



# **Manage asynchronous mirrored pairs**

SANtricity 11.6

NetApp  
June 11, 2024

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# Manage asynchronous mirrored pairs

## Remove asynchronous 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

Review the following information about orphaned mirrored pairs:

- An orphaned mirrored pair exists when a member volume in a consistency mirror group has been removed on one side (either the local storage array side or the remote storage array side) but not on the other side.
- Orphaned mirrored pairs are detected when inter-array communication is restored and the two sides of the mirror configuration reconcile mirror parameters.
- You can remove a mirrored pair to correct an orphaned mirrored pair state.

### Steps

1. Select **Storage > Asynchronous Mirroring**.
2. Select the **Mirrored Pair** tab.

The Mirrored Pairs table appears and displays all the mirrored pairs associated with the storage array.

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

### Results

SANtricity System Manager performs the following actions:

- Removes the mirror relationship from the mirror consistency group on the local storage array and on the remote storage array, and deletes the reserved capacity.
- Returns the primary volume and the secondary volume to host-accessible, non-mirrored volumes.
- Updates the Asynchronous Mirroring tile with the removal of the asynchronous mirrored pair.

## Increase reserved capacity

You can increase reserved capacity, which is the physically allocated capacity used for any copy service operation on a storage object. For snapshot operations, it is typically 40 percent of the base volume; for asynchronous mirroring operations, it is typically 20 percent of the base volume. Typically, you increase reserved capacity when you receive a warning that the storage object's reserved capacity is becoming full.

### Before you begin

- The volume in the pool or volume group must have an Optimal status and must not be in any state of modification.
- Free capacity must exist in the pool or volume group that you want to use to increase capacity.

If no free capacity exists on any pool or volume group, you can add unassigned capacity in the form of

unused drives to a pool or volume group.

### About this task

You can increase reserved capacity only in increments of 8 GiB for the following storage objects:

- Snapshot group
- Snapshot volume
- Consistency group member volume
- Mirrored pair volume

Use a high percentage if you believe the primary volume will undergo many changes or if the lifespan of a particular copy service operation will be very long.



You cannot increase reserved capacity for a snapshot volume that is read-only. Only snapshot volumes that are read-write require reserved capacity.

### Steps

1. Select **Storage > Pools & Volume Groups**.
2. Select the **Reserved Capacity** tab.
3. Select the storage object for which you want to increase reserved capacity, and then click **Increase Capacity**.

The **Increase Reserved Capacity** dialog box appears.

4. Use the spinner box to adjust the capacity percentage.

If free capacity does not exist on the pool or volume group that contains the storage object you selected, and the storage array has Unassigned Capacity, you can create a new pool or volume group. You can then retry this operation using the new free capacity on that pool or volume group.

5. Click **Increase**.

### Results

System Manager performs the following actions:

- Increases the reserved capacity for the storage object.
- Displays the newly-added reserved capacity.

## Change the reserved capacity settings for a mirrored pair volume

You can change the settings for a mirrored pair volume to adjust the percentage point at which System Manager sends an alert notification when the reserved capacity for a mirrored pair volume is nearing full.

### Steps


1. Select **Storage > Pools & Volume Groups**.
2. Select the **Reserved Capacity** tab.

3. Select the mirrored pair volume that you want to edit, and then click **View/Edit Settings**.

The **Mirrored Pair Volume Reserved Capacity Settings** dialog box appears.

4. Change the reserved capacity settings for the mirrored pair volume as appropriate.

#### Field details

Setting	Description
Alert me when...	<p>Use the spinner box to adjust the percentage point at which System Manager sends an alert notification when the reserved capacity for a mirrored pair is nearing full.</p> <p>When the reserved capacity for the mirrored pair exceeds the specified threshold, System Manager sends an alert, allowing you time to increase reserved capacity.</p> <p> Changing the Alert setting for one mirrored pair changes the Alert setting for all mirrored pairs that belong to the same mirror consistency group.</p>

5. Click **Save** to apply your changes.

## Complete mirrored pair for primary volumes created on legacy system

If you created a primary volume on a legacy storage array that cannot be managed by SANtricity System Manager, you can create the secondary volume on this array with SANtricity System Manager.

### About this task

You can perform asynchronous mirroring between legacy arrays that use a different interface and newer arrays that can be managed by SANtricity System Manager.

- If you are mirroring between two storage arrays that use SANtricity System Manager, you can skip this task because you already completed the mirrored pair in the mirrored pair creation sequence.
- Perform this task on the remote storage array.

### Steps

1. Select **Storage > Asynchronous Mirroring**.
2. Select the **Mirrored Pair** tab.

The Mirrored Pairs table appears and displays all the mirrored pairs associated with the storage array.

3. Find the mirrored pair volume with a status of Incomplete, and then click the **Complete mirrored pair** link displayed in the mirrored pair column.
4. Choose whether you want to complete the mirrored pair creation sequence automatically or manually by selecting one of the following radio buttons:

- **Automatic** — Create new secondary volume.

Accept the default settings for the remote side of the mirrored pair by selecting an existing pool or volume group where you want to create the secondary volume. Use this recommended option to allocate the reserved capacity for the secondary volume with the default settings.

- **Manual** — Select an existing volume.

Define your own parameters for the secondary volume.

- Click **Next** to select the secondary volume.
- Select an existing volume that you want to use as the secondary volume and then click **Next** to allocate the reserved capacity.
- Allocate the reserved capacity. Do one of the following:

- Accept the default settings.

The default setting for reserved capacity is 20% of the capacity of the base volume, and usually this capacity is sufficient.

- Allocate your own reserved capacity settings to meet your data storage needs related to asynchronous mirroring.

The capacity needed varies, depending on the frequency and size of I/O writes to the primary volume and how long you need to keep the capacity. In general, choose a larger capacity for reserved capacity if one or both of these conditions exist:

- You intend to keep the mirrored pair for a long period of time.
- A large percentage of data blocks will change on the primary volume due to heavy I/O activity. Use historical performance data or other operating system utilities to help you determine typical I/O activity to the primary volume.

#### 5. Select **Complete**.

### Results

SANtricity System Manager performs the following actions:

- Creates the secondary volume on the remote storage array and allocates reserved capacity for the remote side of the mirrored pair.
- Begins initial synchronization between the local storage array and the remote storage array.
- If the volume being mirrored is a thin volume, only the allocated blocks are transferred to the secondary volume during the initial synchronization. This transfer reduces the amount of data that must be transferred to complete the initial synchronization.
- Creates the reserved capacity for the mirrored pair on the local storage array and on the remote storage array.

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