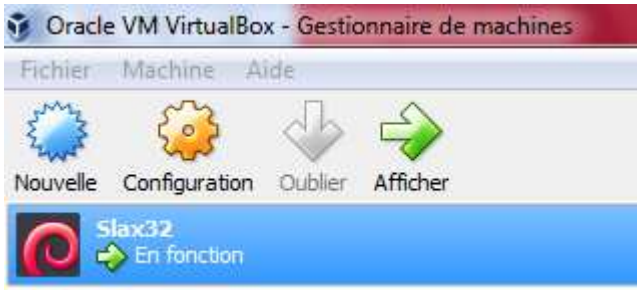
TP08 PAS A PAS (Utilisation de Buildroot)

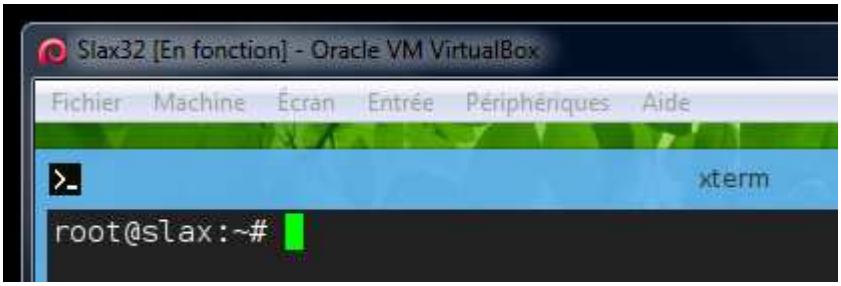
Matière : ATELIER SYSTEME D'EXPLOITATION EMBARQUE | Classe : SEM21

Travail effectué

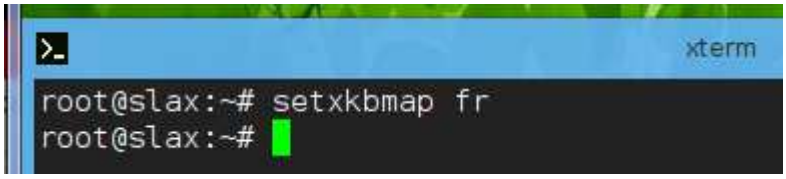
1- Lancer VirtuelBox



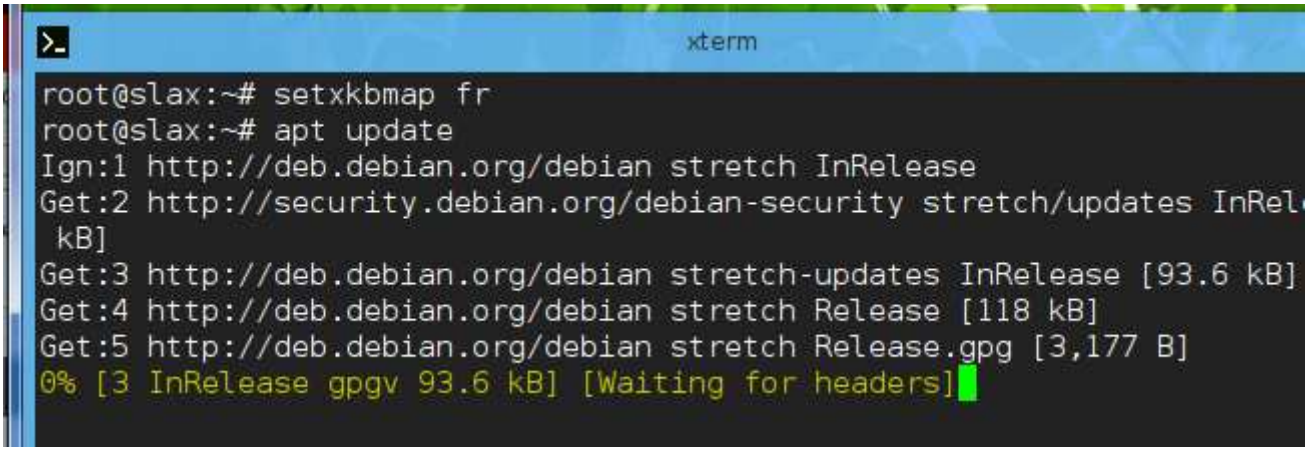
2- Démarrer la machine virtuelle "Slax32"



3- Changer le clavier en "azerty"

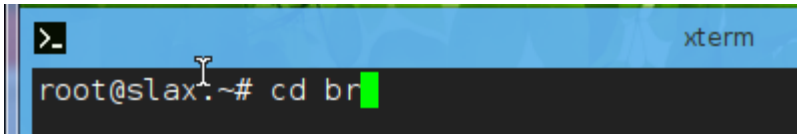


4- Actualiser apt (apt update)



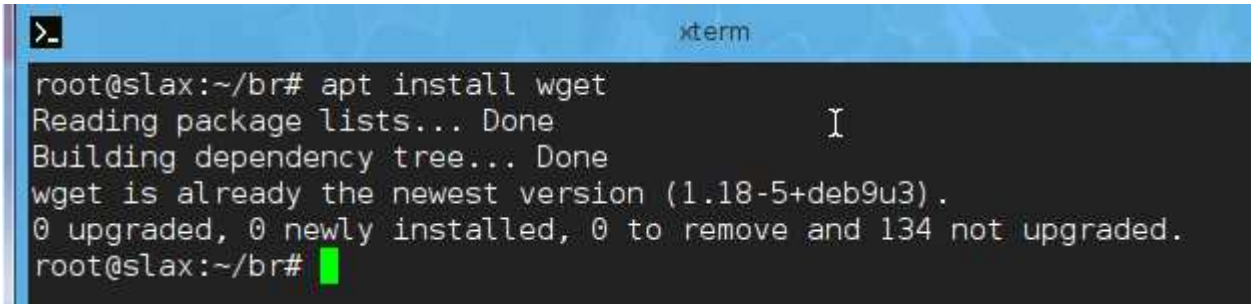
5- Créer un dossier "br" (mkdir)

6- Entrer dans le dossier "br" (cd)

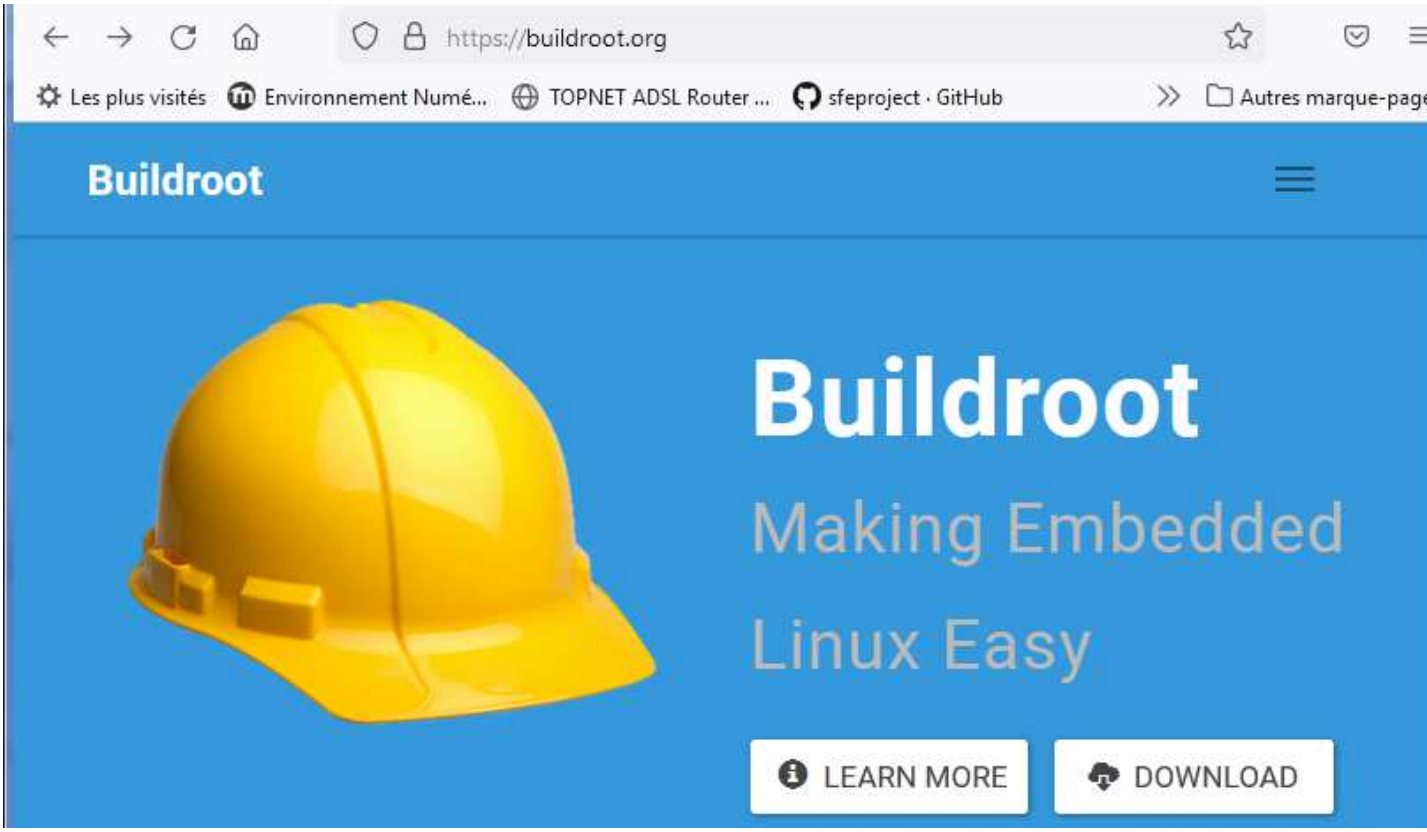


7- Lister le contenu de "br" (ls)

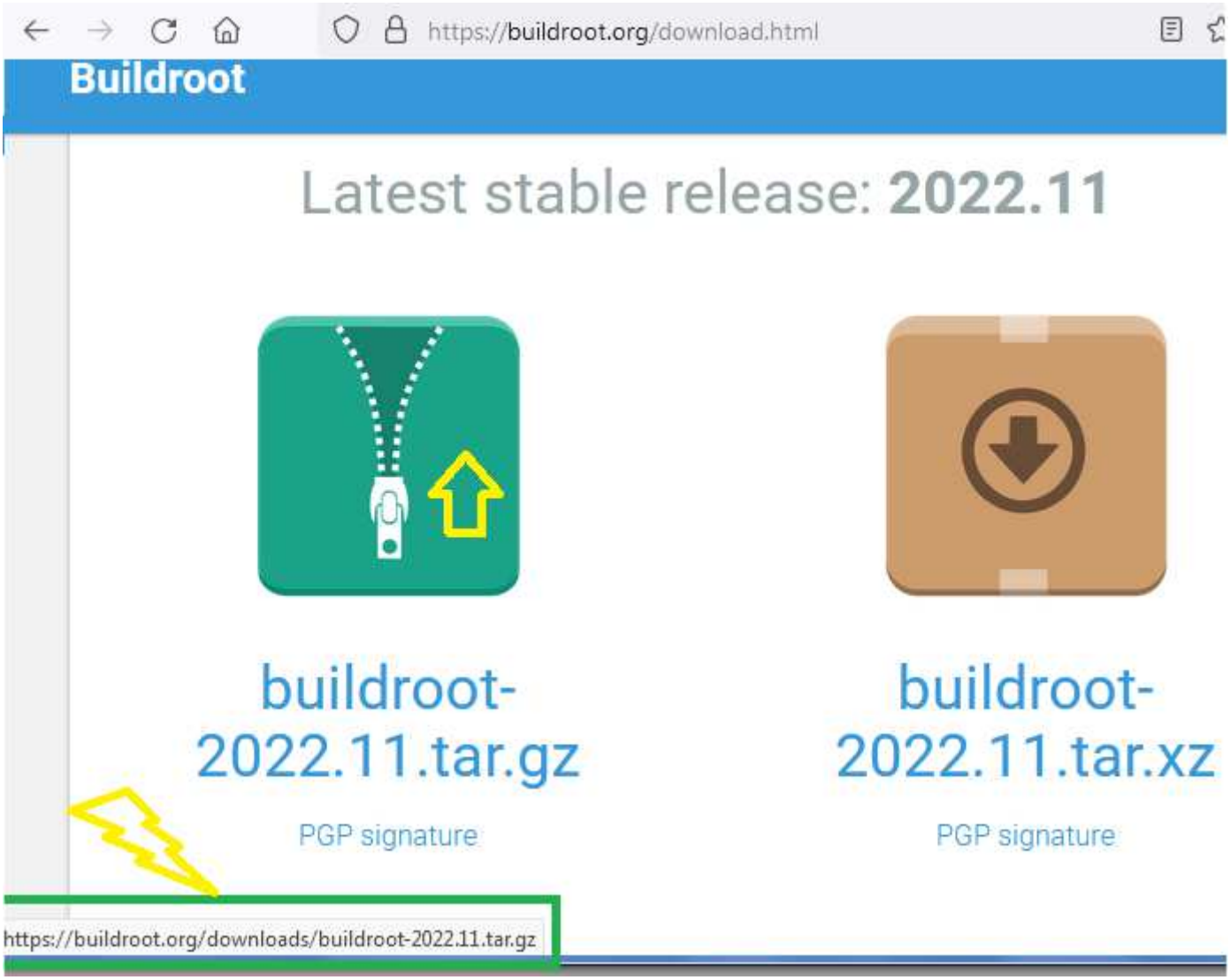
8- Installer wget



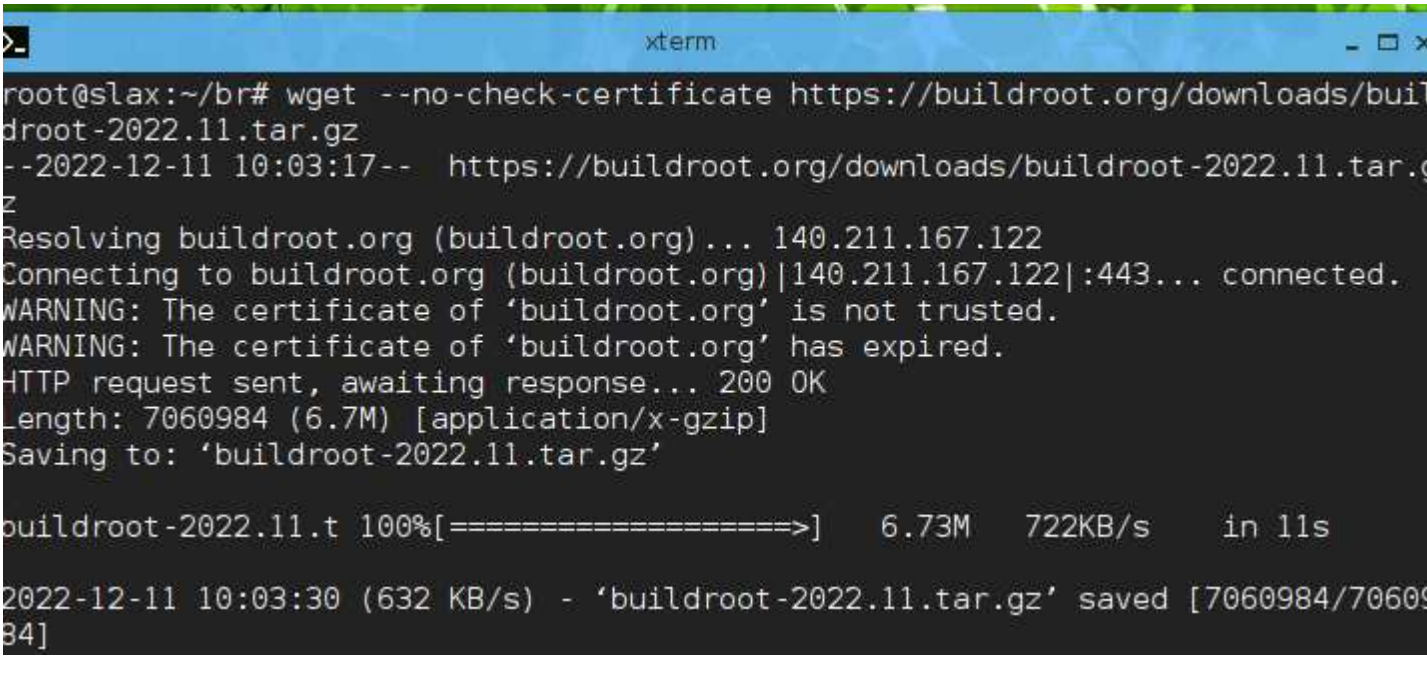
9- Ouvrir le lien [1] et cliquer sur "Download"



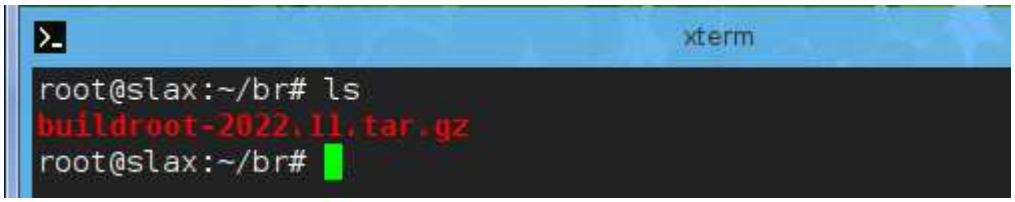
10- Fixer la souris sur "buildroot-2020.1.11.tar.gz" pour voir son chemin complet dans la barre d'état



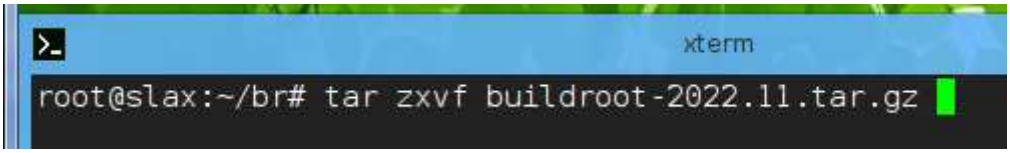
11- Télécharger "buildroot-2020.11.1.tar.gz" (wget --no-check-certificate CheminComplet)



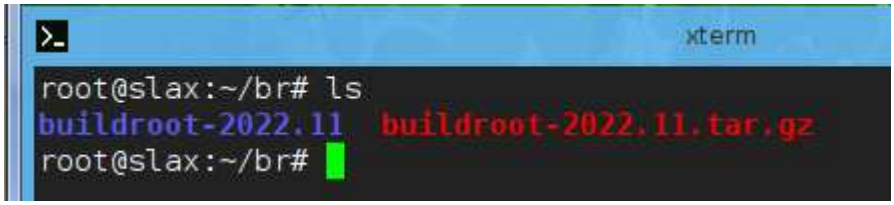
12- Lister le contenu du dossier en cours (ls)



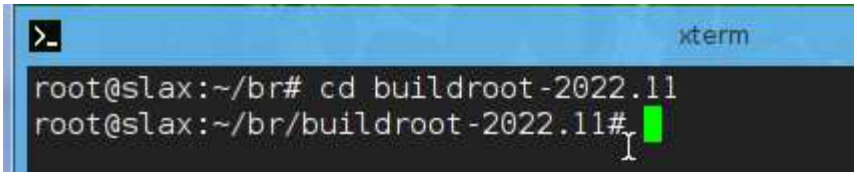
13- Extraire le fichier "buildroot-2020.1.11.tar.gz" (tar zxvf nomFichier)



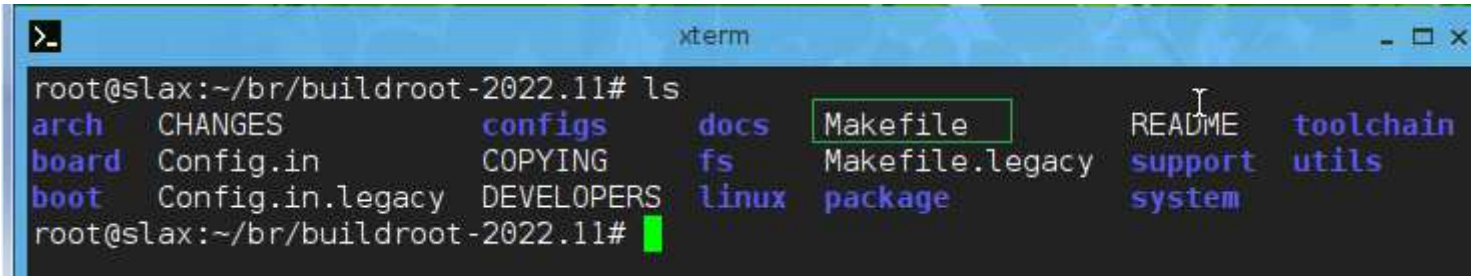
14- Lister le contenu du dossier en cours (ls)



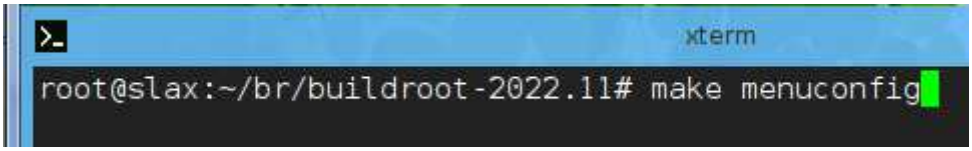
15- Entrer dans le dossier " buildroot-2020.1.11" (cd)

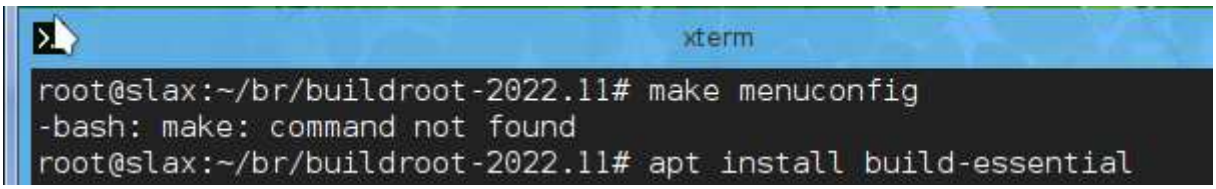


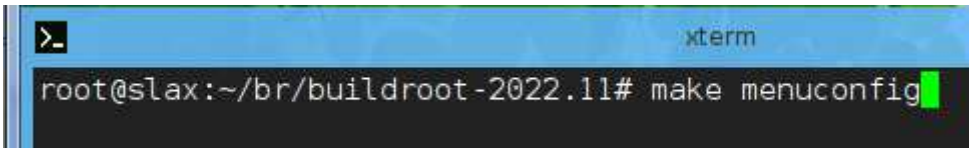
16- Lister le contenu du dossier en cours (ls)



17- Afficher le menu de configuration de buildroot (make menuconfig)

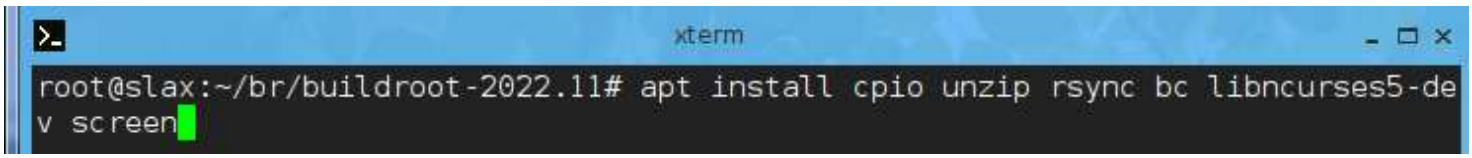




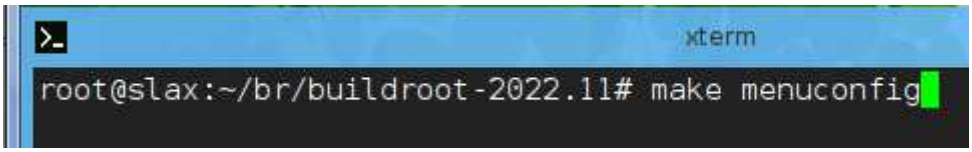


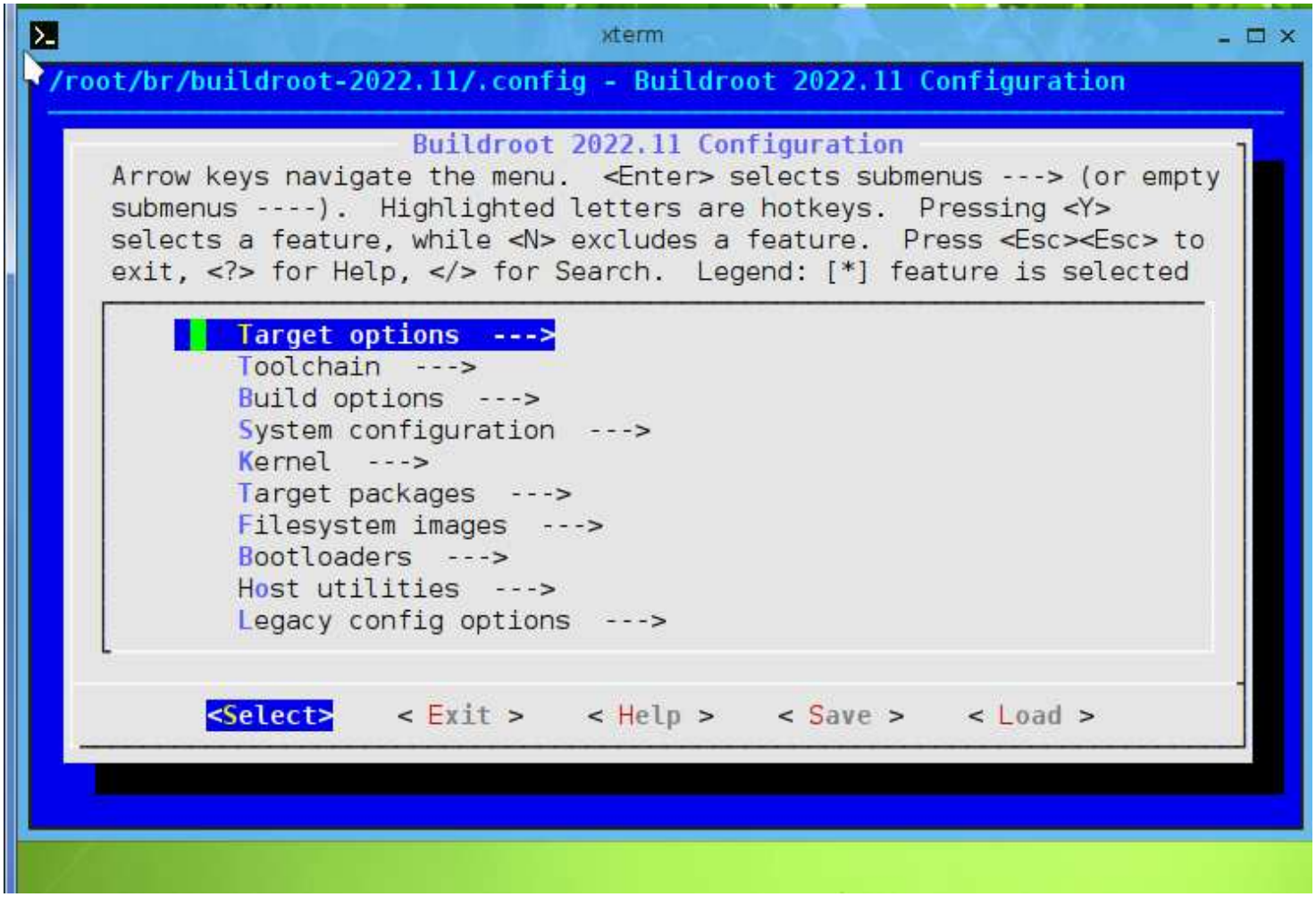

```
 *** Unable to find the ncurses libraries or the
 *** required header files.
 *** 'make menuconfig' requires the ncurses libraries
 ***
 *** Install ncurses (ncurses-devel or libncurses-dev
 *** depending on your distribution) and try again.
 ***
Makefile:253: recipe for target '/root/br/buildroot-2022.11/output/build/buildro
ot-config/dochecklxdialog' failed
make[1]: *** [/root/br/buildroot-2022.11/output/build/buildroot-config/dochecklx
dialog] Error 1
make[1]: Leaving directory '/root/br/buildroot-2022.11/support/kconfig'
Makefile:957: recipe for target '/root/br/buildroot-2022.11/output/build/buildro
ot-config/mconf' failed
make: *** [/root/br/buildroot-2022.11/output/build/buildroot-config/mconf] Error
 2
root@slax:~/br/buildroot-2022.11#
```

18- Installer toutes les bibliothèques du lien [2]



19- Afficher le menu de configuration de buildroot (make menuconfig)





20- Quitter le "menuconfig"

21- Afficher le menu de configuration "qt" de buildroot (make xconfig)

```
xterm
root@slax:~/br/buildroot-2022.11# make xconfig
mkdir -p /root/br/buildroot-2022.11/output/build/buildroot-config/lxdialog
PKG_CONFIG_PATH="" make CC="/usr/bin/gcc" HOSTCC="/usr/bin/gcc" \
    obj=/root/br/buildroot-2022.11/output/build/buildroot-config -C support/kcon
fig -f Makefile.br qconf
make[1]: Entering directory '/root/br/buildroot-2022.11/support/kconfig'
/bin/sh: line 1: pkg-config: command not found
/bin/sh: line 5: pkg-config: command not found
*
* Could not find Qt via pkg-config.
* Please install either Qt 4.8 or 5.x. and make sure it's in PKG_CONFIG_PATH
*
make[1]: *** No rule to make target '/root/br/buildroot-2022.11/output/build/bui
ldroot-config/.tmp_qtcheck', needed by '/root/br/buildroot-2022.11/output/build/
buildroot-config/qconf.o'.  Stop.
make[1]: Leaving directory '/root/br/buildroot-2022.11/support/kconfig'
Makefile:957: recipe for target '/root/br/buildroot-2022.11/output/build/buildro
ot-config/qconf' failed
make: *** [/root/br/buildroot-2022.11/output/build/buildroot-config/qconf] Error
 2
root@slax:~/br/buildroot-2022.11#
```

22- Installer Qt en utilisant le lien [5]

a. apt install qtcreator

```
xterm
root@slax:~/br/buildroot-2022.11# apt install qtcreator
```

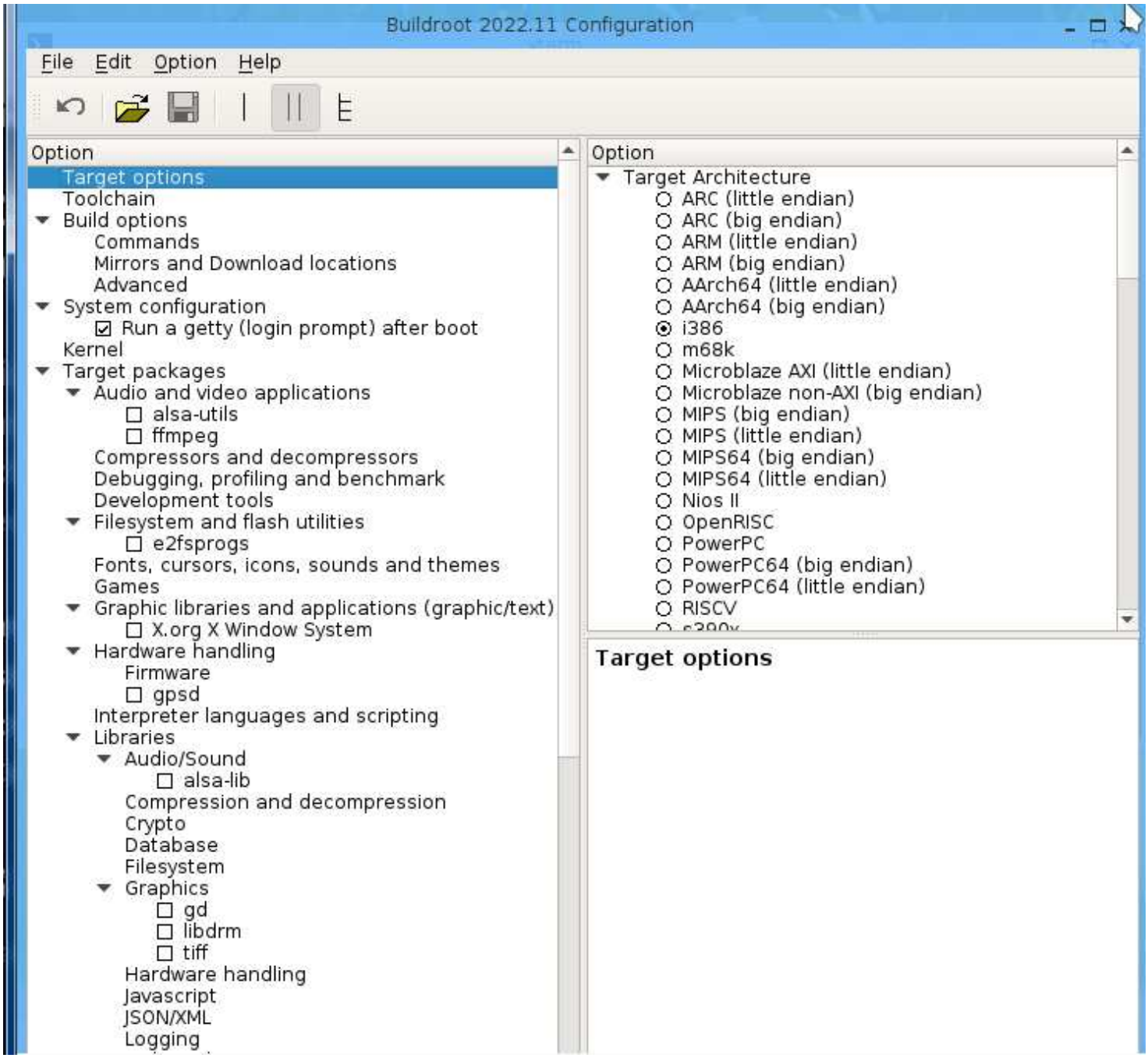
b. apt install qt5-default

```
xterm
root@slax:~/br/buildroot-2022.11# apt install qt5-default
```

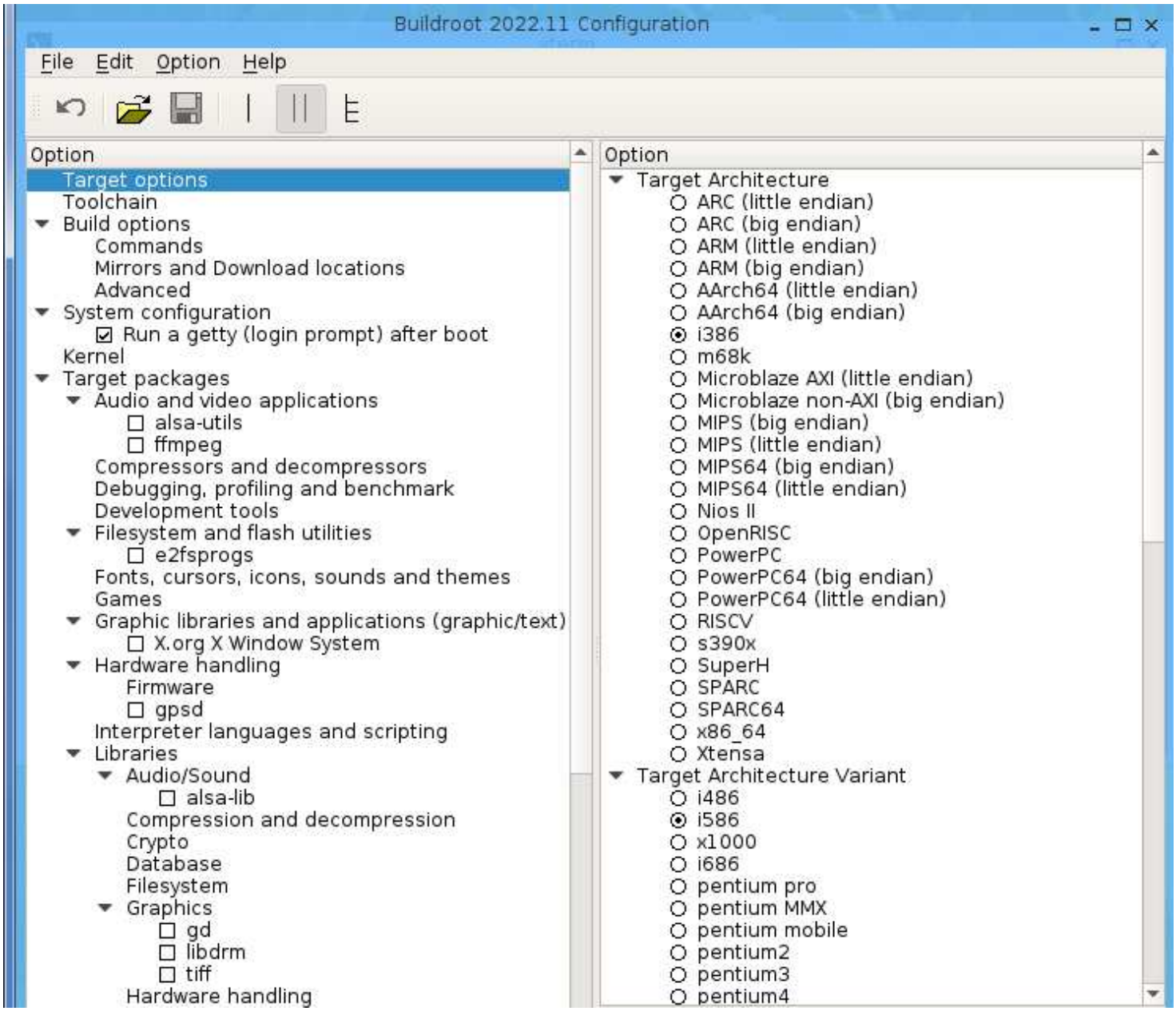
c. apt install pkg-config

```
xterm
root@slax:~/br/buildroot-2022.11# apt install pkg-config
```

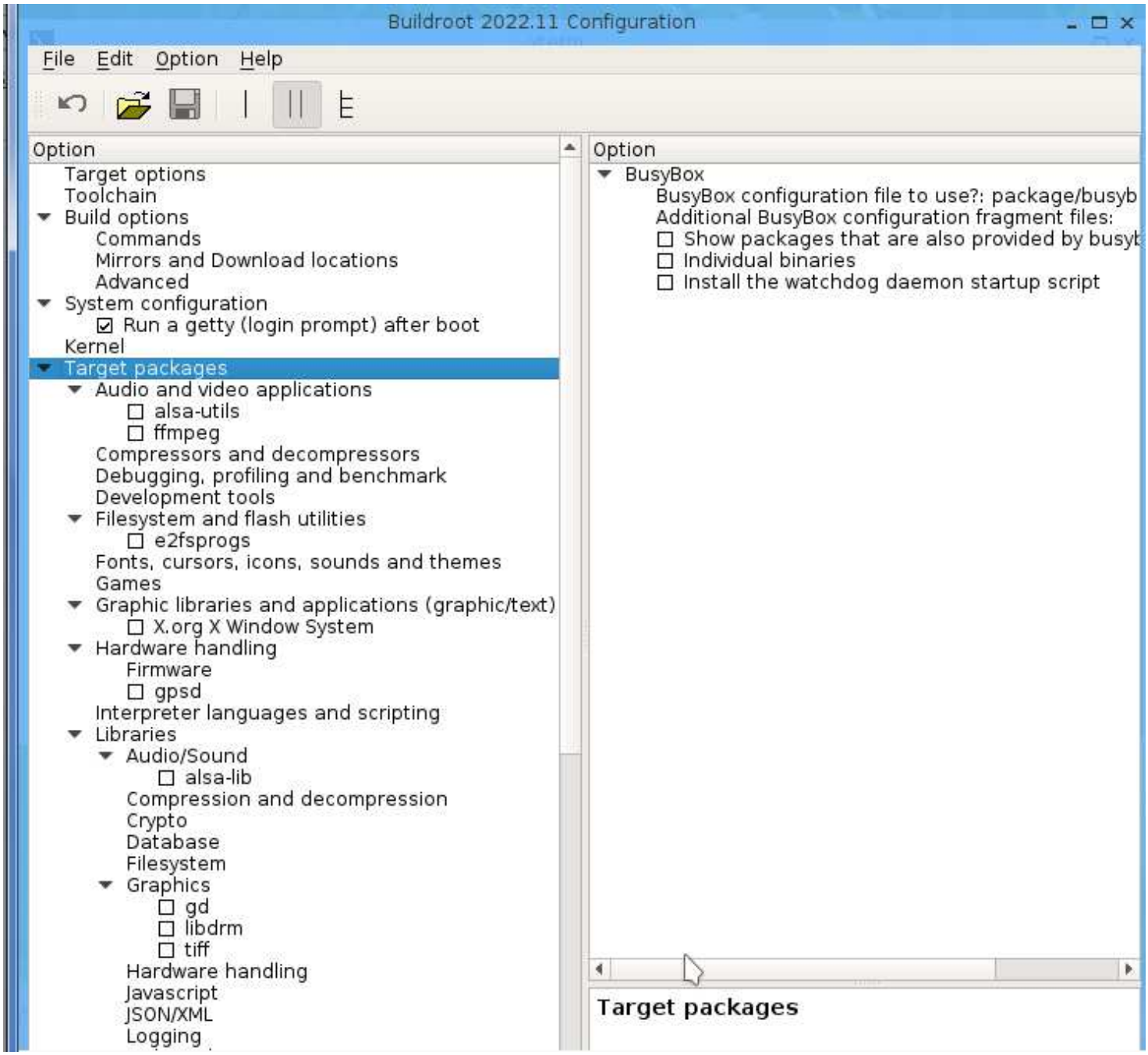
23- Afficher le menu de configuration "qt" de buildroot (make xconfig)



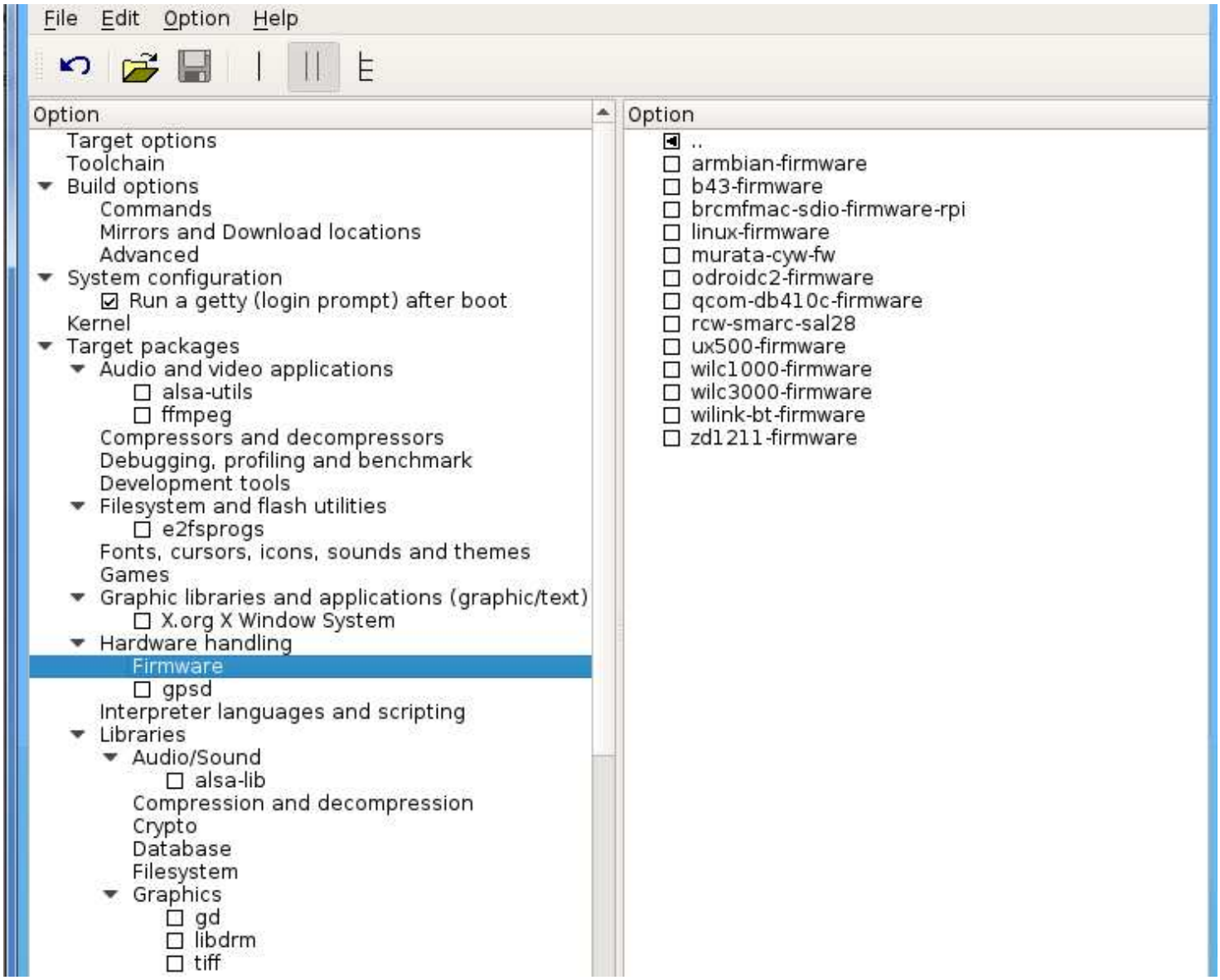
Target options



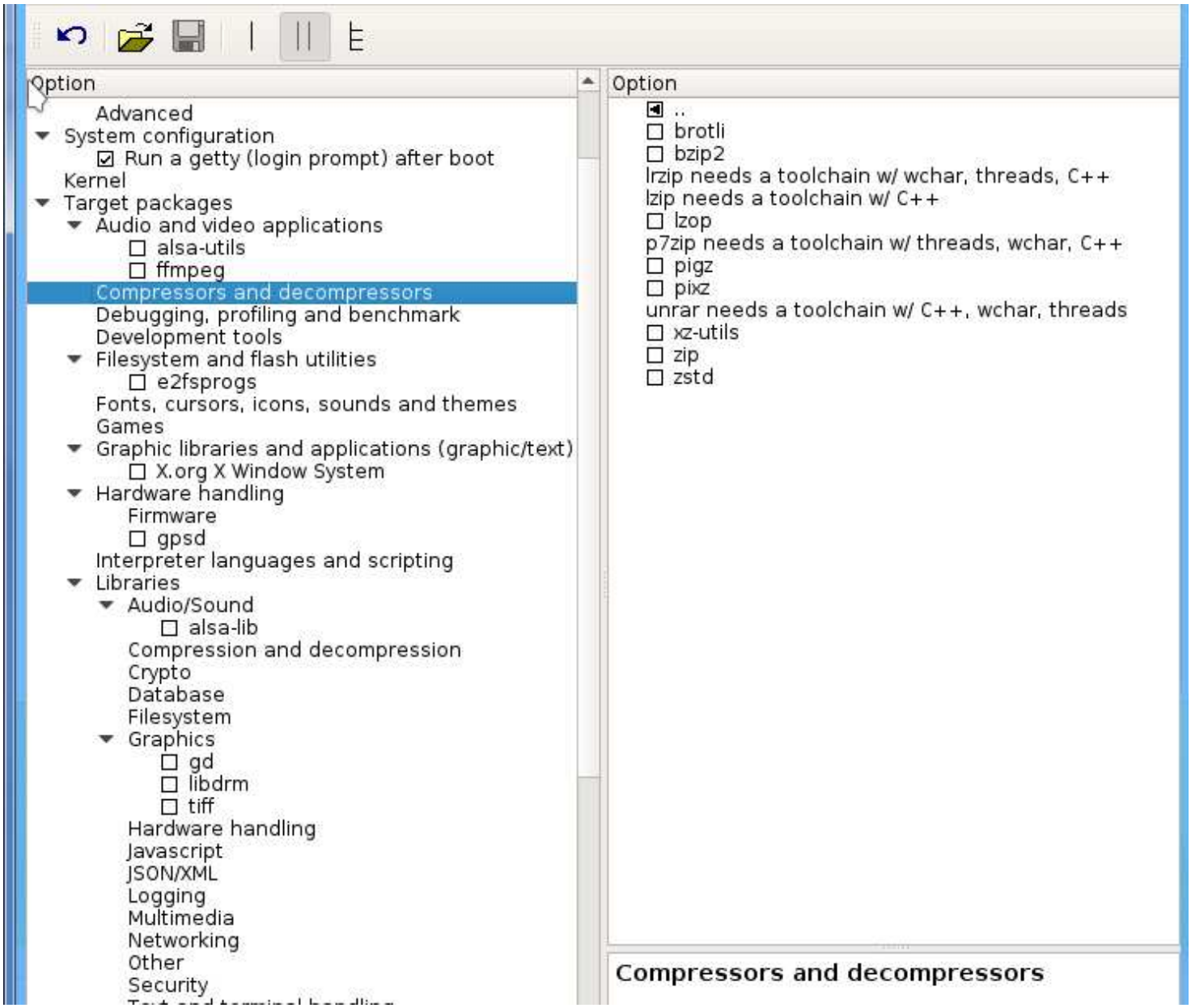
Target packages



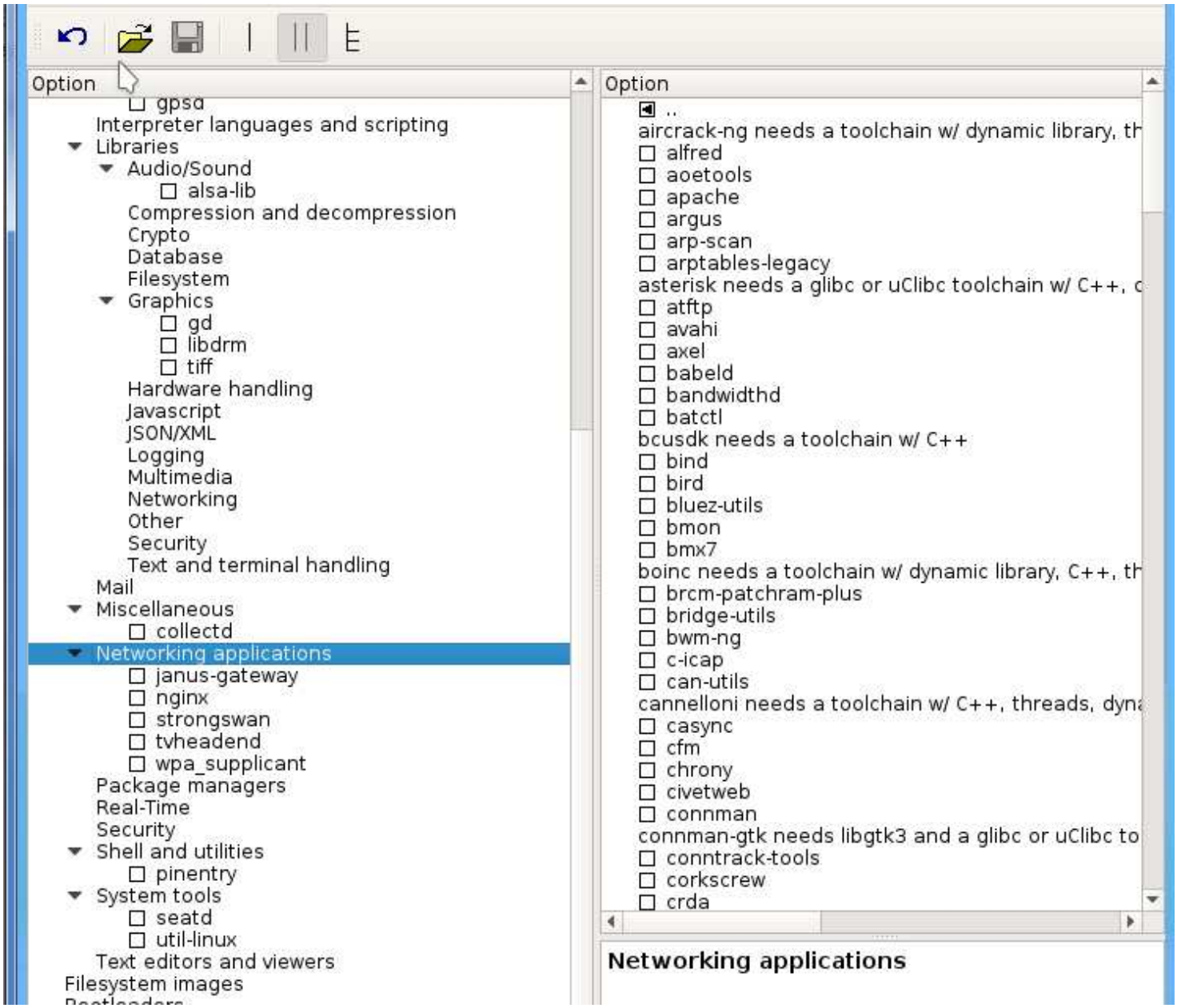
Firmware

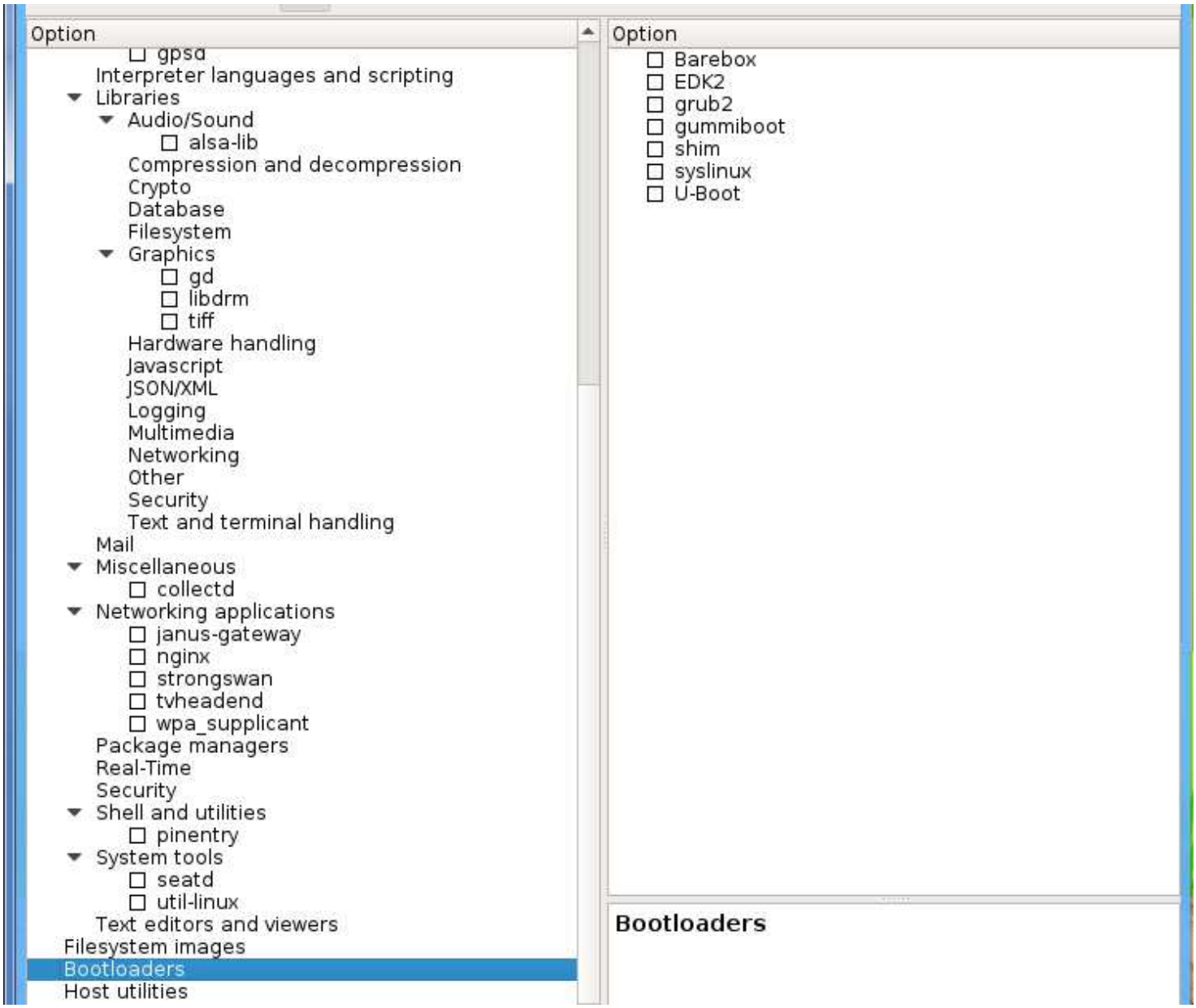

File Edit Option Help
Option
Target options
Toolchain
Build options
Commands
Mirrors and Download locations
Advanced
System configuration
Run a getty (login prompt) after boot
Kernel
Target packages
Audio and video applications
alsa-utils
ffmpeg
Compressors and decompressors
Debugging, profiling and benchmark
Development tools
Filesystem and flash utilities
e2fsprogs
Fonts, cursors, icons, sounds and themes
Games
Graphic libraries and applications (graphic/text)
X.org X Window System
Hardware handling
Firmware
gpsd
Interpreter languages and scripting
Libraries
Audio/Sound
alsa-lib
Compression and decompression
Crypto
Database
Filesystem
Graphics
gd
libdrm
tiff
Option
..
armbian-firmware
b43-firmware
brcmfmac-sdio-firmware-rpi
linux-firmware
murata-cyw-fw
odroidc2-firmware
qcom-db410c-firmware
rcw-smarc-sal28
ux500-firmware
wilc1000-firmware
wilc3000-firmware
wilink-bt-firmware
zd1211-firmware

Compressors and décompressors

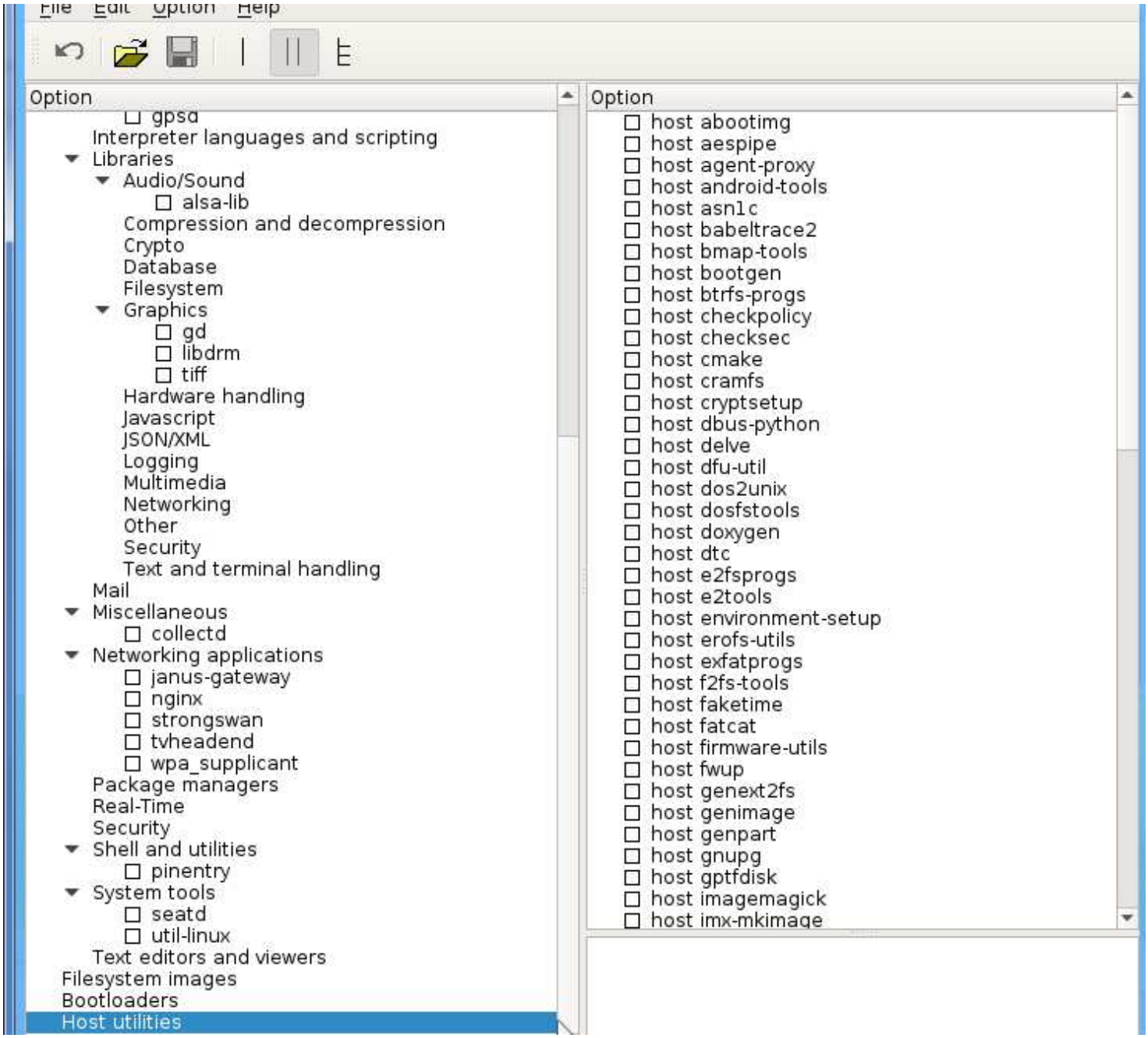


Networking applications

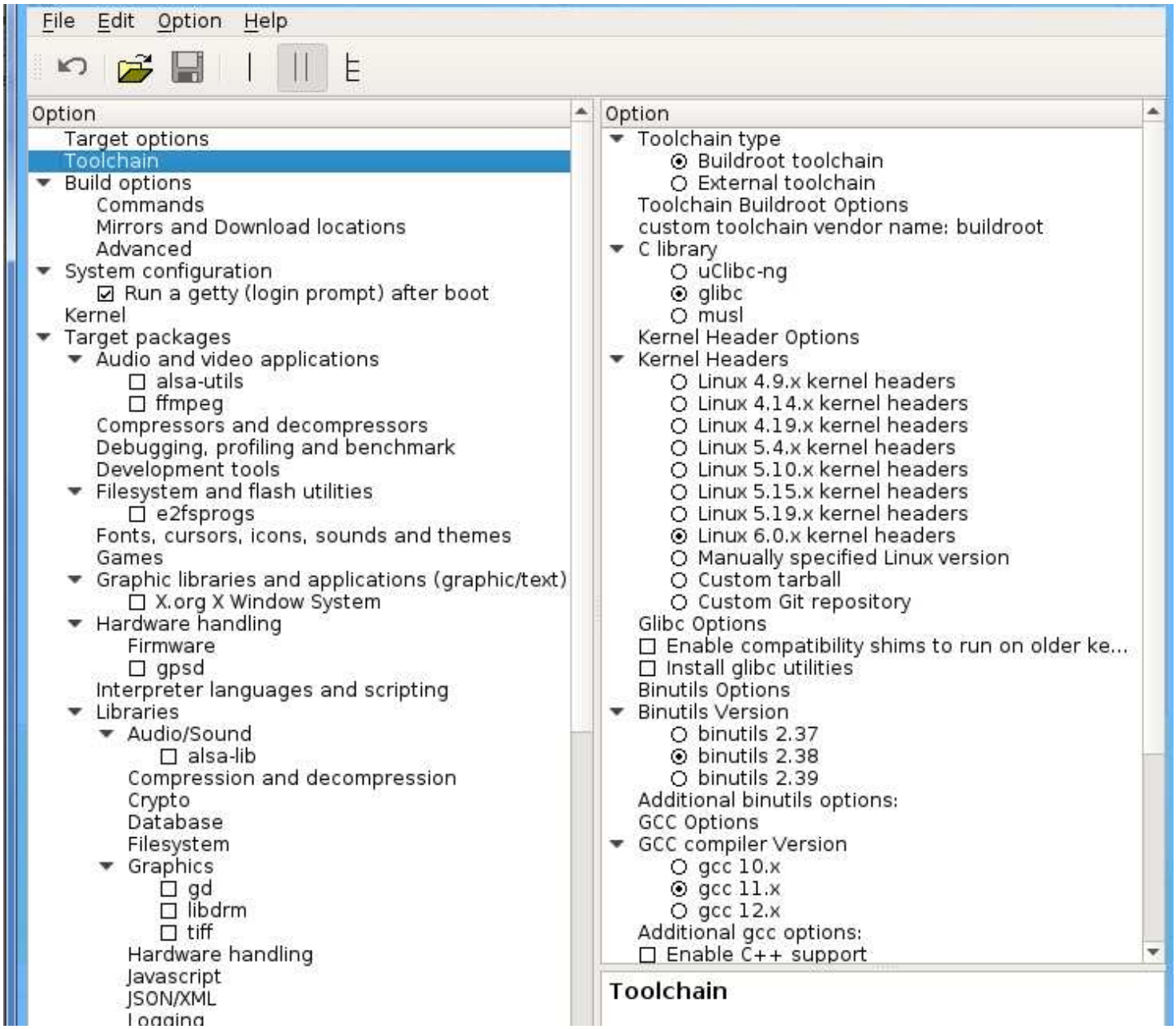



Option
gpsd
Interpreter languages and scripting
Libraries
Audio/Sound
alsa-lib
Compression and decompression
Crypto
Database
Filesystem
Graphics
gd
libdrm
tiff
Hardware handling
Javascript
JSON/XML
Logging
Multimedia
Networking
Other
Security
Text and terminal handling
Mail
Miscellaneous
collectd
Networking applications
janus-gateway
nginx
strongswan
tvheadend
wpa_supplicant
Package managers
Real-Time
Security
Shell and utilities
pinentry
System tools
seatd
util-linux
Text editors and viewers
Filesystem images
Bootloaders
Host utilities
Option
Barebox
EDK2
grub2
gummiboot
shim
syslinux
U-Boot
Bootloaders

Host utilities



Toolchain


File Edit Option Help
Option
Target options
Toolchain
Build options
Commands
Mirrors and Download locations
Advanced
System configuration
Run a getty (login prompt) after boot
Kernel
Target packages
Audio and video applications
alsa-utils
ffmpeg
Compressors and decompressors
Debugging, profiling and benchmark
Development tools
Filesystem and flash utilities
e2fsprogs
Fonts, cursors, icons, sounds and themes
Games
Graphic libraries and applications (graphic/text)
X.org X Window System
Hardware handling
Firmware
gpsd
Interpreter languages and scripting
Libraries
Audio/Sound
alsa-lib
Compression and decompression
Crypto
Database
Filesystem
Graphics
gd
libdrm
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Toolchain Buildroot Options
custom toolchain vendor name: buildroot
C library
uClibc-ng
glibc
musl
Kernel Header Options
Kernel Headers
Linux 4.9.x kernel headers
Linux 4.14.x kernel headers
Linux 4.19.x kernel headers
Linux 5.4.x kernel headers
Linux 5.10.x kernel headers
Linux 5.15.x kernel headers
Linux 5.19.x kernel headers
Linux 6.0.x kernel headers
Manually specified Linux version
Custom tarball
Custom Git repository
Glibc Options
Enable compatibility shims to run on older ke...
Install glibc utilities
Binutils Options
Binutils Version
binutils 2.37
binutils 2.38
binutils 2.39
Additional binutils options:
GCC Options
GCC compiler Version
gcc 10.x
gcc 11.x
gcc 12.x
Additional gcc options:
Enable C++ support
Toolchain