

# RHCS6: Create a new Logical Volume / Global Filesystem 2 (GFS2)

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## RHCS: Create a new Logical Volume / Global Filesystem 2 (GFS2)

```
# Tested on RHEL 6

# I included this recipe as part of Red Hat Cluster Suite but, in
# fact, gfs2 is part of an
# optional package and not part of Red Hat Cluster Suite.

# In any case, to configure gfs2 subsystem we need to install Red Hat
# Cluster layer first

# Once Red Hat Cluster configured we'll follow following procedure
# (run commands on all
# nodes making up our cluster except when indicated):

# Required package installation:

yum install lvm2-cluster gfs2-utils

# Change LVM locking type to use built-in cluster locking on all
# cluster nodes. This
# can be done by either changing "locking-type" to '3' in
# /etc/lvm/lvm.conf configuration
```

file or by running:

```
lvmconf --enable-cluster
```

```
# Let's activate and start necessary services
```

```
chkconfig gfs2 on
```

```
chkconfig clvmd on
```

```
service clvmd start
```

```
service gfs2 start
```

```
# GFS2 construction...
```

```
# We'll run following commands only on one of the nodes in the  
cluster -----
```

```
DISK=/dev/sdc1
```

```
VG=gfsvg
```

```
LV=lv_gfs_test
```

```
MNTPT=/sharedfs
```

```
SIZE=5GB
```

```
JOURNALS=4 # The number of journals for gfs2_mkfs.
```

```
I recommend to
```

```
# use 2 journals per machine that will  
mount the fs.
```

```
CLUSTERNAME=mycluster # We will user "clustername" for the  
lock table field (-t)
```

```
# that should have the form  
clustername:fsname. Clustername must
```

```
# match that in cluster.conf; only  
members of the cluster are
```

```
# permitted to use this filesystem.
```

```
Fsname (1 to 16 characters)
```

```
# must be unique so I recommend to use
```

```
clustername:lv_name
```

```
pvcreate $DISK
```

```
vgcreate $VG $DISK
```

```
vgchange -cy $VG
```

```
lvcreate -n $LV -L $SIZE $VG
```

```
mkfs.gfs2 -j$JOURNALS -p lock_dlm -t $CLUSTERNAME:$LV /dev/$VG/$LV
```

```
# -----  
-----
```

```
# Update /etc/fstab and mount F.S. on every server forming the  
cluster
```

```
echo "/dev/$VG/$LV    $MNTPT        gfs2        defaults    0 0" >>  
/etc/fstab
```

```
mkdir $MNTPT
```

```
mount $MNTPT
```

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