Summary

This tech tip will cover how to manually move resources from one Windows Failover Cluster to another. This will cover two scenarios.

1. Moving resources to a new cluster on the same Compellent Storage Center
2. Moving resources to a new cluster on a new Compellent Storage Center

Please note that this document will not cover how to get the applications and services running on the new cluster. This is simply covering the movement of the resources.

Details

Persistent Reservations

In Windows Server 2008 and above Microsoft implemented Persistent Reservations into Failover Clustering. PR is set at the volume level and is linked with a specific SCSI ID. This allows specific nodes of the cluster to assume “ownership” of a volume thereby “locking” the volume.

Moving Resources between Clusters

When moving resources between clusters, it is important to take PR into consideration. If not done properly, the volume will show up in Disk Management as a “RAW” volume and the OS will request that the volume be formatted before use.

In order to circumvent this, there are a few steps that need to take place.
Scenario 1 – Moving Resources between clusters within the same Storage Center:

In this scenario we must use Replays to move the resources. The reason for this is that when taking a replay and the subsequent Local Recovery, we are able to keep the data on the volume, but present it with a unique SCSI ID. This will remove any PR locks on the volume and allow the volume to be mapped to a new cluster without any issues. If there is a need to break the Replay dependencies once the Local Recovery has been made, it can then be Copy-Mirror-Migrated (CMM) to a new volume.

Scenario 2 – Moving resources to a new cluster on a new Storage Center:

There are two ways to handle a separate Storage Center. Both methods will use replication; however the presentation of the volume will be different. Below are the two methods.

1. Create a Local Recovery from the replay on the second Storage Center and present the Local Recovery to the host.
2. Delete the replication, remove the mapping to the Storage Center, and map the volume directly to the host.

The reason it is not required to do a local recovery in the second scenario is because the volume has been replicated to a new storage subsystem. Since PR is not retained across the subsystems, it is acceptable to directly map the volume to the cluster without using a Local Recovery. Step 1 above is shown because it is still a valid method; just not required.

**NOTE:** If the volume was presented to the cluster and is in a RAW state, please do not do anything to the volume. Remove the mapping, take a Replay and a Local Recovery. Reassign the Local Recovery volume back to the hosts, rescan disks and the volume should come back as NTFS once the disk is brought online.

### Document History

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<td>A</td>
<td>Initial Release</td>
<td>Shane Burton</td>
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