Effect of moving or copying a LUN on Snapshot copies

ONTAP 9

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Table of Contents

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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 volune is applied to the copied or moved volume. If Snapshot copies are not eestablished 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

                                                  ---Blocks---
Vserver  Volume  Snapshot                  Size   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	`volume snapshot delete -vserver` *svm_name* `-volume` *vol_name* `-snapshot` *snapshot_name*
Delete multiple Snapshot copies	`volume snapshot delete -vserver` *svm_name* `-volume` *vol_name* `-snapshot` *snapshot_name1*`[,`*snapshot_name2*`,…]`
Delete all Snapshot copies	`volume snapshot delete -vserver` *svm_name* `-volume` *vol_name* `-snapshot *`

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

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

10 entries were acted on.
```

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