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
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
   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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