



# **Effect of moving or copying a LUN on Snapshot copies**

**ONTAP 9**

NetApp  
April 21, 2023

# Table of Contents

- Effect of moving or copying a LUN on Snapshot copies ..... 1
  - Effect of moving or copying a LUN on Snapshot copies overview..... 1
  - Restore a single LUN from a Snapshot copy ..... 1
  - Restore all LUNs in a volume from a Snapshot copy..... 2
  - Delete one or more existing Snapshot copies from a volume ..... 3

# Effect of moving or copying a LUN on Snapshot copies

## Effect of moving or copying a LUN on Snapshot copies overview

Snapshot copies are created at the volume level. If you copy or move a LUN to a different volume, the Snapshot copy policy of the destination volume is applied to the copied or moved volume. If Snapshot copies are not established for the destination volume, Snapshot copies will not be created of the moved or copied LUN.

## Restore a single LUN from a Snapshot copy

You can restore a single LUN from a Snapshot copy without restoring the entire volume that contains the single LUN. You can restore the LUN in place or to a new path in the volume. The operation restores only the single LUN without impacting other files or LUNs in the volume. You can also restore files with streams.

### What you'll need

- You must have enough space on your volume to complete the restore operation:
  - If you are restoring a space-reserved LUN where the fractional reserve is 0%, you require one times the size of the restored LUN.
  - If you are restoring a space-reserved LUN where the fractional reserve is 100%, you require two times the size of the restored LUN.
  - If you are restoring a non-space-reserved LUN, you only require the actual space used for the restored LUN.
- A Snapshot copy of the destination LUN must have been created.

If the restore operation fails, the destination LUN might be truncated. In such cases, you can use the Snapshot copy to prevent data loss.

- A Snapshot copy of the source LUN must have been created.

In rare cases, the LUN restore can fail, leaving the source LUN unusable. If this occurs, you can use the Snapshot copy to return the LUN to the state just before the restore attempt.

- The destination LUN and source LUN must have the same OS type.

If your destination LUN has a different OS type from your source LUN, your host can lose data access to the destination LUN after the restore operation.

### Steps

1. From the host, stop all host access to the LUN.
2. Unmount the LUN on its host so that the host cannot access the LUN.
3. Unmap the LUN:

```
lun mapping delete -vserver vserver_name -volume volume_name -lun lun_name  
-igroup igroup_name
```

4. Determine the Snapshot copy you want to restore your LUN to:

```
volume snapshot show -vserver vserver_name -volume volume_name
```

5. Create a Snapshot copy of the LUN prior to restoring the LUN:

```
volume snapshot create -vserver vserver_name -volume volume_name -snapshot  
snapshot_name
```

6. Restore the specified LUN in a volume:

```
volume snapshot restore-file -vserver vserver_name -volume volume_name  
-snapshot snapshot_name -path lun_path
```

7. Follow the steps on the screen.

8. If necessary, bring the LUN online:

```
lun modify -vserver vserver_name -path lun_path -state online
```

9. If necessary, remap the LUN:

```
lun mapping create -vserver vserver_name -volume volume_name -lun lun_name  
-igroup igroup_name
```

10. From the host, remount the LUN.

11. From the host, restart access to the LUN.

## Restore all LUNs in a volume from a Snapshot copy

You can use `volume snapshot restore` command to restore all the LUNs in a specified volume from a Snapshot copy.

### Steps

1. From the host, stop all host access to the LUNs.

Using SnapRestore without stopping all host access to LUNs in the volume can cause data corruption and system errors.

2. Unmount the LUNs on that host so that the host cannot access the LUNs.

3. Unmap your LUNs:

```
lun mapping delete -vserver vserver_name -volume volume_name -lun lun_name  
-igroup igroup_name
```

4. Determine the Snapshot copy to which you want to restore your volume:

```
volume snapshot show -vserver vserver_name -volume volume_name
```

5. Change your privilege setting to advanced:

```
set -privilege advanced
```

6. Restore your data:

```
volume snapshot restore -vserver vserver_name -volume volume_name -snapshot  
snapshot_name
```

7. Follow the instructions on the screen.

8. Remap your LUNs:

```
lun mapping create -vserver vserver_name -volume volume_name -lun lun_name  
-igroup igroup_name
```

9. Verify that your LUNs are online:

```
lun show -vserver vserver_name -path lun_path -fields state
```

10. If your LUNs are not online, bring them online:

```
lun modify -vserver vserver_name -path lun_path -state online
```

11. Change your privilege setting to admin:

```
set -privilege admin
```

12. From the host, remount your LUNs.

13. From the host, restart access to your LUNs.

## Delete one or more existing Snapshot copies from a volume

You can manually delete one or more existing Snapshot copies from the volume. You might want to do this if you need more space on your volume.

### Steps

1. Use the `volume snapshot show` command to verify which Snapshot copies you want to delete.

```
cluster::> volume snapshot show -vserver vs3 -volume vol3
```

Vserver	Volume	Snapshot	Size	---Blocks---	
				Total%	Used%
-----	-----	-----	-----	-----	-----
vs3	vol3				
		snap1.2013-05-01_0015	100KB	0%	38%
		snap1.2013-05-08_0015	76KB	0%	32%
		snap2.2013-05-09_0010	76KB	0%	32%
		snap2.2013-05-10_0010	76KB	0%	32%
		snap3.2013-05-10_1005	72KB	0%	31%
		snap3.2013-05-10_1105	72KB	0%	31%
		snap3.2013-05-10_1205	72KB	0%	31%
		snap3.2013-05-10_1305	72KB	0%	31%
		snap3.2013-05-10_1405	72KB	0%	31%
		snap3.2013-05-10_1505	72KB	0%	31%

10 entries were displayed.

2. Use the `volume snapshot delete` command to delete Snapshot copies.

If you want to...	Enter this command...
Delete a single Snapshot copy	<code>volume snapshot delete -vserver <i>svm_name</i> -volume <i>vol_name</i> -snapshot <i>snapshot_name</i></code>
Delete multiple Snapshot copies	<code>volume snapshot delete -vserver <i>svm_name</i> -volume <i>vol_name</i> -snapshot <i>snapshot_name1</i>[, <i>snapshot_name2</i>,...]</code>
Delete all Snapshot copies	<code>volume snapshot delete -vserver <i>svm_name</i> -volume <i>vol_name</i> -snapshot *</code>

The following example deletes all Snapshot copies on the volume vol3.

```
cluster::> volume snapshot delete -vserver vs3 -volume vol3 *
```

10 entries were acted on.

## Copyright information

Copyright © 2023 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.