A thin-provisioned volume can be converted nondisruptively to a fully allocated volume, or vice versa, by using the Modify Capacity Savings functions. Figure 5-5 shows how to convert volume type. You can right click on the volume and select Modify Capacity Savings.

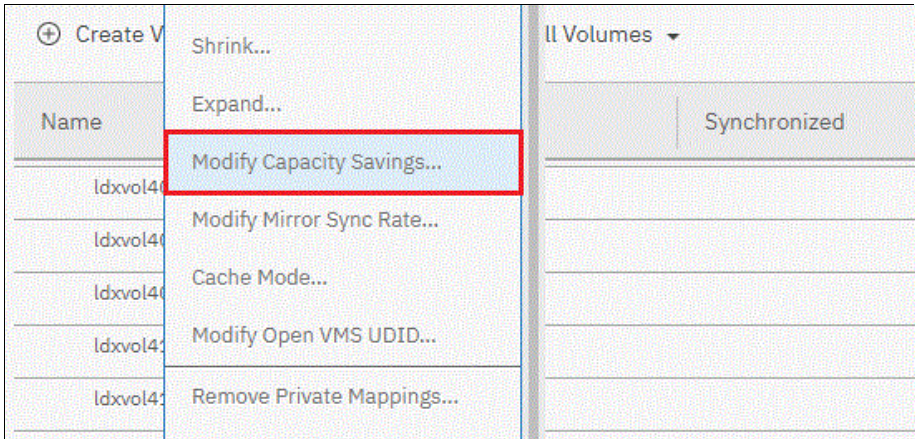

Figure 5-5 Converting volume types nondisruptively

The fully allocated to thin-provisioned migration procedure uses a zero-detection algorithm so that grains that contain all zeros do not cause any real capacity to be used.

Tip: Consider the use of thin-provisioned volumes as targets in FlashCopy relationships.

5.3.1 Compressed volumes

When you create volumes, you can specify compression as a method to save capacity for the volume. With compressed volumes, data is compressed as it is written to disk, saving more space. When data is read to hosts, the data is decompressed.

Compression is available through data reduction support as part of the system. If you want volumes to use compression as part of data reduction support, compressed volumes must belong to data reduction pools. Data reduction pools also support reclaiming unused capacity automatically after mapped hosts no longer need the capacity for operations.

These host issue SCSI unmap commands and the released capacity is reclaimed by the data reduction pool for redistribution. For compressed volumes in data reduction pools, the used capacity before compression indicates the total amount of data that is written to volume copies in the storage pool before data reduction occurs.

This compression solution provides nondisruptive conversion between compressed and uncompressed volumes and eliminates the need for special procedures to deal with compressed volumes.

If you are planning to virtualize volumes that are connected to your hosts directly from any storage subsystems, and you want to know what the space saving you will achieve run the Comprestimator Utility.

Comprestimator is a command-line, host-based utility that can be used to estimate an expected compression rate for block devices. The previous link provides all of the instructions needed.