5 Days

CEPH125- Red Hat Ceph Storage Architecture and Administration

Red Hat Ceph Storage Architecture and Administration (CEPH125) is structured around 3 segments. The first segment is an in-depth view of the Red Hat Ceph Storage architecture and provides instructions for deploying Red Hat Ceph Storage, including the Ceph Storage Cluster, the Ceph Object Gateway, and the Ceph Block Device.

The second segment focuses on day-to-day operations of a Ceph Storage cluster together with some common troubleshooting and tuning techniques that storage administrators can use to provide 24x7 availability of the storage infrastructure. The third segment covers the integration of the Ceph Storage Cluster with Glance and Cinder in Red Hat Enterprise Linux® OpenStack Platform. This segment also covers configuring Red Hat Ceph Storage as a replacement for Swift and integrating it with Keystone.

Course Details

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Course Outline

Introduction to course and Ceph Introduce the course, Ceph Storage, and related Ceph systems.
Overview of Ceph components

Provide an overview of the requirements to create and access object storage data in Ceph Object Store.

Overview of CRUSH map Understand CRUSH data placement algorithm and how it is used to determine data placement. Ceph Block storage Describe the method to create and access block storage data with the Ceph Block device (RBD). Ceph Filesystem Describe the method to create and access file storage data with the Ceph distributed file system. Ceph Storage cluster Create a Ceph object cluster. Ceph file Configure a Ceph file in Global, MON, MDS, and OSD server sections. Ceph clients Work with Ceph object clusters, Ceph Block Devices, Ceph Object Gateway daemons, and Ceph Filesystem. Ceph pools Understand Ceph pool concepts and configuration. CRUSH map configuration Configure and manage CRUSH map. MON servers Explain and create MON servers. OSD servers Explain and create Ceph OSD servers and OSD Maps. MDS servers Overview, configure, and map MDS servers. Alternative deployment Overview alternative deployment methods. Ceph operations & maintenance Overview and troubleshoot daily maintenance with Ceph. Performance tuning Tune the Linux server. Ceph daemon optimization Overview and optimize Ceph daemons. Architectural considerations Discuss architectural considerations for Ceph Performance Optimization. Ceph Client tuning & troubleshooting Tune and troubleshoot Ceph Client. Introduction to OpenStack & Ceph Introduce and explain integration of Ceph and OpenStack. Integrate Ceph with Glance Integrate object storage for image with Glance. Integrate Ceph with Cinder Integrate block storage for VMs with Cinder. Ceph and Ceph Object Gateway daemons Overview process to replace Swift with Ceph and Ceph Object Gateway daemons.

Who Should Attend

This course is intended for storage administrators, cloud operators, and cloud developers who want to learn how to deploy and manage Red Hat Ceph Storage within or outside the Red Hat Enterprise Linux OpenStack Platform environment.

Pre Requisite

Knowledge in Linux server administration and Linux command line Fundamental storage knowledge Red Hat Certified System Administrator (RHCSA) certification or the equivalent experience with Linux

Exams

Red Hat Ceph Storage Architecture and Administration []

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