Oscar Ignacio Vásquez

Practica 1.

Para crear las particiones utilizamos fdisk.

Con n se crea una partición, con p se visualizan las particiones creadas.

```
oscar@oscar-ignacio:
$ sudo fdisk /dev/sdb

Welcome to fdisk (util-linux 2.31.1).
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 0xfc919a19.

Command (m for help):
```

```
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 (2048-4194303, default 2048):
Last sector, +sectors or +size{K,M,G,T,P} (2048-4194303, default 4194303): +500MB

Created a new partition 1 of type 'Linux' and of size 477 MiB.
```

```
Command (m for help): n
Partition type
   p   primary (1 primary, 0 extended, 3 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (2-4, default 2): 2
First sector (978944-4194303, default 978944):
Last sector, +sectors or +size{K,M,G,T,P} (978944-4194303, default 4194303): +500MB

Created a new partition 2 of type 'Linux' and of size 477 MiB.
```

```
Command (m for help): n
Partition type
   p   primary (2 primary, 0 extended, 2 free)
   e   extended (container for logical partitions)
Select (default p): p
Partition number (3,4, default 3):
First sector (1955840-4194303, default 1955840):
Last sector, +sectors or +size{K,M,G,T,P} (1955840-4194303, default 4194303): +500MB

Created a new partition 3 of type 'Linux' and of size 477 MiB.
```

```
Command (m for help): n
Partition type
   p   primary (3 primary, 0 extended, 1 free)
   e   extended (container for logical partitions)
Select (default e): e

Selected partition 4
First sector (2932736-4194303, default 2932736):
Last sector, +sectors or +size{K,M,G,T,P} (2932736-4194303, default 4194303): +500MB

Created a new partition 4 of type 'Extended' and of size 477 MiB.
```

Para modificar el tipo de partición se utiliza t, después L para listar los hexadecimales y seleccionar el adecuado, en este caso 82 para swap, 7 para NTFS/exFAT y 5 para Extended.

```
Command (m for help): t
Partition number (1-4, default 4): 2
Hex code (type L to list all codes): L

 0  Empty           24  NEC DOS         81  Minix / old Lin bf  Solaris
 1  FAT12           27  Hidden NTFS Win 82  Linux swap / So c1  DRDOS/sec (FAT-
 2  XENIX root      39  Plan 9          83  Linux           c4  DRDOS/sec (FAT-
 3  XENIX usr       3c  PartitionMagic  84  OS/2 hidden or  c6  DRDOS/sec (FAT-
 4  FAT16 <32M      40  Venix 80286     85  Linux extended  c7  Syrinx
 5  Extended        41  PPC PReP Boot   86  NTFS volume set da  Non-FS data
 6  FAT16           42  SFS             87  NTFS volume set db  CP/M / CTOS / .
 7  HPFS/NTFS/exFAT 4d  QNX4.x          88  Linux plaintext de  Dell Utility
 8  AIX             4e  QNX4.x 2nd part 8e  Linux LVM       df  BootIt
 9  AIX bootable    4f  QNX4.x 3rd part 93  Amoeba          e1  DOS access
 a  OS/2 Boot Manag 50  OnTrack DM      94  Amoeba BBT      e3  DOS R/O
 b  W95 FAT32       51  OnTrack DM6 Aux 9f  BSD/OS          e4  SpeedStor
 c  W95 FAT32 (LBA) 52  CP/M            a0  IBM Thinkpad hi ea  Rufus alignment
 e  W95 FAT16 (LBA) 53  OnTrack DM6 Aux a5  FreeBSD         eb  BeOS fs
 f  W95 Ext'd (LBA) 54  OnTrackDM6      a6  OpenBSD         ee  GPT
10  OPUS            55  EZ-Drive        a7  NeXTSTEP        ef  EFI (FAT-12/16/
11  Hidden FAT12    56  Golden Bow      a8  Darwin UFS      f0  Linux/PA-RISC b
12  Compaq diagnost 5c  Priam Edisk     a9  NetBSD          f1  SpeedStor
14  Hidden FAT16 <3 61  SpeedStor       ab  Darwin boot     f4  SpeedStor
16  Hidden FAT16    63  GNU HURD or Sys af  HFS / HFS+      f2  DOS secondary
17  Hidden HPFS/NTF 64  Novell Netware  b7  BSDI fs         fb  VMware VMFS
18  AST SmartSleep  65  Novell Netware  b8  BSDI swap       fc  VMware VMKCORE
1b  Hidden W95 FAT3 70  DiskSecure Mult bb  Boot Wizard hid fd  Linux raid auto
1c  Hidden W95 FAT3 75  PC/IX           bc  Acronis FAT32 L fe  LANstep
1e  Hidden W95 FAT1 80  Old Minix       be  Solaris boot    ff  BBT
Hex code (type L to list all codes):
```

```
Command (m for help): p
Disk /dev/sdb: 2 GiB, 2147483648 bytes, 4194304 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
Disklabel type: dos
Disk identifier: 0xdf5e3823

Device     Boot   Start     End Sectors  Size Id Type
/dev/sdb1          2048  978943  976896  477M 83 Linux
/dev/sdb2        978944 1955839  976896  477M 82 Linux swap / Solaris
/dev/sdb3       1955840 2932735  976896  477M  7 HPFS/NTFS/exFAT
/dev/sdb4       2932736 3909631  976896  477M  5 Extended

Command (m for help):
```

Se utiliza w para guardar los cambios.

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

oscar@oscar-ignacio:
$
```

Se utiliza el comando sudo dd if=/dev/sdb count=1 | hd para analizar el contenido del MBR.

```
oscar@oscar-ignacio:
$ sudo dd if=/dev/sdb count=1 | hd
1+0 records in
1+0 records out
00000000  00 00 00 00 00 00 00 00  00 00 00 00 00 00 00 00  |................|
*
000001b0  00 00 00 00 00 00 00 00  23 38 5e df 00 00 00 20  |........#8^.... |
000001c0  21 00 83 ee 32 3c 00 08  00 00 00 e8 0e 00 00 ee  |!...2<..........|
000001d0  33 3c 82 be 05 79 00 f0  0e 00 00 e8 0e 00 00 be  |3<...y..........|
000001e0  06 79 07 8d 17 b6 00 d8  1d 00 00 e8 0e 00 00 8d  |.y..............|
000001f0  18 b6 05 5c 29 f3 00 c0  2c 00 00 e8 0e 00 55 aa  |...\)...,.....U.|
512 bytes copied, 0.000626114 s, 818 kB/s
00000200
oscar@oscar-ignacio:
$
```

00 20

21 00 83 ee 32 3c 00 08 00 00 00 e8 0e 00

Partición 1

Boot = 00 no existe sector de arranque

Partición de inicio CHS (Cylinder-Head-Sector)

20 21 00

Tipo = 83 Linux

Partición final CHS (Cylinder-Head-Sector)

ee 32 3c

Sector de inicio (sin formato)

00 08 00 00

Tamaño de la partición en hexadecimal

00 0e e8 00

00 ee

33 3c 82 be 05 79 00 f0 0e 00 00 e8 0e 00

Partición 2

Boot = 00 no existe sector de arranque

Partición de inicio CHS (Cylinder-Head-Sector)

ee 33 3c

Tipo = 82 Linux SWAP

Partición final CHS (Cylinder-Head-Sector)

be 05 79

Sector de inicio (sin formato)

00 f0 0e 00

Tamaño de la partición en hexadecimal

00 0e e8 00

00 be

06 79 07 8d 17 b6 00 d8 1d 00 00 e8 0e 00

Partición 3

Boot = 00 no existe sector de arranque

Partición de inicio CHS (Cylinder-Head-Sector)

be 06 79

Tipo = 07 NFS/exFAT

Partición final CHS (Cylinder-Head-Sector)

8d 17 6b

Sector de inicio (sin formato)

00 d8 1d 00

Tamaño de la partición en hexadecimal

00 0e e8 00

00 8d

18 b6 05 5c 29 f3 00 c0 2c 00 00 e8 0e 00 55 aa

Partición 4

Boot = 00 no existe sector de arranque

Partición de inicio CHS (Cylinder-Head-Sector)

8d 18 b6

Tipo = 05 Extended

55 aa = Final de MBR

Partición final CHS (Cylinder-Head-Sector)

5c 29 f3

Sector de inicio (sin formato)

00 c0 2c 00

Tamaño de la partición en hexadecimal

00 0e e8 00

Referencias:

http://blog.hakzone.info/posts-and-articles/bios/analysing-the-master-boot-record-mbr-with-a-hex-editor-hex-workshop/