

LVM: Reduce an existing Logical Volume / Filesystem

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LVM: Reduce an existing Logical Volume / Filesystem

```
# Tested on RHEL 5, 6 & 7

# *** It is not possible to reduce an xfs filesystem so this recipe is valid
only for
#   ext2/ext3/ext4 filesystems.

# *** As of February 2016, new implementation of LVM didn't permit reducing a RAID
volume:
#   "Unable to reduce RAID LV - operation not implemented."

# Just in case, I recommended to backup up all important data before
reducing a F.S.

MNTPT=/testmntpt
SIZE=128M # Final size, in Mbytes. Without "M" to specify size in
Bytes.

VG=`mount | awk '{if ( $3 == "$MNTPT" ) print$1}' | cut -f4 -d '/' | cut -f1 -d
'_'`
LV=`mount | awk '{if ( $3 == "$MNTPT" ) print$1}' | cut -f4 -d '/' | cut -f2 -d
'_'`
```

```
df -h $MNTPT
```

```
Filesystem          Size  Used Avail Use% Mounted on
/dev/mapper/testvg-testlv
788M    17M   731M   3% /testmntpt
```

```
lvs | grep $LV
```

```
testlv    testvg mwi-aom-- 800.00m
testlv_mlog 100.00
```

```
umount $MNTPT
```

```
# First, we check the file system. 'e2fsck' is used to check the
ext2/ext3/ext4 family of
```

```
# file systems. '-f' option force checking even if the file system
seems clean. This step
```

```
# is mandatory.
```

```
e2fsck -f /dev/$VG/$LV
```

```
e2fsck 1.39 (29-May-2006)
```

```
Pass 1: Checking inodes, blocks, and sizes
```

```
Pass 2: Checking directory structure
```

```
Pass 3: Checking directory connectivity
```

```
Pass 4: Checking reference counts
```

```
Pass 5: Checking group summary information
```

```
/dev/testvg/testlv: 11/102592 files (9.1% non-contiguous),
7532/204800 blocks
```

```
# Then, we reduce the size of the filesystem
```

```
resize2fs -p /dev/$VG/$LV $SIZE
```

```
resize2fs 1.39 (29-May-2006)
```

```
Resizing the filesystem on /dev/testvg/testlv to 32768 (4k) blocks.
```

```
Begin pass 3 (max = 7)
```

```
Scanning inode table
```

```
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

```
The filesystem on /dev/testvg/testlv is now 32768 blocks long.
```

```
# And finally, we reduce the size of the logical volume
```

```
lvreduce -L $SIZE /dev/$VG/$LV
```

```
WARNING: Reducing active logical volume to 128.00 MB
```

```
THIS MAY DESTROY YOUR DATA (filesystem etc.)
```

```
Do you really want to reduce testlv? [y/n]: y
```

```
Reducing logical volume testlv to 128.00 MB
```

```
Logical volume testlv successfully resized
```

```
lvs | grep $LV
```

```
testlv testvg mwi-ao 128.00M testlv_mlog  
100.00
```

```
mount /dev/$VG/$LV $MNTPT
```

```
df -h $MNTPT
```

```
Filesystem          Size  Used Avail Use% Mounted on  
/dev/mapper/testvg-testlv  
                    127M  17M  104M  14% /testmntpt
```

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