Pair volumes using a volume ID or pairing key

Element Software

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Pair volumes using a volume ID or pairing key

Pair volumes using a volume ID

You can pair a volume with another volume on a remote cluster if you have cluster administrator access to both clusters on which volumes are to be paired. This method uses the volume ID of the volume on the remote cluster to initiate a connection.

What you'll need

- Ensure that the clusters containing the volumes are paired.
- Create a new volume on the remote cluster.

> You can assign a replication source and target after the pairing process. A replication source or target can be either volume in a volume pair. You should create a target volume that contains no data and has the exact characteristics of the source volume, such as size, block size setting for the volumes (either 512e or 4k), and QoS configuration. If you assign an existing volume as the replication target, the data on that volume will be overwritten. The target volume can be greater or equal in size to the source volume, but it cannot be smaller.

- Know the target Volume ID.

Steps

1. Select **Management** > **Volumes**.
2. Click the **Actions** icon for the volume you want to pair.
3. Click **Pair**.
4. In the **Pair Volume** dialog box, select **Start Pairing**.
5. Select **I Do** to indicate that you have access to the remote cluster.
6. Select a **Replication Mode** from the list:
   - **Real-time (Asynchronous)**: Writes are acknowledged to the client after they are committed on the source cluster.
   - **Real-time (Synchronous)**: Writes are acknowledged to the client after they are committed on both the source and target clusters.
   - **Snapshots Only**: Only snapshots created on the source cluster are replicated. Active writes from the source volume are not replicated.
7. Select a remote cluster from the list.
8. Choose a remote volume ID.
9. Click **Start Pairing**.

   The system opens a web browser tab that connects to the Element UI of the remote cluster. You might be required to log on to the remote cluster with cluster administrator credentials.

10. In the Element UI of the remote cluster, select **Complete Pairing**.
11. Confirm the details in **Confirm Volume Pairing**.
12. Click **Complete Pairing**.

After you confirm the pairing, the two clusters begin the process of connecting the volumes for pairing. During the pairing process, you can see messages in the **Volume Status** column of the **Volume Pairs** window. The volume pair displays `PausedMisconfigured` until the volume pair source and target are assigned.

After you successfully complete the pairing, it is recommended that you refresh the Volumes table to remove the **Pair** option from the **Actions** list for the paired volume. If you do not refresh the table, the **Pair** option remains available for selection. If you select the **Pair** option again, a new tab opens and because the volume is already paired, the system reports a `StartVolumePairing Failed: xVolumeAlreadyPaired` error message in the **Pair Volume** window of the Element UI page.

Find more information

- Volume pairing messages
- Volume pairing warnings
- Assign a replication source and target to paired volumes

Pair volumes using a pairing key

If you have cluster administrator access to only the source cluster (you do not have cluster admin credentials for a remote cluster), you can pair a volume with another volume on a remote cluster using a pairing key.

What you'll need

- Ensure that the clusters containing the volumes are paired.
- Ensure that there is a volume on the remote cluster to use for the pairing.

> You can assign a replication source and target after the pairing process. A replication source or target can be either volume in a volume pair. You should create a target volume that contains no data and has the exact characteristics of the source volume, such as size, block size setting for the volumes (either 512e or 4k), and QoS configuration. If you assign an existing volume as the replication target, the data on that volume will be overwritten. The target volume can be greater or equal in size to the source volume, but it cannot be smaller.

Steps

1. Select **Management** > **Volumes**.
2. Click **Actions** icon for the volume you want to pair.
3. Click **Pair**.
4. In the **Pair Volume** dialog box, select **Start Pairing**.
5. Select **I Do Not** to indicate that you do not have access to the remote cluster.
6. Select a **Replication Mode** from the list:
   - **Real-time (Asynchronous)**: Writes are acknowledged to the client after they are committed on the source cluster.
   - **Real-time (Synchronous)**: Writes are acknowledged to the client after they are committed on both the source and target clusters.
   - **Snapshots Only**: Only snapshots created on the source cluster are replicated. Active writes from the

source volume are not replicated.

7. Click **Generate Key**.

   This action generates a text key for pairing and creates an unconfigured volume pair on the local cluster. If you do not complete the procedure, you will need to manually delete the volume pair.

8. Copy the pairing key to your computer's clipboard.
9. Make the pairing key accessible to the cluster admin at the remote cluster site.

   The volume pairing key should be treated in a secure manner and not used in a way that would allow accidental or unsecured access.

   Do not modify any of the characters in the pairing key. The key becomes invalid if it is modified.

10. In the remote cluster Element UI, select **Management** > **Volumes**.
11. Click the Actions icon for the volume you want to pair.
12. Click **Pair**.
13. In the **Pair Volume** dialog box, select **Complete Pairing**.
14. Paste the pairing key from the other cluster into the **Pairing Key** box.
15. Click **Complete Pairing**.

    After you confirm the pairing, the two clusters begin the process of connecting the volumes for pairing. During the pairing process, you can see messages in the **Volume Status** column of the **Volume Pairs** window. The volume pair displays `PausedMisconfigured` until the volume pair source and target are assigned.

    After you successfully complete the pairing, it is recommended that you refresh the Volumes table to remove the **Pair** option from the **Actions** list for the paired volume. If you do not refresh the table, the **Pair** option remains available for selection. If you select the **Pair** option again, a new tab opens and because the volume is already paired, the system reports a `StartVolumePairing Failed: xVolumeAlreadyPaired` error message in the **Pair Volume** window of the Element UI page.

Find more information

- Volume pairing messages
- Volume pairing warnings
- Assign a replication source and target to paired volumes

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