



# Troubleshooting

## ONTAP System Manager

NetApp  
April 02, 2021

# Table of Contents

- Troubleshooting ..... 1
  - Failure creating a SnapMirror relationship and initializing consistency group ..... 1
  - Planned failover unsuccessful ..... 1
  - Mediator not reachable or Mediator quorum status is false ..... 2
  - Automatic unplanned failover not triggered on Site B ..... 2
  - Link between Site B and Mediator down and Site A down ..... 4
  - Link between Site A and Mediator down and Site B down ..... 5
  - SM-BC SnapMirror delete operation fails when fence is set on destination volume ..... 6
  - Volume move operation stuck when primary is down ..... 6
  - SnapMirror release fails when unable to delete Snapshot copy ..... 7
  - Volume move reference Snapshot copy shows as the newest ..... 7

# Troubleshooting

## Failure creating a SnapMirror relationship and initializing consistency group

### Issue:

Creation of SnapMirror relationship and consistency group initialization fails.

### Error message:

```
command failed: The number of SnapMirror Synchronous Consistency Group relationships in a cluster cannot exceed 5
```

### Solution:

Ensure that the configuration has no more than 5 consistency groups. See [Additional restrictions and limitations](#).

## Planned failover unsuccessful

### Issue:

After executing the `snapmirror failover start` command, the output for the `snapmirror failover show` command displays a message indicates that a nondisruptive operation is in progress.

### Example:

```
Cluster1::> snapmirror failover show
Source Destination Error
Path Path Type Status start-time end-time Reason
-----
vs1:/cg/cg vs0:/cg/cg planned failed 10/1/2020 10/1/2020 SnapMirror
Failover cannot start because a volume move is running. Retry the command
once volume move has finished.
08:35:04
08:35:04
```

### Cause:

Planned failover cannot begin when a nondisruptive operation is in progress, including volume move, aggregate relocation, and storage failover.

### Solution:

Wait for the nondisruptive operation to complete and try the failover operation again.

# Mediator not reachable or Mediator quorum status is false

## Issue:

After executing the `snapmirror failover start` command, the output for the `snapmirror failover show` command displays a message indicating that Mediator is not configured.

See [Initialize the ONTAP Mediator](#).

## Example:

```
Cluster1::> snapmirror failover show
Source Destination Error
Path Path Type Status start-time end-time Reason
-----
vs0:/cg/cg vs1:/cg/cg planned failed 10/1/2020 10/1/2020 SnapMirror
failover cannot start because the source-side precheck failed. reason:
Mediator not configured.
05:50:42 05:50:43
```

## Cause:

Mediator is not configured or there are network connectivity issues.

## Solution:

If Mediator is not configured, you must configure Mediator before you can establish an SM-BC relationship. Fix any network connectivity issues. Make sure Mediator is connected and quorum status is true on both the source and destination site using the `snapmirror mediator show` command.

## Example:

```
cluster::> snapmirror mediator show
Mediator Address Peer Cluster Connection Status Quorum Status
-----
10.234.10.143 cluster2 connected true
```

# Automatic unplanned failover not triggered on Site B

## Issue:

A failure on Site A does not trigger an unplanned failover on Site B.

## Possible cause #1:

Mediator is not configured. To determine if this is the cause, issue the `snapmirror mediator show` command on the Site B cluster.

**Example:**

```
Cluster2::*> snapmirror mediator show
This table is currently empty.
```

This example indicates that Mediator is not configured on Site B.

**Solution:**

Ensure that Mediator is configured on both clusters, that the status is connected, and quorum is set to True.

**Possible cause #2:**

SnapMirror consistency group is out of sync. To determine if this is the cause, view the event log to view if the consistency group was in sync during the time at which the Site A failure occurred.

**Example:**

```
cluster::*> event log show -event *out.of.sync*

Time                Node                Severity            Event
-----
-----
10/1/2020 23:26:12  sti42-vsimsim-ucs511w ERROR              sms.status.out.of.sync:
Source volume "vs0:zrto_cg_556844_511u_RW1" and destination volume
"vs1:zrto_cg_556881_511w_DP1" with relationship UUID "55ab7942-03e5-11eb-
ba5a-005056a7dc14" is in "out-of-sync" status due to the following reason:
"Transfer failed."
```

**Solution:**

Complete the following steps to perform a forced failover on Site B.

1. Unmap all LUNs belonging to the consistency group from Site B.
2. Delete the SnapMirror consistency group relationship using the `force` option.
3. Enter the `snapmirror break` command on the consistency group constituent volumes to convert volumes from DP to R/W, to enable I/O from Site B.
4. Boot up the Site A nodes to create a zero RTO relationship from Site B to Site A.
5. Release the consistency group with `relationship-info-only` on Site A to retain common Snapshot copy and unmap the LUNs belonging to the consistency group.
6. Convert volumes on Site A from R/W to DP by setting up a volume level relationship using either the Sync policy or Async policy.
7. Issue the `snapmirror resync` to synchronize the relationships.
8. Delete the SnapMirror relationships with the Sync policy on Site A.
9. Release the SnapMirror relationships with Sync policy using `relationship-info-only true` on Site B.
10. Create a consistency group relationship from Site B to Site A.

11. Perform a consistency group resync from Site A, and then verify that the consistency group is in sync.
12. Rescan host LUN I/O paths to restore all paths to the LUNs.

## Link between Site B and Mediator down and Site A down

### Example:

```

cluster::*> snapmirror mediator show
Mediator Address Peer Cluster      Connection Status Quorum Status
-----
10.237.86.17      C1_cluster      unreachable      true
SnapMirror consistency group relationship status is out of sync.

C2_cluster::*> snapmirror show -expand
Source          Destination Mirror Relationship Total
Last
Path           Type Path           State Status           Progress Healthy
Updated
-----
vs0:/cg/src_cg_1 XDP vs1:/cg/dst_cg_1 Snapmirrored OutOfSync - false -
vs0:zrto_cg_655724_188a_RW1 XDP vs1:zrto_cg_655755_188c_DP1 Snapmirrored
OutOfSync - false -
vs0:zrto_cg_655733_188a_RW2 XDP vs1:zrto_cg_655762_188c_DP2 Snapmirrored
OutOfSync - false -
vs0:zrto_cg_655739_188b_RW1 XDP vs1:zrto_cg_655768_188d_DP1 Snapmirrored
OutOfSync - false -
vs0:zrto_cg_655748_188b_RW2 XDP vs1:zrto_cg_655776_188d_DP2 Snapmirrored
OutOfSync - false -
5 entries were displayed.

Site B cluster is unable to reach Site A.
C2_cluster::*> cluster peer show
Peer Cluster Name          Cluster Serial Number Availability
Authentication
-----
C1_cluster                  1-80-000011                Unavailable      ok

```

### Solution

Force a failover to enable I/O from Site B and then establish a zero RTO relationship from Site B to Site A.

Complete the following steps to perform a forced failover on Site B.

1. Unmap all LUNs belonging to the consistency group from Site B.
2. Delete the SnapMirror consistency group relationship using the force option.

3. Enter the snapmirror break command on the consistency group constituent volumes to convert volumes from DP to RW, to enable I/O from Site B.
4. Boot up the Site A nodes to create a zero RTO relationship from Site B to Site A.
5. Release the consistency group with relationship-info-only on Site A to retain common Snapshot copy and unmap the LUNs belonging to the consistency group.
6. Convert volumes on Site A from RW to DP by setting up a volume level relationship using either Sync policy or Async policy.
7. Issue the snapmirror resync to synchronize the relationships.
8. Delete the SnapMirror relationships with Sync policy on Site A.
9. Release the SnapMirror relationships with Sync policy using relationship-info-only true on Site B.
10. Create a consistency group relationship from Site B to Site A.
11. Perform a consistency group resync from Site A, and then verify that the consistency group is in sync.
12. Rescan host LUN I/O paths to restore all paths to the LUNs.

## Link between Site A and Mediator down and Site B down

**Determining the cause:**

Check the status of Mediator from Site A.

**Example:**

```
C1_cluster::*> snapmirror mediator show
Mediator Address Peer Cluster      Connection Status Quorum Status
-----
10.237.86.17    C2_cluster      unreachable      true

C1_cluster::*> snapmirror list-destinations
Source          Destination      Transfer      Progress
Relationship
Path           Type  Path           Status Progress Updated      Id
-----
vs0:/cg/src_cg_1  XDP   vs1:/cg/dst_cg_1  OutOfSync  -        -
bba7d354-06f6-11eb-9138-005056acec19
```

Check Site B connectivity:

```
C1_sti78-vsimg-ucs188a_cluster::*> cluster peer show
Peer Cluster Name          Cluster Serial Number Availability
Authentication
-----
C2_cluster                 1-80-000011             Unavailable    ok
```

Check the consensus status on SM-BC volume:

```
C1_cluster::*> volume show zrto_cg_894191_188b_RW1 -fields smbc-consensus
vserver volume                smbc-consensus
-----
vs0      zrto_cg_894191_188b_RW1 Awaiting-consensus
```

**Solution:**

Complete the following steps to override SM-BC consensus and forcefully resume I/O on Site A:

1. Unmap the LUNs on Site A.
2. Issue the snapmirror release command using the `-force` and `override-smbc-consensus` option on Site A.
3. Remap the LUNs.
4. First, bring up Mediator, and then bring up the Site B nodes.
5. Resync the consistency group relationship using `snapmirror resync`.
6. After Site B is up, verify that the consistency group relationship is up and is in sync.
7. Perform a LUN rescan on the host to restore all paths to the LUNs.

## SM-BC SnapMirror delete operation fails when fence is set on destination volume

**Issue:**

SnapMirror delete operation fails when any of the destination volumes have redirection fence set.

**Solution**

Performing the following operations to retry the redirection and remove the fence from the destination volume.

- SnapMirror resync
- SnapMirror update

## Volume move operation stuck when primary is down

**Issue:**

A volume move operation is stuck indefinitely in cutover deferred state when the primary



site is down in an SM-BC relationship.

When the primary site is down, the secondary site performs an automatic unplanned failover (AUFO). When a volume move operation is in progress when the AUFO is triggered the volume move becomes stuck.

**Solution:**

Abort the volume move instance that is stuck and restart the volume move operation.

## SnapMirror release fails when unable to delete Snapshot copy

**Issue:**

The SnapMirror release operation fails when the Snapshot copy cannot be deleted.

**Solution:**

The Snapshot copy contains a transient tag. Use the `snapshot delete` command with the `-ignore-owners` option to remove the transient Snapshot copy.

```
snapshot delete -volume <volume_name> -snapshot <snapshot_name> -ignore-owners true -force true
```

Retry the `snapmirror release` command.

## Volume move reference Snapshot copy shows as the newest

**Issue:**

After performing a volume move operation on a consistency group volume, the volume move reference Snapshot copy might display as the newest for the SnapMirror relationship.

You can view the newest Snapshot copy with the following command:

```
snapmirror show -fields newest-snapshot status -expand
```

**Solution:**

Manually perform a `snapmirror resync` or wait for the next automatic resync operation after the volume move operation completes.

## Copyright Information

Copyright © 2021 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## 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.