a Red Hat Ceph Storage Cluster                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Describe Red Hat Ceph Storage architecture, including data organization, distribution and client access methods.                        | Manage and adjust the CRUSH and OSD maps to optimize data placement to meet the performance and redundancy requirements of cloud applications. | Manage an operational Ceph cluster using tools to check status, monitor services, and properly start and stop all or part of the cluster. Perform cluster maintenance by replacing or repairing cluster components, including MONs, OSDs, and PGs. |
| Deploying Red Hat Ceph Storage                                                                                                          | Providing Block Storage Using RADOS Block Devices                                                                                              | Tuning and Troubleshooting Red Hat Ceph Storage                                                                                                                                                                                                    |
| Deploy a new Red Hat Ceph Storage cluster and expand the cluster capacity.                                                              | Configure Red Hat Ceph Storage to provide block storage for clients by using RADOS block devices (RBDs).                                       | Identify the key Ceph cluster performance metrics and use them to tune and troubleshoot Ceph operations for optimal performance.                                                                                                                   |
| Configuring a Red Hat Ceph Storage Cluster                                                                                              | Providing Object Storage Using a RADOS Gateway                                                                                                 | Managing Cloud Platforms with Red Hat Ceph Storage                                                                                                                                                                                                 |
| Manage the Red Hat Ceph Storage configuration, including the primary settings, the use of monitors, and the cluster network layout.     | Configure Red Hat Ceph Storage to provide object storage for clients by using a RADOS Gateway (RGW).                                           | Manage Red Hat cloud infrastructure to use Red Hat Ceph Storage to provide image, block, volume, object, and shared file storage.                                                                                                                  |
| Creating Object Storage Cluster Components                                                                                              | Providing File Storage Using CephFS                                                                                                            | Comprehensive review                                                                                                                                                                                                                               |
| Create and manage the components that comprise the object storage cluster, including OSDs, pools, and the cluster authorization method. | Configure Red Hat Ceph Storage to provide file storage for clients using the Ceph File System (CephFS).                                        | Review tasks from Cloud Storage with Red Hat Ceph Storage.                                                                                                                                                                                         |

## Additional Information:

**Technology considerations** This course does not have any special technical requirements. This course is not intended for BYOD. Internet access is recommended.

## Further Information:

For More information, or to book your course, please call us on Head Office Tel.: +974 40316639

[training@globalknowledge.qa](mailto:training@globalknowledge.qa)

[www.globalknowledge.com/en-qa/](http://www.globalknowledge.com/en-qa/)

Global Knowledge, Qatar Financial Center, Burj Doha, Level 21, P.O.Box 27110, West Bay, Doha, Qatar