



Transitioning a volume SnapMirror relationship in a staggered configuration

ONTAP 7-Mode Transition

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Table of Contents

- Transitioning a volume SnapMirror relationship in a staggered configuration 1
 - Transitioning a secondary volume 1
 - Transitioning a primary volume 8

Transitioning a volume SnapMirror relationship in a staggered configuration

You can transition a 7-Mode volume SnapMirror relationship and retain the data protection relationship by transitioning the secondary volume before the primary volume. In this method, you set up a staggered SnapMirror DR relationship between the 7-Mode primary volumes and clustered Data ONTAP secondary volumes.

- The primary and secondary clusters and SVMs must already be set up.
- For establishing an SVM peer relationship when transitioning a volume SnapMirror relationship, the following conditions must be met:
 - The secondary cluster should not have an SVM with the same name as that of the primary SVM.
 - The primary cluster should not have an SVM with the same name as that of the secondary SVM.
 - You must have reviewed the information about preparing for transition.

[Preparing for transition](#)

Related information

[Resuming a failed SnapMirror baseline transfer](#)

Transitioning a secondary volume

Transitioning a secondary volume involves creating a SnapMirror relationship, performing a baseline transfer, performing incremental updates, and setting up a SnapMirror relationship between the 7-Mode primary volume and the clustered Data ONTAP secondary volume.

The secondary cluster and storage virtual machine (SVM) must already be set up.

Steps

1. Copy data from the 7-Mode volume to the clustered Data ONTAP volume:
 - a. Use the `snapmirror create` command with the relationship type as TDP to create a SnapMirror relationship between the 7-Mode system and the SVM.

```
sec_cluster::> snapmirror create -source-path sec_system:dst_7_vol  
-destination-path dst_vserver:dst_c_vol -type TDP  
Operation succeeded: snapmirror create the relationship with  
destination dst_vserver:dst_c_vol.
```

- b. Use the `snapmirror initialize` command to start the baseline transfer.

```
sec_cluster::> snapmirror initialize -destination-path  
dst_vserver:dst_c_vol  
Operation is queued: snapmirror initialize of destination  
dst_vserver:dst_c_vol.
```

- c. Depending on whether you want to update the clustered Data ONTAP volume manually or by setting up a SnapMirror schedule, perform the appropriate action:

| If you want to... | Then... |
|---------------------------|--|
| Update transfers manually | <p data-bbox="883 159 1442 195">i. Use the <code>snapmirror update</code> command.</p> <div data-bbox="915 226 1487 409"> <pre data-bbox="941 262 1383 378">sec_cluster::> snapmirror update -destination-path dst_vserver:dst_c_vol</pre> </div> <p data-bbox="883 443 1430 512">ii. Use the <code>snapmirror show</code> command to monitor the data copy status.</p> |

| If you want to... | Then... |
|------------------------------------|---|
| Perform scheduled update transfers | <p data-bbox="883 159 1429 260">i. Use the <code>job schedule cron create</code> command to create a schedule for update transfers.</p> <div data-bbox="915 294 1487 474"> <pre data-bbox="941 327 1419 441">sec_cluster:> job schedule cron create -name 15_minute_sched -minute 15</pre> </div> <p data-bbox="883 508 1468 609">ii. Use the <code>snapmirror modify</code> command to apply the schedule to the SnapMirror relationship.</p> <div data-bbox="915 642 1487 861"> <pre data-bbox="941 676 1386 827">sec_cluster:> snapmirror modify -destination-path dst_vserver:dst_c_vol -schedule 15_minute_sched</pre> </div> <p data-bbox="883 894 1435 961">iii. Use the <code>snapmirror show</code> command to monitor the data copy status.</p> |

- If you have a schedule for incremental transfers, perform the following steps when you are ready to perform cutover:

- Use the `snapmirror quiesce` command to disable all future update transfers.

```
sec_cluster::> snapmirror quiesce -destination-path
dst_vserver:dst_vol
```

- Use the `snapmirror modify` command to delete the SnapMirror schedule.

```
sec_cluster::> snapmirror modify -destination-path
dst_vserver:dst_vol -schedule ""
```

- If you quiesced the SnapMirror transfers earlier, use the `snapmirror resume` command to enable SnapMirror transfers.

```
sec_cluster::> snapmirror resume -destination-path
dst_vserver:dst_vol
```

- Wait for any ongoing transfers between the 7-Mode volumes and the clustered Data ONTAP volumes to finish, and then disconnect client access from the 7-Mode volumes to start cutover.

- Use the `snapmirror update` command to perform a final data update to the clustered Data ONTAP volume.

```
sec_cluster::> snapmirror update -destination-path dst_vserver:dst_vol
Operation is queued: snapmirror update of destination
dst_vserver:dst_vol.
```

- Use the `snapmirror show` command to verify that the last transfer was successful.
- Use the `snapmirror break` command to break the SnapMirror relationship between the 7-Mode secondary volume and the clustered Data ONTAP secondary volume.

```
sec_cluster::> snapmirror break -destination-path dst_vserver:dst_vol
[Job 60] Job succeeded: SnapMirror Break Succeeded
```

- If your volumes have LUNs configured, at the advanced privilege level, use the `lun show` command to verify that the LUNs were transitioned.

You can also use the `lun show` command on the clustered Data ONTAP volume to view all of the LUNs that were successfully transitioned.

- Use the `snapmirror delete` command to delete the SnapMirror relationship between the 7-Mode secondary volume and the clustered Data ONTAP secondary volume.


```
sec_cluster::> snapmirror delete -destination-path dst_vserver:dst_vol
```

9. Use the `snapmirror release` command to remove the SnapMirror relationship information from the 7-Mode system.

```
system7mode> snapmirror release dataVol20 vs1:dst_vol
```

10. Establish a disaster recovery relationship between the 7-Mode primary volume and clustered Data ONTAP secondary volume:

- a. Use the `vserver peer transition create` command to create an SVM peer relationship between the 7-Mode primary volume and the clustered Data ONTAP secondary volume.

```
sec_cluster::> vserver peer transition create -local-vserver  
dst_vserver -src-filer-name src_system  
Transition peering created
```

- b. Use the `job schedule cron create` command to create a job schedule that matches the schedule configured for the 7-Mode SnapMirror relationship.

```
sec_cluster::> job schedule cron create -name 15_minute_sched -minute  
15
```

- c. Use the `snapmirror create` command to create a SnapMirror relationship between the 7-Mode primary volume and the clustered Data ONTAP secondary volume.

```
sec_cluster::> snapmirror create -source-path src_system:src_7_vol  
-destination-path dst_vserver:dst_c_vol -type TDP -schedule  
15_minute_sched  
Operation succeeded: snapmirror create the relationship with  
destination dst_vserver:dst_c_vol.
```

- d. Use the `snapmirror resync` command to resynchronize the clustered Data ONTAP secondary volume.

For successful resynchronization, a common 7-Mode Snapshot copy must exist between the 7-Mode primary volume and the clustered Data ONTAP secondary volume.

```
sec_cluster::> snapmirror resync -destination-path  
dst_vserver:dst_c_vol
```

- If the target cluster is running Data ONTAP 8.3.2 or later, you must create the required igroups and map the LUNs manually.

- If the target cluster is running Data ONTAP 8.3.1 or earlier, you must map the secondary LUNs manually after completing the storage cutover of the primary volumes.
- You must delete the SVM peer relationship between the secondary 7-Mode system and the secondary SVM when all of the required volumes in the 7-Mode system are transitioned to the SVM.
- You must delete the SnapMirror relationship between the 7-Mode primary and the 7-Mode secondary systems.

Related information

[Recovering from a failed LUN transition](#)

[Configuring a TCP window size for SnapMirror relationships](#)

Transitioning a primary volume

Transitioning a primary volume involves copying data from the 7-Mode primary volumes to the clustered Data ONTAP primary volumes, deleting the disaster recovery relationship between the 7-Mode primary and clustered Data ONTAP secondary volumes, and establishing a SnapMirror relationship between the clustered Data ONTAP primary and secondary volumes.

The primary cluster and SVM must already be set up.

Steps

1. Copy the data from the 7-Mode primary volume to the clustered Data ONTAP primary volume:
 - a. Use the `snapmirror create` command with the relationship type as TDP to create a SnapMirror relationship between the 7-Mode system and the SVM.

```
pri_cluster::> snapmirror create -source-path src_system:finance
-destination-path src_vserver:src_c_vol -type TDP
Operation succeeded: snapmirror create the relationship with
destination src_vserver:src_c_vol.
```

- b. Use the `snapmirror initialize` command to start the baseline transfer.

```
pri_cluster::> snapmirror initialize -destination-path
src_vserver:src_c_vol
Operation is queued: snapmirror initialize of destination
src_vserver:src_c_vol.
```

- c. Depending on whether you want to update the clustered Data ONTAP volume manually or by setting up a SnapMirror schedule, perform the appropriate action:

| If you want to... | Then... |
|---------------------------|--|
| Update transfers manually | <p data-bbox="883 155 1442 193">i. Use the <code>snapmirror update</code> command.</p> <div data-bbox="915 226 1487 407"><pre data-bbox="938 260 1383 373">pri_cluster::> snapmirror update -destination-path src_vserver:src_c_vol</pre></div> <p data-bbox="883 441 1432 508">ii. Use the <code>snapmirror show</code> command to monitor the data copy status.</p> |

| If you want to... | Then... |
|------------------------------------|---|
| Perform scheduled update transfers | <p data-bbox="883 159 1430 260">i. Use the <code>job schedule cron create</code> command to create a schedule for update transfers.</p> <div data-bbox="915 296 1487 474"> <pre data-bbox="938 327 1419 443">pri_cluster::> job schedule cron create -name 15_minute_sched -minute 15</pre> </div> <p data-bbox="883 510 1466 611">ii. Use the <code>snapmirror modify</code> command to apply the schedule to the SnapMirror relationship.</p> <div data-bbox="915 646 1487 863"> <pre data-bbox="938 678 1386 831">pri_cluster::> snapmirror modify -destination-path src_vserver:src_c_vol -schedule 15_minute_sched</pre> </div> <p data-bbox="883 898 1487 961">iii. Use the <code>snapmirror show</code> command to monitor the data copy status.</p> |

2. If you have a schedule for incremental transfers, perform the following steps when you are ready to perform cutover:

- a. Use the `snapmirror quiesce` command to disable all future update transfers.

```
pri_cluster::> snapmirror quiesce -destination-path
src_vserver:src_c_vol
```

- b. Use the `snapmirror modify` command to delete the SnapMirror schedule.

```
pri_cluster::> snapmirror modify -destination-path
src_vserver:src_c_vol -schedule ""
```

- c. If you quiesced the SnapMirror transfers earlier, use the `snapmirror resume` command to enable SnapMirror transfers.

```
pri_cluster::> snapmirror resume -destination-path
src_vserver:src_c_vol
```

3. Create an SVM peer relationship between the clustered Data ONTAP secondary and primary SVMs.

- a. Use the `cluster peer create` command to create a cluster peer relationship.

```
pri_cluster::> cluster peer create -peer-addr cluster2-d2,
10.98.234.246 -timeout 60
```

Notice: Choose a passphrase of 8 or more characters. To ensure the authenticity of the peering relationship, use a phrase or sequence of characters that would be hard to guess.

```
Enter the passphrase: *****
Confirm the passphrase: *****
```

- b. From the source cluster, use the `vserver peer create` command to create the SVM peer relationship between the clustered Data ONTAP primary and secondary volumes.

```
pri_cluster::> vserver peer create -vserver src_vserver -peer-vserver
src_c_vserver -applications snapmirror -peer-cluster sec_cluster
```

- c. From the destination cluster, use the `vserver peer accept` command to accept the SVM peer request and establish the SVM peer relationship.

```
Total
Transfer Bytes: 473163808768
Total Transfer Time
in Seconds: 43405
```

```
sec_cluster::> vsync peer accept -vsync dst_vsync -peer_vsync
src_vsync
```

4. From the destination cluster, use the `syncmirror quiesce` command to suspend any data transfers between the 7-Mode primary volume and the clustered Data ONTAP secondary volume if a schedule is set up for update transfers.

```
sec_cluster::> syncmirror quiesce -destination-path
dst_vsync:dst_c_vol
```

5. Monitor the data copy operation and initiate cutover:
 - a. Wait for any ongoing transfers from the 7-Mode primary volumes to the clustered Data ONTAP primary and clustered Data ONTAP secondary volumes to finish, and then disconnect client access from the 7-Mode primary volume to start cutover.
 - b. Use the `syncmirror update` command to perform a final data update to the clustered Data ONTAP primary volume from the 7-Mode primary volume.

```
pri_cluster::> syncmirror update -destination-path
src_vsync:src_c_vol
```

- c. Use the `syncmirror break` command to break the SnapMirror relationship between the 7-Mode primary volume and clustered Data ONTAP primary volume.

```
pri_cluster::> syncmirror break -destination-path
src_vsync:src_c_vol
[Job 1485] Job is queued: syncmirror break for destination
src_vsync:src_c_vol.
```

- d. If your volumes have LUNs configured, at the advanced privilege level, use the `lun transition 7-mode show` command to verify that the LUNs have been transitioned.

You can also use the `lun show` command on the clustered Data ONTAP volume to view all of the LUNs that were successfully transitioned.

- e. Use the `syncmirror delete` command to delete the relationship.

```
pri_cluster::> syncmirror delete -destination-path
src_vsync:src_c_vol
```

- f. Use the `syncmirror release` command to remove the SnapMirror relationship information from the 7-Mode system.

```
system7mode> snapmirror release dataVol20 vs1:dst_vol
```

6. From the destination cluster, break and delete the disaster recovery relationship between the 7-Mode primary volume and clustered Data ONTAP secondary volume.

- a. Use the `snapmirror break` command to break the disaster recovery relationship between the 7-Mode primary volume and clustered Data ONTAP secondary volume.

```
sec_cluster::> snapmirror break -destination-path  
dst_vserver:dst_c_vol  
[Job 1485] Job is queued: snapmirror break for destination  
dst_vserver:dst_c_vol.
```

- b. Use the `snapmirror delete` command to delete the relationship.

```
sec_cluster::> snapmirror delete -destination-path  
dst_vserver:dst_c_vol
```

- c. Use the `snapmirror release` command to remove the SnapMirror relationship information from the 7-Mode system.

```
system7mode> snapmirror release dataVol20 vs1:dst_vol
```

7. From the destination cluster, establish a SnapMirror relationship between the clustered Data ONTAP primary and secondary volumes:

- a. Use the `snapmirror create` command to create a SnapMirror relationship between the clustered Data ONTAP primary and secondary volumes.

```
sec_cluster::> snapmirror create -source-path src_vserver:src_c_vol  
-destination-path dst_vserver:dst_c_vol -type DP -schedule  
15_minute_sched
```

- b. Use the `snapmirror resync` command to resynchronize the SnapMirror relationship between the clustered Data ONTAP volumes.

For successful resynchronization, a common Snapshot copy must exist between the clustered Data ONTAP primary and secondary volumes.

```
sec_cluster::> snapmirror resync -destination-path  
dst_vserver:dst_c_vol
```

- c. Use the `snapmirror show` command to verify that the status of SnapMirror resynchronization shows

SnapMirrored.



You must ensure that the SnapMirror resynchronization is successful to make the clustered Data ONTAP secondary volume available for read-only access.

You must delete the SVM peer relationship between the 7-Mode system and the SVM when all the required volumes in the 7-Mode system are transitioned to the SVM.

Related information

[Recovering from a failed LUN transition](#)

[Configuring a TCP window size for SnapMirror relationships](#)

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