



# **Manage synchronous mirrored pairs**

SANtricity 11.6

NetApp

February 12, 2024

This PDF was generated from <https://docs.netapp.com/us-en/e-series-santricity-116/sm-mirroring/test-communication-for-synchronous-mirroring.html> on February 12, 2024. Always check docs.netapp.com for the latest.

# Table of Contents

- Manage synchronous mirrored pairs . . . . . 1
  - Test communication for synchronous mirroring . . . . . 1
  - Suspend and resume synchronization for a mirrored pair . . . . . 1
  - Change role between volumes in a mirrored pair . . . . . 2
  - Change synchronization settings for a mirrored pair . . . . . 2
  - Remove synchronous mirror relationship. . . . . 3

# Manage synchronous mirrored pairs

## Test communication for synchronous mirroring

You can test the communication between a local storage array and a remote storage array to diagnose possible communication problems for a mirrored pair that is participating in synchronous mirroring.

### About this task

Two different tests are run:

- **Communication** — Verifies that the two storage arrays have a communication path. The communication test validates that the local storage array can communicate with the remote storage array and that the secondary volume associated with the mirrored pair exists on the remote storage array.
- **Latency** — Sends a SCSI test unit command to the secondary volume on the remote storage array associated with the mirrored pair to test the minimum, average, and maximum latency.

### Steps

1. Select **Storage > Synchronous Mirroring**.
2. Select the mirrored pair that you want to test, and then select **Test Communication**.
3. Review the information displayed in the Results window, and, if necessary, follow the corrective action indicated.



If the communication test fails, the test continues to run after you close this dialog until communication between the mirrored pair is restored.

## Suspend and resume synchronization for a mirrored pair

You can use the Suspend option and Resume option to control when to synchronize the data on the primary volume and the secondary volume in a mirrored pair.

### About this task

If a mirrored pair is manually suspended, the mirrored pair will not synchronize until it is manually resumed.

### Steps

1. Select **Storage > Synchronous Mirroring**.
2. Select the mirrored pair that you want to suspend or resume, and then select either **More > Suspend** or **More > Resume**.

The system displays a confirmation.

3. Select **Yes** to confirm.

### Results

System Manager performs the following actions:

- Either suspends or resumes data transfer between the mirrored pair without removing the mirror

relationship.

- For a *suspended* mirrored pair:
  - Displays **Suspended** in the Mirrored Pair table.
  - Logs any data that was written to the primary volume of the mirrored pair while synchronization is suspended.
- For a *resumed* mirrored pair, writes the data automatically to the secondary volume of the mirrored pair when synchronization is resumed. A full synchronization is not required.

## Change role between volumes in a mirrored pair

You can perform a role reversal between the two volumes in a mirrored pair that are participating in synchronous mirroring. You change the role between volumes in a mirrored pair for administrative purposes or in the event of a disaster on the local storage array.

### About this task

You can either demote the primary volume to the secondary role or promote the secondary volume to the primary role. Any hosts that are accessing the primary volume have read/write access to the volume. When the primary volume becomes a secondary volume, only remote writes initiated by the primary controller are written to the volume.

### Steps

1. Select **Storage › Synchronous Mirroring**.
2. Select the mirrored pair that contains the volumes for which you want to change the role, and then select **More › Change role**.

The system displays a confirmation.

3. Confirm that you want to change the role of the volumes, and then select **Change Role**.



If the local storage array cannot communicate with the remote storage array, the system displays the **Cannot Contact Storage Array** dialog box when a role change is requested, but the remote storage array cannot be contacted. Click **Yes** to force the role change.

### Results

System Manager performs the following action:

- If the associated volume in the mirrored pair can be contacted, the roles between the volumes change. System Manager promotes the secondary volume in the mirrored pair to the primary role or demotes the primary volume in the mirrored pair to the secondary role (depending on your selection).

## Change synchronization settings for a mirrored pair

You can change the synchronization priority and resynchronization policy that the mirrored pair uses to complete the resynchronization operation after a communication interruption.

### About this task

You can edit the synchronization settings for a mirrored pair only on the storage array that contains the primary volume.

### Steps

1. Select **Storage > Synchronous Mirroring**.
2. Select the mirrored pair that you want to edit, and then select **More > Edit settings**.

The system displays the View/Edit Settings dialog box.

3. Use the slider bar to edit the synchronization priority.

The synchronization priority determines how much of the system resources are used to complete the resynchronization operation after a communication interruption as compared to service I/O requests.

### More about synchronization rates

There are five synchronization priority rates:

- Lowest
- Low
- Medium
- High
- Highest

If the synchronization priority is set to the lowest rate, I/O activity is prioritized, and the resynchronization operation takes longer. If the synchronization priority is set to the highest rate, the resynchronization operation is prioritized, but I/O activity for the storage array might be affected.

4. Edit the resynchronization policy as appropriate.

You can resynchronize the mirrored pairs on the remote storage array either manually or automatically.

- **Manual** (the recommended option) — Select this option to require synchronization to be manually resumed after communication is restored to a mirrored pair. This option provides the best opportunity for recovering data.
- **Automatic** — Select this option to start resynchronization automatically after communication is restored to a mirrored pair.

5. Select **Save**.

## Remove synchronous mirror relationship

You remove a mirrored pair to remove the mirror relationship from the primary volume on the local storage array and the secondary volume on the remote storage array.

### About this task

You can also remove a mirrored pair to correct an orphaned mirrored pair state. Review the following information about orphaned mirrored pairs:

- An orphaned mirrored pair exists when a member volume has been removed on one side (local/remote)

but not on the other side.

- Orphaned mirrored pairs are detected when inter-array communication is restored.

### Steps

1. Select **Storage › Synchronous Mirroring**.
2. Select the mirrored pair that you want to remove, and then select the **Uncommon Tasks › Remove**.

The **Remove Mirror Relationship** dialog box appears.

3. Confirm that you want to remove the mirrored pair, and then click **Remove**.

### Results

System Manager performs the following actions:

- Removes the mirror relationship from the mirrored pair on the local storage array and on the remote storage array.
- Returns the primary volume and the secondary volume to host-accessible, non-mirrored volumes.
- Updates the Synchronous Mirroring tile with the removal of the synchronous mirrored pair.

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