9.1 Storage migration overview

To migrate data from an existing storage system to the SVC, it is necessary to use the built-in external virtualization capability. This capability places external connected Logical Units (LUs) under the control of the SVC. After volumes are virtualized, hosts continue to access them but do so through the SVC, which acts as a proxy.

> **Attention:** The system does not require a license for its own control and expansion enclosures. However, a license is required for each enclosure of any external systems that are being virtualized. Data can be migrated from existing storage systems to your system by using the external virtualization function within 45 days of purchase of the system without purchase of a license. After 45 days, any ongoing use of the external virtualization function requires a license for each enclosure in each external system.
>
> Set the license temporarily during the migration process to prevent messages that indicate that you are in violation of the license agreement from being sent. When the migration is complete, or after 45 days, reset the license to its original limit or purchase a new license.

The following topics give an overview of the storage migration process:

► Typically, storage systems divide storage into many SCSI LUs that are presented to hosts.

► I/O to the LUs must be stopped and changes made to the mapping of the external storage system LUs and to the fabric configuration so that the original LUs are presented directly to the SVC and not to the hosts anymore. The SVC discovers the external LUs as *unmanaged* MDisks.

► The unmanaged MDisks are *imported* to the SVC as *image-mode volumes* and placed into a temporary storage pool. This storage pool is now a logical container for the LUs.

► Each MDisk has a one-to-one mapping with an image-mode volume. From a data perspective, the image-mode volumes represent the LUs exactly as they were before the import operation. The image-mode volumes are on the same physical drives of the external storage system and the data remains unchanged. The SVC is presenting active images of the LUs and is acting as a proxy.

► The hosts must have the existing storage system multipath device driver removed, and are then configured for SVC attachment. The SVC hosts are defined with worldwide port names (WWPNs) or iSCSI qualified names (IQNs), and the volumes are mapped to the hosts. After the volumes are mapped, the hosts discover the SVC volumes through a host rescan or reboot operation.

► IBM Spectrum Virtualize volume mirroring operations are then initiated. The image-mode volumes are mirrored to generic volumes. Volume mirroring is an online migration task, which means a host can still access and use the volumes during the mirror synchronization process.

► After the mirror operations are complete, the image-mode volumes are removed. The external storage system LUs are now migrated and the now redundant storage can be decommissioned or reused elsewhere.

9.1.1 Interoperability and compatibility

Interoperability is an important consideration when a new storage system is set up in an environment that contains existing storage infrastructure. Before attaching any external storage systems to the SVC, see the IBM System Storage Interoperation Center (SSIC):

http://www.ibm.com/systems/support/storage/ssic/interoperability.wss