CEPH125 - Red Hat Ceph Storage Architecture and Administration

- Prepare for Red Hat Ceph Storage
  - Identify challenges faced by traditional storage and explain how Ceph addresses them.
- Deploy Red Hat Ceph Storage
  - Deploy and expand the storage capacity of a new Red Hat Ceph Storage cluster.
- Configure Red Hat Ceph Storage
  - Manage how Ceph stores data with pools, configure Red Hat Ceph Storage using its configuration file, and configure users for Ceph clients that may access the Ceph storage cluster.
- Provide block storage with RBD
  - Configure Ceph to provide block storage for clients by using RADOS block devices (RBDs).
- Provide object storage with RADOSGW
  - Configure Ceph to provide object storage for clients by using a RADOS gateway (RADOSGW or RGW).
- Provide file storage with CephFS
  - Configure Ceph to provide file storage for clients using the Ceph Filesystem (CephFS).
- Configure the CRUSH map
  - Adjust the CRUSH map—which controls how data is stored, replicated, and distributed across OSDs in the Ceph cluster—in order to optimize resiliency and performance.
- Manage and update the cluster maps
  - Explain how the monitor and OSD maps are managed in order to maintain cluster operation, quorum, and consistency.
- Manage a Red Hat Ceph Storage cluster
  - Check Ceph cluster status, troubleshoot Ceph daemon problems, and upgrade Ceph software.
- Tune and troubleshoot Red Hat Ceph Storage
  - Identify the key performance metrics for a Ceph cluster and use them to help tune and troubleshoot the operating system and Ceph software for optimal performance.
- Integrate Red Hat Ceph Storage with OpenStack
  - Configure an OpenStack cloud to use Ceph to provide image, block, object, and file storage.