

配置硬盘-LVM 新加盘扩展

1、首先在root用户下执行lvs，看有无反馈信息，有的说明系统采用了逻辑分区

2、lvs

```
root@localhost ~]# lvs
LV VG Attr LSize Pool Origin Data% Meta% Move Log Cpy%Sync Convert
root centos -wi-ao---- 45.21g
swap centos -wi-ao---- 4.00g
```

2、联系管理员添加需要大小的磁盘

3、执行partprobe或者重启机器，让系统重新扫描磁盘信息。执行fdisk -l查看

4、fdisk -l

```
[root@localhost ~]# fdisk -l

Disk /dev/sda: 53.7 GB, 53687091200 bytes, 104857600 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: 0x000af559

   Device Boot      Start         End      Blocks    Id  System
/dev/sda1  *         2048     1640447       819200    83   Linux
/dev/sda2             1640448    104857599     51608576    8e   Linux LVM

Disk /dev/sdb: 53.7 GB, 53687091200 bytes, 104857600 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: 0x80aa32f3

   Device Boot      Start         End      Blocks    Id  System
/dev/sdb1             2048     104857599     52427776    83   Linux

Disk /dev/sdc: 53.7 GB, 53687091200 bytes, 104857600 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 /dev/mapper/centos-root: 48.5 GB, 48549068800 bytes, 94822400 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 /dev/mapper/centos-swap: 4294 MB, 4294967296 bytes, 8388608 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
```

4、对新加载的磁盘进行分区，并修改分区格式为lvm

```
[root@localhost ~]# fdisk /dev/sdc
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x2045c15a.

Command (m for help): n
Partition type:
   p   primary (0 primary, 0 extended, 4 free)
   e   extended
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-104857599, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-104857599, default 104857599):
Using default value 104857599
Partition 1 of type Linux and of size 50 GiB is set

Command (m for help): t
Selected partition 1
Hex code (type L to list all codes): 8e
Changed type of partition 'Linux' to 'Linux LVM'

Command (m for help): w
The partition table has been altered!

Calling ioctl() to re-read partition table.
Syncing disks.
```

5、查看当前物理卷，执行pvs

创建新的物理卷，执行pvcreate

```
[root@localhost ~]# pvs
PV          VG      Fmt  Attr PSize  PFree
/dev/sda2   centos  lvm2 a--  49.21g    0
[root@localhost ~]# pvcreate /dev/sdc1
Physical volume "/dev/sdc1" successfully created.
[root@localhost ~]# pvs
PV          VG      Fmt  Attr PSize   PFree
/dev/sda2   centos  lvm2 a--  49.21g    0
/dev/sdc1    centos  lvm2 ---  <50.00g <50.00g
```

6、查看当前卷组信息，执行vgs

增加原卷组大小，执行vgextend

```

[root@localhost ~]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
centos  1   2   0 wz--n- 49.21g    0
[root@localhost ~]# vgextend centos /dev/sdc1
Volume group "centos" successfully extended
[root@localhost ~]# vgs
VG      #PV #LV #SN Attr   VSize  VFree
centos  2   2   0 wz--n- 99.21g <50.00g
[root@localhost ~]#

```

7、查看要扩充的逻辑卷相关信息，执行lvs

给需要的逻辑卷扩容，执行lvextend

lvs

lvextend --resize -L +49.8G /dev/centos/root

```

[root@localhost ~]# lvs
LV VG      Attr      LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
root centos -wi-a- 45.21g
swap centos -wi-a- 4.00g
[root@localhost ~]# lvextend --resize -L +49.8G /dev/centos/
/dev/centos/root /dev/centos/swap
[root@localhost ~]# lvextend --resize -L +49.8G /dev/centos/root
Rounding size to boundary between physical extents: 49.80 GiB.
Size of logical volume centos/root changed from 45.21 GiB (11575 extents) to <95.02 GiB (24324 extents).
Logical volume centos/root successfully resized.
resize2fs 1.42.9 (28-Dec-2013)
Filesystem at /dev/mapper/centos-root is mounted on /; on-line resizing required
old_desc_blocks = 6, new_desc_blocks = 12
The filesystem on /dev/mapper/centos-root is now 24907776 blocks long.
[root@localhost ~]# lvs
LV VG      Attr      LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
root centos -wi-a- <95.02g
swap centos -wi-a- 4.00g

```