Manage mirror consistency groups

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Test communication for mirror consistency groups

You can test the communication link to diagnose possible communication problems between the local storage array and the remote storage array associated with a mirror consistency group.

Before you begin

The mirror consistency group that you want to test must exist on the local and remote storage arrays.

About this task

You can run four different tests:

- **Connectivity** — Verifies that the two controllers have a communication path. The connectivity test sends an inter-array message between the storage arrays, and then validates that the corresponding mirror consistency group on the remote storage array exists. It also validates that the member volumes of the mirror consistency group on the remote storage array match the member volumes of the mirror consistency group on the local storage array.
- **Latency** — Sends a SCSI Test Unit command to each mirrored volume on the remote storage array associated with the mirror consistency group to test the minimum, average, and maximum latency.
- **Bandwidth** — Sends two inter-array messages to the remote storage array to test the minimum, average, and maximum bandwidth as well as the negotiated link speed of the port on the array performing the test.
- **Port connections** — Shows the port that is being used for mirroring on the local storage array and the port that is receiving the mirrored data on the remote storage array.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab, and then select the mirror consistency group that you want to test.
3. Select **Test Communication**.

   The **Test Communication** dialog box appears.

4. Select one or more communication tests to perform between the local and remote storage arrays associated with the selected mirror consistency group, and then click **Test**.
5. Review the information displayed in the Results window.

Communication Test Status	Description
Normal with no errors	The mirror consistency group is communicating correctly.
Passed status (but not normal)	Check possible network or connection problems and retry the test.
Failed status	The reason for the failure is indicated. Refer to the Recovery Guru to correct the problem.

Communication Test Status	Description
Port connection error	The reason may be that the local storage array is not connected or the remote storage array cannot be contacted. Refer to the Recovery Guru to correct the problem.

After you finish

After the communication test completes, this dialog box shows a Normal status, a Passed status, or a Failed status.

If the communication test returns a Failed status, the test continues to run after you close this dialog box until communication between the mirror consistency groups is restored.

Suspend or resume synchronization for mirror consistency group

You can suspend or resume the synchronization of data on all mirrored pairs within a mirror consistency group, which is more efficient than suspending or resuming synchronization on individual mirrored pairs.

About this task

Suspending and resuming synchronization on groups helps to reduce any performance impact to the host application, which might occur while any changed data on the local storage array is copied to the remote storage array.

The state of the mirror consistency group and its mirrored pairs stay suspended until you use the Resume option to resume synchronization activity.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirrored Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group that you want to suspend or resume, and then select either **More › Suspend** or **More › Resume**.

   The system displays a confirmation.

4. Select **Yes** to confirm.

Results

System Manager performs the following actions:

- Either suspends or resumes data transfer between all mirrored pairs in a mirror consistency group without removing the mirror relationship.
- Logs any data that was written to the primary side of the mirror consistency group while the mirror group is suspended and writes the data automatically to the secondary side of the mirror consistency group when the mirror group is resumed. A full synchronization is not required.

- For a *suspended* mirror consistency groups, displays **user-suspended** in the Mirror Consistency Groups table.
- For a *resumed* mirror consistency group, data written to the primary volumes while the mirror consistency group was suspended is written to the secondary volumes immediately. Periodic synchronization resumes if an automatic synchronization interval has been set.

Change synchronization settings for a mirror consistency group

You can change the synchronization settings and warning thresholds that the mirror consistency group on the local storage array uses when data is initially synchronized or when data is re-synchronized during asynchronous mirroring operations.

About this task

Changing the synchronization settings affects the synchronization operations of all mirrored pairs within the mirror consistency group.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirrored Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group that you want to edit, and then select **More › Edit settings**.

   The system displays the Edit Settings dialog box.

4. Edit the synchronization and alert settings as appropriate, and then click **Save**.

Field details

Field	Description
Synchronize the mirrored pairs…	Specify whether you want to synchronize the mirrored pairs on the remote storage array either manually or automatically. • **Manually** – Select this option to manually synchronize the mirrored pairs on the remote storage array. • **Automatically, every** – Select this option to automatically synchronize the mirrored pairs on the remote storage array by specifying the time interval from the beginning of the previous update to the beginning of the next update. The default interval is 10 minutes.
Alert me…	If you set the synchronization method to occur automatically, set the following alerts: • **Synchronization** – Set the length of time after which System Manager sends an alert that synchronization has not completed. • **Remote recovery point** – Set a time limit after which System Manager sends an alert indicating that the recovery point data on the remote storage array is older than your defined time limit. Define the time limit from the end of the previous update. • **Reserved capacity threshold** – Define a reserved capacity amount at which System Manager sends an alert that you are nearing the reserved capacity threshold. Define the threshold by percentage of the capacity remaining.

Results

System Manager changes the synchronization settings for every mirrored pair in the mirror consistency group.

Re-synchronize mirror consistency group manually

You can manually start re-synchronization for all mirrored pairs within a mirror consistency group.

Steps

1. Select **Storage › Synchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirror Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group that you want to re-synchronize, and then select **More › Manually resynchronize**.

   The system displays a confirmation.

4. Select **Yes** to confirm.

Results

The system performs the following actions:

- Initiates re-synchronization of data on all of the mirrored pairs within the selected mirror consistency group.
- Updates modified data from the local storage array to the remote storage array.

View unsynchronized data amount between mirror consistency groups

You can view the amount of unsynchronized data between the mirror consistency groups on the local storage array and on the remote storage array. While the mirror consistency group is in an Unsynchronized status, no mirroring activity takes place.

About this task

You can perform this task when the selected mirror consistency group contains mirrored pairs and when synchronization is not currently in-progress.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirror Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Click **More › View unsynchronized data amount**.

   If unsynchronized data exists, the table values reflect this. The data amount column lists the unsynchronized data amount in MiB.

Update remote IP address

You can update the iSCSI IP address for your remote storage array to re-establish connection with the local storage array.

Before you begin

Both the local storage array and the remote storage array must be configured for asynchronous mirroring using an iSCSI connection.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirror Consistency Group table displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group that you want to update, and then select **More › Update remote IP address**.

The system displays the **Update Remote IP Address** dialog box.

4. Select **Update** to update the iSCSI IP address for your remote storage array.

Results

The system resets the IP address of the remote storage array to re-establish connection with the local storage array.

Change mirror consistency group role to primary or secondary

You can change the role between mirror consistency groups for administrative purposes or in the event of a disaster on the local storage array.

About this task

Mirror consistency groups created on the local storage array hold the primary role. Mirror consistency groups created on the remote storage array hold the secondary role. You can either demote the local mirror consistency group to a secondary role or promote the remote mirror consistency group to a primary role.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirror Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group for which you want to change the role, and then select **More › Change role to <Primary | Secondary>.**

   The system displays a confirmation.

4. Confirm that you want to change the role of the mirror consistency group, and then click **Change Role**.

> 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 actions:

- The Mirror Consistency Group table displays the status "pending" or "in-progress" next to the mirror consistency group undergoing the role change. You can cancel a Role Change operation that is pending by clicking the **Cancel** link found within the table cell.
- If the associated mirror consistency group can be contacted, the roles between the mirror consistency groups change. System Manager promotes the secondary mirror consistency group to a primary role or demotes the primary mirror consistency group to a secondary role (depending on your selection). The role change affects all mirrored pairs within the selected mirror consistency group.

Delete mirror consistency group

You can delete mirror consistency groups that are no longer needed on the local storage array and on the remote storage array.

Before you begin

All mirrored pairs must be removed from the mirror consistency group.

Steps

1. Select **Storage › Asynchronous Mirroring**.
2. Select the **Mirror Consistency Groups** tab.

   The Mirror Consistency Group table appears and displays all the mirror consistency groups associated with the storage array.

3. Select the mirror consistency group that you want to delete, and then select **Uncommon Tasks › Delete**.

   The system displays a confirmation.

4. Select **Yes** to delete the mirror consistency group.

Results

System Manager performs the following actions:

- Deletes the mirror consistency group on the local storage array first, and then deletes the mirror consistency group on the remote storage array.
- Removes the mirror consistency group from the Mirror Consistency Group table.

After you finish

Occasionally, there may be instances where the mirror consistency group is successfully deleted from the local storage array, but a communication error prevents the mirror consistency group from being deleted from the remote storage array. In this case, you must access the remote storage array to delete the corresponding mirror consistency group.

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