



# **Expand FlexGroup volumes in a SnapMirror relationship**

**ONTAP 9**

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# Table of Contents

- Expand FlexGroup volumes in a SnapMirror relationship ..... 1
  - Expand FlexGroup volumes in a SnapMirror relationship ..... 1
  - Expand the source FlexGroup volume of a SnapMirror relationship ..... 1
  - Expand the destination FlexGroup volume of a SnapMirror relationship ..... 2

# Expand FlexGroup volumes in a SnapMirror relationship

## Expand FlexGroup volumes in a SnapMirror relationship

Beginning with ONTAP 9.3, you can expand the source FlexGroup volume and destination FlexGroup volume that are in a SnapMirror relationship by adding new constituents to the volumes. You can expand the destination volumes either manually or automatically.

### About this task

- After expansion, the number of constituents in the source FlexGroup volume and destination FlexGroup volume of a SnapMirror relationship must match.

If the number of constituents in the volumes does not match, the SnapMirror transfers fail.

- You should not perform any SnapMirror operation when the expansion process is in progress.
- If a disaster strikes before the expansion process is complete, you must break the SnapMirror relationship and wait until the operation succeeds.



You should break the SnapMirror relationship when the expansion process is in progress only in the case of a disaster. In the case of a disaster, the break operation can take some time to complete. You should wait for the break operation to get completed successfully before performing a resync operation. If the break operation fails, you must retry the break operation. If the break operation fails, some of the new constituents might remain in the destination FlexGroup volume after the break operation. It is best to delete these constituents manually before proceeding further.

## Expand the source FlexGroup volume of a SnapMirror relationship

Beginning with ONTAP 9.3, you can expand the source FlexGroup volume of a SnapMirror relationship by adding new constituents to the source volume. You can expand the source volume in the same way that you expand a regular FlexGroup volume (read-write volume).

### Steps

1. Expand the source FlexGroup volume: `volume expand -vserver vservers_name -volume fg_src -aggr-list aggregate name,... [-aggr-list-multiplier constituents_per_aggr]`

```
cluster1::> volume expand -volume src_fg -aggr-list aggr1 -aggr-list  
-multiplier 2 -vserver vs_src
```

Warning: The following number of constituents of size 50GB will be added to FlexGroup "src\_fg": 2.

Expanding the FlexGroup will cause the state of all Snapshot copies to be set to "partial".

Partial Snapshot copies cannot be restored.

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

[Job 146] Job succeeded: Successful

The state of all of the Snapshot copies that are taken before the volume is expanded changes to partial.

## Expand the destination FlexGroup volume of a SnapMirror relationship

You can expand the destination FlexGroup volume and reestablish the SnapMirror relationship either automatically or manually. By default, the SnapMirror relationship is set for automatic expansion, and the destination FlexGroup volume expands automatically if the source volume expands.

### What you'll need

- The source FlexGroup volume must have been expanded.
- The SnapMirror relationship must be in the `SnapMirrored` state.

The SnapMirror relationship must not be broken or deleted.

### About this task

- When the destination FlexGroup volume is created, the volume is set up for automatic expansion by default.

You can modify the destination FlexGroup volume for manual expansion, if required.



The best practice is to expand the destination FlexGroup volume automatically.

- All SnapMirror operations fail until both the source FlexGroup volume and destination FlexGroup volume have expanded and have the same number of constituents.
- If you expand the destination FlexGroup volume after the SnapMirror relationship is broken or deleted, you cannot resync the original relationship again.

If you intend to reuse the destination FlexGroup volume, you must not expand the volume after deleting the SnapMirror relationship.

### Choices

- Perform an update transfer to expand the destination FlexGroup volume automatically:

- a. Perform a SnapMirror update transfer: `snapmirror update -destination-path svm:vol_name`
- b. Verify that the status of the SnapMirror relationship is in the SnapMirrored state: `snapmirror show`

```
cluster2::> snapmirror show
```

| Progress      | Source  | Destination | Mirror        | Relationship | Total    |
|---------------|---------|-------------|---------------|--------------|----------|
| Last          | Path    | Type        | Path          | State        | Status   |
| Healthy       | Updated |             |               |              | Progress |
| -----         | -----   | -----       | -----         | -----        | -----    |
| -----         | -----   |             |               |              |          |
| vs_src:src_fg |         | XDP         | vs_dst:dst_fg |              |          |
|               |         |             |               | Snapmirrored |          |
|               |         |             |               | Idle         | -        |
| -             |         |             |               |              | true     |

Based on the size and availability of aggregates, the aggregates are automatically selected, and new constituents that match the constituents of the source FlexGroup volume are added to the destination FlexGroup volume. After expansion, a resynchronization operation is automatically triggered.

- Expand the destination FlexGroup volume manually:
  - a. If the SnapMirror relationship is in the auto-expand mode, set the SnapMirror relationship to the manual expand mode: `snapmirror modify -destination-path svm:vol_name -is-auto-expand -enabled false`

```
cluster2::> snapmirror modify -destination-path vs_dst:dst_fg -is
-auto-expand-enabled false
Operation succeeded: snapmirror modify for the relationship with
destination "vs_dst:dst_fg".
```

- b. Quiesce the SnapMirror relationship: `snapmirror quiesce -destination-path svm:vol_name`

```
cluster2::> snapmirror quiesce -destination-path vs_dst:dst_fg
Operation succeeded: snapmirror quiesce for destination
"vs_dst:dst_fg".
```

- c. Expand the destination FlexGroup volume: `volume expand -vserver vs_server_name -volume fg_name -aggr-list aggregate name,... [-aggr-list-multiplier constituents_per_aggr]`

```
cluster2::> volume expand -volume dst_fg -aggr-list aggr1 -aggr-list
-multiplier 2 -vserver vs_dst
```

Warning: The following number of constituents of size 50GB will be added to FlexGroup "dst\_fg": 2.

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

[Job 68] Job succeeded: Successful

- d. Resynchronize the SnapMirror relationship: `snapmirror resync -destination-path svm:vol_name`

```
cluster2::> snapmirror resync -destination-path vs_dst:dst_fg
Operation is queued: snapmirror resync to destination
"vs_dst:dst_fg".
```

- e. Verify that the status of the SnapMirror relationship is SnapMirrored: `snapmirror show`

```
cluster2::> snapmirror show
```

Progress

| Source        | Destination | Mirror        | Relationship | Total    |
|---------------|-------------|---------------|--------------|----------|
| Last          |             |               |              |          |
| Path          | Type        | Path          | State        | Status   |
| Healthy       | Updated     |               |              | Progress |
| vs_src:src_fg | XDP         | vs_dst:dst_fg | Snapmirrored |          |
|               |             |               | Idle         | -        |
| -             |             |               |              | true     |

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