

# Importing and Exporting RBD Images

## Objectives

After completing this section, you should be able to export an RBD image from the cluster to an external file and import it into another cluster.

## Importing and Exporting RBD Images

The RBD export and import mechanism allows you to maintain operational copies of RBD images that are fully functional and accessible, either within the same cluster or by using a separate cluster. You can use these copies for a variety of use cases, including:

- Testing new versions using realistic volumes of data
- Running quality assurance processes using realistic volumes of data
- Implementing business continuity scenarios
- Decoupling backup processes from the production block devices

The RADOS block device feature provides the ability to export and import entire RBD images or only RBD image changes between two points in time.

## Exporting RBD Images

Red Hat Ceph Storage provides the `rbd export` command to export an RBD image to a file. This command exports an RBD image or an RBD image snapshot to the specified destination file. The `rbd export` command has the following syntax:

```
rbd export [--export-format {1|2}] (image-spec | snap-spec) [dest-path]
```

The `--export-format` option specifies the format of the exported data, allowing you to convert earlier RBD format 1 images to newer, format 2 images. The following example exports an RBD image called `test` to the `/tmp/test.dat` file.

```
[ceph: root@node /]# rbd export rbd/test /tmp/test.dat
```

## Importing RBD Images

Red Hat Ceph Storage provides the `rbd import` command to import an RBD image from a file. The command creates a new image and imports the data from the specified source path. The `rbd import` command has the following syntax:

```
rbd import [--export-format {1|2}] [--image-format format-id] [--object-size size-in-B/K/M] [--stripe-unit size-in-B/K/M --stripe-count num] [--image-feature feature-name]... [--image-shared] src-path [image-spec]
```

The `--export-format` option specifies the data format of the data to be imported. When importing format 2 exported data, use the `--stripe-unit`, `--stripe-count`, `--object-size`, and `--image-feature` options to create the new RBD format 2 image.