

Procedimiento para aumentar espacio en los filesystem

Cómo aumentar espacio en los filesystem

A continuación, desarrollaremos los pasos a seguir para la aumentar espacio en los filesystem de nuestra MV.

1. Entrar al disco donde está el espacio libre (siempre de preferencia debe estar en el **sda**)

```
[root@Opmantek-Syslog ~]# cfdisk /dev/sda
```

2. Seleccionar el **Free Space, New** y dar **Enter**

```
cfdisk (util-linux-ng 2.17.2)

Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

-----
Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot       Pri/Log      Free Space    1.05          *
sda1      Primary    Linux ext3    524.29        *
sda2      Primary    Linux LVM     42424.34      *
sda2      Pri/Log    Free Space    171798.70     *
-----

[ Help ] [ New ] [ Print ] [ Quit ] [ Units ] [ Write ]
```

3. Seleccionar **Primary** y dar **Enter**

```
[Primary] [Logical] [Cancel ]

Create a new primary partition
```

4. Colocar el espacio que usarás para esa partición en **MB** y dar **Enter**

```
Size (in MB): 153600
```

5. Seleccionar **Beginning** y dar **Enter**

```
[Beginning] [ End ] [ Cancel ]

Add partition at beginning of free space
```

6. Una vez creada la partición, seleccionar **Type** y dar **Enter**

```

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Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot       Pri/Log      Free Space    1.05         *
sda2      Primary    Linux ext3    524.29        *
sda3      Primary    Linux LVM     42424.34      *
          Primary    Linux        153598.88     *
          Pri/Log    Free Space    18199.82      *

[ Bootable ] [ Delete ] [ Help ] [ Maximize ] [ Print ] [ Quit ] [ Type ] [ Units ] [ Write ]

Change the filesystem type (DOS, Linux, OS/2 and so on)

```

- 7. Escribir **8E** para darle tipo **Linux LVM** y dar **Enter**

```

Enter filesystem type: 8E

```

- 8. Repetir el proceso con el **Free Space** que queda, desde el paso 2

```

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Heads: 255 Sectors per Track: 63 Cylinders: 26108

Name      Flags      Part Type    FS Type      [Label]      Size (MB)
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sda1      Boot       Pri/Log      Free Space    1.05         *
sda2      Primary    Linux ext3    524.29        *
sda3      Primary    Linux LVM     42424.34      *
          Primary    Linux LVM     153598.88     *
          Pri/Log    Free Space    18199.82      *

[ Help ] [ New ] [ Print ] [ Quit ] [ Units ] [ Write ]

Create new partition from free space

```

```

[Primary] [Logical] [Cancel ]

Create a new primary partition

```

```

Size (in MB): 18199.81

```

```

cfdisk (util-linux-ng 2.17.2)

Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot       Primary     Linux ext3    524.29
sda2      Primary    Primary     Linux LVM     42424.34
sda3      Primary    Primary     Linux LVM     153598.88
sda4      Primary    Primary     Linux LVM     18199.82

[ Bootable ] [ Delete ] [ Help ] [ Maximize ] [ Print ] [ Quit ] [ Type ] [ Units ] [ Write ]

Change the filesystem type (DOS, Linux, OS/2 and so on)

```

```

Enter filesystem type: 8E

```

9. Una vez creadas las dos particiones, seleccionar **Write** y das **Enter**

```

cfdisk (util-linux-ng 2.17.2)

Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot       Primary     Linux ext3    524.29
sda2      Primary    Primary     Linux LVM     42424.34
sda3      Primary    Primary     Linux LVM     153598.88
sda4      Primary    Primary     Linux LVM     18199.82

[ Bootable ] [ Delete ] [ Help ] [ Maximize ] [ Print ] [ Quit ] [ Type ] [ Units ] [ Write ]

Write partition table to disk (this might destroy data)

```

10. Escribimos **yes** y presionamos **Enter**

```

cfdisk (util-linux-ng 2.17.2)

Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot       Primary     Linux ext3    524.29
sda2      Primary    Primary     Linux LVM     42424.34
sda3      Primary    Primary     Linux LVM     153598.88
sda4      Primary    Primary     Linux LVM     18199.82

Are you sure you want to write the partition table to disk? (yes or no): yes

Warning!! This may destroy data on your disk!

```

11. Hemos terminado, para salir, seleccionamos **Quit** y damos **Enter**

```

cfdisk (util-linux-ng 2.17.2)

Disk Drive: /dev/sda
Size: 214748364800 bytes, 214.7 GB
Heads: 255 Sectors per Track: 63 Cylinders: 26108

-----
Name      Flags      Part Type    FS Type      [Label]      Size (MB)
-----
sda1      Boot      Primary     Linux ext3    524.29       *
sda2      Primary   Primary     Linux LVM     42424.34     *
sda3      Primary   Primary     Linux LVM     153598.88    *
sda4      Primary   Primary     Linux LVM     18199.82     *
-----

[ Bootable ] [ Delete ] [ Help ] [ Maximize ] [ Print ] [ Quit ] [ Type ] [ Units ] [ Write ]

Quit program without writing partition table

```

12. Para comprobar, podemos ejecutar un **fdisk -l** y veremos las particiones creadas en **sda**

```

[root@Opmantek-Syslog ~]# fdisk -l

Disk /dev/sda: 214.7 GB, 214748364800 bytes
255 heads, 63 sectors/track, 26108 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x0008cec3

   Device Boot      Start         End      Blocks    Id  System
/dev/sda1  *           1           64      512000    83  Linux
Partition 1 does not end on cylinder boundary.
/dev/sda2             64        5222      41430016    8e  Linux LVM
/dev/sda3          5222       23896     149998905    8e  Linux LVM
/dev/sda4       23896      26109     17773255    8e  Linux LVM

```

13. Ahora, ejecutamos el siguiente procedimiento con **sda3**

partx: para añadir las particiones que hemos creado

```

[root@Opmantek-Syslog ~]# partx -a /dev/sda
BLKPG: Device or resource busy
error adding partition 1
BLKPG: Device or resource busy
error adding partition 2
[root@Opmantek-Syslog ~]# partx -a /dev/sda
BLKPG: Device or resource busy
error adding partition 1
BLKPG: Device or resource busy
error adding partition 2
BLKPG: Device or resource busy
error adding partition 3
BLKPG: Device or resource busy
error adding partition 4

```

pvccreate: creamos un volumen físico de la partición sda3 que creamos

```
[root@Opmantek-Syslog ~]# pvcreate /dev/sda3  
  
Physical volume "/dev/sda3" successfully  
created
```

vgextend: extendemos el volumen del grupo "vg_nmis64_data"

```
[root@Opmantek-Syslog ~]# vgextend vg_nmis64_data /dev/sda3  
  
Volume group "vg_nmis64_data" successfully extended
```

lvextend: reasignamos espacio en el volumen lógico "lv_data"

```
[root@Opmantek-Syslog ~]# lvextend -l 100%VG /dev/vg_nmis64_data/lv_data  
  
Size of logical volume vg_nmis64_data/lv_data changed from 40.00 GiB (10239 extents) to 183.04 GiB  
(46859 extents).  
  
Logical volume lv_data successfully resized.
```

resize2fs: redimensionamos el espacio de /dev/vg_nmis64_data/lv_data para que se le asigne el tamaño que le dimos a sda3

```
[root@Opmantek-Syslog ~]# resize2fs /dev/vg_nmis64_data/lv_data  
resize2fs 1.41.12 (17-May-2010)  
  
Filesystem at /dev/vg_nmis64_data/lv_data is mounted on /data; on-line resizing required  
old desc_blocks = 3, new_desc_blocks = 12  
  
Performing an on-line resize of /dev/vg_nmis64_data/lv_data to 47983616 (4k) blocks.  
  
The filesystem on /dev/vg_nmis64_data/lv_data is now 47983616 blocks long.
```

14. Ejecutamos el mismo procedimiento, pero ahora con **sda4**

pvccreate: creamos un volumen físico de la partición sda4 que creamos

```
[root@Opmantek-Syslog ~]# pvcreate /dev/sda4  
  
Physical volume "/dev/sda4" successfully  
created
```

vgextend: extendemos el volumen del grupo "vg_nmis64"

```
[root@Opmantek-Syslog ~]# vgextend vg_nmis64 /dev/sda4  
  
Volume group "vg_nmis64" successfully extended
```

lvextend: reasignamos espacio en el volumen lógico "lv_var"

```
[root@Opmantek-Syslog ~]# lvextend -l 100%VG /dev/vg_nmis64/lv_var
```

Size of logical volume vg_nmis64/lv_var changed from 19.53 GiB (5000 extents) to 36.48 GiB (9338 extents).

Logical volume lv_var successfully resized.

resize2fs: redimensionamos el espacio de dev/vg_nmis64/lv_var para que se le asigne el tamaño que le dimos a sda3

```
[root@Opmantek-Syslog ~]# resize2fs /dev/vg_nmis64/lv_var
resize2fs 1.41.12 (17-May-2010)
Filesystem at /dev/vg_nmis64/lv_var is mounted on /var; on-line resizing required
old desc_blocks = 2, new_desc_blocks = 3
Performing an on-line resize of /dev/vg_nmis64/lv_var to 9562112 (4k) blocks.
The filesystem on /dev/vg_nmis64/lv_var is now 9562112 blocks long.
```

15. Para comprobar que nuestros filesystems ya tienen el espacio que nosotros asignamos, basta con hacer un **df -h** y lo podremos ver

```
[root@Opmantek-Syslog ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/mapper/vg_nmis64-lv_root
                16G   2.1G   13G   14% /
tmpfs           937M    0  937M    0% /dev/shm
/dev/sdal       477M   38M  414M    9% /boot
/dev/mapper/vg_nmis64_data-lv_data
                181G   391M   171G    1% /data
/dev/mapper/vg_nmis64-lv_var
                36G   293M   34G    1% /var
```