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# Logical Volume Manager

## LVM

: redhat

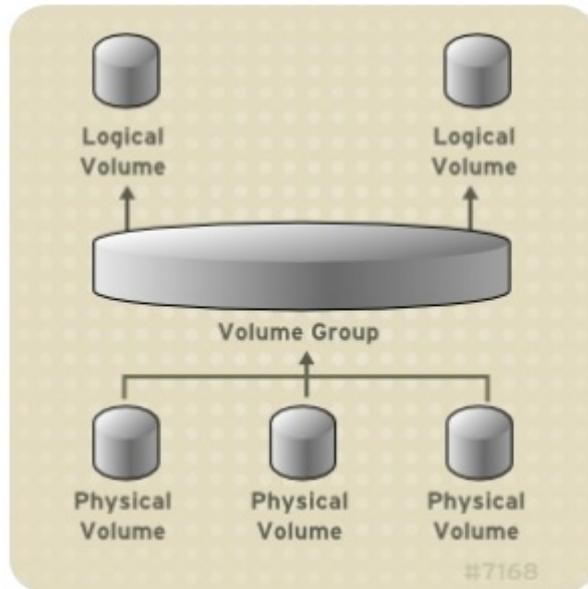


그림 1.1. LVM 논리 볼륨 구성 요소

## LVM

- physical Volume(PV)
- Volume Group(VG)
- Logical Volume(LV)

## Physical Volume

\* Size 10G

- 

```
[root@localhost ~]# fdisk -l
Disk /dev/sdb: 21.5 GB, 21474836480 bytes, 41943040 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x522ca171
```

Device	Boot	Start	End	Blocks	Id	System
/dev/sdb1		2048	20973567	10485760	8e	Linux LVM

•

```
[root@localhost ~]# pvcreate -h
pvcreate: Initialize physical volume(s) for use by LVM
```

```
pvcreate
  [--norestorefile]
  [--restorefile file]
  [-d|--debug]
  [-f[f]|--force [--force]]
  [-h|-?|--help]
  [--labelsector sector]
  [-M|--metadatatype 1|2]
  [--pvmetadatacopies #copies]
  [--bootloaderareasez BootLoaderAreaSize[bBsSkKmMgGtTpPeE]]
  [--metadatasize MetadataSize[bBsSkKmMgGtTpPeE]]
  [--dataalignment Alignment[bBsSkKmMgGtTpPeE]]
  [--dataalignmentoffset AlignmentOffset[bBsSkKmMgGtTpPeE]]
  [--setphysicalvolumesize PhysicalVolumeSize[bBsSkKmMgGtTpPeE]]
  [-t|--test]
  [-u|--uuid uuid]
  [-v|--verbose]
  [-y|--yes]
  [-Z|--zero {y|n}]
  [--version]
  PhysicalVolume [PhysicalVolume...]
```

```
[root@localhost ~]# pvcreate /dev/sdb1
Physical volume "/dev/sdb1" successfully created
```

•

```
[root@localhost ~]# pvs
PV          VG   Fmt  Attr PSize  PFree
/dev/sda2  rhel lvm2 a--  29.51g  0
/dev/sdb1           lvm2 a--  10.00g 10.00g
[root@localhost ~]# pvdisplay
--- Physical volume ---
PV Name           /dev/sda2
VG Name           rhel
PV Size           29.51 GiB / not usable 3.00 MiB
Allocatable       yes (but full)
PE Size           4.00 MiB
Total PE          7554
Free PE           0
```

```

Allocated PE          7554
PV UUID              Ub2hjb-BUuv-ffkk-ytkD-0p9D-3coH-GfcyLu
"/dev/sdb1" is a new physical volume of "10.00 GiB"
--- NEW Physical volume ---
PV Name              /dev/sdb1
VG Name
PV Size              10.00 GiB
Allocatable          NO
PE Size              0
Total PE             0
Free PE              0
Allocated PE         0
PV UUID              7WPUaF-0t00-KCfn-oHkB-vL7d-qMTE-2itl4i

```

## Volume Group

- Volume Group

```

[root@localhost ~]# vgcreate -h
vgcreate: Create a volume group

vgcreate
  [-A|--autobackup {y|n}]
  [--addtag Tag]
  [--alloc AllocationPolicy]
  [-c|--clustered {y|n}]
  [-d|--debug]
  [-h|--help]
  [-l|--maxlogicalvolumes MaxLogicalVolumes]
  [-M|--metadatatype 1|2]
  [--[vg]metadaticopies #copies]
  [-p|--maxphysicalvolumes MaxPhysicalVolumes]
  [-s|--physicalextentsize PhysicalExtentSize[bBsSkKmMgGtTpPeE]]
  [-t|--test]
  [-v|--verbose]
  [--version]
  [-y|--yes]
  [ PHYSICAL DEVICE OPTIONS ]
  VolumeGroupName PhysicalDevicePath [PhysicalDevicePath...]

```

## \* Volume Group

```

[root@localhost ~]# vgs
VG   #PV #LV #SN Attr   VSize  VFree
vg01  1   0   0 wz--n- 10.00g 10.00g

[root@localhost ~]# vgdisplay
--- Volume group ---

```

```
VG Name          vg01
System ID
Format           lvm2
Metadata Areas   1
Metadata Sequence No 1
VG Access        read/write
VG Status        resizable
MAX LV           0
Cur LV          0
Open LV          0
Max PV           0
Cur PV          1
Act PV           1
VG Size          10.00 GiB
PE Size          4.00 MiB
Total PE         2559
Alloc PE / Size  0 / 0
Free PE / Size   2559 / 10.00 GiB
VG UUID          o5TZxH-7BYe-dzpM-cZaZ-obwu-X2W5-lkgt7r
```

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Last update: **2015/06/30 05:49**

