Red Hat Hyperconverged Infrastructure for Virtualization 1.5

Managing Red Hat Gluster Storage using RHV Administration Portal

Perform common Red Hat Gluster Storage management tasks in the Administration Portal

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Perform common Red Hat Gluster Storage management tasks in the Administration Portal

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Abstract

After Red Hat Hyperconverged Infrastructure for Virtualization has been deployed, you can perform many operational and management tasks for Red Hat Gluster Storage using the Red Hat Virtualization Administration Portal. Read this book to understand how to manage storage using the Administration Portal. This document explains how to perform maintenance tasks specific to Red Hat Hyperconverged Infrastructure for Virtualization.

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PREFACE

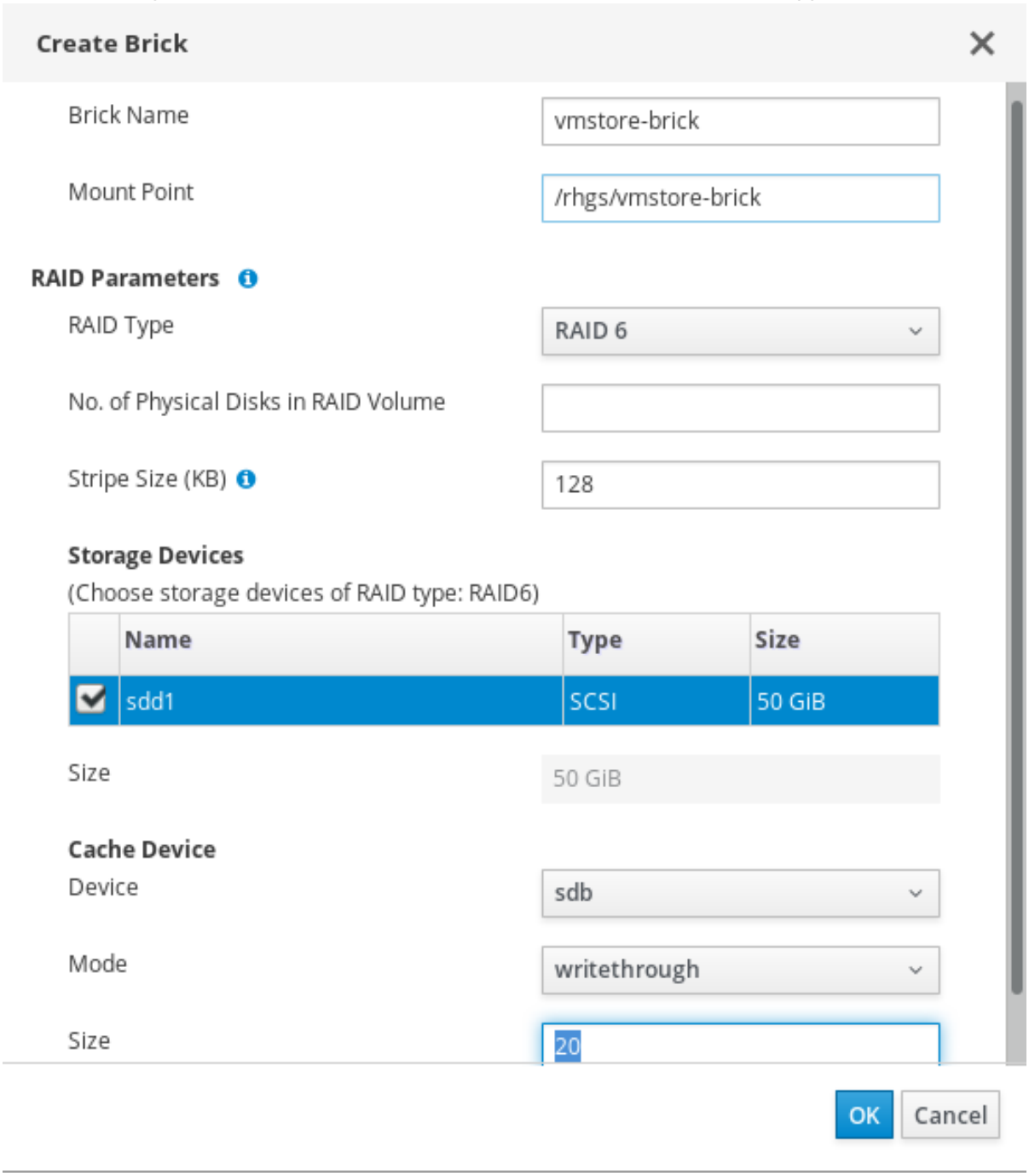
This document shows you how to manage Red Hat Gluster Storage using the Administration Portal provided by Red Hat Virtualization Manager.

CHAPTER 1. MANAGING BRICKS

1.1. CREATING A BRICK USING THE ADMINISTRATION PORTAL

This process creates a new thinly provisioned logical volume on a specified storage device, for use as a brick in a Gluster volume.

1. Log in to the Administration Portal.
2. Click **Compute** → **Hosts** and select the host for the brick.
3. Click **Storage Devices**.
   If no storage devices are visible, try synchronizing the volume: Section 2.9, “Synchronizing volume state using the Administration Portal”.
4. Select a storage device and click **Create Brick**. The *Create Brick* window appears.



a. Specify the **Brick Name**.

b. Specify the **Mount Point** for the brick.

c. (Optional) To create a RAID array, specify the following:

- **No. of physical disks in the RAID array**
- **RAID Type**

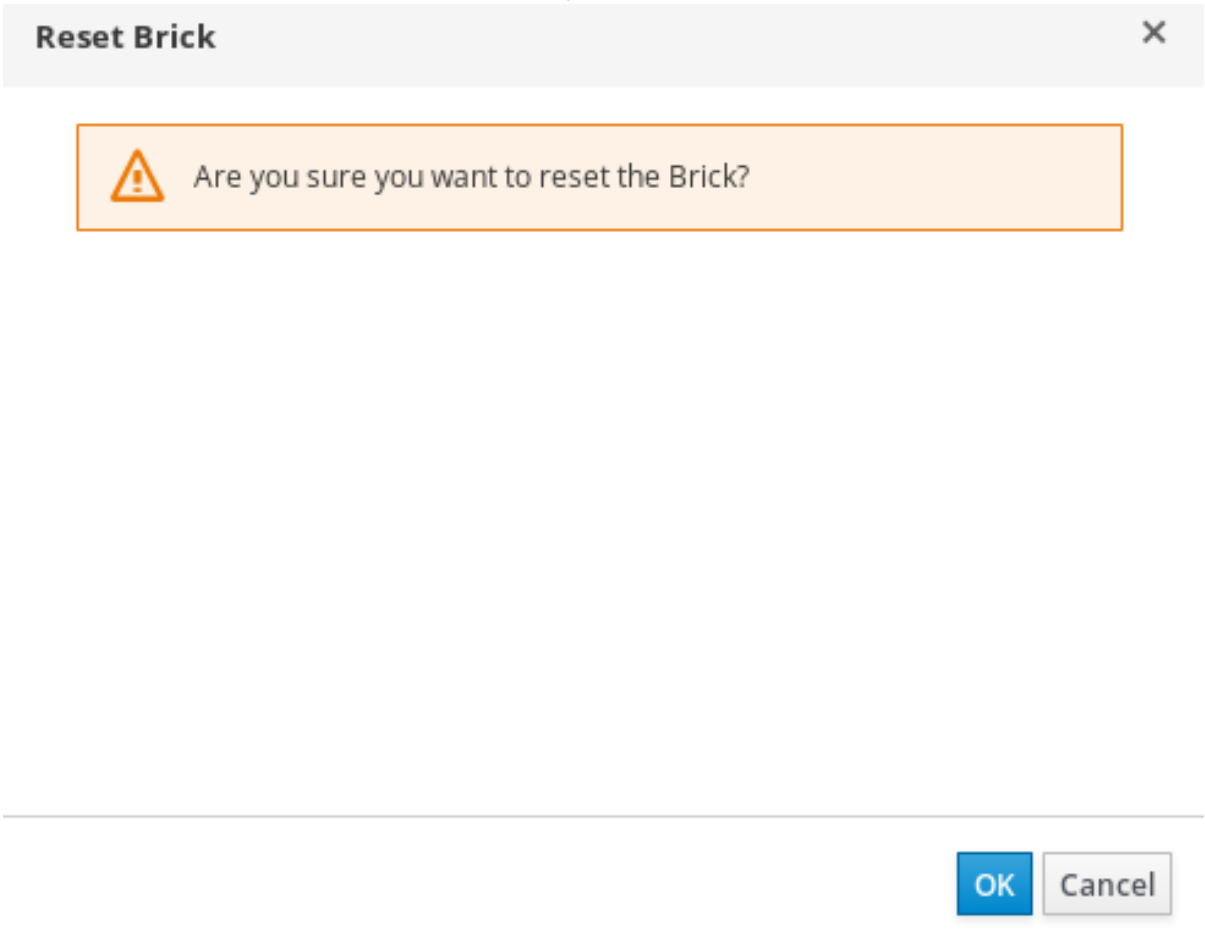
d. (Optional) To assign a cache device for this brick, specify a **Device** under *Cache Device*. This is recommended when your main storage device is not a solid state disk.

e. Click **OK**.

1.2. RESETTING A BRICK USING THE ADMINISTRATION PORTAL

Resetting a brick lets you reconfigure a brick as though you are adding it to the cluster for the first time, using the same UUID, hostname, and path. See the Red Hat Gluster Storage Administration Guide for more information.

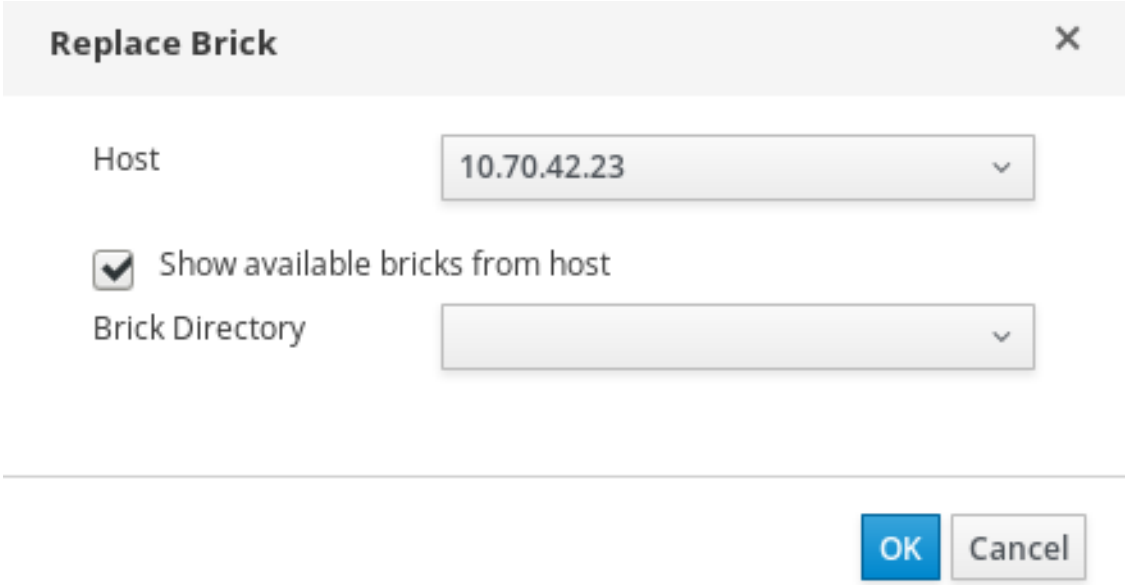
1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click the name of the volume that runs on the brick you want to reset.
4. Click **Bricks**.
5. Click **Reset Brick**. The *Reset Brick* window opens.



6. Click **OK** to confirm the operation.

1.3. REPLACING A BRICK USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click the name of the volume that runs on the brick you want to reset.
4. Click **Bricks**.
5. Click **Replace Brick**. The *Replace Brick* window opens.



   a. Select the **Host** of the replacement brick.
   b. Select the **Brick Directory** of the replacement brick.
   c. Click **OK**.

1.4. DELETING A BRICK USING THE ADMINISTRATION PORTAL

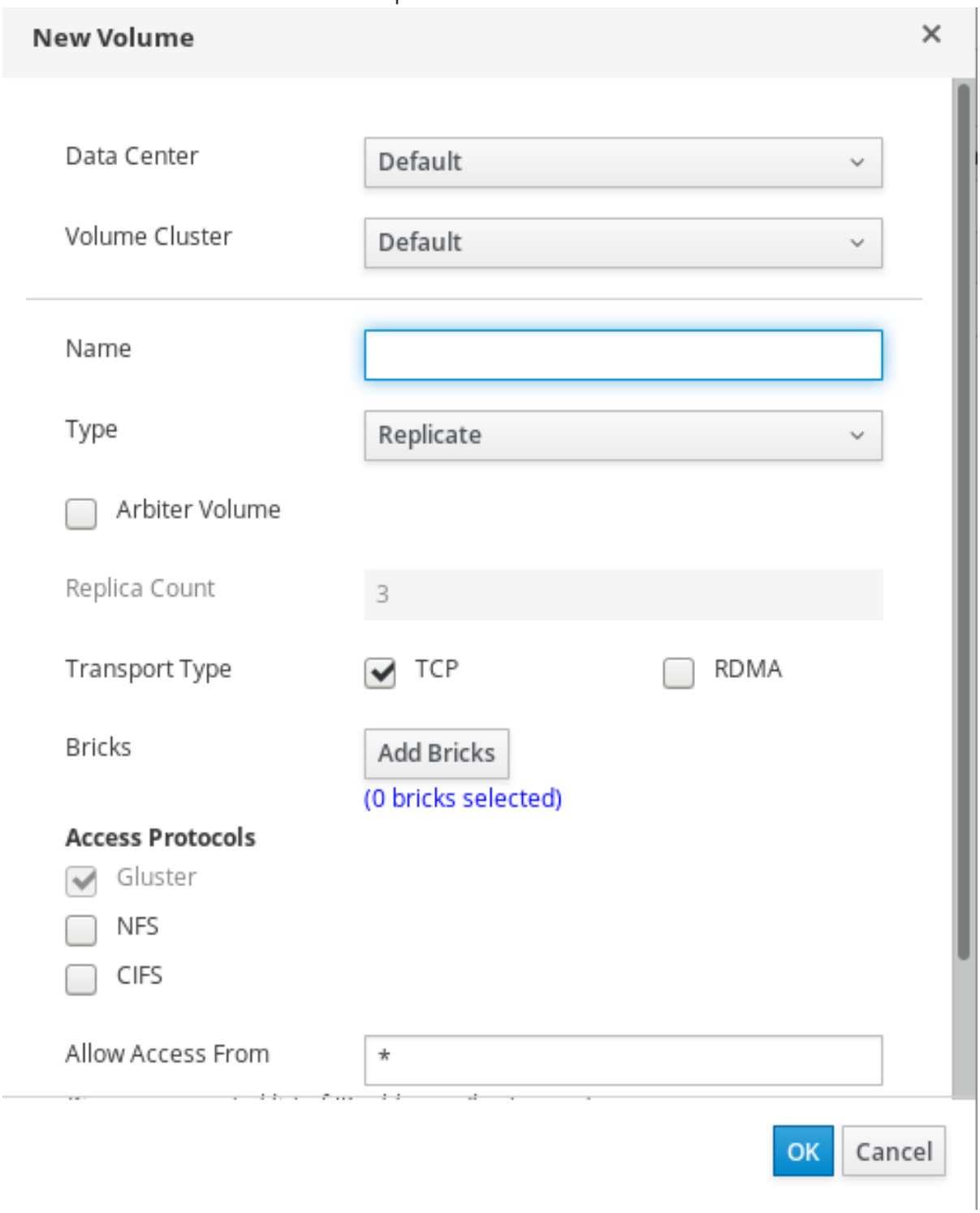
1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Select the volume you want to delete.
4. Click **Stop** and confirm that the volume should be stopped.
5. Click **Bricks**.
6. Select the brick to remove.
7. Click **Remove** and confirm that the brick should be removed.

CHAPTER 2. MANAGING VOLUMES

A volume is a logical collection of bricks where each brick is an export directory on a host in the trusted storage pool. Most Red Hat Gluster Storage management operations affect the volume.

2.1. CREATING A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click **New**. The *New Volume* window opens.



   a. Select the **Volume Cluster** to use.

b. Specify the **Name** of the new volume.

c. Specify the **Type** of the new volume.

d. (Optional) For replicated and distributed replicated volumes, check the **Arbiter** checkbox to configure one or more arbiter bricks for the volume.

e. Click **Add Bricks** and specify the bricks you want to use in the new volume.
For a replicate volume you must select at least 3 bricks.

To add a brick, perform the following steps.

i. Select the **Host** of the brick to use.

ii. Select the **Brick Directory** of the brick to use.

iii. Click **Add**.
The brick is listed in the *Add Bricks* window.

f. Click **OK** when all bricks have been added. The *Add Bricks* window closes, and the number of bricks selected is displayed in the *New Volume* window.

4. Click **OK**.

2.2. STARTING A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Select the volume that you want to start.
4. Click **Start**.

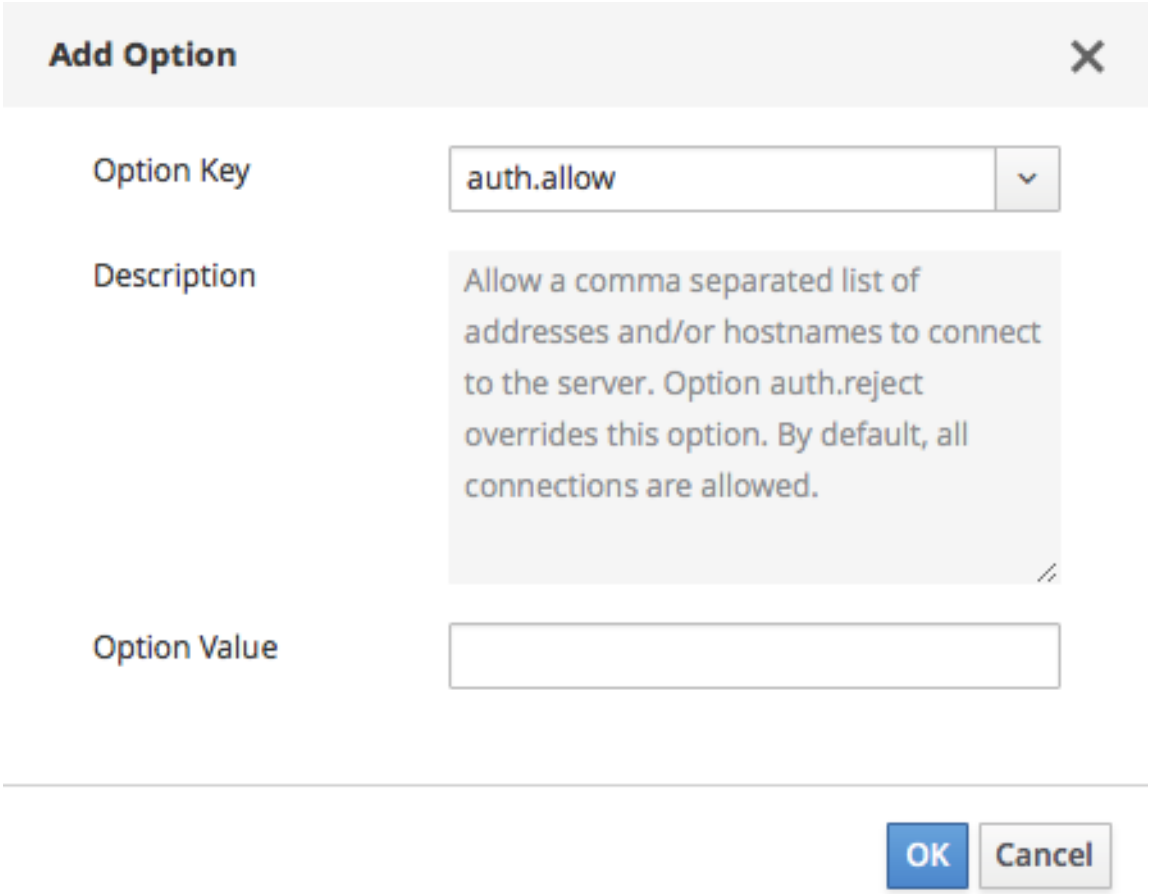
2.3. STOPPING A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Select the volume that you want to stop.
4. Click **Stop**.
5. Click **OK**.

2.4. CONFIGURING OPTIONS ON A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click the name of the volume to configure.

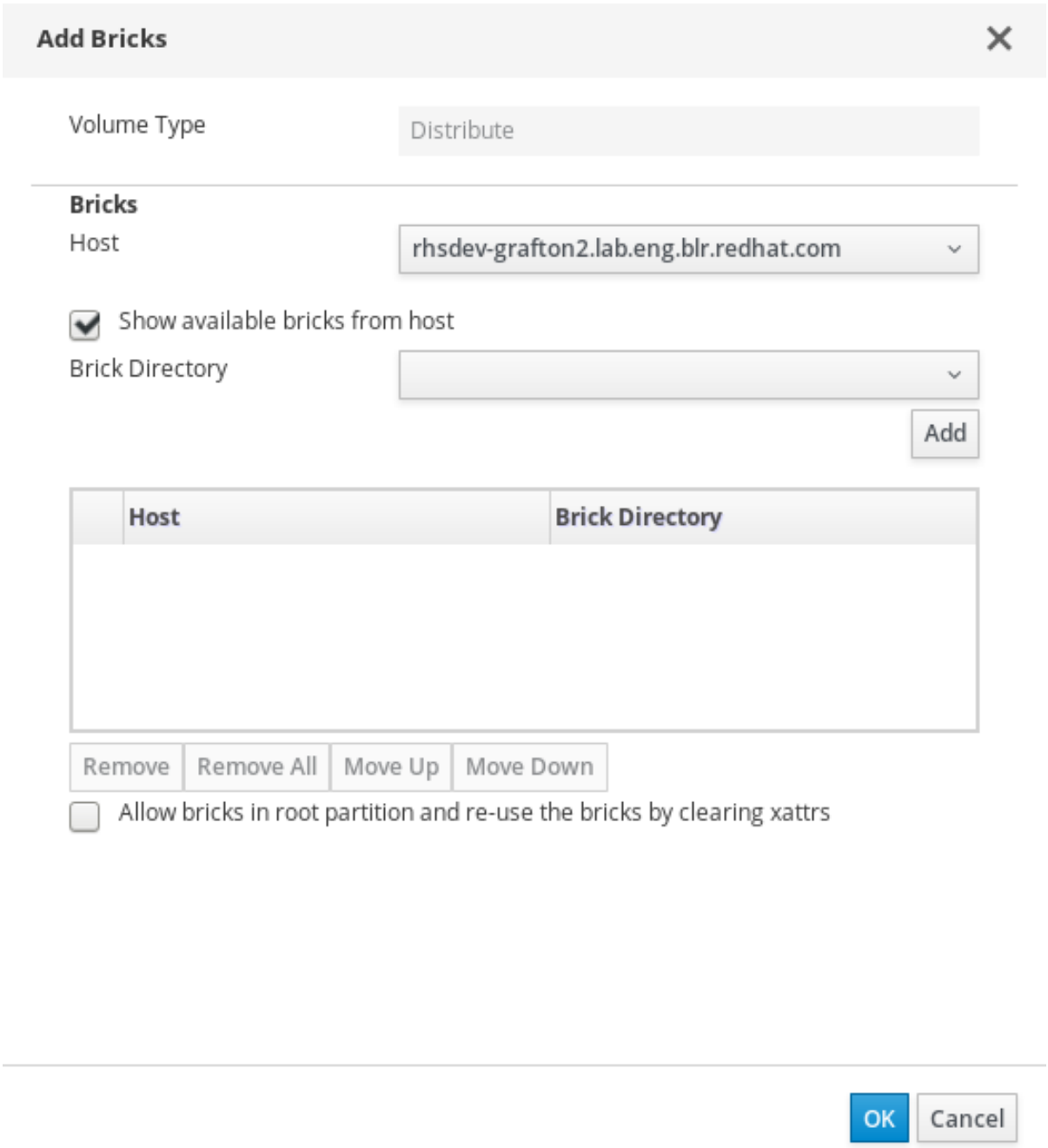
4. Click **Volume Options**.
5. Click **Add**. The *Add Option* window opens.



   a. Select the **Option Key** to specify.
   b. Specify the **Option Value** to set.
   c. Click **OK**. The *Add Option* window closes and the *Volume Options* view updates with the new configuration setting.

2.5. EXPANDING A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click the name of the volume you want to expand.
4. Click **Bricks**.
5. Click **Add**. A warning about expanding volumes on hyperconverged hosts appears.
6. Read the warning and click **Yes** if you want to proceed. The *Add Bricks* window opens.



Follow the following steps for each brick to add to the volume.

a. Select the **Host** of the brick to use.

b. Select the **Brick Directory** of the brick to use.

c. Click **Add**.
The brick is listed in the *Add Bricks* window.

7. Click **OK** when all bricks have been added. The *Add Bricks* window closes, and the number of bricks selected is displayed in the *New Volume* window.

8. Click **OK** to finish adding bricks to the volume.

9. You may also need to rebalance the volume.

2.6. SHRINKING A VOLUME USING THE ADMINISTRATION PORTAL

You can expand a Gluster volume by adding new bricks to the volume in multiples of the replica count of the volume.

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Click the name of the volume you want to shrink.
4. Click **Stop**.
5. Click **OK** and wait for the volume to stop.
6. Click **Bricks** and select the brick to remove.
7. Click **Remove**. The *Remove Bricks* window opens.
8. Confirm the removal of the selected brick, and wait for the brick to be removed.
9. Check the **Activities** column and verify all data has been migrated off the brick.
10. Click **Commit** to finish removing the brick.
11. You may also need to rebalance the volume.

2.7. REBALANCING A VOLUME USING THE ADMINISTRATION PORTAL

After expanding or shrinking a volume (without migrating data), you need to rebalance the data among the hosts. In a non-replicated volume, all bricks must be online to perform the rebalance operation. In a replicated volume, at least one of the bricks in the replica must be online.

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Select the volume to rebalance.
4. Click **Rebalance**. The rebalance process starts, and the rebalance icon is displayed in the *Activities* column related to the volume.

2.8. DELETING A VOLUME USING THE ADMINISTRATION PORTAL

1. Log in to the Administration Portal.
2. Click **Storage** → **Volumes**.
3. Select the volume you want to delete.
4. Click **Stop** and confirm that the volume should be stopped.
5. Click **Remove** and confirm that the volume should be removed.

2.9. SYNCHRONIZING VOLUME STATE USING THE ADMINISTRATION PORTAL

1. Log in to Red Hat Virtualization Manager.
2. Click **Compute** → **Volumes**.
3. Select the volume that you want to synchronize.
4. Click the **Geo-replication** sub-tab.
5. Click **Sync**.