Some of the other commands that you use on VGs include:

- List (**lsvg**)
- Remove (**exportvg**)
- Install (**importvg**)
- Reorganize (**reorgvg**)
- Synchronize (**syncvg**)
- Make available for use (**varyonvg**)
- Make unavailable for use (**varyoffvg**)

Small systems might require only one VG to contain all the PVs that are attached to the system. However, you might want to create separate VGs for security reasons because each VG can have its own security permissions. Separate VGs also make maintenance easier because groups other than the one being serviced can remain active. Because the rootvg must always be online, it contains only the minimum number of PVs that is necessary for system operation.

You can move data from one PV to other PVs in the same VG by using the **migratepv** command. With this command, you can free a PV so it can be removed from the VG. For example, you can move data from a PV that is going to be replaced.

A VG that is created with smaller physical and logical volume limits can be converted to a format that can hold more PVs and more logical volumes. This operation requires that there be enough free partitions on every PV in the VG for the volume group descriptor area (VGDA) expansion. The number of free partitions that are required depends on the size of the current VGDA and the PP size. Because the VGDA is on the edge of the disk and requires contiguous space, the free partitions are required on the edge of the disk. If those partitions are allocated for a user's use, they are migrated to other free partitions on the same disk. The rest of the PPs are renumbered to reflect the loss of the partitions for VGDA usage. This renumbering changes the mappings of the logical volumes to PPs in all the PVs of this VG.

If you saved the mappings of the logical volumes for a potential recovery operation, generate the maps again after the completion of the conversion operation. Also, if the backup of the VG is taken with the map option and you plan to restore by using those maps, the restore operation might fail because the partition number might no longer exist (due to reduction). As a best practice, take the backup before the conversion and after the conversion if the map option is used. Because the VGDA space increased substantially, every VGDA update operation (creating a logical volume, changing a logical volume, adding a PV, and so on) might take considerably longer to run.

## Physical volume

A disk must be designated as a PV and put into an available state before it can be assigned to a VG.

A PV has certain configuration and identification information that is written on it. This information includes a PV identifier that is unique to the system.

The LVM can use the additional space that a Redundant Array of Independent Disks (RAID) can add to a logical unit number (LUN) by adding PPs to the PV that is associated with the LUN.