



Restore files from a SnapMirror destination volume

ONTAP 9

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Restore files from a SnapMirror destination volume

Restore a file, LUN, or NVMe namespace from an ONTAP SnapMirror destination

You can restore a single file, LUN, a set of files or LUNs from a snapshot, or an NVMe namespace from a SnapMirror destination volume. Beginning with ONTAP 9.7, you can also restore NVMe namespaces from a SnapMirror synchronous destination. You can restore files to the original source volume or to a different volume.

Before you begin

To restore a file or LUN from a SnapMirror synchronous destination (supported beginning with ONTAP 9.5), you must first delete and release the relationship.

About this task

The volume to which you are restoring files or LUNs (the destination volume) must be a read-write volume:

- SnapMirror performs an *incremental restore* if the source and destination volumes have a common snapshot (as is typically the case when you are restoring to the original source volume).
- Otherwise, SnapMirror performs a *baseline restore*, in which the specified snapshot and all the data blocks it references are transferred to the destination volume.

Steps

1. List the snapshots in the destination volume:

```
volume snapshot show -vserver <SVM> -volume volume
```

Learn more about `volume snapshot show` in the [ONTAP command reference](#).

The following example shows the snapshots on the `vserverB:secondary1` destination:

```
cluster_dst:> volume snapshot show -vserver vserverB -volume secondary1
```

Vserver	Volume	Snapshot	State	Size	Total% Used%
-----	-----	-----	-----	-----	-----
vserverB	secondary1	hourly.2013-01-25_0005	valid	224KB	0%
		daily.2013-01-25_0010	valid	92KB	0%
		hourly.2013-01-25_0105	valid	228KB	0%
		hourly.2013-01-25_0205	valid	236KB	0%
		hourly.2013-01-25_0305	valid	244KB	0%
		hourly.2013-01-25_0405	valid	244KB	0%
		hourly.2013-01-25_0505	valid	244KB	0%

7 entries were displayed.

2. Restore a single file or LUN or a set of files or LUNs from a snapshot in a SnapMirror destination volume:

```
snapmirror restore -source-path <SVM:volume>|<cluster://SVM/volume>, ...  
-destination-path <SVM:volume>|<cluster://SVM/volume>, ... -source-snapshot  
snapshot -file-list <source_file_path,@destination_file_path>
```



You must run this command from the destination SVM or the destination cluster.

The following command restores the files `file1` and `file2` from the snapshot `daily.2013-01-25_0010` in the original destination volume `secondary1`, to the same location in the active file system of the original source volume `primary1`:

```
cluster_dst:> snapmirror restore -source-path vserverB:secondary1  
-destination-path vserverA:primary1 -source-snapshot daily.2013-01-  
25_0010 -file-list /dir1/file1,/dir2/file2
```

```
[Job 3479] Job is queued: snapmirror restore for the relationship with  
destination vserverA:primary1
```

The following command restores the files `file1` and `file2` from the snapshot `daily.2013-01-25_0010` in the original destination volume `secondary1`, to a different location in the active file system of the original source volume `primary1`.

The destination file path begins with the @ symbol followed by the path of the file from the root of the original source volume. In this example, file1 is restored to /dir1/file1.new and file2 is restored to /dir2.new/file2 on primary1:

```
cluster_dst:> snapmirror restore -source-path vserverB:secondary1
-destination-path vserverA:primary1 -source-snapshot daily.2013-01-
25_0010 -file-list
/dir/file1,@/dir1/file1.new,/dir2/file2,@/dir2.new/file2

[Job 3479] Job is queued: snapmirror restore for the relationship with
destination vserverA:primary1
```

The following command restores the files file1 and file3 from the snapshot daily.2013-01-25_0010 in the original destination volume secondary1, to different locations in the active file system of the original source volume primary1, and restores file2 from snap1 to the same location in the active file system of primary1.

In this example, the file file1 is restored to /dir1/file1.new and file3 is restored to /dir3.new/file3:

```
cluster_dst:> snapmirror restore -source-path vserverB:secondary1
-destination-path vserverA:primary1 -source-snapshot daily.2013-01-
25_0010 -file-list
/dir/file1,@/dir1/file1.new,/dir2/file2,/dir3/file3,@/dir3.new/file3

[Job 3479] Job is queued: snapmirror restore for the relationship with
destination vserverA:primary1
```

Related information

- [snapmirror restore](#)

Restore volume contents from an ONTAP SnapMirror destination

You can restore the contents of an entire volume from a snapshot in a SnapMirror destination volume. You can restore the volume's contents to the original source volume or to a different volume.

About this task

This procedure applies to FAS, AFF, and ASA systems. If you have an ASA r2 system (ASA A1K, ASA A90, ASA A70, ASA A50, ASA A30, ASA A20, or ASA C30), follow [these steps](#) to restore data. ASA r2 systems provide a simplified ONTAP experience specific to SAN-only customers.

The destination volume for the restore operation must be one of the following:

- A read-write volume, in which case SnapMirror performs an *incremental restore*, provided that the source and destination volumes have a common snapshot (as is typically the case when you are restoring to the original source volume).



The command fails if there is not a common snapshot. You cannot restore the contents of a volume to an empty read-write volume.

- An empty data protection volume, in which case SnapMirror performs a *baseline restore*, in which the specified snapshot and all the data blocks it references are transferred to the source volume.

Restoring the contents of a volume is a disruptive operation. SMB traffic must not be running on the SnapVault primary volume when a restore operation is running.

If the destination volume for the restore operation has compression enabled, and the source volume does not have compression enabled, disable compression on the destination volume. You need to re-enable compression after the restore operation is complete.

Any quota rules defined for the destination volume are deactivated before the restore is performed. You can use the `volume quota modify` command to reactivate quota rules after the restore operation is complete.


When data in a volume is lost or corrupted, you can roll back your data by restoring from an earlier snapshot.

This procedure replaces the current data on the source volume with data from an earlier snapshot version. You should perform this task on the destination cluster.

Steps

You can restore a volume's contents using System Manager or the ONTAP CLI.

System Manager

1. Click **Protection > Relationships**, and then click the source volume name.
2. Click  and then select **Restore**.
3. Under **Source**, the source volume is selected by default. Click **Other Volume** if you want to choose a volume other than the source.
4. Under **Destination**, choose the snapshot you want to restore.
5. If your source and destination are located on different clusters, on the remote cluster, click **Protection > Relationships** to monitor the restore progress.

CLI

1. List the snapshots in the destination volume:

```
volume snapshot show -vserver <SVM> -volume <volume>
```

The following example shows the snapshots on the `vserverB:secondary1` destination:

```
cluster_dst::> volume snapshot show -vserver vserverB -volume  
secondary1
```

Vserver	Volume	Snapshot	State	Size	
Total%	Used%				
-----	-----	-----	-----	-----	-----
vserverB	secondary1	hourly.2013-01-25_0005	valid	224KB	0%
0%		daily.2013-01-25_0010	valid	92KB	0%
0%		hourly.2013-01-25_0105	valid	228KB	0%
0%		hourly.2013-01-25_0205	valid	236KB	0%
0%		hourly.2013-01-25_0305	valid	244KB	0%
0%		hourly.2013-01-25_0405	valid	244KB	0%
0%		hourly.2013-01-25_0505	valid	244KB	0%

7 entries were displayed.

2. Restore the contents of a volume from a snapshot in a SnapMirror destination volume:

```
snapmirror restore -source-path <SVM:volume>|<cluster://SVM/volume>  
-destination-path <SVM:volume>|<cluster://SVM/volume> -source-snapshot
```

<snapshot>



You must run this command from the original source SVM or the original source cluster.

The following command restores the contents of the original source volume `primary1` from the snapshot `daily.2013-01-25_0010` in the original destination volume `secondary1`:

```
cluster_src::> snapmirror restore -source-path vserverB:secondary1  
-destination-path vserverA:primary1 -source-snapshot daily.2013-01-  
25_0010
```

Warning: All data newer than snapshot `daily.2013-01-25_0010` on volume `vserverA:primary1` will be deleted.

Do you want to continue? {y|n}: y

[Job 34] Job is queued: snapmirror restore from source
vserverB:secondary1 for the snapshot `daily.2013-01-25_0010`.

3. Remount the restored volume and restart all applications that use the volume.

Other ways to do this in ONTAP

To perform these tasks with...	See this content...
System Manager Classic (available with ONTAP 9.7 and earlier)	Volume restore using SnapVault overview

Related information

- [snapmirror restore](#)
- [volume snapshot show](#)

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