Rotate volumes allocation method

Extents can be allocated sequentially. In this case, all extents are taken from the same rank until enough extents are available for the requested volume size or the rank is full. In this case, the allocation continues with the next rank in the extent pool.

If more than one volume is created in one operation, the allocation for each volume starts in another rank. When several volumes are provisioned (allocated), rotate through the ranks, as shown in Figure 4-9.

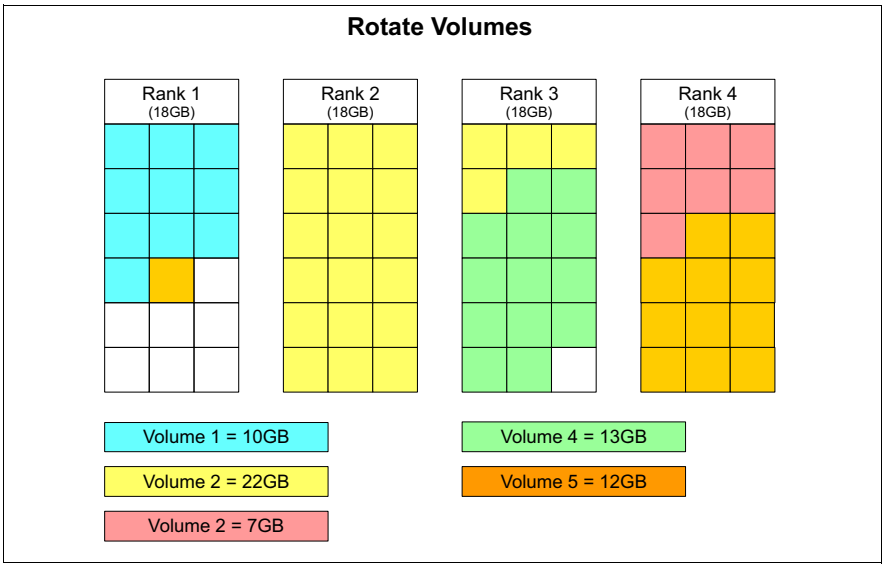

Figure 4-9 Rotate volumes

You might want to consider this allocation method when you prefer to manage performance manually. The workload of one volume is going to one rank. This configuration makes the identification of performance bottlenecks easier. However, by putting all the volumes' data onto one rank, you might introduce a bottleneck, depending on your actual workload.

Important: Rotate extents and rotate volume EAMs provide distribution of volumes over ranks. Rotate extents run this distribution at a granular (1 GiB or 16 MiB extent) level, and is a better method to minimize hot spots and improve overall performance.

However, as previously stated, Easy Tier is really the preferred choice for managing the storage pool extents.

In a mixed-tier characteristic extent pool that contains different *tiers* of ranks, the storage pool striping EAM is used independently of the requested EAM, and EAM is set to `managed`.

Easy Tier default allocation order is *High Performance*. With the *High Performance* setting, the system will populate drive classes in this order: Flash Tier 0, Flash Tier 1, Flash Tier 2.

There is a GUI and a CLI option for the whole Storage Facility to change the allocation preference. The two options are *High Performance* and *High Utilization*. With the *High Utilization* setting, the machine will populate drive classes in this order: Flash Tier 1, Flash Tier 2, Flash Tier 0. The CLI **`chsi`** command can be used to switch the **`ETTierOrder`** parameter between *High Performance* and *High Utilization*.

When you create striped volumes and non-striped volumes in an extent pool, a rank might be filled before the others. A full rank is skipped when you create new striped volumes.