












## 1. Creamos los discos.

Device	Summary
 Memory	1 GB
 Processors	1
 Hard Disk (SCSI)	20 GB
 Hard Disk 2 (SCSI)	102 MB
 Hard Disk 3 (SCSI)	102 MB
 CD/DVD (SATA)	Auto detect
 Network Adapter	Bridged (Automatic)
 Sound Card	Auto detect
 Printer	Present
 USB Controller	Present
 Display	Auto detect

## 2. sudo -i

```
alu2f@ubuntu:~$ sudo -i
[sudo] password for alu2f:
```

## 3. apt-get install mdadm

```
root@ubuntu:~# apt-get install mdadm
```

## 4. fdisk -l

```
Disk /dev/sdb: 106 MB, 106954752 bytes
64 heads, 32 sectors/track, 102 cylinders, total 208896 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x00000000

Disk /dev/sdb doesn't contain a valid partition table

Disk /dev/sdc: 106 MB, 106954752 bytes
64 heads, 32 sectors/track, 102 cylinders, total 208896 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk identifier: 0x00000000

Disk /dev/sdc doesn't contain a valid partition table
```

## 5. mdadm --create /dev/md0 --raid-devices=2 /dev/sdb /dev/sdc --level=raid1

```
root@ubuntu:~# mdadm --create /dev/md0 --raid-devices=2 /dev/sdb /dev/sdc --level=raid1
mdadm: Note: this array has metadata at the start and
may not be suitable as a boot device. If you plan to
store '/boot' on this device please ensure that
your boot-loader understands md/v1.x metadata, or use
--metadata=0.90
Continue creating array? yes
mdadm: Defaulting to version 1.2 metadata
mdadm: array /dev/md0 started.
```

## 6. fdisk /dev/md0

```
root@ubuntu:~# fdisk /dev/md0
Device contains neither a valid DOS partition table, nor Sun, SGI or OSF disklabel
Building a new DOS disklabel with disk identifier 0x5d5475b9.
Changes will remain in memory only, until you decide to write them.
After that, of course, the previous content won't be recoverable.

Warning: invalid flag 0x0000 of partition table 4 will be corrected by w(rite)

Command (m for help): n
Partition type:
   p   primary (0 primary, 0 extended, 4 free)
   e   extended
Select (default p): p
Partition number (1-4, default 1): 1
First sector (2048-208639, default 2048):
Using default value 2048
Last sector, +sectors or +size{K,M,G} (2048-208639, default 208639):
Using default value 208639
```

## 7. mkfs /dev/md0p1

**mkdir /mnt/raid1**

**mount /dev/md0p1 /mnt/raid1**

```
root@ubuntu:~# mkfs /dev/md0
mke2fs 1.42.9 (4-Feb-2014)
Filesystem label=
OS type: Linux
Block size=1024 (log=0)
Fragment size=1024 (log=0)
Stride=0 blocks, Stripe width=0 blocks
26104 inodes, 104320 blocks
5216 blocks (5.00%) reserved for the super user
First data block=1
Maximum filesystem blocks=67371008
13 block groups
8192 blocks per group, 8192 fragments per group
2008 inodes per group
Superblock backups stored on blocks:
    8193, 24577, 40961, 57345, 73729

Allocating group tables: done
Writing inode tables: done
Writing superblocks and filesystem accounting information: done
```

```
root@ubuntu:~# mkdir /mnt/raid1
```

```
root@ubuntu:~# mount /dev/md0 /mnt/raid1
```

8. `dd if=/dev/zero of=/mnt/raid1/fichero bs=512 count=100000`

`ls -l /mnt/raid1`

```
root@ubuntu:~# dd if=/dev/zero of=/mnt/raid1/fichero bs=512 count=100000
100000+0 records in
100000+0 records out
51200000 bytes (51 MB) copied, 0,25739 s, 199 MB/s
```

9. `mdadm /dev/md0 --fail /dev/sdb`

`cat /proc/mdstat`

`mdadm /dev/md0 --remove /dev/sdb`

`cat /proc/mdstat`

```
root@ubuntu:~# ls -l /mnt/raid1
total 50209
-rw-r--r-- 1 root root 51200000 oct 24 20:17 fichero
drwx----- 2 root root 12288 oct 24 19:52 lost+found
```

10. `mdadm --zero-superblock /dev/sdb`

`mdadm /dev/md0 --add /dev/sdb`

```
root@ubuntu:~# mdadm /dev/md0 --fail /dev/sdb
mdadm: set /dev/sdb faulty in /dev/md0
root@ubuntu:~# cat /proc/mdstat
Personalities : [raid1]
md0 : active raid1 sdc[1] sdb[0](F)
      104320 blocks super 1.2 [2/1] [_U]

unused devices: <none>
```

```
root@ubuntu:~# mdadm /dev/md0 --remove /dev/sdb
mdadm: hot removed /dev/sdb from /dev/md0
You have mail in /var/mail/root
root@ubuntu:~# cat /proc/mdstat
Personalities : [raid1]
md0 : active raid1 sdc[1]
      104320 blocks super 1.2 [2/1] [_U]

unused devices: <none>
```

11. `mdadm /dev/md0 --stop`

```
root@ubuntu:~# mdadm --zero-superblock /dev/sdb
root@ubuntu:~# mdadm /dev/md0 --add /dev/sdb
mdadm: added /dev/sdb
```

12. `mdadm --assemble --scan`

```
root@ubuntu:~# mdadm /dev/md0 --stop
mdadm: No action given for /dev/md0 in --misc mode
      Action options must come before device names
root@ubuntu:~# mdadm --assemble --scan
mdadm: No arrays found in config file or automatically
```