Snapshotting is now possible in an LVM enhanced system. A snapshot takes a point in time copy of a logical volume and makes it available as another disk while still allowing writes to happen to the original filesystem. This allows you to back up the snapshot image without needing to take the files or database offline; you can continue to work and change the files for later backup.

**Creating Snapshot Volumes**

Use the -s argument of the lvcreate command to create a snapshot volume. A snapshot volume is writeable.

LVM snapshots are not cluster-aware, so they require exclusive access to a volume. For information on activating logical volumes on individual nodes in a cluster, see [Section 4.8, “Activating Logical Volumes on Individual Nodes in a Cluster”](https://www.centos.org/docs/5/html/Cluster_Logical_Volume_Manager/cluster_activation.html).

The following command creates a snapshot logical volume that is 100 megabytes in size named /dev/vg00/snap. This creates a snapshot of the origin logical volume named /dev/vg00/lvol1. If the original logical volume contains a file system, you can mount the snapshot logical volume on an arbitrary directory in order to access the contents of the file system to run a backup while the original file system continues to get updated.

lvcreate --size 100M --snapshot --name snap /dev/vg00/lvol1

After you create a snapshot logical volume, specifying the origin volume on the lvdisplay command yields output that includes a a list of all snapshot logical volumes and their status (active or inactive).

The following example shows the status of the logical volume /dev/new\_vg/lvol0, for which a snapshot volume /dev/new\_vg/newvgsnap has been created.

# **lvdisplay /dev/new\_vg/lvol0**

--- Logical volume ---

LV Name /dev/new\_vg/lvol0

VG Name new\_vg

LV UUID LBy1Tz-sr23-OjsI-LT03-nHLC-y8XW-EhCl78

LV Write Access read/write

LV snapshot status source of

/dev/new\_vg/newvgsnap1 [active]

LV Status available

# open 0

LV Size 52.00 MB

Current LE 13

Segments 1

Allocation inherit

Read ahead sectors 0

Block device 253:2

The lvs command, by default, displays the origin volume and the current percentage of the snapshot volume being used for each snapshot volume. The following example shows the default output for the lvs command for a system that includes the logical volume /dev/new\_vg/lvol0, for which a snapshot volume /dev/new\_vg/newvgsnap has been created.

# **lvs**

LV VG Attr LSize Origin Snap% Move Log Copy%

lvol0 new\_vg owi-a- 52.00M

newvgsnap1 new\_vg swi-a- 8.00M lvol0 0.20

**Note**

Because the snapshot increases in size as the origin volume changes, it is important to monitor the percentage of the snapshot volume regularly with the lvs command to be sure it does not fill. A snapshot that is 100% full is lost completely, as write to unchanged parts of the originin would be unable to succeed without corrupting the snapshot.