## Métodos de Creacion de 'PV' en LVM2

--> Disponemos de un 'VG' con espacio suficiente como comprobamos:

[root@CentOS ~]# **vgs**

```
  VG         #PV #LV #SN Attr   VSize  VFree
  vg_centos    1   2   0 wz--n- 14,51g    0
  volumen01    3   2   0 wz--n- 14,98g 6,97g
```

--> Crearemos 2 'PV' de 2 GB cada uno que denominaremos: '**pv01**', y '**pv02**' respectivamente por los dos métodos posibles: directamente especificando los GB. , o por cálculo de Pe's (extensiones).

**Método-1 (opción '-L') :**

[root@CentOS ~]# **lvcreate -L 2GB -n pv01 /dev/mapper/volumen01**
  Logical volume "pv01" created

[root@CentOS ~]# lvs

```
  LV      VG         Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  lv_root vg_centos -wi-ao---- 13,01g
  lv_swap vg_centos -wi-ao----  1,50g
  lvol0   volumen01 -wi-ao----  8,00g
  lvol1   volumen01 -wi-ao----  4,00m
  pv01    volumen01 -wi-a-----  2,00g
```

**Método-2 (opción '-l'):**

--> Extracto de página man para 'lvcreate':

> .....
> *-l, --extents LogicalExtentsNumber[%{VG|PVS|FREE|ORIGIN}]*
> *Gives the number of logical extents to allocate for the new logical volume. The total number of physical extents allocated*
> *will be greater than this, for example, if the volume is mirrored. The number can also be expressed as a percentage of the*
> *total space in the Volume Group with the suffix %VG, as a percentage of the remaining free space in the Volume Group with the*
> *suffix %FREE, as a percentage of the remaining free space for the specified PhysicalVolume(s) with the suffix %PVS, or (for a*
> *snapshot) as a percentage of the total space in the Origin Logical Volume with the suffix %ORIGIN (i.e. 100%ORIGIN provides*
> *space for the whole origin). When expressed as a percentage, the number is treated as an approximate upper limit for the total*
> *number of physical extents to be allocated (including extents used by any mirrors, for example).*
> .....

--> Mostramos información del Volúmen para comprobar espacio tamaño de la extensión por defecto:

[root@CentOS ~]# **vgdisplay /dev/mapper/volumen01**

```
  --- Volume group ---
```

```
  VG Name               volumen01
  System ID
  Format                lvm2
  Metadata Areas        3
  Metadata Sequence No  6
  VG Access             read/write
  VG Status             resizable
  MAX LV                0
  Cur LV                3
  Open LV               2
  Max PV                0
  Cur PV                3
  Act PV                3
  VG Size               14,98 GiB
  PE Size               4,00 MiB
  Total PE              3834
  Alloc PE / Size       2561 / 10,00 GiB
  Free  PE / Size       1273 / 4,97 GiB
  VG UUID               wJs6ee-1T57-vcLF-tiX6-rcAV-7qZy-sfsubJ
```

--> Realizamos los cálculos, teniendo en cuenta que:

```
PE Size               4,00 MiB
Total PE              3834
Free  PE / Size       1273 / 4,97 GiB
```

**2GB x 1024 = 2.048 ==>> 2.048/4= 512 -> Necesitamos por tanto 512 PE's**

--> Utilizamos la cálculadora '**bc**' de la 'Free Software Foundation' para hacer todo:

```
[root@CentOS ~]# bc

bc 1.06.95
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006 Free Software Foundation, Inc.
This is free software with ABSOLUTELY NO WARRANTY.
For details type `warranty'.
2*1024/4
512
```

--> Creamos el 'PV':

```
[root@CentOS ~]# lvcreate -l 512 -n pv02 /dev/mapper/volumen01
  Logical volume "pv02" created

[root@CentOS ~]# lvs
  LV      VG         Attr       LSize  Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  lv_root vg_centos -wi-ao---- 13,01g
  lv_swap vg_centos -wi-ao----  1,50g
  lvol0   volumen01 -wi-ao----  8,00g
  lvol1   volumen01 -wi-ao----  4,00m
  pv01    volumen01 -wi-a-----  2,00g
  pv02    volumen01 -wi-a-----  2,00g
```

```
[root@CentOS ~]# vgdisplay /dev/mapper/volumen01
  --- Volume group ---
  VG Name               volumen01
  System ID
  Format                lvm2
  Metadata Areas        3
  Metadata Sequence No  7
  VG Access             read/write
  VG Status             resizable
  MAX LV                0
  Cur LV                4
  Open LV               2
  Max PV                0
  Cur PV                3
  Act PV                3
  VG Size               14,98 GiB
  PE Size               4,00 MiB
  Total PE              3834
  Alloc PE / Size       3073 / 12,00 GiB
  Free  PE / Size       761 / 2,97 GiB
  VG UUID               wJs6ee-1T57-vcLF-tiX6-rcAV-7qZy-sfsubJ

[root@CentOS ~]# vgs /dev/mapper/volumen01
  VG        #PV #LV #SN Attr   VSize  VFree
  volumen01   3   4   0 wz--n- 14,98g 2,97g
```