

Tarea

Tema: Instalación Centos 7 minimal/
Logical y volumen Groups

Academia Tecnología de la Universidad
de Costa Rica.

Curso:

Administración de Servidores GNU/Linux
Nivel 2.

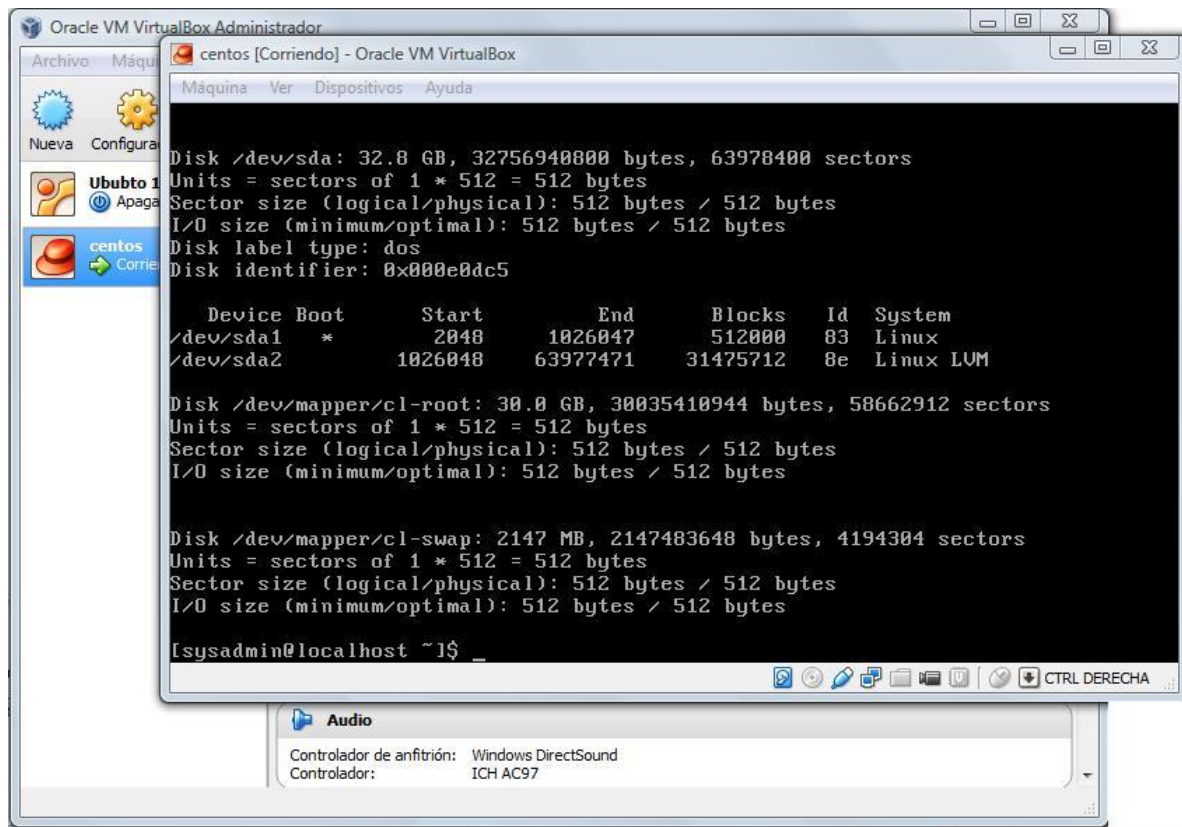
Elaborado por:

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San José, Costa Rica.

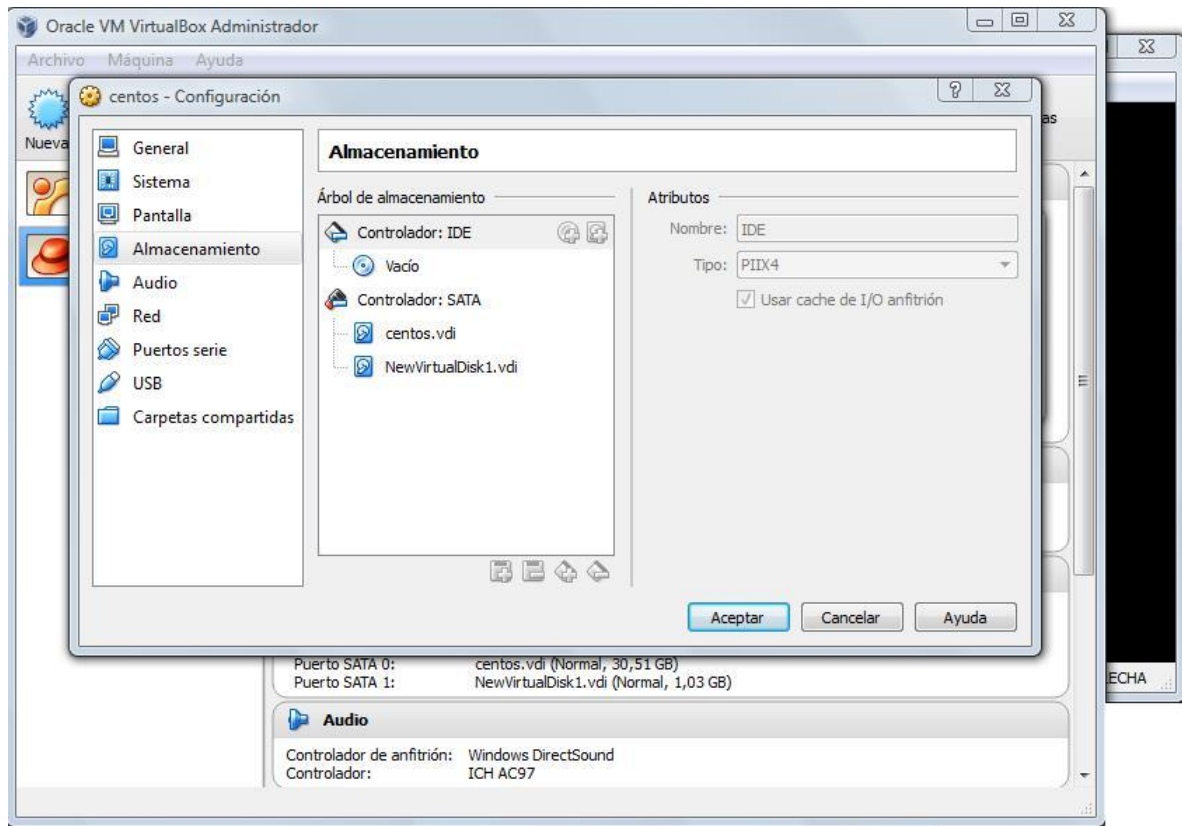
Julio, 2016.

Instalación Centos 7 minimal 32 bits con LVM:



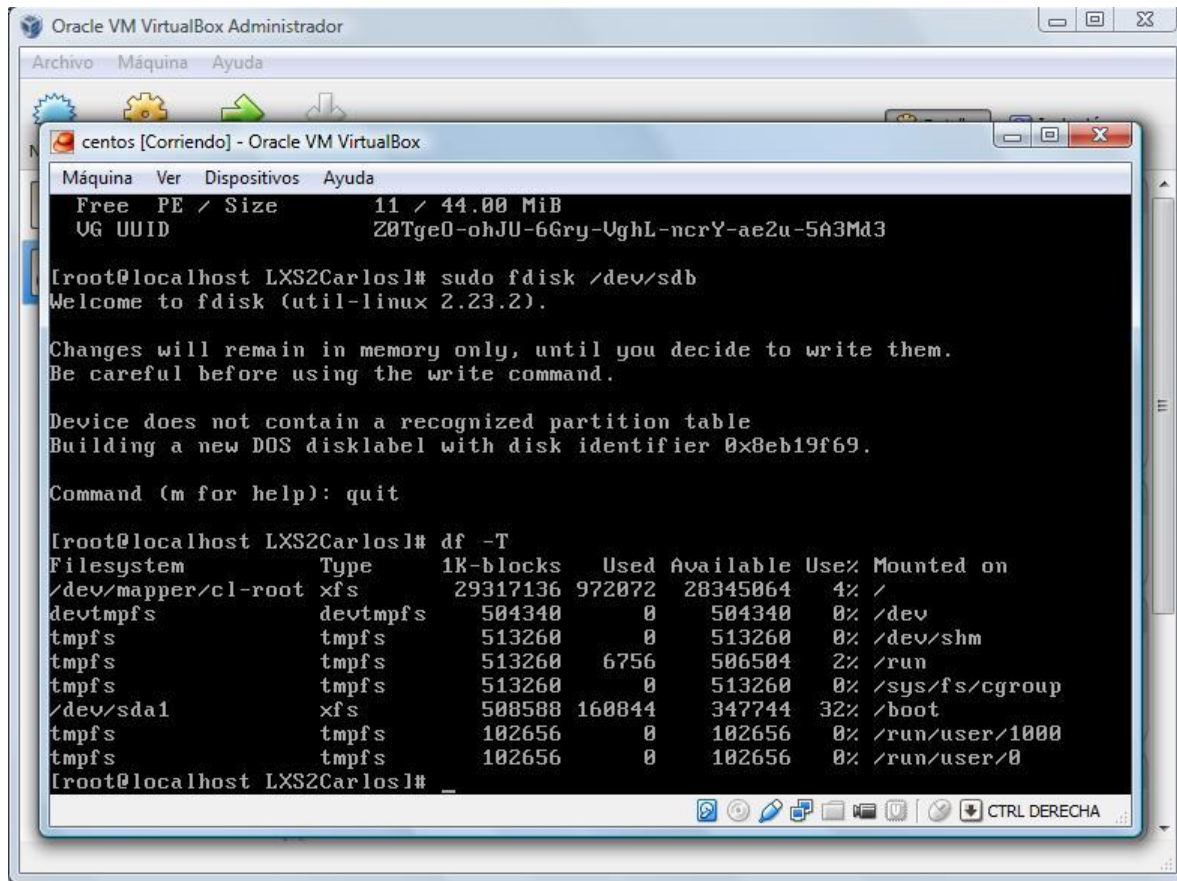
Disco de 1 GB agregado usando la opción de configuraciones de Oracle VM Virtual Vox:

Nota: el nuevo disco posee como nombre "New VistualDisk"



Extensión del Volumen Group de Root:

Identificación de los lvm montados:



Oracle VM VirtualBox Administrador

centos [Corriendo] - Oracle VM VirtualBox

Máquina Ver Dispositivos Ayuda

```
Free PE / Size      11 / 44.00 MiB
VG UUID             Z0Tge0-ohJU-6Gry-UghL-ncrY-ae2u-5A3Md3

[root@localhost LXS2Carlos]# sudo fdisk /dev/sdb
Welcome to fdisk (util-linux 2.23.2).

Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.

Device does not contain a recognized partition table
Building a new DOS disklabel with disk identifier 0x0eb19f69.

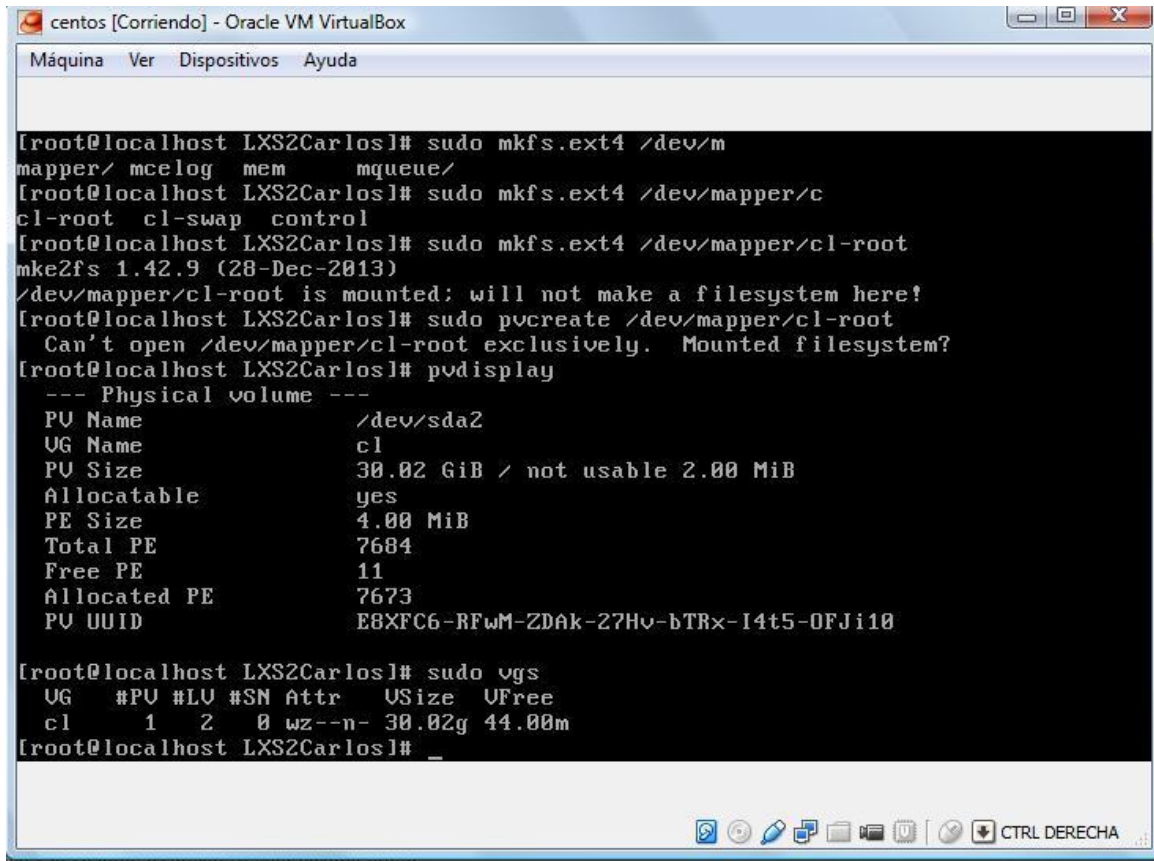
Command (m for help): quit

[root@localhost LXS2Carlos]# df -T
Filesystem            Type      1K-blocks    Used Available Use% Mounted on
/dev/mapper/cl-root   xfs        29317136  972072  28345064   4% /
devtmpfs              devtmpfs   504340      0      504340   0% /dev
tmpfs                 tmpfs      513260      0      513260   0% /dev/shm
tmpfs                 tmpfs      513260     6756      506504   2% /run
tmpfs                 tmpfs      513260      0      513260   0% /sys/fs/cgroup
/dev/sda1              xfs        508588  160844      347744  32% /boot
tmpfs                 tmpfs      102656      0      102656   0% /run/user/1000
tmpfs                 tmpfs      102656      0      102656   0% /run/user/0

[root@localhost LXS2Carlos]# _
```

CTRL DERECHA

Physical Volume:



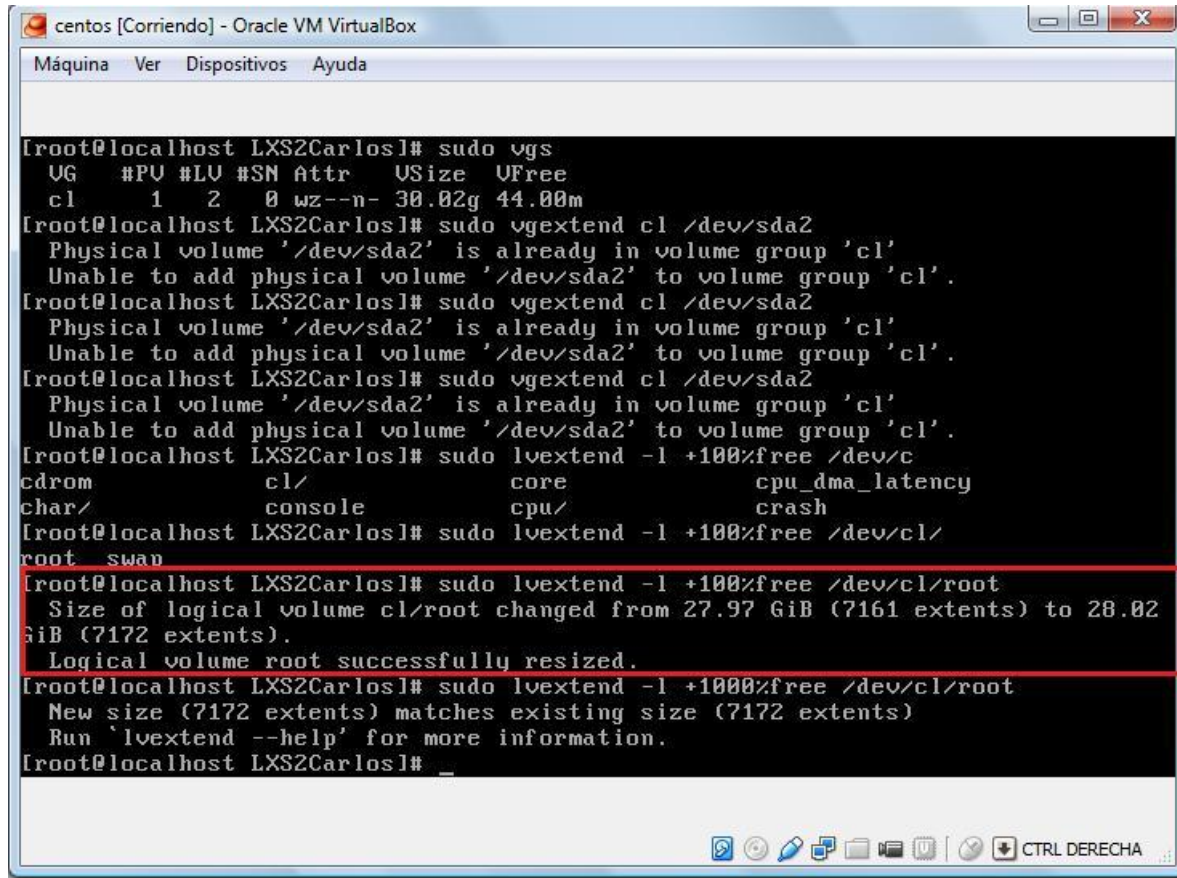
```
centos [Corriendo] - Oracle VM VirtualBox
Máquina Ver Dispositivos Ayuda

[root@localhost LXS2Carlos]# sudo mkfs.ext4 /dev/mapper/mcelog mem mqueue/
[root@localhost LXS2Carlos]# sudo mkfs.ext4 /dev/mapper/cl-root cl-swap control
[root@localhost LXS2Carlos]# sudo mkfs.ext4 /dev/mapper/cl-root
mke2fs 1.42.9 (28-Dec-2013)
/dev/mapper/cl-root is mounted; will not make a filesystem here!
[root@localhost LXS2Carlos]# sudo pvcreate /dev/mapper/cl-root
Can't open /dev/mapper/cl-root exclusively. Mounted filesystem?
[root@localhost LXS2Carlos]# pvdisplay
--- Physical volume ---
PV Name                /dev/sda2
VG Name                cl
PV Size                30.02 GiB / not usable 2.00 MiB
Allocatable            yes
PE Size                4.00 MiB
Total PE               7684
Free PE                11
Allocated PE           7673
PV UUID                E8XFC6-RFwM-ZDAk-27Hv-bTRx-I4t5-0FJi10

[root@localhost LXS2Carlos]# sudo vgs
VG   #PV #LU #SN Attr   USize UFree
cl   1  2   0 wz--n- 30.02g 44.00m
[root@localhost LXS2Carlos]# _
```

Extensión del Volumen Group Root:

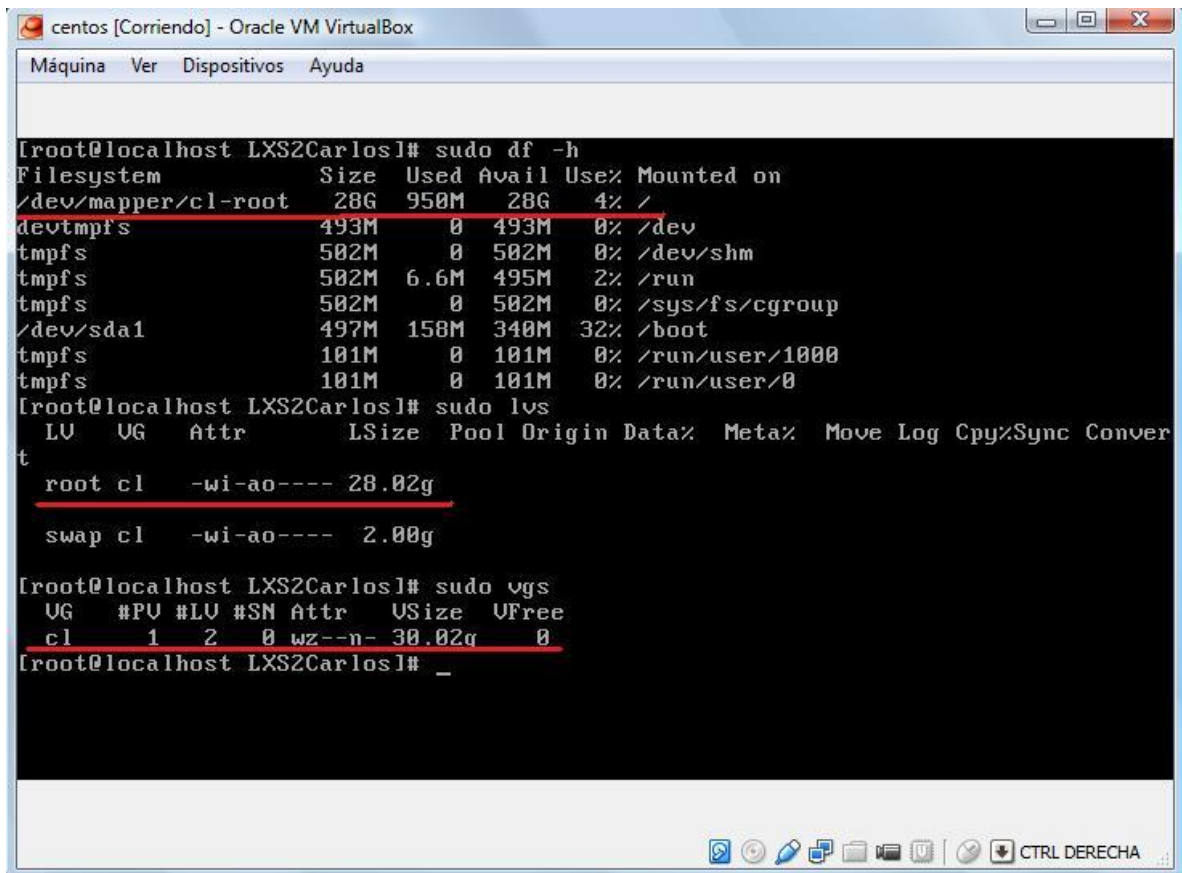
Nota: Se ejecutó el siguiente comando: `sudo lvextend -l +100%FREE /dev/cl/root`



```
centos [Corriendo] - Oracle VM VirtualBox
Máquina Ver Dispositivos Ayuda

[root@localhost LXS2Carlos]# sudo vgs
  VG   #PV #LV #SN Attr   VSize  VFree
  cl    1  2  0 wz--n- 30.02g 44.00m
[root@localhost LXS2Carlos]# sudo vgextend cl /dev/sda2
Physical volume '/dev/sda2' is already in volume group 'cl'
Unable to add physical volume '/dev/sda2' to volume group 'cl'.
[root@localhost LXS2Carlos]# sudo vgextend cl /dev/sda2
Physical volume '/dev/sda2' is already in volume group 'cl'
Unable to add physical volume '/dev/sda2' to volume group 'cl'.
[root@localhost LXS2Carlos]# sudo vgextend cl /dev/sda2
Physical volume '/dev/sda2' is already in volume group 'cl'
Unable to add physical volume '/dev/sda2' to volume group 'cl'.
[root@localhost LXS2Carlos]# sudo lvextend -l +100%free /dev/c
cdrom          cl/          core          cpu_dma_latency
char/         console      cpu/          crash
[root@localhost LXS2Carlos]# sudo lvextend -l +100%free /dev/cl/
root  swap
[root@localhost LXS2Carlos]# sudo lvextend -l +100%free /dev/cl/root
Size of logical volume cl/root changed from 27.97 GiB (7161 extents) to 28.02
GiB (7172 extents).
Logical volume root successfully resized.
[root@localhost LXS2Carlos]# sudo lvextend -l +1000%free /dev/cl/root
New size (7172 extents) matches existing size (7172 extents)
Run 'lvextend --help' for more information.
[root@localhost LXS2Carlos]# _
```

Resultados:



The screenshot shows a terminal window titled 'centos [Corriendo] - Oracle VM VirtualBox'. The terminal output displays the results of three commands: 'df -h', 'ls', and 'vgs'. The 'df -h' command shows disk usage for various filesystems, with the root filesystem highlighted. The 'ls' command shows the details of the 'cl' logical volume. The 'vgs' command shows the details of the 'cl' volume group.

```
[root@localhost LXS2Carlos]# sudo df -h
Filesystem                Size      Used Avail Use% Mounted on
/dev/mapper/cl-root        28G       950M    28G   4% /
devtmpfs                   493M       0    493M   0% /dev
tmpfs                      502M       0    502M   0% /dev/shm
tmpfs                      502M   6.6M    495M   2% /run
tmpfs                      502M       0    502M   0% /sys/fs/cgroup
/dev/sda1                  497M    158M    340M  32% /boot
tmpfs                      101M       0    101M   0% /run/user/1000
tmpfs                      101M       0    101M   0% /run/user/0

[root@localhost LXS2Carlos]# sudo ls
LU  VG   Attr      LSize   Pool Origin Data%  Meta%  Move Log Cpy%Sync Conver
t
root cl   -wi-ao---- 28.02g
swap cl   -wi-ao---- 2.00g

[root@localhost LXS2Carlos]# sudo vgs
VG   #PV #LV #SN Attr   VSize VFree
cl    1  2   0 wz--n- 30.02g  0

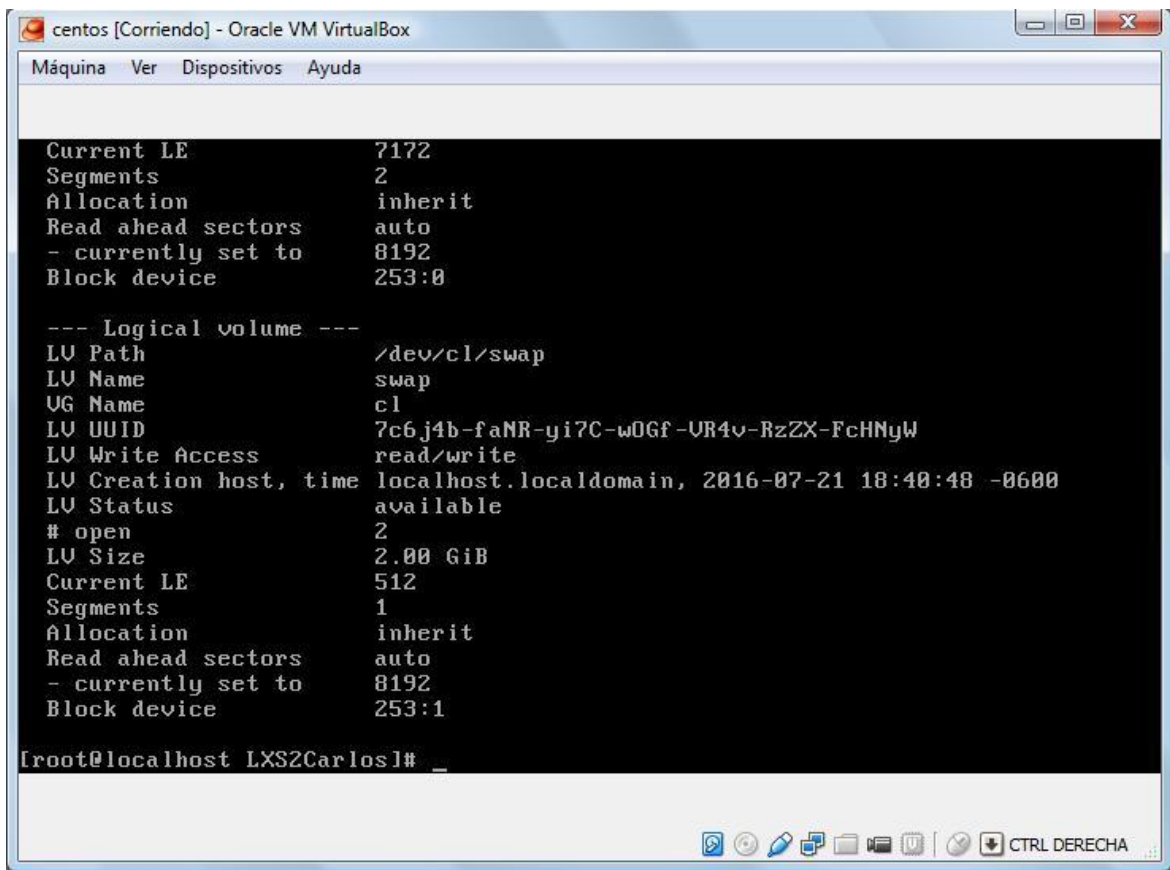
[root@localhost LXS2Carlos]# _
```

```
centos [Corriendo] - Oracle VM VirtualBox
Máquina Ver Dispositivos Ayuda

Block device          253:1

[root@localhost LXS2Carlos]# vgsdisplay
--- Volume group ---
UG Name                c1
System ID
Format                 lvm2
Metadata Areas         1
Metadata Sequence No   4
UG Access               read/write
UG Status               resizable
MAX LV                 0
Cur LV                 2
Open LV                 2
Max PU                 0
Cur PU                 1
Act PU                 1
UG Size                 30.02 GiB
PE Size                 4.00 MiB
Total PE                7684
Alloc PE / Size         7684 / 30.02 GiB
Free PE / Size           0 / 0
UG UUID                 Z0Tge0-ohJU-6Gry-UghL-ncrY-ae2u-5A3Md3

[root@localhost LXS2Carlos]# _
```

The screenshot shows a terminal window titled "centos [Corriendo] - Oracle VM VirtualBox". The window has a menu bar with "Máquina", "Ver", "Dispositivos", and "Ayuda". The terminal output displays the details of the current logical volume (LV) and a logical volume named "swap".

```
Current LE          7172
Segments           2
Allocation          inherit
Read ahead sectors  auto
- currently set to  8192
Block device        253:0

--- Logical volume ---
LV Path            /dev/cl/swap
LV Name            swap
VG Name            cl
LV UUID            7c6j4b-faNR-yi7C-w0Gf-UR4v-RzZX-FcHNyW
LV Write Access    read/write
LV Creation host, time localhost.localdomain, 2016-07-21 18:40:48 -0600
LV Status          available
# open             2
LV Size            2.00 GiB
Current LE         512
Segments           1
Allocation          inherit
Read ahead sectors  auto
- currently set to  8192
Block device        253:1

[root@localhost LXS2Carlos]#
```

The terminal window also shows a toolbar at the bottom with icons for various functions and a "CTRL DERECHA" button.

Referencias:

<https://rbgeek.wordpress.com/2013/01/27/how-to-extend-the-root-partition-in-lvm/>