Configuring RBD Mirrors

Objectives

After completing this section, you should be able to configure an RBD mirror to replicate an RBD block device between two Ceph clusters for disaster recovery purposes.

RBD Mirroring

Red Hat Ceph Storage supports *RBD mirroring* between two storage clusters. This allows you to automatically replicate RBD images from one Red Hat Ceph Storage cluster to another remote cluster. This mechanism mirrors the source (primary) RBD image and the target (secondary) RBD image over the network using an asynchronous mechanism. If the cluster containing the primary RBD image becomes unavailable, then you can fail over to the secondary RBD image from the remote cluster and restart the applications that use it.

When failing over from the source RBD image to the mirror RBD image, you must *demote* the source RBD image and *promote* the target RBD image. A demoted image becomes locked and unavailable. A promoted image becomes available and accessible in read/write mode.

The RBD mirroring features requires the *rbd-mirror* daemon. The *rbd-mirror* daemon pulls the image updates from the remote peer cluster and applies them to the local cluster image.

Supported Mirroring Configurations

RBD mirroring supports two configurations:

One-way mirroring or active-passive
: In one-way mode, the RBD images of one cluster are available in read/write mode and the remote cluster contains mirrors. The mirroring agent runs on the remote cluster. This mode enables the configuration of multiple secondary clusters.

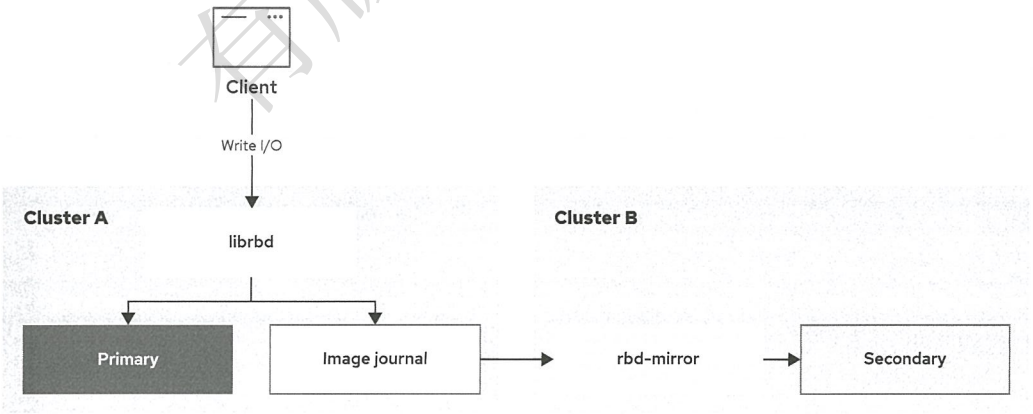

Figure 7.1: One-way mirroring