

# Administración de Sistemas y Redes

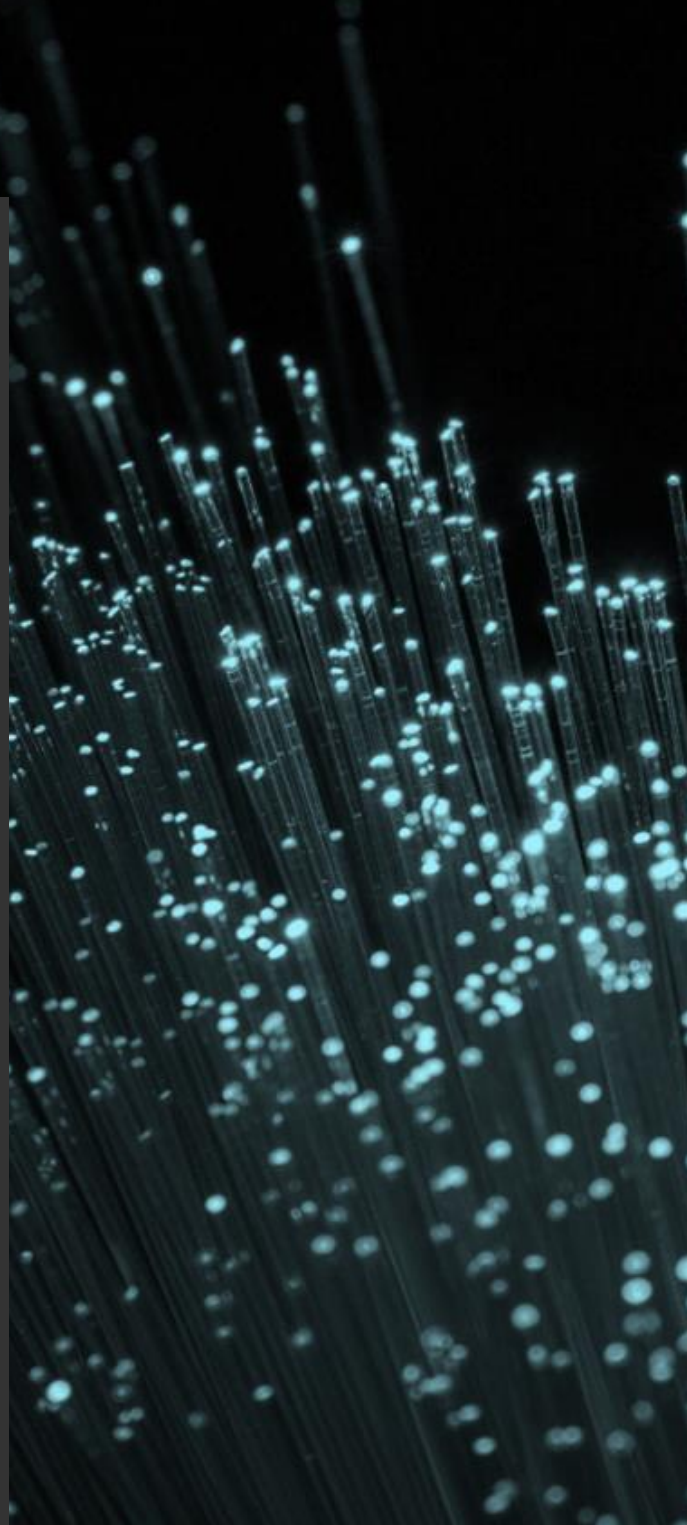
## Práctica 3

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15 FEBRERO

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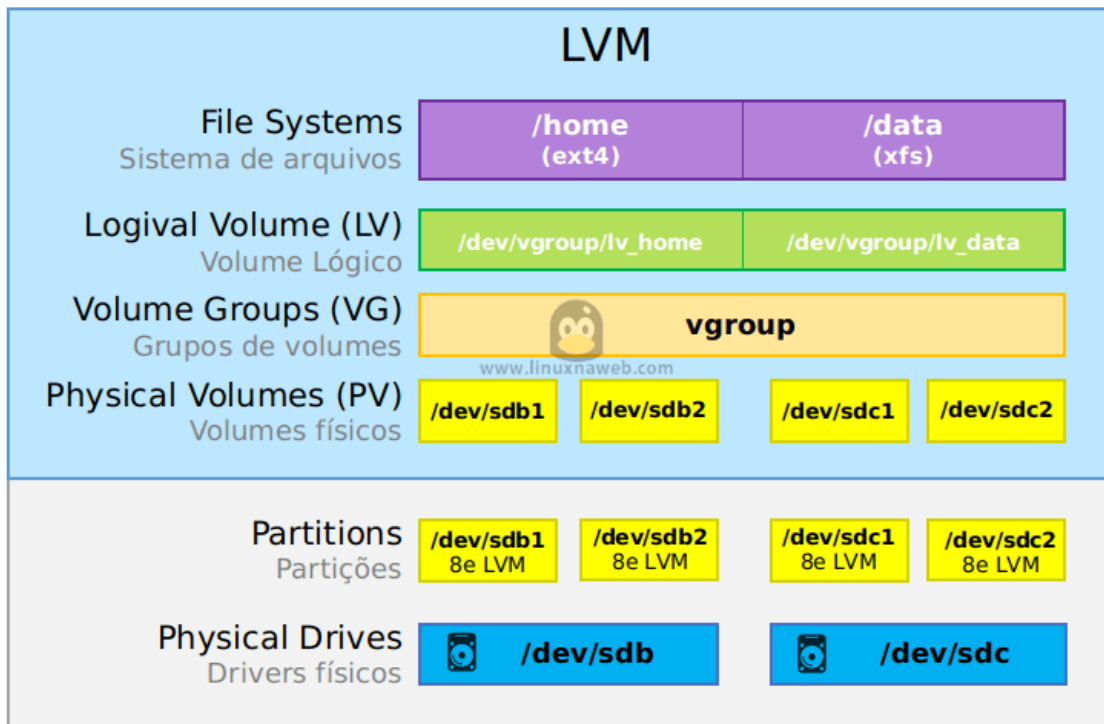
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LVM en Linux (pequeño esquema para la práctica):



## A. Recuperación básica de errores durante el inicio

Si examinamos /boot/loader/entries

```
[U0285176@linux ~] 1-2: ls /boot/loader/entries/
c6560302311f4340935c6d4492d1f926-0-rescue.conf
c6560302311f4340935c6d4492d1f926-5.14.0-162.12.1.el9_1.x86_64.conf
c6560302311f4340935c6d4492d1f926-5.14.0-162.6.1.el9_1.x86_64.conf
[U0285176@linux ~] 1-3:
```

Editamos el más reciente:

```
[U0285176@linux ~] 1-3: ls -l /boot/loader/entries/
total 12
-rw-r--r--. 1 root root 488 feb  1 18:31 c6560302311f4340935c6d4492d1f926-0-rescue.conf
-rw-r--r--. 1 root root 435 feb  1 18:41 c6560302311f4340935c6d4492d1f926-5.14.0-162.12.1.el9_1.x86_64.conf
-rw-r--r--. 1 root root 432 feb  1 18:31 c6560302311f4340935c6d4492d1f926-5.14.0-162.6.1.el9_1.x86_64.conf
[U0285176@linux ~] 1-4: vim /boot/loader/entries/c6560302311f4340935c6d4492d1f926-5.14.0-162.12.1.el9_1.x86_64.conf _
```

Retocamos vmlinuz por vmlinuz:

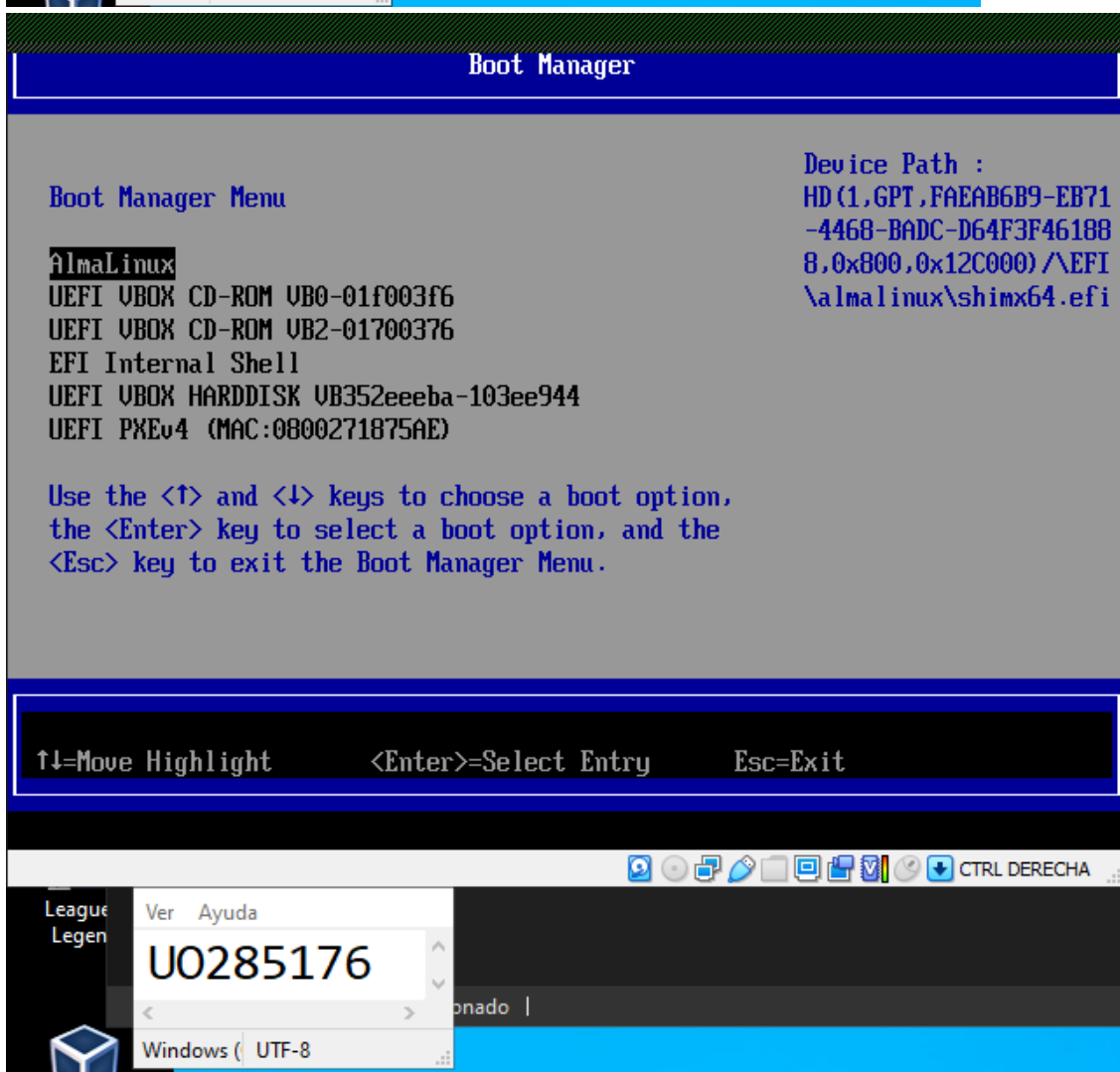
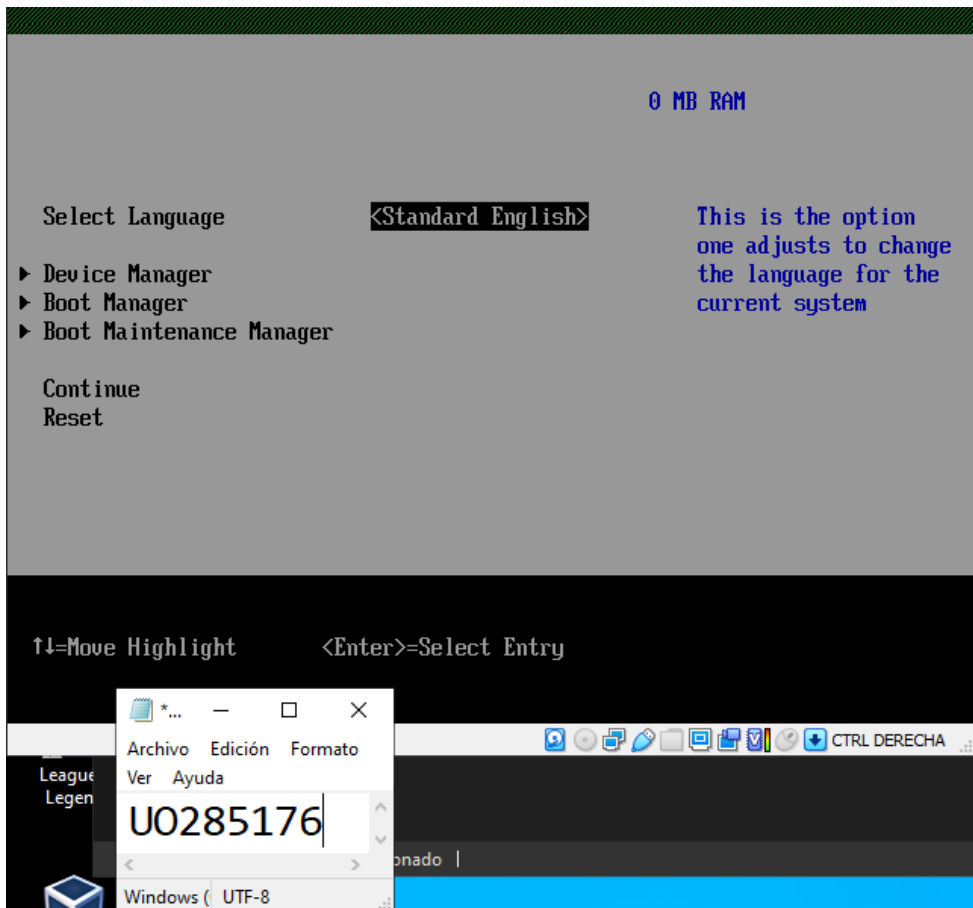
```
version 5.14.0-162.12.1.el9_1.x86_64
linux /vmlinuz-5.14.0-162.12.1.el9_1.x86_64
initrd /initramfs-5.14.0-162.12.1.el9_1.x86_64.img
options root=/dev/mapper/almalinux-root ro crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M resume=/dev/mapper/almalinux-swa
.lv=almalinux/root rd.lvm.lv=almalinux/swap
grub_users $grub_users
grub_arg --unrestricted
grub_class almalinux
_
```

Comprobamos que no arranca:

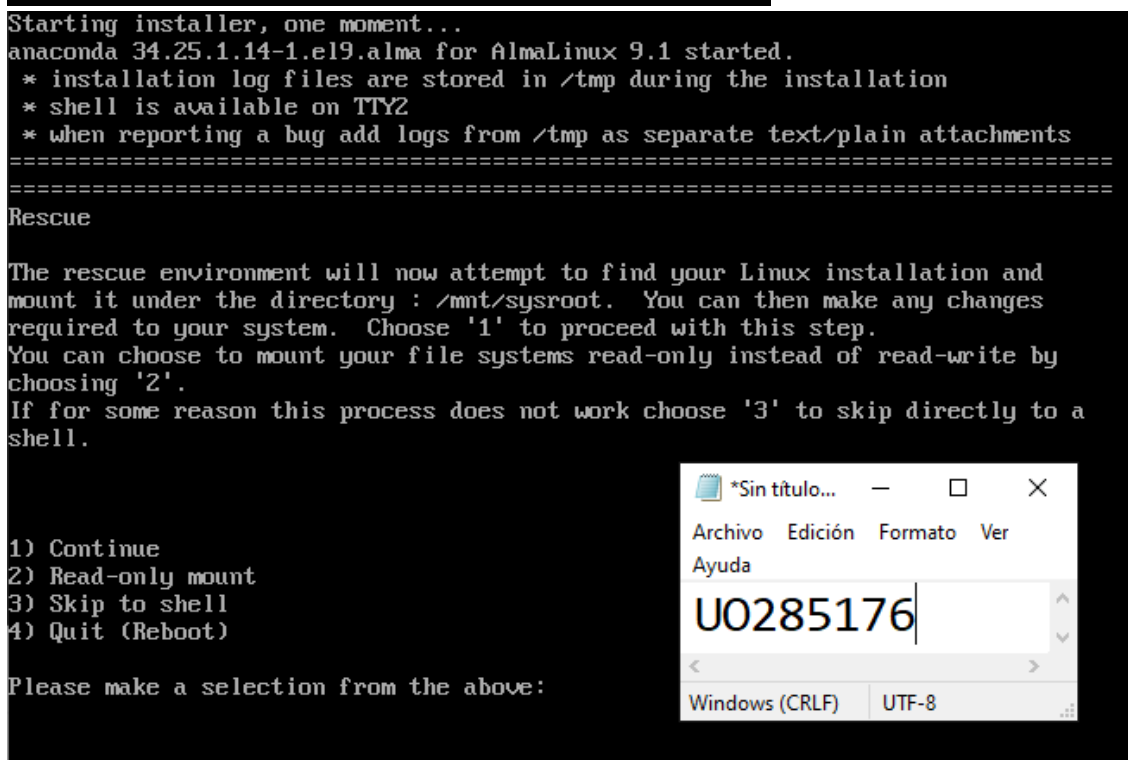
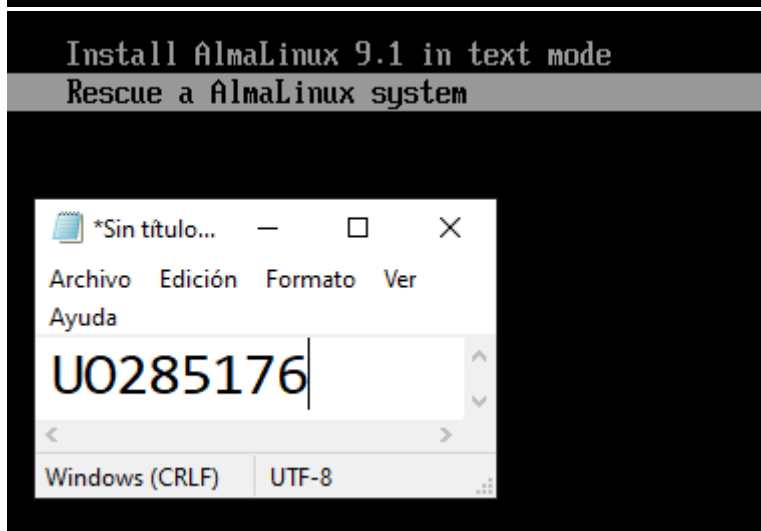
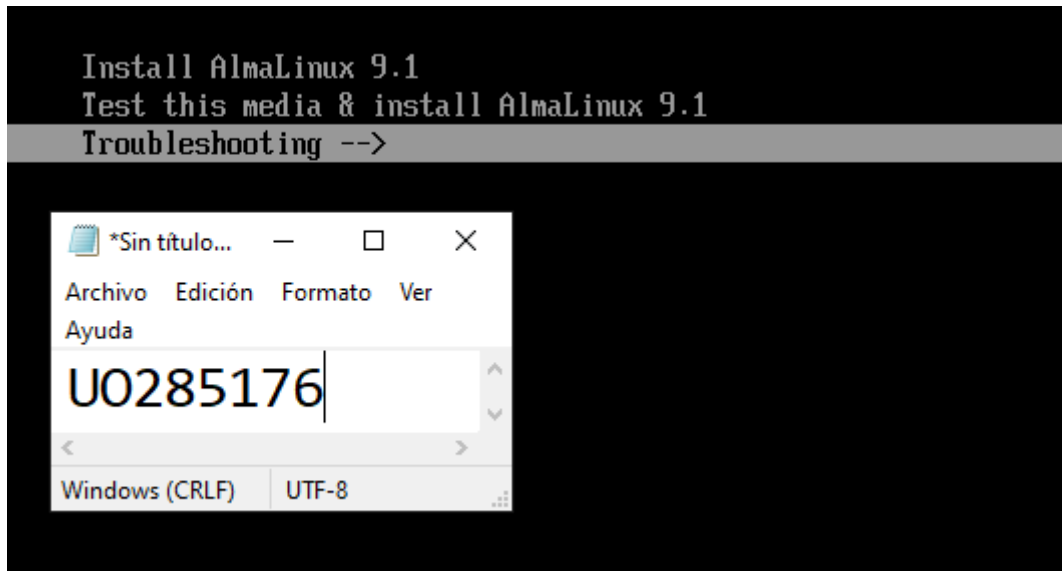
```
error: ../../grub-core/fs/fshelp.c:257:file '/vmlinuz-5.14.0-162.12.1.el9_1.x86_64' not found.
error: ../../grub-core/loader/i386/efi/linux.c:259:you need to load the kernel first.
```

```
Press any key to continue..._
```

Arrancamos en modo de recuperación:



Insertamos la iso de AlmaLinux en VBox:



Le damos a continue y obtenemos una Shell, en la que hacemos un `$ ls /mnt/sysroot` para ver el contenido que se está reparando:

```
Starting installer, one moment...
anaconda 34.25.1.14-1.el9.alma for AlmaLinux 9.1 started.
* installation log files are stored in /tmp during the installation
* shell is available on TTY2
* when reporting a bug add logs from /tmp as separate text/plain attachments
=====
Rescue

The rescue environment will now attempt to find your Linux installation and
mount it under the directory : /mnt/sysroot. You can then make any changes
required to your system. Choose '1' to proceed with this step.
You can choose to mount your file systems read-only instead of read-write by
choosing '2'.
If for some reason this process does not work choose '3' to skip directly to a
shell.

1) Continue
2) Read-only mount
3) Skip to shell
4) Quit (Reboot)

Please make a selection from the above: 1
=====
Rescue Shell

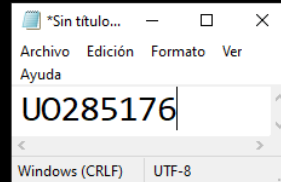
Your system has been mounted under /mnt/sysroot.

If you would like to make the root of your system the root of the active system,
run the command:

    chroot /mnt/sysroot

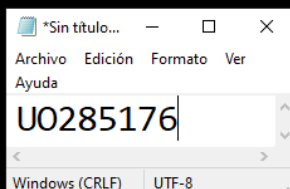
When finished, please exit from the shell and your system will reboot.

Please press ENTER to get a shell:
bash-5.1# pwd
/
bash-5.1# loadkeys es
bash-5.1# ls /mnt/sys
sysimage/ sysroot/
bash-5.1# ls /mnt/sysroot/
afs bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
bash-5.1#
```



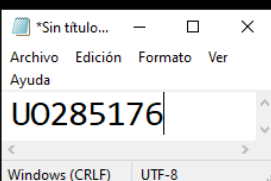
Nota\*: Se ha cargado el teclado a español con \$ loadkeys es  
 Hacemos \$ chroot /mnt/sysroot para que sea el directorio raíz:

```
bash-5.1#
bash-5.1#
bash-5.1#
bash-5.1# chroot /mnt/sysroot
bash-5.1# pwd
/
bash-5.1# ls
afs bin boot dev etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
bash-5.1#
```



Retocamos el fichero de configuración de nuevo:

```
title AlmaLinux (5.14.0-162.12.1.el9_1.x86_64) 9.1 (Lime Lymx)
version 5.14.0-162.12.1.el9_1.x86_64
linux /vmlinuz-5.14.0-162.12.1.el9_1.x86_64
initrd /initramfs-5.14.0-162.12.1.el9_1.x86_64.img
options root=/dev/mapper/almalinux-root ro crashkernel=1G-4G:192M,4G-64G:256M,64G-:512M resume=/dev/mapper/almalinux-sw
.lv=almalinux/root rd.lvm.lv=almalinux/swap
grub_users $grub_users
grub_arg --unrestricted
grub_class almalinux
```



Reiniciamos y ya vuelve a arrancar de nuevo:

```
[U0285176@linux~]-2:
[U0285176@linux~]-2:
[U0285176@linux~]-2:
[U0285176@linux~]-2:
[U0285176@linux~]-2:
[U0285176@linux~]-2:
[U0285176@linux~]-2: _
```

Volvemos a retocar el fichero de configuración de la misma manera que el punto 2

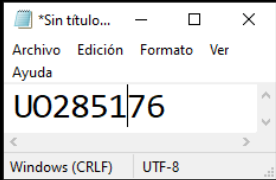
Vuelve a fallar:

```
error: ../grub-core/fs/fshelp.c:257:file `vmlinuz-5.14.0-162.12.1.el9_1.x86_64' not found.
error: ../grub-core/loader/i386/efi/linux.c:259:you need to load the kernel first.

Press any key to continue..._
```

Al iniciar el sistema pulsamos la tecla “e” y editamos el texto: systemd.unit=emergency.target

```
load_video
set gfxpayload=keep
insmod gzio
linux ($root)/vmlinuz-5.14.0-162.12.1.el9_1.x86_64 root=/dev/mapper/almalinux-root ro crashkernel=16-4G:192M,4G-64G:256M
512M resume=/dev/mapper/almalinux-swap rd.lvm.lv=almalinux/root rd.lvm.lv=almalinux/swap systemd.unit=emergency.target
initrd ($root)/initramfs-5.14.0-162.12.1.el9_1.x86_64.img
```



Hacemos Ctrl+X para salvar y start (no me lo permitía inicialmente porque ponía vmlinuz y debería ser vmlinuz)

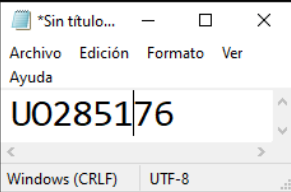
Obtenemos una Shell como root:

```
[ 2.739121] systemd[1]: Relabelled /dev, /dev/shm, /run, /sys/fs/cgroup in 17.177ms.
[ 2.745051] systemd[1]: systemd 250-12.el9_1.1 running in system mode (+PAM +AUDIT +SELINUX +APPARMOR +IMA +S
CRYPT +GNUTLS +OPENSSL +ACL +BLKID +CURL +ELFUTILS -FIDO2 +IDN2 -IDN -IPTC +KMOD +LIBCRYPTSETUP +LIBFDISK +PCRE2
KIT -QRENCODE +BZIP2 +LZ4 +XZ +ZLIB +ZSTD -BPF_FRAMEWORK +XKBCOMMON +UTMP +SYSVINIT default-hierarchy=unified)
[ 2.746451] systemd[1]: Detected virtualization oracle.
[ 2.746907] systemd[1]: Detected architecture x86-64.

Welcome to AlmaLinux 9.1 (Linux)!
```

```
[ 2.750232] systemd[1]: Hostname set to <linux.as.local>.
[ 2.777759] systemd-rc-local-generator[586]: /etc/rc.d/rc.local is not marked executable, skipping.
[ OK ] Stopped Journal Service.
[ 2.943112] systemd[1]: initrd-switch-root.service: Deactivated successfully.
[ 2.943666] systemd[1]: Stopped Switch Root.
[ OK ] Stopped Switch Root.
[ 2.944753] systemd[1]: Stopped target Switch Root.
[ OK ] Stopped target Switch Root.
[ 2.945772] systemd[1]: Stopped target Initrd File Systems.
[ OK ] Stopped target Initrd File Systems.
[ 2.946817] systemd[1]: Stopped target Initrd Root File System.
[ OK ] Stopped target Initrd Root File System.
[ 2.948582] systemd[1]: Started Emergency Shell.
[ OK ] Started Emergency Shell.
[ 2.949666] systemd[1]: Reached target Emergency Mode.
[ OK ] Reached target Emergency Mode.
[ 2.952115] systemd[1]: systemd-fsck-root.service: Deactivated successfully.
[ 2.952691] systemd[1]: Stopped File System Check on Root Device.
[ OK ] Stopped File System Check on Root Device.
[ 2.954954] systemd[1]: Starting Journal Service...
Starting Journal Service...
[ 2.967067] systemd[1]: Started Journal Service.
[ OK ] Started Journal Service.

You are in emergency mode. After logging in, type "journalctl -xb" to view
system logs, "systemctl reboot" to reboot, "systemctl default" or "exit"
to boot into default mode.
Contraseña de root para mantenimiento
(o pulse Control-D para continuar):
[U0285176@linux~]-1:
```



Comprobamos con Alt+F2 que no hay múltiples sesiones.

Comprobamos la red con \$ nmcli:

```
[UO285176@linux~]2: nmcli
Error: no se pudo crear el objeto NMClient: No se pudo conectar: No existe el fichero o el directorio.
[UO285176@linux~]3:
```

Comprobamos que no podemos instalar nada:

```
[UO285176@linux~]3: dnf install discord
Error de configuración: [Errno 30] Sistema de ficheros de sólo lectura: '/var/log/dnf.log': '/var/log/dnf.log'
[UO285176@linux~]4: dnf install vim
Error de configuración: [Errno 30] Sistema de ficheros de sólo lectura: '/var/log/dnf.log': '/var/log/dnf.log'
[UO285176@linux~]5:
```

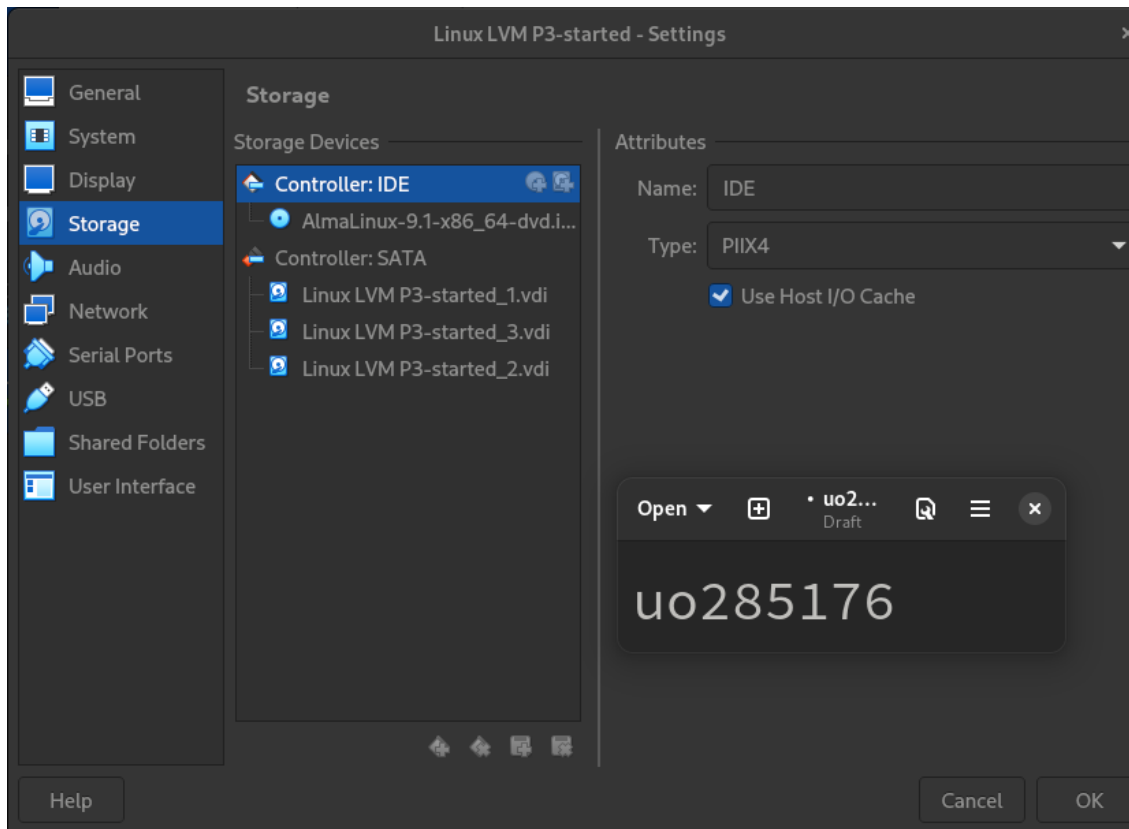
Mantiene vmlinux pues, aunque hagas cambios en el modo de emergencia, los cambios no son persistentes.

Si lo volvemos a modificar, ya podremos arrancar con normalidad.

```
Bienvenido al SO de UO285176!
Hoy es Wed Feb 15 2023 10:20:45 @ linux.as.local
linux login: root
Password:
Last login: Wed Feb 15 10:15:33 on tty1
#####
Preparado para hackear... UO285176 ;)
#####
[UO285176@linux~]1:
```

## B. Instalación de Linux con particionamiento dinámico

Creamos un Linux con 3 discos de 10 Gb cada uno:





Se ha hecho la siguiente configuración especificada (se dejaron aproximadamente 512 Mb sobrantes):

**INSTALACIÓN DE ALMALINUX 9.1**

**Hecho** **es** **¡Ayuda!**

**▼ Nueva instalación AlmaLinux 9.1**

**DATOS**

- /home: 9,14 GiB
- almalinux-home

**SISTEMA**

- /: 9,14 GiB
- almalinux-root
- /boot/efi: 200 MiB
- sda1
- /boot: 512 MiB
- sda2
- swap: 512 MiB
- sdb1

**almalinux-root**

Punto de montaje: /

Capacidad deseada: 9,14 GiB

Tipo de dispositivo: LVM ☐ Cifrar

Sistema de archivos: xfs ☒ Reformatear

Dispositivo(s): ATA VBOX HARDISK (sda) y otro

Grupo De Volúmenes: almalinux (12 MiB libre)

Etiqueta:

Nombre: root

Configuración de actualizaciones

Nota: Los cambios que usted haga en esta pantalla no se aplicarán hasta que usted haga clic en el botón 'Comenzar instalación'.

Descartar todos los cambios

ESPACIO DISPONIBLE: 511,93 MiB

ESPACIO TOTAL: 20 GiB

2 dispositivos de almacenamiento seleccionados

Open Draft uo285176 New tab (Ctrl+T)

Comprobamos el resultado con `$ lsblk -f`:

```

[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# lsblk -f
NAME        FSTYPE     FSUVER  LABEL  UUID                                  FSAVAIL  FSUSE%  MOUNTPOINTS
sda
├─sda1      vfat       FAT16   B098-5BED  63691b89-bc57-4634-a5fc-7a8064dad6b4  192,8M   3%     /boot/efi
├─sda2      xfs        480     /boot
├─sda3      LVM2_member LVM2 001  nn02m0-uKaN-IdM9-mMbF-U7QB-hKSK-Djvbbxf  9G       1%     /home
└─almalinux-home xfs
sdb
├─sdb1      swap       1       275fc734-50ea-4728-96aa-23e8a73019f9  [SWAP]
├─sdb2      LVM2_member LVM2 001  i8UJTe-607u-UMUW-gyKq-1Ly0-KbPT-ImNaXr  8,1G     12%    /
└─almalinux-root xfs
└─almalinux-home xfs
sdc
sr0
[root@localhost ~]# Soy UO285176

```

Creamos la partición que ocupa todo el espacio en el tercer disco de tipo LVM:  
Creamos el volumen físico en `/dev/sdc1` con `$ pvcreate /dev/sdc1`:

```

[root@localhost ~]# gdisk /dev/sdc
GPT fdisk (gdisk) version 1.0.7

Partition table scan:
  MBR: not present
  BSD: not present
  APM: not present
  GPT: not present

Creating new GPT entries in memory.

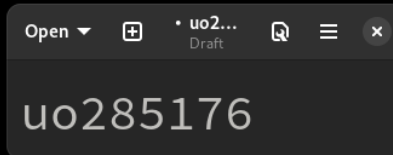
Command (? for help): n
Partition number (1-128, default 1):
First sector (34-20971486, default = 2048) or {+}-size{KMGT}:
Last sector (2048-20971486, default = 20971486) or {+}-size{KMGT}: +10G
Last sector (2048-20971486, default = 20971486) or {+}-size{KMGT}:
Current type is 8300 (Linux filesystem)
Hex code or GUID (L to show codes, Enter = 8300): 8e00
Changed type of partition to 'Linux LUM'

Command (? for help): p
Disk /dev/sdc: 20971520 sectors, 10.0 GiB
Model: UBOX HARDISK
Sector size (logical/physical): 512/512 bytes
Disk identifier (GUID): B89B740B-0172-421D-B143-3CDC75F1126E
Partition table holds up to 128 entries
Main partition table begins at sector 2 and ends at sector 33
First usable sector is 34, last usable sector is 20971486
Partitions will be aligned on 2048-sector boundaries
Total free space is 2014 sectors (1007.0 KiB)

Number  Start (sector)    End (sector)  Size      Code  Name
   1            2048          20971486   10.0 GiB   8E00   Linux LUM

Command (? for help):

```



```

[root@localhost ~]#
[root@localhost ~]#
[root@localhost ~]# pvcreate /dev/sdc
  Cannot use /dev/sdc: device is partitioned
[root@localhost ~]# pvcreate /dev/sdc
  Cannot use /dev/sdc: device is partitioned
[root@localhost ~]# lsblk /dev/sdc
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
sdc   8:32   0  10G  0 disk
└─sdc1 8:33   0  10G  0 part
[root@localhost ~]# lsblk /dev/sdc1
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
sdc1  8:33   0  10G  0 part
[root@localhost ~]# pvcreate /dev/sdc1
  Physical volume "/dev/sdc1" successfully created.
[root@localhost ~]# soy UO285176_

```

Nota: cambié el foreground a rojo porque me aburrí del verde.

Añadimos el volumen físico al grupo almalinux con la orden `$ vgextend almalinux /dev/sdc1`

```

[root@localhost ~]# umount /home
f 211.971796J XFS (dm-1): Unmounting Filesystem
[root@localhost ~]# lsblk -f
NAME        FSTYPE     FSVER          LABEL          UUID                                 FSAVAIL FSUSE% MOUNTPOINTS
sda
├─sda1      swap              1
├─sda2      LVM2_member LVM2 001
│   └─ almalinux-root
│       └─ xfs
│           └─ almalinux-home
│               └─ xfs
sdb
├─sdb1      vfat          FAT16
├─sdb2      xfs
├─sdb3      LVM2_member LVM2 001
│   └─ almalinux-root
│       └─ xfs
sdc
├─sdc1      LVM2_member LVM2 001
└─sr0       iso9660       Joliet Extension Almalinux-9-1-x86_64-dvd 2022-11-16-15-14-13-00
[root@localhost ~]# soy el UO285176

```

Para extender el volumen lógico que contiene a /home haremos:

- Desmontamos /home con \$ **umount** /home:

```

root@localhost ~# mount /home
[ 211.971796] XFS (dm-1): Unmounting Filesystem
root@localhost ~# lsblk -f

```

NAME	FSTYPE	FSUSER	LABEL	UUID	FSAVAIL	FSUSE%	MOUNTPOINTS
sd							
└-sda1	swap	1		97998f02-23d0-41f7-80d9-b517cbabc4b6			ISWAP1
└-sda2	LVM2_member	LVM2 001		F20f33-ML0x-0c90-pf06-Guqf-9n0J-q00RYU			
└└-almalinux-root	xfs			247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12% /	
└└-almalinux-home	xfs			95adb9f2-ad65-400d-98e4-641c0932a873			
sdb							
└-sdb1	vfat	FAT16		D535-EE43	192,8M	3% /boot/efi	
└-sdb2	xfs			31820563-10ef-4abd-a040-1f04a5740f1c	306,1M	40% /boot	
└-sdb3	LVM2_member	LVM2 001		KENDru-8zLr-c1b8-H52a-wr5E-wCTG-pSTeAX			
└└-almalinux-root	xfs			247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12% /	
sdc							
└-sdc1	LVM2_member	LVM2 001		f30e7-roTJ-mduw-Ji7c-A1My-q7fR-uKx7B2			
sr0	iso9660		Joliet Extension Almalinux-9-1-x86_64-dvd	2022-11-16-15-14-13-00			

```

root@localhost ~#
root@localhost ~#

```

- Extendemos el volumen lógico para que use otros 4Gb del tercer disco con `$ lvextend -L+4G /dev/almalinux/home /dev/sdc1`:

```
root@localhost ~]# lvextend -L+4G /dev/sdc1
"/dev/sdc1": Invalid path for Logical Volume.
Run `lvextend --help' for more information.
root@localhost ~]# lvextend -L+4G /dev/almalinux/home /dev/sdc1
Size of logical volume almalinux/home changed from <9,15 GiB (2342 extents) to <13,15 GiB (3366 extents).
[ 415.897381] dm-1: detected capacity change from 19185664 to 27574272
Logical volume almalinux/home successfully resized.
root@localhost ~]# SOY EL U0285176_
```

- Volvemos a montar /home con \$ mount /home:

```

root@localhost ~# mount /home
[ 639.334245] XFS (dm-1): Mounting V5 Filesystem
[ 639.351248] XFS (dm-1): Ending clean mount
root@localhost ~# lsblk -f

```

	NAME	FSTYPE	FUSER	LABEL	UUID	FSAVAIL	FSUSE%	MOUNTPOINT
sda								
└sda1	swap	1			97990f02-23d8-41f7-80d9-b517cbbac4b6			[SWAP]
└sda2	LVM2_member	LVM2 001			F2Qf33-ML0x-Ac98-pFo6-Guqf-nIU-qU0RYU			
└└└almalinux-root	xfs				247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12%	/
└└└almalinux-home	xfs				95adb9f2-ad65-480d-98e4-641c8932a873	9G	1%	/home
sdb								
└sdb1	vfat	FAT16			D535-EE43	192,8M	3%	/boot/efi
└sdb2	xfs				31828563-18ef-4abd-a048-1f04a5740f1c	306,1M	48%	/boot
└sdb3	LVM2_member	LVM2 001			KENDru-8zLr-c1Bb-H52a-wr5E-wCTG-pSTeAx			
└└└almalinux-root	xfs				247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12%	/
sdc								
└sdc1	LVM2_member	LVM2 001			f3D0E7-roTJJ-mduw-Ji7c-AMUj-q7fR-uKx7B2			
└└└almalinux-home	xfs				95adb9f2-ad65-480d-98e4-641c8932a873	9G	1%	/home
sr0	iso9660	Joliet Extension	AlmaLinux-9-1-x86_64-dvd		2022-11-16-15-14-13-00			

```

root@localhost ~# SOY EL 00285176

```

- Aplicamos el ajuste de tamaño al filesystem con `$ xfs_growfs /dev/almalinux/home`:

```

[root@localhost ~]# xfs_growfs /dev/almalinux/home
meta-data=/dev/mapper/almalinux-home isize=512    agcount=4, agsize=599552 blks
          = sectsz=512   attr=2, projid32bit=1
          = crc=1       finobt=1, sparse=1, rmapbt=0
          = reflink=1    bigtime=1 inobtcount=1
data      = bsize=4096   blocks=2398208, imaxpct=25
          = sunit=0      swidth=0 blks
naming     =version 2    bsize=4096   ascii-ci=0, ftype=1
log        = internal log bsize=4096   blocks=2560, version=2
          =             sectsz=512   sunit=0 blks, lazy-count=1
          =             extsz=4096   blocks=0, rtextents=0

data blocks changed from 2398208 to 3446784
[root@localhost ~]# lsblk -f

```

NAME	FSTYPE	FSUSER	LABEL	UUID	FSAVAIL	FSUSE%	MOUNTPOINTS
sda							
	swap	1		97998f02-23d0-41f7-8bd9-b517c9abc4b6			[SWAP]
	LVM2_member	LVM2 001		F20f33-ML0x-0c90-pf06-6uqf-9nTU-q00RYU			
	<ul style="list-style-type: none"> <li>almalinux-root</li> <li> <ul style="list-style-type: none"> <li>xfs</li> <li>almalinux-home</li> <li>xfs</li> </ul> </li> </ul>			247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12%	/
sdb							
	vfat	FAT16		D535-EE43	192,8M	3%	/boot/efi
	xfs			31828563-18ef-4abd-a040-1f04a5740f1c	306,1M	48%	/boot
	<ul style="list-style-type: none"> <li>LVM2_member</li> <li> <ul style="list-style-type: none"> <li>LVM2 001</li> <li>almalinux-root</li> <li> <ul style="list-style-type: none"> <li>xfs</li> </ul> </li> </ul> </li> </ul>			KENDru-0zLr-c1bB-H52a-wr5E-uCTG-pSTeAX			
sdc							
	<ul style="list-style-type: none"> <li>almalinux-root</li> <li> <ul style="list-style-type: none"> <li>xfs</li> </ul> </li> </ul>			247c7b3f-b836-49ab-98b4-75433f612d4e	8,1G	12%	/
	LVM2_member	LVM2 001		f3D0E7-roTJ-mduw-Ji7c-A1My-q7fR-uKx7B2			
	<ul style="list-style-type: none"> <li>almalinux-home</li> <li> <ul style="list-style-type: none"> <li>xfs</li> </ul> </li> </ul>			95adb9f2-ad65-480d-98e4-641c0932a873	13G	1%	/home
sr0	iso9660		Joliet Extension	AlmaLinux-9-1-x86_64-dvd			
				2022-11-16-15-14-13-00			

```

[root@localhost ~]# SOY EL 00285176

```

Como se puede apreciar, se aumentó /home a 13Gb

- Ejecutamos la orden \$ pvscan:

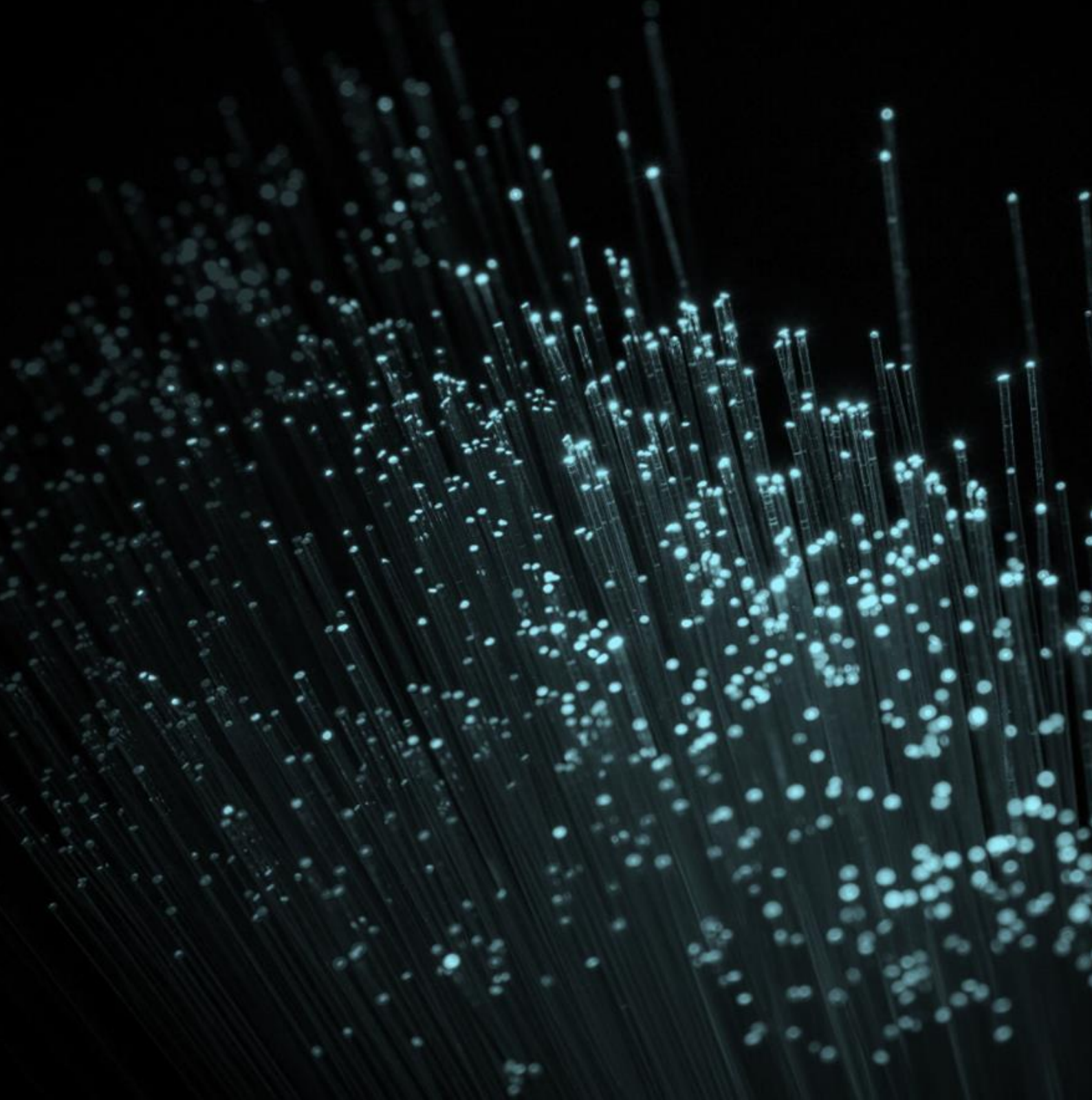
```
[root@localhost ~]# pvscan
PV /dev/sdb3   VG almalinux   lvm2 [9,05 GiB / 0    free]
PV /dev/sda2   VG almalinux   lvm2 [<9,25 GiB / 12,00 MiB free]
PV /dev/sdc1   VG almalinux   lvm2 [<10,00 GiB / <6,00 GiB free]
Total: 3 [28,29 GiB] / in use: 3 [28,29 GiB] / in no VG: 0 [0    ]
[root@localhost ~]# SOY EL UO285176_
```

- Ejecutamos la orden \$ lvscan:

```
[root@localhost ~]# lvscan
ACTIVE          '/dev/almalinux/home' [<13,15 GiB] inherit
ACTIVE          '/dev/almalinux/root' [<9,14 GiB] inherit
[root@localhost ~]# soy el uo285176
```

- Ejecutamos la orden \$ df /home:

```
[root@localhost ~]# df /home
S.ficheros      bloques de 1K Usados Disponibles Uso% Montado en
/dev/mapper/almalinux-home 13776896 129248    13647648    1% /home
[root@localhost ~]# soy el uo285176
```



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