

<b>DRBD</b>	<b>LVM</b>	.....	3
		.....	3



# DRBD LVM

: <https://mantech.jira.com/wiki/pages/viewpage.action?pagelid=130777162>

DRBD on LVM DRBD가 Backing Device LVM(Logical Volume Manager) LV(Logical Volume) . LVM on DRBD DRBD가 Backing Device Hard Disk Device( , sda# ) , DRBD LVM PV(Physical Volume)

DRBD가 Backing Device LVM LV (DRBD on LVM) , resize  
 DRBD Backing Device 가 .  
 가 , DRBD meta data DRBD device  
 . Secondary Node 가 (lvextend , drbdadm resize) LV

LVM LV Backing Device DRBD  
 'DRBD2', r1 MCCC . LV 'DRBD1', 1G 2G  
 가 , DRBD . )  
 /etc/drbd.conf .

```
resource r1 {
protocol C;
disk {
on-io-error detach;
}
on DRBD1 {
device /dev/drbd0;
disk /dev/vg1/lv1;
address 100.100.110.1:7791;
flexible-meta-disk internal;
}
on DRBD2 {
device /dev/drbd0;
disk /dev/vg1/lv1;
address 100.100.110.2:7791;
flexible-meta-disk internal;
}
}
```

## LVM

### LVM

```
--- Volume group ---
VG Name vg1
System ID
Format lvm2
Metadata Areas 1
Metadata Sequence No 2
VG Access read/write
VG Status resizable
MAX LV 0
Cur LV 1
Open LV 0
Max PV 0
Cur PV 1
Act PV 1
VG Size 3.00 GiB
PE Size 4.00 MiB
Total PE 767
Alloc PE / Size 256 / 1.00 GiB
Free PE / Size 511 / 2.00 GiB
VG UUID a4AlxN-1MPk-lAJ0-0JJH-tTDz-QlFv-he1TpI

--- Logical volume ---
LV Name /dev/vg1/lv1
VG Name vg1
LV UUID kwmHaH-b0dX-w3D2-Ktcq-CuZ8-u944-37NCNc
LV Write Access read/write
LV Status available
# open 0
LV Size 1.00 GiB
Current LE 256
Segments 1
Allocation inherit
Read ahead sectors auto
- currently set to 256
Block device 253:3

--- Physical volumes ---
PV Name /dev/sdb
PV UUID Fda1SR-ckDD-xk1J-5g0t-7pKU-f18N-IM7oyT
PV Status allocatable
Total PE / Free PE 767 / 511
```

1. DRBD Device가 LV Backing Device ,

LV

LV

2. DRBD1            Online    LV            1G    2G            .

```
[root@DRBD1 ~]# lvextend -L 2G /dev/vg1/lv1
```

3. DRBD1                    LV            .

```
[root@DRBD1 ~]# lvdisplay /dev/vg1/lv1
--- Logical volume ---
LV Name                /dev/vg1/lv1
VG Name                vg1
LV UUID                kwmHaH-b0dX-w3D2-Ktcq-CuZ8-u944-37NCNc
LV Write Access        read/write
LV Status               available
# open                 0
LV Size                2.00 GiB
Current LE             512
Segments               1
Allocation              inherit
Read ahead sectors     auto
- currently set to    256
Block device           253:3
```

4. DRBD2            LV            1G    2G            .

```
[root@DRBD2 ~]# lvextend -L 2G /dev/vg1/lv1
```

5. DRBD2                    LV            .

```
[root@DRBD2 ~]# lvdisplay /dev/vg1/lv1
--- Logical volume ---
LV Name                /dev/vg1/lv1
VG Name                vg1
LV UUID                c8h9wm-mSiC-Jhq8-i9BT-0Bd8-fuc6-DtJ3IY
LV Write Access        read/write
LV Status               available
# open                 0
LV Size                2.00 GiB
Current LE             512
Segments               1
Allocation              inherit
Read ahead sectors     auto
- currently set to    256
Block device           253:3
```

6. DRBD1 DRBD LV

```
[root@DRBD1 ~]# drbdadm resize r1
```

7. DRBD LV 가 , 가 resync가

```
[root@DRBD2 ~]# cat /proc/drbd
version: 8.3.13 (api:88/proto:86-96)
GIT-hash: 83ca112086600faacab2f157bc5a9324f7bd7f77 build by dag@Build64R6,
2012-05-07 11:52:13
0: cs:SyncSource ro:Primary/Secondary ds:UpToDate/Inconsistent C r-----
ns:365400 nr:0 dw:0 dr:374512 al:0 bm:22 lo:1 pe:29 ua:64 ap:0 ep:1 wo:b
oos:1735324
[==>.....] sync'ed: 17.4% (1735324/2097052)K
finish: 0:01:27 speed: 19,872 (17,224) K/sec
```

8. Resync가 , DRBD2 (Target) DRBD meta data

```
[root@DRBD2~]# drbdadm resize r1
```

9. LV 가 가 , DBRD가 Resize , 2G , 1G

```
[root@DRBD1 ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/vg_drbd1-lv_root
                15G  4.7G  9.0G  35% /
tmpfs           499M   88K  499M   1% /dev/shm
/dev/sda1       485M   33M  428M   7% /boot
/dev/drbd0     1008M   34M  924M   4% /test
```

10. DRBD1 resize2fs ,

```
[root@DRBD1 ~]# resize2fs /dev/drbd0
resize2fs 1.41.12 (17-May-2010)
Filesystem at /dev/drbd0 is mounted on /test; on-line resizing required
old desc_blocks = 1, new_desc_blocks = 1
Performing an on-line resize of /dev/drbd0 to 524288 (4k) blocks.
The filesystem on /dev/drbd0 is now 524288 blocks long.
```

## 11. DRBD1

```
[root@DRBD1 ~]# df -h
Filesystem                Size  Used Avail Use% Mounted on
/dev/mapper/vg_drbd1-lv_root
                          15G   4.7G   9.0G   35% /
tmpfs                      499M   88K   499M    1% /dev/shm
/dev/sda1                  485M   33M   428M    7% /boot
/dev/drbd0                 2.0G   34M   1.9G    2% /test
```

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