

Instal·lació de CentOS 7 per l'Avance III 400 MHz SB

ISO d'instal·lació

Instal·lo el sistema operatiu CentOS 7.9-2009 de 2021-11-12 a partir de la imatge ISO CentOS-7-x86_64-DVD-2009.iso descarregada de la [rèplica del magatzem de CentOS al CSUC](#),

```
# cd /home/miquel/Informatica/CentOS/
# wget http://ftp.csuc.cat/centos/7/isos/x86_64/CentOS-7-x86_64-DVD-2009.iso
--2021-08-18 11:31:58--
http://ftp.csuc.cat/centos/7/isos/x86_64/CentOS-7-x86_64-DVD-2009.iso
Resolving ftp.csuc.cat (ftp.csuc.cat)... 84.88.0.29
Connecting to ftp.csuc.cat (ftp.csuc.cat)|84.88.0.29|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 4712300544 (4.4G) [application/octet-stream]
Saving to: 'CentOS-7-x86_64-DVD-2009.iso'

CentOS-7-x86_64-DVD-2009.iso
100%[=====>] 4.39G
8.16MB/s in 7m 15s

2021-08-18 11:39:13 (10.3 MB/s) - 'CentOS-7-x86_64-DVD-2009.iso' saved
[4712300544/4712300544]
```

i copiada amb dd a un pendrive USB-3

```
# dd if=CentOS-7-x86_64-DVD-2009.iso of=/dev/sdg
9203712+0 records in
9203712+0 records out
4712300544 bytes (4.7 GB) copied, 817.294 s, 5.8 MB/s
```

Malauradament, el primer cop que intento instal·lar CentOS, el programa d'instal·lació dona un error al verificar el pendrive i s'interromp la instal·lació. Per descartar un problema al fitxer ISO descarregat, calculo la signatura SHA-256 del fitxer

```
c# sha256sum CentOS-7-x86_64-DVD-2009.iso
e33d7b1ea7a9e2f38c8f693215dd85254c3a4fe446f93f563279715b68d07987 CentOS-7-
x86_64-DVD-2009.iso
```

i comprovo que coincideix amb la signatura al fitxer sha256sum.txt descarregat de la rèplica al CSUC

```
# cat sha256sum.txt
689531cce9cf484378481ae762fae362791a9be078fda10e4f6977bf8fa71350 CentOS-7-
x86_64-Everything-2009.iso
```

```
b79079ad71cc3c5ceb3561fff348a1b67ee37f71f4cddfec09480d4589c191d6 CentOS-7-  
x86_64-NetInstall-2009.iso  
07b94e6b1a0b0260b94c83d6bb76b26bf7a310dc78d7a9c7432809fb9bc6194a CentOS-7-  
x86_64-Minimal-2009.iso  
e33d7b1ea7a9e2f38c8f693215dd85254c3a4fe446f93f563279715b68d07987 CentOS-7-  
x86_64-DVD-2009.iso
```

de forma que l'error es deu haver originat al fer la còpia amb dd. Per evitar que es torni a produir,
instal·lo dcfldd i dc3dd,

```
# apt install dcfldd  
# apt install dc3dd
```

unes versions millorades de dd que verifiquen que la còpia coincideixi amb l'original, i faig servir
dc3dd per fer la còpia sense errors,

```
# dc3dd if=CentOS-7-x86_64-DVD-2009.iso of=/dev/sdg hash=sha256 hlog=centos-  
usb-sha256sum.log log=centos-usb.log verb=on  
  
dc3dd 7.2.641 started at 2021-08-18 13:22:24 +0200  
compiled options:  
command line: dc3dd if=CentOS-7-x86_64-DVD-2009.iso of=/dev/sdg hash=sha256  
hlog=centos-usb-sha256sum.log log=centos-usb.log verb=on  
sector size: 512 bytes (assumed)  
4712300544 bytes ( 4.4 G ) copied ( 100% ), 195 s, 23 M/s  
  
input results for file `CentOS-7-x86_64-DVD-2009.iso':  
9203712 sectors in  
e33d7b1ea7a9e2f38c8f693215dd85254c3a4fe446f93f563279715b68d07987 (sha256)  
  
output results for device `/dev/sdg':  
9203712 sectors out  
  
dc3dd completed at 2021-08-18 13:25:38 +0200
```

Finalment, repeteixo el procés d'instal·lació a partir del pendrive i aquest cop el programa
d'instal·lació del CentOS s'executa sense errors.

Enllaços d'interès

- [dcfldd - Cerca de Google](#)
- [dcfldd\(1\) - Linux man page](#)
- [dcfldd](#), at Forensics Wiki.
- [dc3dd\(1\) - Linux man page](#)
- [dc3dd | Penetration Testing Tools](#), KALI tools.
- [dc3dd](#), at Forensics Wiki.
- [# Simple Forensics imaging with dd, dc3dd & dcfldd - Forensics Matters](#)

Magatzems (repositories) addicionals

La llista de magatzems actualment configurats és,

```
# yum repolist
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
* base: ftp.csuc.cat
* extras: ftp.csuc.cat
* updates: ftp.csuc.cat
```

repo id	repo name	status
base/7/x86_64	CentOS-7 - Base	10,072
extras/7/x86_64	CentOS-7 - Extras	498
updates/7/x86_64	CentOS-7 - Updates	2,567
repolist: 13,137		

Cal afegir aquests magatzems addicionals: [bruker](#), [elrepo](#) i [epel](#) per tenir la mateixa configuració que als ordinadors dels Avance Neo o de l'Avance III 600 MHz. Les instruccions per afegir-los estan disponibles als seus llocs web i a altres pàgines d'Internet.

- [CentOS 7 TopSpin Installation](#)
- ["The Community Enterprise Linux Repository" \(ELRepo\)](#); i
- [Extra Packages for Enterprise Linux \(EPEL\)](#)

La instal·lació del magatzem EPEL no dona cap problema:

```
# yum install
https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
[...]
Installed:
  epel-release.noarch 0:7-13

Complete!
```

i la instal·lació d'ELRepo tampoc,

```
# rpm --import https://www.elrepo.org/RPM-GPG-KEY-elrepo.org
# yum install https://www.elrepo.org/elrepo-release-7.el7.elrepo.noarch.rpm
[...]
Installed:
  elrepo-release.noarch 0:7.0-5.el7.elrepo

Complete!
```

Un cop instal·lats, afegeixo el magatzem de Bruker, i instal·lo els paquets necessaris pel TopSpin i per l'adquisició, així com els paquets dels quals depenen,

```
# yum --nogpgcheck install
https://repo-bbio.bruker.com/CentOS/7/Bruker-Addon/bruker-addon-latest.x86_64.rpm
```

[...]

Installed:

bruker-addon.noarch 0:1.4-0.el7.brk

Complete!

```
# yum install epel-release
```

[...]

Package epel-release-7-13.noarch already installed and latest version
Nothing to do

```
# yum install --enablerepo=bruker bruker-topspin-environ
```

[...]

Resolving Dependencies

--> Running transaction check

---> Package bruker-topspin-environ.x86_64 0:1.0-21.el7.brk will be installed

--> Processing Dependency: xorg-x11-fonts-ISO8859-1-75dpi for package: bruker-topspin-environ-1.0-21.el7.brk.x86_64

--> Processing Dependency: xorg-x11-fonts-75dpi for package: bruker-topspin-environ-1.0-21.el7.brk.x86_64

:
:

---> Package nettle.i686 0:2.7.1-9.el7_9 will be installed

---> Package nettle.x86_64 0:2.7.1-9.el7_9 will be an update

--> Finished Dependency Resolution

Dependencies Resolved

:
:

Install 1 Package (+161 Dependent packages)

Upgrade (39 Dependent packages)

Total download size: 157 M

Is this ok [y/d/N]: y

Downloading packages:

No Presto metadata available for updates

warning:

/var/cache/yum/x86_64/7/base/packages/ORBit2-2.14.19-13.el7.i686.rpm: Header V3 RSA/SHA256 Signature, key ID f4a80eb5: NOKEY

Public key for ORBit2-2.14.19-13.el7.i686.rpm is not installed

(1/201): ORBit2-2.14.19-13.el7.i686.rpm

| 171 kB 00:00:00

(2/201): PackageKit-gtk3-module-1.1.10-2.el7.centos.i686.rpm

| 12 kB 00:00:00

:
:

(200/201): systemd-219-78.el7_9.3.x86_64.rpm

```
| 5.1 MB 00:00:01
(201/201): xorg-x11-fonts-IS08859-1-75dpi-7.5-9.el7.noarch.rpm
| 933 kB 00:00:01
-----
-----
Total
9.8 MB/s | 157 MB 00:00:16
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
Importing GPG key 0xF4A80EB5:
  Userid      : "CentOS-7 Key (CentOS 7 Official Signing Key)
<security@centos.org>"
  Fingerprint: 6341 ab27 53d7 8a78 a7c2 7bb1 24c6 a8a7 f4a8 0eb5
  Package     : centos-release-7-9.2009.0.el7.centos.x86_64 (@anaconda)
  From        : /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-7
Is this ok [y/N]: y
Retrieving key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
Importing GPG key 0x352C64E5:
  Userid      : "Fedora EPEL (7) <epel@fedoraproject.org>"
  Fingerprint: 91e9 7d7c 4a5e 96f1 7f3e 888f 6a2f aea2 352c 64e5
  Package     : epel-release-7-13.noarch (@/epel-release-latest-7.noarch)
  From        : /etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
Is this ok [y/N]: y
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Updating    : libX11-common-1.6.7-3.el7_9.noarch
1/240
  Installing  : kernel-headers-3.10.0-1160.36.2.el7.x86_64
2/240
  Installing  : libgcc-4.8.5-44.el7.i686
3/240
  :
  :
  Installing  : libcanberra-gtk2-0.30-9.el7.i686
200/240
  Installing  : bruker-topspin-environ-1.0-21.el7.brk.x86_64
201/240
      All required 32bit libraries are present
  Cleanup    : libX11-devel-1.6.7-2.el7.x86_64
202/240
  Cleanup    : systemd-sysv-219-78.el7.x86_64
203/240
  :
  :
  Cleanup    : nss-softokn-freebl-3.44.0-8.el7_7.x86_64
239/240
  Cleanup    : glibc-2.17-317.el7.x86_64
240/240
  Verifying  : gnome-vfs2-2.24.4-14.el7.i686
1/240
```

```
Verifying   : gcc-c++-4.8.5-44.el7.x86_64
2/240
:
:
Verifying   : gtk3-immodule-xim-3.22.30-5.el7.x86_64
239/240
Verifying   : mesa-libEGL-18.3.4-10.el7.x86_64
240/240

Installed:
  bruker-topspin-envIRON.x86_64 0:1.0-21.el7.brk

Dependency Installed:
  GConf2.i686 0:3.2.6-8.el7
  ORBit2.i686 0:2.14.19-13.el7
  PackageKit-glib.i686 0:1.1.10-2.el7.centos
  PackageKit-gtk3-module.i686 0:1.1.10-2.el7.centos
  :
  :
  xorg-x11-fonts-IS08859-1-75dpi.noarch 0:7.5-9.el7          xz-
  libs.i686 0:5.2.2-1.el7
  zlib.i686 0:1.2.7-19.el7_9

Dependency Updated:
  freetype.x86_64 0:2.8-14.el7_9.1          glib2.x86_64
  0:2.56.1-9.el7_9          glibc.x86_64 0:2.17-324.el7_9
  glibc-common.x86_64 0:2.17-324.el7_9          gtk3.x86_64
  0:3.22.30-6.el7          gtk3-immodule-xim.x86_64 0:3.22.30-6.el7
  libX11.x86_64 0:1.6.7-3.el7_9          libX11-common.noarch
  0:1.6.7-3.el7_9          libX11-devel.x86_64 0:1.6.7-3.el7_9
  libblkid.x86_64 0:2.23.2-65.el7_9.1          libgudev1.x86_64
  0:219-78.el7_9.3          libmount.x86_64 0:2.23.2-65.el7_9.1
  libsmartcols.x86_64 0:2.23.2-65.el7_9.1          libuuid.x86_64
  0:2.23.2-65.el7_9.1          mesa-libEGL.x86_64 0:18.3.4-12.el7_9
  mesa-libGL.x86_64 0:18.3.4-12.el7_9          mesa-libgbm.x86_64
  0:18.3.4-12.el7_9          mesa-libglapi.x86_64 0:18.3.4-12.el7_9
  nettle.x86_64 0:2.7.1-9.el7_9          nspr.x86_64
  0:4.25.0-2.el7_9          nss-softokn-freebl.x86_64 0:3.53.1-6.el7_9
  nss-util.x86_64 0:3.53.1-1.el7_9          openssl.x86_64
  1:1.0.2k-21.el7_9          openssl-libs.x86_64 1:1.0.2k-21.el7_9
  pulseaudio.x86_64 0:10.0-6.el7_9          pulseaudio-libs.x86_64
  0:10.0-6.el7_9          pulseaudio-libs-glib2.x86_64 0:10.0-6.el7_9
  pulseaudio-module-bluetooth.x86_64 0:10.0-6.el7_9 pulseaudio-module-
x11.x86_64 0:10.0-6.el7_9 pulseaudio-utils.x86_64 0:10.0-6.el7_9
  qt.x86_64 1:4.8.7-9.el7_9          qt-mysql.x86_64
  1:4.8.7-9.el7_9          qt-x11.x86_64 1:4.8.7-9.el7_9
  systemd.x86_64 0:219-78.el7_9.3          systemd-libs.x86_64
  0:219-78.el7_9.3          systemd-python.x86_64 0:219-78.el7_9.3
  systemd-sysv.x86_64 0:219-78.el7_9.3          util-linux.x86_64
```

```
0:2.23.2-65.el7_9.1      zlib.x86_64 0:1.2.7-19.el7_9
```

Complete!

El resultat és ara tenim disponibles els mateixos magatzems que a l'ordinador de l'Avance Neo 500 MHz, i un d'extra que potser no cal i que podríem eliminar: "Bruker-Addon-7 - Public Updates (bruker/7)",

```
# yum repolist
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: ftp.csuc.cat
 * elrepo: mirrors.coreix.net
 * epel: mirror.eixamcoop.cat
 * extras: ftp.csuc.cat
 * updates: ftp.csuc.cat
repo id                repo name
status
base/7/x86_64          CentOS-7 - Base
10,072
bruker/7               Bruker-Addon-7 - Public Updates
110+13
elrepo                 ELRepo.org Community Enterprise Linux Repository
- el7                  128
epel/x86_64            Extra Packages for Enterprise Linux 7 - x86_64
13,634
extras/7/x86_64        CentOS-7 - Extras
498
updates/7/x86_64       CentOS-7 - Updates
2,567
repolist: 26,899
```

Instal·lació de paquets de Bruker



Desactivació del magatzem Bruker



Actualització del programari instal·lat

Després d'afegir els nous magatzems, actualitzo el programari instal·lat,

```
# yum check-update
Loaded plugins: fastestmirror, langpacks
```

Loading mirror speeds from cached hostfile

epel/x86_64/metalink

| 22 kB 00:00:00

* base: ftp.csuc.cat

* elrepo: ftp.nluug.nl

* epel: mirror.eixamcoop.cat

* extras: ftp.csuc.cat

* updates: ftp.csuc.cat

base

| 3.6 kB 00:00:00

brucker

| 2.9 kB 00:00:00

elrepo

| 3.0 kB 00:00:00

epel

| 4.7 kB 00:00:00

extras

| 2.9 kB 00:00:00

updates

| 2.9 kB 00:00:00

(1/3): epel/x86_64/updateinfo

| 1.0 MB 00:00:00

(2/3): updates/7/x86_64/primary_db

| 9.6 MB 00:00:01

(3/3): epel/x86_64/primary_db

| 6.9 MB 00:00:04

NetworkManager.x86_64

1:1.18.8-2.el7_9

updates

NetworkManager-adsl.x86_64

1:1.18.8-2.el7_9

updates

NetworkManager-bluetooth.x86_64

1:1.18.8-2.el7_9

updates

NetworkManager-glib.x86_64

1:1.18.8-2.el7_9

updates

NetworkManager-libnm.x86_64

1:1.18.8-2.el7_9

updates

NetworkManager-ppp.x86_64

1:1.18.8-2.el7_9

updates

:

:

xorg-x11-drv-ati.x86_64

19.0.1-3.el7_7

updates

xorg-x11-server-Xorg.x86_64

1.20.4-16.el7_9

updates

xorg-x11-server-common.x86_64

1.20.4-16.el7_9

updates

xterm.x86_64

295-3.el7_9.1

updates

Obsoleting Packages

bruker-system-environ.noarch

1.0-5.el7.brk

bruker

okular.x86_64

yum update

Loaded plugins: fastestmirror, langpacks

Loading mirror speeds from cached hostfile

* base: ftp.csuc.cat

* elrepo: mirrors.coreix.net

* epel: mirror.eixamcoop.cat

* extras: ftp.csuc.cat

* updates: ftp.csuc.cat

Resolving Dependencies

--> Running transaction check

---> Package NetworkManager.x86_64 1:1.18.8-1.el7 will be updated

---> Package NetworkManager.x86_64 1:1.18.8-2.el7_9 will be an update

---> Package NetworkManager-ads1.x86_64 1:1.18.8-1.el7 will be updated

---> Package NetworkManager-ads1.x86_64 1:1.18.8-2.el7_9 will be an update

---> Package NetworkManager-bluetooth.x86_64 1:1.18.8-1.el7 will be updated

---> Package NetworkManager-bluetooth.x86_64 1:1.18.8-2.el7_9 will be an update

:

:

--> Running transaction check

---> Package libzip.x86_64 0:0.10.1-8.el7 will be installed

base/7/x86_64/filelists_db

| 7.2 MB 00:00:00

bruker/7/filelists_db

| 26 kB 00:00:00

elrepo/filelists_db

| 35 kB 00:00:00

epel/x86_64/filelists_db

| 12 MB 00:00:01

extras/7/x86_64/filelists_db

| 235 kB 00:00:00

updates/7/x86_64/filelists_db

| 5.5 MB 00:00:00

--> Finished Dependency Resolution

Dependencies Resolved

```

=====
=====
=====
Package                                     Arch
Version                                     Repository
Size
=====
=====
=====

```

Installing:

bruker-system-environ	noarch
1.0-5.el7.brk	bruker
11 k	
replacing okular.x86_64 4.10.5-9.el7	
kernel	x86_64
3.10.0-1160.36.2.el7	updates
50 M	

Updating:

NetworkManager	x86_64
1:1.18.8-2.el7_9	updates
1.9 M	
:	
:	
xorg-x11-server-Xvfb	x86_64
1.20.4-16.el7_9	updates
856 k	
xorg-x11-xbitmaps	noarch
1.1.1-6.el7	base
37 k	
yumex	noarch
3.0.17-1.el7	epel
444 k	

Transaction Summary

```
=====
=====
=====
Install      2 Packages (+76 Dependent packages)
Upgrade    228 Packages
```

Total download size: 602 M
Is this ok [y/d/N]: y

Downloading packages:

No Presto metadata available for updates
(1/306): NetworkManager-adsl-1.18.8-2.el7_9.x86_64.rpm
| 163 kB 00:00:00
(2/306): NetworkManager-1.18.8-2.el7_9.x86_64.rpm
| 1.9 MB 00:00:00
(3/306): NetworkManager-bluetooth-1.18.8-2.el7_9.x86_64.rpm
| 183 kB 00:00:00
:
:
(304/306): xorg-x11-server-Xvfb-1.20.4-16.el7_9.x86_64.rpm
| 856 kB 00:00:00
(305/306): xterm-295-3.el7_9.1.x86_64.rpm
| 456 kB 00:00:00
(306/306): yumex-3.0.17-1.el7.noarch.rpm

| 444 kB 00:00:00

Total

11 MB/s | 602 MB 00:00:55

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Updating : coreutils-8.22-24.el7_9.2.x86_64
1/535

Installing : kdesdk-common-4.10.5-8.el7.noarch
2/535

Updating : libldb-1.5.4-2.el7.x86_64
3/535

Updating : python-libs-2.7.5-90.el7.x86_64
4/535

:
:

Updating : bpftool-3.10.0-1160.36.2.el7.x86_64
305/535

Updating : iwl4965-firmware-228.61.2.24-80.el7_9.noarch
306/535

Cleanup : samba-client-4.10.16-5.el7.x86_64
307/535

Cleanup : ipa-client-4.6.8-5.el7.centos.x86_64
308/535

:
:

Cleanup : gd-2.0.35-26.el7.x86_64
534/535

Cleanup : bpftool-3.10.0-1160.el7.x86_64
535/535

Verifying : 1:NetworkManager-tui-1.18.8-2.el7_9.x86_64
1/535

Verifying : 7:device-mapper-event-1.02.170-6.el7_9.5.x86_64
2/535

:
:

Verifying : libstoragegmt-1.8.1-1.el7.x86_64
534/535

Verifying : gnome-settings-daemon-3.28.1-8.el7.x86_64
535/535

Installed:

bruker-system-envron.noarch 0:1.0-5.el7.brk
kernel.x86_64 0:3.10.0-1160.36.2.el7

Dependency Installed:

ImageMagick.x86_64 0:6.9.10.68-5.el7_9 SDL.x86_64 0:1.2.15-17.el7

```
Xaw3d.x86_64 0:1.6.2-4.el7          advancecomp.x86_64 0:1.15-22.el7
apr.x86_64 0:1.4.8-7.el7          apr-util.x86_64 0:1.5.2-6.el7
compat-libstdc++-33.x86_64 0:3.2.3-72.el7 evince.x86_64 0:3.28.2-10.el7
:
:
vim-minimal.x86_64 2:7.4.629-8.el7_9
wpa_supplicant.x86_64 1:2.6-12.el7_9.2          xorg-x11-
drv-atl.x86_64 0:19.0.1-3.el7_7
xorg-x11-server-Xorg.x86_64 0:1.20.4-16.el7_9          xorg-x11-
server-common.x86_64 0:1.20.4-16.el7_9          xterm.x86_64
0:295-3.el7_9.1
```

Replaced:
okular.x86_64 0:4.10.5-9.el7

Complete!

Llista de paquets instal·lats a l'Avance III 600 MHz

Genero la llista de paquets instal·lats a l'Avance III 600 MHz i la transfereixo al nou ordinador per l'Avance III 400 MHz SB,

```
$ rpm -qa | sort > 20210819-avance3-600-pkglist.txt

$ ls -l 20210819-avance3-600-pkglist.txt
-rw-r--r--. 1 sermnadmin sermnadmin 62040 Aug 19 17:09 20210819-avance3-600-
pkglist.txt

$ wc -l 20210819-avance3-600-pkglist.txt
1850 20210819-avance3-600-pkglist.txt

$ md5sum 20210819-avance3-600-pkglist.txt
bd2abffe1603ef8931125c4c3cc0ce92 20210819-avance3-600-pkglist.txt

$ scp ./20210819-avance3-600-pkglist.txt
sermnadmin@cie-54-214.uab.cat:/home/sermnadmin/Documents
The authenticity of host 'cie-54-214.uab.cat (158.109.54.214)' can't be
established.
ECDSA key fingerprint is SHA256:y5C84bqQupGc03axR4i/nnJs0uJVDlUTlKFHWtGP6a0.
ECDSA key fingerprint is
MD5:f8:55:34:99:a7:ad:67:46:0f:f8:5f:c5:e7:eb:47:14.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'cie-54-214.uab.cat,158.109.54.214' (ECDSA) to
the list of known hosts.
sermnadmin@cie-54-214.uab.cat's password:
20210819-avance3-600-pkglist.txt
```

i faig servir md5sum al nou ordinador per verificar que s'ha transferit correctament,

```
sermnadmin@cie-54-214 Documents]$ md5sum 20210819-avance3-600-pkglist.txt
bd2abffe1603ef8931125c4c3cc0ce92 20210819-avance3-600-pkglist.txt
```

Llista de paquets instal·lats a l'Avance III 400 MHz SB

Genero la llista de paquets instal·lats a l'Avance III 400 MHz SB per poder-la comparar amb la llista de paquets instal·lats a l'Avance III 600 MHz,

```
# rpm -qa | sort > 20210819-avance3-400sb-pkglist.txt

# ls -l 20210819-avance3-400sb-pkglist.txt
-rw-r--r--. 1 sermnadmin sermnadmin 57257 Aug 20 13:46 20210819-
avance3-400sb-pkglist.txt

# wc -l 20210819-avance3-400sb-pkglist.txt
1707 20210819-avance3-400sb-pkglist.txt
```

Com es pot veure, falten per instal·lar 143 paquets (1850 - 1707).

Instal·lació de paquets que manquen

Un cop actualitzat el programari, comparo la llista de paquets instal·lats en aquest ordinador amb la llista de paquets instal·lats a l'ordinador del 600 MHz per instal·lar els que manquen,

```
# comm -23 20210819-avance3-400sb-pkglist.txt 20210819-avance3-600-
pkglist.txt > list-packages-only-in-400sb.txt
# comm -13 20210819-avance3-400sb-pkglist.txt 20210819-avance3-600-
pkglist.txt > list-packages-only-in-600.txt
```

Llavors genero un llistat que conté els paquets instal·lats només al 600 MHz i afegeixo el seu magatzem d'origen,

```
# for PKG in `cat list-packages-only-in-600.txt` ;
> do
> echo -e $PKG"\t"`yum info $PKG | grep "Repo          : ";
> done > list-packages-only-in-600-with-repo.txt &

# wc -l list-packages-only-in-600.txt list-packages-only-in-600-with-
repo.txt
 157 list-packages-only-in-600.txt
 157 list-packages-only-in-600-with-repo.txt
 314 total

# tail -5 list-packages-only-in-600-with-repo.txt
xorg-x11-apps-7.7-7.el7.x86_64 Repo : base/7/x86_64
```

```
xorg-x11-fonts-100dpi-7.5-9.el7.noarch Repo : base/7/x86_64
xorg-x11-fonts-IS08859-1-100dpi-7.5-9.el7.noarch Repo : base/7/x86_64
xorg-x11-fonts-misc-7.5-9.el7.noarch Repo : base/7/x86_64
yum-plugin-keys-1.1.31-54.el7_8.noarch Repo : base/7/x86_64
```

Per evitar problemes a l'hora d'actualitzar paquets relacionats amb l'entorn gràfic, aturo el gestor de gràfics gdm,

```
# systemctl status gdm.service
● gdm.service - GNOME Display Manager
   Loaded: loaded (/usr/lib/systemd/system/gdm.service; enabled; vendor
  preset: enabled)
   Active: active (running) since Wed 2021-08-18 14:22:19 CEST; 2 days ago
 Main PID: 8821 (gdm)
    CGroup: /system.slice/gdm.service
            └─8821 /usr/sbin/gdm
              └─8828 /usr/bin/X :0 -background none -noreset -audit 4 -verbose
 -auth /run/gdm/auth-for-gdm-fdN6r0/database -seat seat0 -nolisten tcp vt1

Aug 18 14:22:19 cie-54-214.uab.es systemd[1]: Starting GNOME Display
Manager...
Aug 18 14:22:19 cie-54-214.uab.es systemd[1]: Started GNOME Display Manager.
Aug 18 14:22:29 cie-54-214.uab.es gdm[8821]: Failed to remove greeter
program access to the display. Trying to proceed.

# systemctl stop gdm.service

# systemctl status gdm.service
● gdm.service - GNOME Display Manager
   Loaded: loaded (/usr/lib/systemd/system/gdm.service; enabled; vendor
  preset: enabled)
   Active: inactive (dead) since Fri 2021-08-20 14:51:51 CEST; 2s ago
  Process: 8821 ExecStart=/usr/sbin/gdm (code=exited, status=0/SUCCESS)
 Main PID: 8821 (code=exited, status=0/SUCCESS)

Aug 18 14:22:19 cie-54-214.uab.es systemd[1]: Starting GNOME Display
Manager...
Aug 18 14:22:19 cie-54-214.uab.es systemd[1]: Started GNOME Display Manager.
Aug 18 14:22:29 cie-54-214.uab.es gdm[8821]: Failed to remove greeter
program access to the display. Trying to proceed.
Aug 20 14:51:51 cie-54-214.uab.es systemd[1]: Stopping GNOME Display
Manager...
Aug 20 14:51:51 cie-54-214.uab.es systemd[1]: Stopped GNOME Display Manager.
```

i instal·lo els paquets que manquen,

```
# for PKG in `cat list-packages-only-in-600.txt`
> do
> yum --assumeyes install $PKG
```

```
> done
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
:
:
Resolving Dependencies
--> Running transaction check
---> Package apper.x86_64 0:0.9.2-4.el7 will be installed
:
:
Dependencies Resolved
:
:
Install 1 Package (+3 Dependent packages)

Total download size: 1.7 M
Installed size: 7.5 M
Downloading packages:
(1/4): PackageKit-yum-1.1.10-2.el7.centos.x86_64.rpm
| 75 kB 00:00:00
(2/4): PackageKit-Qt-0.9.5-2.el7.x86_64.rpm
| 78 kB 00:00:00
(3/4): PackageKit-1.1.10-2.el7.centos.x86_64.rpm
| 587 kB 00:00:00
(4/4): apper-0.9.2-4.el7.x86_64.rpm
| 991 kB 00:00:00
-----
-----
-----
Total
5.1 MB/s | 1.7 MB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : PackageKit-1.1.10-2.el7.centos.x86_64
1/4
  Installing : PackageKit-yum-1.1.10-2.el7.centos.x86_64
2/4
  Installing : PackageKit-Qt-0.9.5-2.el7.x86_64
3/4
  Installing : apper-0.9.2-4.el7.x86_64
4/4
  Verifying  : PackageKit-Qt-0.9.5-2.el7.x86_64
1/4
  Verifying  : PackageKit-yum-1.1.10-2.el7.centos.x86_64
2/4
  Verifying  : apper-0.9.2-4.el7.x86_64
3/4
  Verifying  : PackageKit-1.1.10-2.el7.centos.x86_64
4/4
```

Installed:

apper.x86_64 0:0.9.2-4.el7

Dependency Installed:

PackageKit.x86_64 0:1.1.10-2.el7.centos

PackageKit-

Qt.x86_64 0:0.9.5-2.el7

PackageKit-yum.x86_64

0:1.1.10-2.el7.centos

Complete!

:

:

i així per cadascun dels paquets al fitxer `list-packages-only-in-600.txt` fins instal·lar el darrer, comprovar si cal actualitzar algun paquet i actualitzar els que calgui,

Loaded plugins: fastestmirror, langpacks, refresh-packagekit

Loading mirror speeds from cached hostfile

:

:

Total download size: 32 k

Installed size: 40 k

Downloading packages:

yum-plugin-keys-1.1.31-54.el7_8.noarch.rpm

| 32 kB 00:00:00

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

Installing : yum-plugin-keys-1.1.31-54.el7_8.noarch

1/1

Verifying : yum-plugin-keys-1.1.31-54.el7_8.noarch

1/1

Installed:

yum-plugin-keys.noarch 0:1.1.31-54.el7_8

Complete!

yum check-update

Loaded plugins: fastestmirror, keys, langpacks, refresh-packagekit

Loading mirror speeds from cached hostfile

* base: ftp.csuc.cat

* elrepo: mirrors.coreix.net

* epel: mirror.eixamcoop.cat

* extras: ftp.csuc.cat

* updates: ftp.csuc.cat

exiv2.x86_64

0.27.0-4.el7_8

```

updates
exiv2-libs.x86_64

# yum update
Loaded plugins: fastestmirror, keys, langpacks, refresh-packagekit
:
:
Upgrade 2 Packages

Total download size: 1.7 M
Is this ok [y/d/N]: y
Downloading packages:
No Presto metadata available for updates
(1/2): exiv2-libs-0.27.0-4.el7_8.x86_64.rpm
| 798 kB  00:00:00
(2/2): exiv2-0.27.0-4.el7_8.x86_64.rpm
| 923 kB  00:00:00
-----
-----
-----
Total
6.0 MB/s | 1.7 MB  00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Updating      : exiv2-libs-0.27.0-4.el7_8.x86_64                1/4
  Updating      : exiv2-0.27.0-4.el7_8.x86_64                  2/4
  Cleanup       : exiv2-libs-0.27.0-3.el7_8.x86_64              3/4
  Cleanup       : exiv2-0.27.0-3.el7_8.x86_64                  4/4
  Verifying     : exiv2-0.27.0-4.el7_8.x86_64                  1/4
  Verifying     : exiv2-libs-0.27.0-4.el7_8.x86_64              2/4
  Verifying     : exiv2-libs-0.27.0-3.el7_8.x86_64              3/4
  Verifying     : exiv2-0.27.0-3.el7_8.x86_64                  4/4

Updated:
  exiv2.x86_64 0:0.27.0-4.el7_8                                exiv2-
  libs.x86_64 0:0.27.0-4.el7_8

Complete!

```

En aquest punt, reinicio l'ordinador amb `reboot -force` perquè faci servir el kernel més actual dels instal·lats.

Eliminar els paquets gràfics de Nvidia

Després de reiniciar l'ordinador dona un error perquè intenta fer servir els mòduls del kernel per una targeta gràfica Nvidia quan en aquest ordinador no n'hi ha cap. Els paquets per Nvidia s'han instal·lat per error a partir de la llista de paquets instal·lats al 600 MHz, on sí que hi ha instal·lada una targeta

gràfica Nvidia. La solució és desinstal·lar aquests paquets,

```
# yum list *nvidia*
Loaded plugins: fastestmirror, keys, langpacks, refresh-packagekit
Loading mirror speeds from cached hostfile
 * base: ftp.csuc.cat
 * elrepo: mirror.koddos.net
 * epel: fr2.rpmfind.net
 * extras: ftp.csuc.cat
 * updates: ftp.csuc.cat
Installed Packages
kmod-nvidia-390xx.x86_64
390.144-1.el7_9.elrepo @elrepo
nvidia-x11-drv-390xx.x86_64
390.144-1.el7_9.elrepo @elrepo
nvidia-x11-drv-390xx-libs.x86_64
390.144-1.el7_9.elrepo @elrepo
Available Packages
kmod-nvidia.x86_64
470.63.01-1.el7_9.elrepo elrepo
:
:
pcp-pmda-nvidia-gpu.x86_64 4.3.2-13.el7_9
updates
yum-plugin-nvidia.noarch
1.0.2-1.el7.elrepo elrepo
[root@cie-54-214 gdm]#

# yum remove kmod-nvidia-390xx.x86_64 nvidia-x11-drv-390xx.x86_64 nvidia-
x11-drv-390xx-libs.x86_64
Loaded plugins: fastestmirror, keys, langpacks, refresh-packagekit
Resolving Dependencies
--> Running transaction check
---> Package kmod-nvidia-390xx.x86_64 0:390.144-1.el7_9.elrepo will be
erased
---> Package nvidia-x11-drv-390xx.x86_64 0:390.144-1.el7_9.elrepo will be
erased
---> Package nvidia-x11-drv-390xx-libs.x86_64 0:390.144-1.el7_9.elrepo will
be erased
--> Finished Dependency Resolution

Dependencies Resolved

=====
=====
Package                               Arch      Version
Repository                            Size
=====
=====
```

```

Removing:
  kmod-nvidia-390xx                x86_64                390.144-1.el7_9.elrepo
@elrepo                          60 M
  nvidia-x11-drv-390xx             x86_64                390.144-1.el7_9.elrepo
@elrepo                          25 M
  nvidia-x11-drv-390xx-libs        x86_64                390.144-1.el7_9.elrepo
@elrepo                          144 M

```

Transaction Summary

```

=====
=====
Remove 3 Packages

```

Installed size: 229 M

Is this ok [y/N]: y

Downloading packages:

Running transaction check

Running transaction test

Transaction test succeeded

Running transaction

```

Erasing   : kmod-nvidia-390xx-390.144-1.el7_9.elrepo.x86_64
1/3

```

Working. This may take some time ...

Done.

```

Erasing   : nvidia-x11-drv-390xx-libs-390.144-1.el7_9.elrepo.x86_64
2/3

```

```

Erasing   : nvidia-x11-drv-390xx-390.144-1.el7_9.elrepo.x86_64
3/3

```

```

Verifying : nvidia-x11-drv-390xx-390.144-1.el7_9.elrepo.x86_64
1/3

```

```

Verifying : kmod-nvidia-390xx-390.144-1.el7_9.elrepo.x86_64
2/3

```

```

Verifying : nvidia-x11-drv-390xx-libs-390.144-1.el7_9.elrepo.x86_64
3/3

```

Removed:

```

  kmod-nvidia-390xx.x86_64 0:390.144-1.el7_9.elrepo      nvidia-x11-
drv-390xx.x86_64 0:390.144-1.el7_9.elrepo      nvidia-x11-drv-390xx-
libs.x86_64 0:390.144-1.el7_9.elrepo

```

Complete!

i reiniciar el gestor gràfic,

```

[root@cie-54-214 gdm]# systemctl stop gdm

```

```

[root@cie-54-214 gdm]# systemctl status gdm

```

● gdm.service - GNOME Display Manager

Loaded: loaded (/usr/lib/systemd/system/gdm.service; enabled; vendor preset: enabled)

Active: inactive (dead) since Fri 2021-08-20 15:48:59 CEST; 4s ago

```
Process: 1408 ExecStartPost=/bin/bash -c TERM=linux /usr/bin/clear > /dev/tty1 (code=exited, status=0/SUCCESS)
```

```
Process: 1394 ExecStart=/usr/sbin/gdm (code=exited, status=0/SUCCESS)
```

```
Main PID: 1394 (code=exited, status=0/SUCCESS)
```

```
Aug 20 15:30:32 cie-54-214.uab.es systemd[1]: Started GNOME Display Manager.
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.132598 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.072693 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.077094 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.083547 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.071624 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmDisplay: display lasted 0.063474 seconds
```

```
Aug 20 15:30:32 cie-54-214.uab.es gdm[1394]: GdmLocalDisplayFactory: maximum number of X display failures reached: check X server log for errors
```

```
Aug 20 15:48:59 cie-54-214.uab.es systemd[1]: Stopping GNOME Display Manager...
```

```
Aug 20 15:48:59 cie-54-214.uab.es systemd[1]: Stopped GNOME Display Manager.
```

```
[root@cie-54-214 gdm]# systemctl start gdm
```

```
[root@cie-54-214 gdm]# systemctl status gdm
```

```
● gdm.service - GNOME Display Manager
```

```
Loaded: loaded (/usr/lib/systemd/system/gdm.service; enabled; vendor preset: enabled)
```

```
Active: active (running) since Fri 2021-08-20 15:49:08 CEST; 1s ago
```

```
Process: 30628 ExecStartPost=/bin/bash -c TERM=linux /usr/bin/clear > /dev/tty1 (code=exited, status=0/SUCCESS)
```

```
Main PID: 30625 (gdm)
```

```
CGroup: /system.slice/gdm.service
```

```
└─30625 /usr/sbin/gdm
```

```
└─30632 /usr/bin/X :0 -background none -noreset -audit 4 -verbose
```

```
-auth /run/gdm/auth-for-gdm-PKHUXv/database -seat seat0 -nolisten tcp vt1
```

```
Aug 20 15:49:08 cie-54-214.uab.es systemd[1]: Starting GNOME Display Manager...
```

```
Aug 20 15:49:08 cie-54-214.uab.es systemd[1]: Started GNOME Display Manager.
```

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