

Actividad A5 – GONZALO OSCO HERNANDEZ

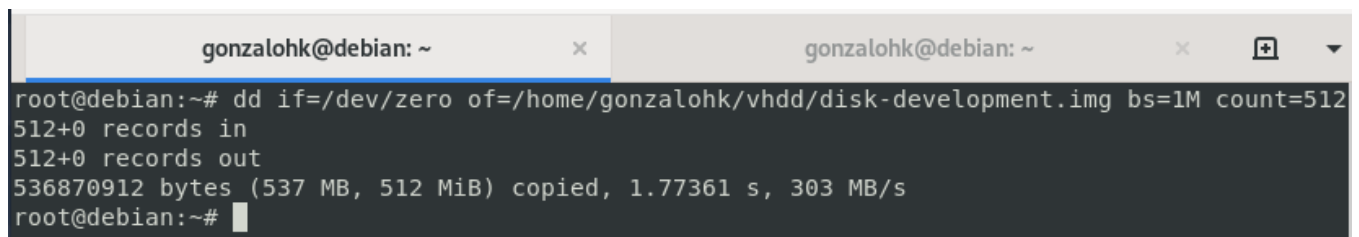
Crear un disco virtual de 1Gb y asociarlo a una VM.

Asociar un disco en frio y en caliente.

Creación del disco duro

Para el ejemplo crearemos un pequeño disco duro de 512mb con el siguiente comando.

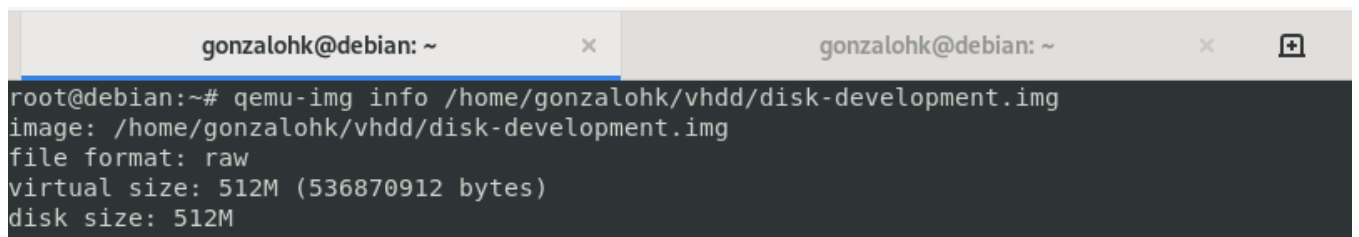
```
root@debian:~# dd if=/dev/zero of=/home/gonzalohk/vhdd/disk-development.img bs=1M count=512
```



```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:~# dd if=/dev/zero of=/home/gonzalohk/vhdd/disk-development.img bs=1M count=512
512+0 records in
512+0 records out
536870912 bytes (537 MB, 512 MiB) copied, 1.77361 s, 303 MB/s
root@debian:~#
```

Verificamos y obtenemos la información del disco.

```
qemu-img info /home/gonzalohk/vhdd/disk-development.img
```

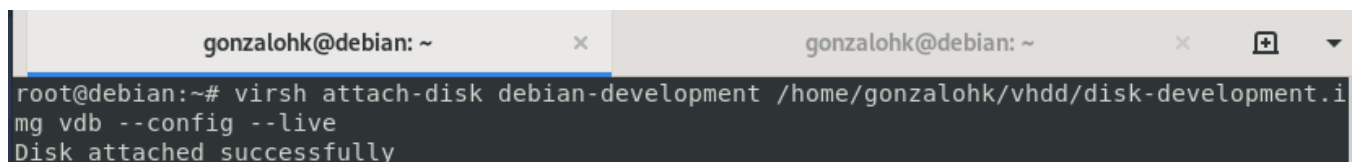


```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:~# qemu-img info /home/gonzalohk/vhdd/disk-development.img
image: /home/gonzalohk/vhdd/disk-development.img
file format: raw
virtual size: 512M (536870912 bytes)
disk size: 512M
root@debian:~#
```

Acople

Posterior a ello, acoplamos el nuevo disco duro a la máquina virtual denominada debían-development

```
root@debian:~# virsh attach-disk debian-development /home/gonzalohk/vhdd/disk-development.img vdb --config --live
```



```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:~# virsh attach-disk debian-development /home/gonzalohk/vhdd/disk-development.i
mg vdb --config --live
Disk attached successfully
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/home/vhdd# [ 7561.675955] pciehp 0000:00:02.6:pcie004: Slot(0-6): Attention button pressed
[ 7561.681861] pciehp 0000:00:02.6:pcie004: Slot(0-6) Powering on due to button press
[ 7561.686522] pciehp 0000:00:02.6:pcie004: Slot(0-6): Card present
[ 7561.689831] pciehp 0000:00:02.6:pcie004: Slot(0-6): Link Up
[ 7562.853893] pci 0000:07:00.0: BAR 4: assigned [mem 0xfde00000-0xfde03fff 64bit pref]
[ 7562.860478] pci 0000:07:00.0: BAR 1: assigned [mem 0xfc000000-0xfc000fff]
[ 7562.864352] pcieport 0000:00:02.6: PCI bridge to [bus 07]
[ 7562.867311] pcieport 0000:00:02.6: bridge window [io 0x7000-0x7fff]
[ 7562.872804] pcieport 0000:00:02.6: bridge window [mem 0xfc000000-0xfc1fffff]
[ 7562.878112] pcieport 0000:00:02.6: bridge window [mem 0xfde00000-0xfdf7ffff 64bit pref]
[ 7562.885235] virtio-pci 0000:07:00.0: enabling device (0000 -> 0002)
[ 7562.896589] virtio_blk virtio5: [vdb] 1048576 512-byte logical blocks (537 MB/512 MiB)
root@debian:/home/vhdd#
```

Verificamos el nuevo disco duro en la maquina virtual debian-development

```
root@debian:/home/vhdd# lsblk -a
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/home/vhdd# lsblk -a
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
vda         254:0    0   2G  0 disk
├─vda1      254:1    0   1.9G  0 part /
├─vda14     254:14   0    3M  0 part
└─vda15     254:15   0   124M  0 part /boot/efi
vdb         254:16   0   512M  0 disk
root@debian:/home/vhdd#
```

Particionamos

```
root@debian:/home/vhdd# fdisk /dev/vdb
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x + ▾
root@debian:/home/vhdd# sudo fdisk /dev/vdb

Welcome to fdisk (util-linux 2.33.1).
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.
Created a new DOS disklabel with disk identifier 0x8f59c039.

Command (m for help): n
Partition type
   p   primary (0 primary, 0 extended, 4 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-1048575, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-1048575, default 1048575):

Created a new partition 1 of type 'Linux' and of size 511 MiB.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
[ 7976.517205] vdb: vdb1
Syncing disks.
```

El acople fue satisfactoria.

Sin embargo, aun debemos particionar el disco duro.

```
root@debian:/# lsblk -a
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x + ▾
root@debian:/# lsblk -a
NAME        MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
vda         254:0    0    2G  0 disk
├─vda1      254:1    0   1.9G  0 part /
├─vda14     254:14   0     3M  0 part
└─vda15     254:15   0   124M  0 part /boot/efi
vdb         254:16   0   512M  0 disk
└─vdb1      254:17   0   511M  0 part
root@debian:/#
```

Formateamos

```
root@debian:/# mkfs.ext3 /dev/vdb1
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/# mkfs.ext3 /dev/vdb1
mke2fs 1.44.5 (15-Dec-2018)
Creating filesystem with 523264 1k blocks and 131072 inodes
Filesystem UUID: bec7cf11-a048-4368-b317-9b3424d0d478
Superblock backups stored on blocks:
    8193, 24577, 40961, 57345, 73729, 204801, 221185, 401409

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done
```

Montamos.

```
root@debian:/# mount -t ext3 /dev/vdb1 /home/projects
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/# mount -t ext3 /dev/vdb1 /home/projects
[ 8761.451988] EXT4-fs (vdb1): mounting ext3 file system using the ext4 subsystem
[ 8761.577422] EXT4-fs (vdb1): mounted filesystem with ordered data mode. Opts: (null)
```

Creamos archivos y carpetas para verificar el correcto funcionamiento.

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/home/projects# ls -l
total 15
drwx----- 2 root root 12288 Jun 11 01:36 lost+found
drwxr-xr-x 2 root root 1024 Jun 11 01:40 node
drwxr-xr-x 2 root root 1024 Jun 11 01:40 reactjs
-rw-r--r-- 1 root root 40 Jun 11 01:40 readme.md
```

Desmontamos.

```
root@debian:/# umount /dev/vdb1
```

Desacople

Posterior a ello, desacoplamos el disco duro de la maquina *debían-development*

```
root@debian:/home/gonzalohk/vhdd# virsh detach-disk debian-development
/home/gonzalohk/vhdd/disk-development.img --config --live
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/home/gonzalohk/vhdd# virsh detach-disk debian-development /home/gonzalohk/vhdd/disk-development.img --config --live
Disk detached successfully
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:/# [ 9258.428019] pciehp 0000:00:02.6:pcie004: Slot(0-6): Attention button pressed
[ 9258.431864] pciehp 0000:00:02.6:pcie004: Slot(0-6): Powering off due to button press
[ 9264.515019] pciehp 0000:00:02.6:pcie004: Slot(0-6): Link Up
[ 9264.518240] pciehp 0000:00:02.6:pcie004: Slot(0-6): No adapter
```

EXTRA - Acople a dos máquinas virtuales (*debian-development* y *debian-development-stg1*)

Para el acople a dos máquinas virtuales distintas adicionamos el parámetro **--mode shareable**

```
root@debian:~# virsh attach-disk debian-development-stg1 /home/gonzalohk/vhdd/disk-development.img vdb --config --live --mode shareable
```

```
gonzalohk@debian: ~ x gonzalohk@debian: ~ x gonzalohk@debian: ~ x +
root@debian:~# virsh attach-disk debian-development /home/gonzalohk/vhdd/disk-development.img vdb --config --live --mode shareable
Disk attached successfully

root@debian:~# virsh attach-disk debian-development-stg1 /home/gonzalohk/vhdd/disk-development-stg1.img vdb --config --live --mode shareable
Disk attached successfully
```

Montamos en ambas máquinas virtuales *debian-development* y *debian-development-stg1*.

```
root@debian:/home# mount -t ext3 /dev/vdb1 /home/projects
```

```
root@debian:/home# mount -t ext3 /dev/vdb1 /home/test
```

En ambas podemos ver los mismos archivos.

```
gonzalohk@debian: ~ x  gonzalohk@debian: ~ x  gonzalohk@debian: ~ x  + ▾
root@debian:/home/projects# ls -l
total 16
drwx----- 2 root root 12288 Jun 11 01:36 lost+found
drwxr-xr-x 2 root root 1024 Jun 11 01:40 node
drwxr-xr-x 2 root root 1024 Jun 11 01:40 reactjs
-rw-r--r-- 1 root root 40 Jun 11 01:40 readme.md
drwxr-xr-x 2 root root 1024 Jun 11 02:09 test-debian-stg1
root@debian:/home/projects#
```

```
gonzalohk@debian: ~ x  gonzalohk@debian: ~ x  gonzalohk@debian: ~ x  + ▾
root@debian:/home/test# ls -l
total 16
drwx----- 2 root root 12288 Jun 11 01:36 lost+found
drwxr-xr-x 2 root root 1024 Jun 11 01:40 node
drwxr-xr-x 2 root root 1024 Jun 11 01:40 reactjs
-rw-r--r-- 1 root root 40 Jun 11 01:40 readme.md
drwxr-xr-x 2 root root 1024 Jun 11 02:09 test-debian-stg1
root@debian:/home/test#
```

Sin embargo, si se crean nuevos archivos desde cualquier máquina virtual, estos no son visibles para la otra máquina virtual hasta que se vuelva a montar el disco duro.