feature enables the quick determination of updated data blocks without the need to scan the full RBD image. The complete delta between two snapshots must be synced prior to use during a failover scenario. Any partially applied set of deltas will be rolled back at the moment of failover.

Managing Replication

Image resynchronization

In case of an inconsistent state between the two peer clusters, the `rbd-mirror` daemon does not attempt to mirror the image that is causing the inconsistency, use `rbd mirror image resync` to resynchronize an image.

```
[ceph: root@node /]# rbd mirror image resync mypool/myimage
```

Enabling and disabling image mirroring

Use `rbd mirror image enable` or `rbd mirror image disable` to enable or disable mirroring on the whole pool in image mode on both peer storage clusters.

```
[ceph: root@node /]# rbd mirror image enable mypool/myimage
```

Using snapshot-based mirroring

To use the *snapshot-based mirroring* convert journal-based mirroring to snapshot- based mirroring by disabling mirroring and enabling snapshot.

```
[ceph: root@node /]# rbd mirror image disable mypool/myimage
Mirroring disabled


[ceph: root@node /]# rbd mirror image enable mypool/myimage snapshot
Mirroring enabled
```

Configuring RBD Mirroring

As a storage administrator, you can improve redundancy by mirroring data images between Red Hat Ceph Storage clusters. Ceph block device mirroring provides protection against data loss, such as a site failure.

To achieve RBD mirroring, and enable the `rbd-mirror` daemon to discover its peer cluster, you must have a registered peer and a created user account. Red Hat Ceph Storage 5 automates this process by using the `rbd mirror pool peer bootstrap create` command.

Important

Each instance of the `rbd-mirror` daemon must connect to both the local and remote Ceph clusters simultaneously. Also, the network must have sufficient bandwidth between the two data centers to handle the mirroring workload.

Configuring RBD Mirroring Step-by-Step

The `rbd-mirror` daemon does not require the source and destination clusters to have unique internal names; both can and should call themselves *ceph*. The `rbd mirror pool peer bootstrap` command utilizes the `--site-name` option to describe the clusters used by the `rbd-mirror` daemon.