

- Configure the RADOS Gateway to provide access to object storage compatible with the Swift API, and manage objects stored using that API.

Chapter 10, Providing File Storage with CephFS

Configure Red Hat Ceph Storage to provide file storage for clients using the Ceph File System (CephFS).

- Provide file storage on the Ceph cluster by deploying the Ceph File System (CephFS).
- Configure CephFS, including snapshots, replication, memory management, and client access.

Chapter 11, Managing a Red Hat Ceph Storage Cluster

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.

- Administer and monitor a Red Hat Ceph Storage cluster, including starting and stopping specific services or the full cluster, and querying cluster health and utilization.
- Perform common cluster maintenance tasks, such as adding or removing MONs and OSDs, and recovering from various component failures.

Chapter 12, Tuning and Troubleshooting Red Hat Ceph Storage

Identify the key Ceph cluster performance metrics, and use them to tune and troubleshoot Ceph operations for optimal performance.

- Choose Red Hat Ceph Storage architecture scenarios and operate Red Hat Ceph Storage-specific performance analysis tools to optimize cluster deployments.
- Protect OSD and cluster hardware resources from over-utilization by controlling scrubbing, deep scrubbing, backfill, and recovery processes to balance CPU, RAM, and I/O requirements.
- Identify key tuning parameters and troubleshoot performance for Ceph clients, including RADOS Gateway, RADOS Block Devices, and CephFS.

Chapter 13, Managing Cloud Platforms with Red Hat Ceph Storage

Manage Red Hat cloud infrastructure to use Red Hat Ceph Storage to provide image, block, volume, object, and shared file storage.

- Describe Red Hat OpenStack Platform storage requirements, and compare the architecture choices for using Red Hat Ceph Storage as an RHOSP storage back end.
- Describe how OpenStack implements Ceph storage for each storage-related OpenStack component.
- Describe Red Hat OpenShift Container Platform storage requirements, and compare the architecture choices for using Red Hat Ceph Storage as an RHOCP storage back end.
- Describe how OpenShift implements Ceph storage for each storage-related OpenShift feature.