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kconfig-frontends のインストール

NuttX の構成を変更する際、Linux と同様 `make menuconfig` で行います。
そのときに **kconfig-frontends** が必要となります。

NuttX README.txt より

```
You will also need to get the kconfig-frontends configuration as
described below under "NuttX Configuration tool". In order to build the
kconfig-frontends configuration tool you will also need: make, gperf,
flex, bison, and libncurses-dev.
```

Related Repositories

These are standalone repositories:

... 略 ...

- * <https://bitbucket.org/nuttx/tools>

There are snapshots of some tools here that you will need to work with
NuttX: kconfig-frontends, genromfs, and others.

kconfig-frontends のビルド

ソースのダウンロード

上記よりダウンロードします。

```
xubuntu64:~/src/NuttX$ git clone https://bitbucket.org/nuttx/tools
Cloning into 'tools'...
remote: Counting objects: 681, done.
remote: Compressing objects: 100% (418/418), done.
remote: Total 681 (delta 393), reused 395 (delta 249)
Receiving objects: 100% (681/681), 1.86 MiB | 958.00 KiB/s, done.
Resolving deltas: 100% (393/393), done.
Checking connectivity... done.
xubuntu64:~/src/NuttX$
```

```
xubuntu64:~/src/NuttX$ cd tools/
xubuntu64:~/src/NuttX/tools$
xubuntu64:~/src/NuttX/tools$ ls -ln
合計 68
-rw-rw-r-- 1 1000 1000 9761 3月 7 12:51 README.txt
```

```
-rw-rw-r-- 1 1000 1000 21069  3月  7 12:51 genromfs-0.5.2.tar.gz
drwxrwxr-x 7 1000 1000  4096  3月  7 12:51 kconfig-frontends
-rw-rw-r-- 1 1000 1000  2715  3月  7 12:51 kconfig-frontends-3.3.0-1-
libintl.patch
-rw-rw-r-- 1 1000 1000 14186  3月  7 12:51 kconfig-language.txt
-rwxrwxr-x 1 1000 1000   816  3月  7 12:51 kconfig-macos.diff
drwxrwxr-x 5 1000 1000  4096  3月  7 12:51 nxfuse
xubuntu64:~/src/NuttX/tools$
```

必要なパッケージの追加

kconfig-frontends のビルドに必要なパッケージをインストールします。

```
xubuntu64:~/src/NuttX/tools$ sudo apt install make gperf flex bison
libncurses-dev
パッケージリストを読み込んでいます... 完了
依存関係ツリーを作成しています
状態情報を読み取っています... 完了
注意 ☐ 'libncurses-dev' の代わりに 'libncurses5-dev' を選択します
make はすでに最新バージョン (4.1-6) です。
以下の追加パッケージがインストールされます:
  libbison-dev libfl-dev
提案パッケージ:
  bison-doc ncurses-doc
以下のパッケージが新たにインストールされます:
  bison flex gperf libbison-dev libfl-dev libncurses5-dev
アップグレード: 0 個、新規インストール: 6 個、削除: 0 個、保留: 0 個。
1,176 kB のアーカイブを取得する必要があります。
この操作後に追加で 4,043 kB のディスク容量が消費されます。
続行しますか? [Y/n]
取得:1 http://jp.archive.ubuntu.com/ubuntu xenial/main amd64 libfl-dev amd64
2.6.0-11 [12.5 kB]
取得:2 http://jp.archive.ubuntu.com/ubuntu xenial/main amd64 flex amd64
2.6.0-11 [290 kB]
取得:3 http://jp.archive.ubuntu.com/ubuntu xenial/main amd64 libbison-dev
amd64 2:3.0.4.dfsg-1 [338 kB]
取得:4 http://jp.archive.ubuntu.com/ubuntu xenial/main amd64 bison amd64
2:3.0.4.dfsg-1 [259 kB]
取得:5 http://jp.archive.ubuntu.com/ubuntu xenial/universe amd64 gperf amd64
3.0.4-2 [102 kB]
取得:6 http://jp.archive.ubuntu.com/ubuntu xenial/main amd64 libncurses5-dev
amd64 6.0+20160213-1ubuntu1 [175 kB]
1,176 kB を 0秒で取得しました (5,653 kB/s)
以前に未選択のパッケージ libfl-dev:amd64 を選択しています。
(データベースを読み込んでいます ... 現在 228906 個のファイルとディレクトリがインストールされてい
ます。)
.../libfl-dev_2.6.0-11_amd64.deb を展開する準備をしています ...
libfl-dev:amd64 (2.6.0-11) を展開しています...
以前に未選択のパッケージ flex を選択しています。
```

```
.../flex_2.6.0-11_amd64.deb を展開する準備をしています ...
flex (2.6.0-11) を展開しています...
以前に未選択のパッケージ libbison-dev:amd64 を選択しています。
.../libbison-dev_2%3a3.0.4.dfsg-1_amd64.deb を展開する準備をしています ...
libbison-dev:amd64 (2:3.0.4.dfsg-1) を展開しています...
以前に未選択のパッケージ bison を選択しています。
.../bison_2%3a3.0.4.dfsg-1_amd64.deb を展開する準備をしています ...
bison (2:3.0.4.dfsg-1) を展開しています...
以前に未選択のパッケージ gperf を選択しています。
.../gperf_3.0.4-2_amd64.deb を展開する準備をしています ...
gperf (3.0.4-2) を展開しています...
以前に未選択のパッケージ libncurses5-dev:amd64 を選択しています。
.../libncurses5-dev_6.0+20160213-1ubuntu1_amd64.deb を展開する準備をしています ...
libncurses5-dev:amd64 (6.0+20160213-1ubuntu1) を展開しています...
libc-bin (2.23-0ubuntu10) のトリガを処理しています ...
install-info (6.1.0.dfsg.1-5) のトリガを処理しています ...
doc-base (0.10.7) のトリガを処理しています ...
doc-base ファイルを 2 個追加 を処理中...
man-db (2.7.5-1) のトリガを処理しています ...
libfl-dev:amd64 (2.6.0-11) を設定しています ...
flex (2.6.0-11) を設定しています ...
libbison-dev:amd64 (2:3.0.4.dfsg-1) を設定しています ...
bison (2:3.0.4.dfsg-1) を設定しています ...
update-alternatives: /usr/bin/yacc (yacc) を提供するために自動モードで
/usr/bin/bison.yacc を使います
gperf (3.0.4-2) を設定しています ...
libncurses5-dev:amd64 (6.0+20160213-1ubuntu1) を設定しています ...
libc-bin (2.23-0ubuntu10) のトリガを処理しています ...
xubuntu64:~/src/NuttX/tools$
```

ビルド

```
xubuntu64:~/src/NuttX/tools$ cd kconfig-frontends/
xubuntu64:~/src/NuttX/tools/kconfig-frontends$ ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether make supports nested variables... (cached) yes
checking for style of include used by make... GNU
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
```

```
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking whether gcc understands -c and -o together... yes
checking dependency style of gcc... gcc3
checking for ar... ar
checking the archiver (ar) interface... ar
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking how to print strings... printf
checking for a sed that does not truncate output... /bin/sed
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking for fgrep... /bin/grep -F
checking for ld used by gcc... /usr/bin/ld
checking if the linker (/usr/bin/ld) is GNU ld... yes
checking for BSD- or MS-compatible name lister (nm)... /usr/bin/nm -B
checking the name lister (/usr/bin/nm -B) interface... BSD nm
checking whether ln -s works... yes
checking the maximum length of command line arguments... 1572864
checking how to convert x86_64-pc-linux-gnu file names to x86_64-pc-linux-
gnu format... func_convert_file_noop
checking how to convert x86_64-pc-linux-gnu file names to toolchain
format... func_convert_file_noop
checking for /usr/bin/ld option to reload object files... -r
checking for objdump... objdump
checking how to recognize dependent libraries... pass_all
checking for dlltool... no
checking how to associate runtime and link libraries... printf %s\n
checking for archiver @FILE support... @
checking for strip... strip
checking for ranlib... ranlib
checking command to parse /usr/bin/nm -B output from gcc object... ok
checking for sysroot... no
checking for a working dd... /bin/dd
checking how to truncate binary pipes... /bin/dd bs=4096 count=1
checking for mt... mt
checking if mt is a manifest tool... no
checking how to run the C preprocessor... gcc -E
checking for ANSI C header files... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking for unistd.h... yes
checking for dlfcn.h... yes
```

```
checking for objdir... .libs
checking if gcc supports -fno-rtti -fno-exceptions... no
checking for gcc option to produce PIC... -fPIC -DPIC
checking if gcc PIC flag -fPIC -DPIC works... yes
checking if gcc static flag -static works... yes
checking if gcc supports -c -o file.o... yes
checking if gcc supports -c -o file.o... (cached) yes
checking whether the gcc linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking whether -lc should be explicitly linked in... no
checking dynamic linker characteristics... GNU/Linux ld.so
checking how to hardcode library paths into programs... immediate
checking whether stripping libraries is possible... yes
checking if libtool supports shared libraries... yes
checking whether to build shared libraries... yes
checking whether to build static libraries... no
checking for gcc... (cached) gcc
checking whether we are using the GNU C compiler... (cached) yes
checking whether gcc accepts -g... (cached) yes
checking for gcc option to accept ISO C89... (cached) none needed
checking whether gcc understands -c and -o together... (cached) yes
checking dependency style of gcc... (cached) gcc3
checking for g++... g++
checking whether we are using the GNU C++ compiler... yes
checking whether g++ accepts -g... yes
checking dependency style of g++... gcc3
checking how to run the C++ preprocessor... g++ -E
checking for ld used by g++... /usr/bin/ld -m elf_x86_64
checking if the linker (/usr/bin/ld -m elf_x86_64) is GNU ld... yes
checking whether the g++ linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking for g++ option to produce PIC... -fPIC -DPIC
checking if g++ PIC flag -fPIC -DPIC works... yes
checking if g++ static flag -static works... yes
checking if g++ supports -c -o file.o... yes
checking if g++ supports -c -o file.o... (cached) yes
checking whether the g++ linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking dynamic linker characteristics... (cached) GNU/Linux ld.so
checking how to hardcode library paths into programs... immediate
checking for inline... inline
checking whether make sets $(MAKE)... (cached) yes
checking for pkg-config... /usr/bin/pkg-config
checking pkg-config is at least version 0.9.0... yes
checking for flex... flex
checking lex output file root... lex.yy
checking lex library... -lfl
checking whether yytext is a pointer... yes
checking for bison... bison -y
checking for gperf... gperf
checking for the type used in gperf declarations... unsigned int
```

```
checking libintl.h usability... yes
checking libintl.h presence... yes
checking for libintl.h... yes
checking whether gettext is declared... yes
checking for library containing gettext... none required
checking ncursesw/curses.h usability... yes
checking ncursesw/curses.h presence... yes
checking for ncursesw/curses.h... yes
checking for library containing setupterm... -ltinfo
checking for library containing initscr... -lncursesw
checking for library containing new_panel... -lpanelw
checking for library containing menu_init... -lmenuw
checking for gtk... no
checking for Qt5... no
checking that generated files are newer than configure... done
configure: creating ./config.status
config.status: creating Makefile
config.status: creating libs/parser/kconfig-parser.pc
config.status: creating scripts/.autostuff/config.h
config.status: executing depfiles commands
config.status: executing libtool commands
configure:
configure: Configured with:
configure: - parser library      : shared (version: 4.11.0)
configure: - root-menu prompt  : Configuration
configure: - config prefix     : CONFIG_
configure: - frontends         : kconfig conf mconf nconf
configure: - localised         : yes
configure: - install utilities : yes
configure: - CFLAGS CXXFLAGS   : -Wall
xubuntu64:~/src/NuttX/tools/kconfig-frontends$
```

```
xubuntu64:~/src/NuttX/tools/kconfig-frontends$ make
cd . && /bin/bash /home/kikuchi/src/NuttX/tools/kconfig-
frontends/scripts/.autostuff/scripts/missing automake-1.15 --foreign
running CONFIG_SHELL=/bin/bash /bin/bash ./configure --no-create --no-
recursion
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether make supports nested variables... (cached) yes
checking for style of include used by make... GNU
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
```



```
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking whether gcc understands -c and -o together... yes
checking dependency style of gcc... gcc3
checking for ar... ar
checking the archiver (ar) interface... ar
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking how to print strings... printf
checking for a sed that does not truncate output... /bin/sed
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking for fgrep... /bin/grep -F
checking for ld used by gcc... /usr/bin/ld
checking if the linker (/usr/bin/ld) is GNU ld... yes
checking for BSD- or MS-compatible name lister (nm)... /usr/bin/nm -B
checking the name lister (/usr/bin/nm -B) interface... BSD nm
checking whether ln -s works... yes
checking the maximum length of command line arguments... 1572864
checking how to convert x86_64-pc-linux-gnu file names to x86_64-pc-linux-
gnu format... func_convert_file_noop
checking how to convert x86_64-pc-linux-gnu file names to toolchain
format... func_convert_file_noop
checking for /usr/bin/ld option to reload object files... -r
checking for objdump... objdump
checking how to recognize dependent libraries... pass_all
checking for dlltool... no
checking how to associate runtime and link libraries... printf %s\n
checking for archiver @FILE support... @
checking for strip... strip
checking for ranlib... ranlib
checking command to parse /usr/bin/nm -B output from gcc object... ok
checking for sysroot... no
checking for a working dd... /bin/dd
checking how to truncate binary pipes... /bin/dd bs=4096 count=1
checking for mt... mt
checking if mt is a manifest tool... no
checking how to run the C preprocessor... gcc -E
checking for ANSI C header files... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking for unistd.h... yes
checking for dlfcn.h... yes
```

```
checking for objdir... .libs
checking if gcc supports -fno-rtti -fno-exceptions... no
checking for gcc option to produce PIC... -fPIC -DPIC
checking if gcc PIC flag -fPIC -DPIC works... yes
checking if gcc static flag -static works... yes
checking if gcc supports -c -o file.o... yes
checking if gcc supports -c -o file.o... (cached) yes
checking whether the gcc linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking whether -lc should be explicitly linked in... no
checking dynamic linker characteristics... GNU/Linux ld.so
checking how to hardcode library paths into programs... immediate
checking whether stripping libraries is possible... yes
checking if libtool supports shared libraries... yes
checking whether to build shared libraries... yes
checking whether to build static libraries... no
checking for gcc... (cached) gcc
checking whether we are using the GNU C compiler... (cached) yes
checking whether gcc accepts -g... (cached) yes
checking for gcc option to accept ISO C89... (cached) none needed
checking whether gcc understands -c and -o together... (cached) yes
checking dependency style of gcc... (cached) gcc3
checking for g++... g++
checking whether we are using the GNU C++ compiler... yes
checking whether g++ accepts -g... yes
checking dependency style of g++... gcc3
checking how to run the C++ preprocessor... g++ -E
checking for ld used by g++... /usr/bin/ld -m elf_x86_64
checking if the linker (/usr/bin/ld -m elf_x86_64) is GNU ld... yes
checking whether the g++ linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking for g++ option to produce PIC... -fPIC -DPIC
checking if g++ PIC flag -fPIC -DPIC works... yes
checking if g++ static flag -static works... yes
checking if g++ supports -c -o file.o... yes
checking if g++ supports -c -o file.o... (cached) yes
checking whether the g++ linker (/usr/bin/ld -m elf_x86_64) supports shared
libraries... yes
checking dynamic linker characteristics... (cached) GNU/Linux ld.so
checking how to hardcode library paths into programs... immediate
checking for inline... inline
checking whether make sets $(MAKE)... (cached) yes
checking for pkg-config... /usr/bin/pkg-config
checking pkg-config is at least version 0.9.0... yes
checking for flex... flex
checking lex output file root... lex.yy
checking lex library... -lfl
checking whether yytext is a pointer... yes
checking for bison... bison -y
checking for gperf... gperf
```

```
checking for the type used in gperf declarations... unsigned int
checking libintl.h usability... yes
checking libintl.h presence... yes
checking for libintl.h... yes
checking whether gettext is declared... yes
checking for library containing gettext... none required
checking ncursesw/curses.h usability... yes
checking ncursesw/curses.h presence... yes
checking for ncursesw/curses.h... yes
checking for library containing setupterm... -ltinfo
checking for library containing initscr... -lncursesw
checking for library containing new_panel... -lpanelw
checking for library containing menu_init... -lmenuw
checking for gtk... no
checking for Qt5... no
checking that generated files are newer than configure... done
configure: creating ./config.status
configure:
configure: Configured with:
configure: - parser library      : shared (version: 4.11.0)
configure:   - root-menu prompt : Configuration
configure:   - config prefix      : CONFIG_
configure: - frontends          : kconfig conf mconf nconf
configure:   - localised         : yes
configure: - install utilities  : yes
configure: - CFLAGS CXXFLAGS    : -Wall
/bin/bash ./config.status
config.status: creating Makefile
config.status: creating libs/parser/kconfig-parser.pc
config.status: creating scripts/.autostuff/config.h
config.status: scripts/.autostuff/config.h is unchanged
config.status: executing depfiles commands
config.status: executing libtool commands
  GPERF      libs/parser/hconf.c
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-checklist.o
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-inputbox.o
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-menubox.o
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-textbox.o
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-util.o
  CC         libs/lxdialog/libs_lxdialog_libkconfig_lxdialog_a-yesno.o
  AR         libs/lxdialog/libkconfig-lxdialog.a
ar: `u' modifier ignored since `D' is the default (see `U')
  CC         libs/parser/libs_parser_libkconfig_parser_la-yconf.lo
  CCLD       libs/parser/libkconfig-parser.la
  CC         frontends/conf/frontends_conf_kconfig_conf-conf.o
  CCLD       frontends/conf/kconfig-conf
  CC         frontends/mconf/frontends_mconf_kconfig_mconf-mconf.o
  CCLD       frontends/mconf/kconfig-mconf
  CC         frontends/nconf/frontends_nconf_kconfig_nconf-nconf.o
  CC         frontends/nconf/frontends_nconf_kconfig_nconf-nconf.gui.o
  CCLD       frontends/nconf/kconfig-nconf
```

```
CC      utils/utils_kconfig_gettext-gettext.o
CCLD    utils/kconfig-gettext
GEN      frontends/kconfig
GEN      utils/kconfig-tweak
xubuntu64:~/src/NuttX/tools/kconfig-frontends$
```

インストール

```
xubuntu64:~/src/NuttX/tools/kconfig-frontends$ sudo make install
/bin/mkdir -p '/usr/local/lib'
/bin/bash ./libtool  --mode=install /usr/bin/install -c
libs/parser/libkconfig-parser.la '/usr/local/lib'
libtool: install: /usr/bin/install -c libs/parser/.libs/libkconfig-
parser-4.11.0.so /usr/local/lib/libkconfig-parser-4.11.0.so
libtool: install: (cd /usr/local/lib && { ln -s -f libkconfig-
parser-4.11.0.so libkconfig-parser.so || { rm -f libkconfig-parser.so && ln
-s libkconfig-parser-4.11.0.so libkconfig-parser.so; }; })
libtool: install: /usr/bin/install -c libs/parser/.libs/libkconfig-
parser.lai /usr/local/lib/libkconfig-parser.la
libtool: finish:
PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/snap/bin
:/sbin" ldconfig -n /usr/local/lib
```

Libraries have been installed in:
 /usr/local/lib

If you ever happen to want to link against installed libraries
in a given directory, LIBDIR, you must either use libtool, and
specify the full pathname of the library, or use the '-LLIBDIR'
flag during linking and do at least one of the following:

- add LIBDIR to the 'LD_LIBRARY_PATH' environment variable
during execution
- add LIBDIR to the 'LD_RUN_PATH' environment variable
during linking
- use the '-Wl,-rpath -Wl,LIBDIR' linker flag
- have your system administrator add LIBDIR to '/etc/ld.so.conf'

See any operating system documentation about shared libraries for
more information, such as the ld(1) and ld.so(8) manual pages.

```
-----
/bin/mkdir -p '/usr/local/bin'
/bin/bash ./libtool  --mode=install /usr/bin/install -c
frontends/conf/kconfig-conf frontends/mconf/kconfig-mconf
frontends/nconf/kconfig-nconf utils/kconfig-gettext '/usr/local/bin'
libtool: install: /usr/bin/install -c frontends/conf/.libs/kconfig-conf
/usr/local/bin/kconfig-conf
libtool: install: /usr/bin/install -c frontends/mconf/.libs/kconfig-mconf
```

```
/usr/local/bin/kconfig-mconf
libtool: install: /usr/bin/install -c frontends/nconf/.libs/kconfig-nconf
/usr/local/bin/kconfig-nconf
libtool: install: /usr/bin/install -c utils/.libs/kconfig-gettext
/usr/local/bin/kconfig-gettext
/bin/mkdir -p '/usr/local/bin'
/usr/bin/install -c frontends/kconfig utils/kconfig-tweak '/usr/local/bin'
/bin/mkdir -p '/usr/local/bin'
/usr/bin/install -c utils/kconfig-diff utils/kconfig-merge '/usr/local/bin'
/bin/mkdir -p '/usr/local/share/doc/kconfig-frontends'
/usr/bin/install -c -m 644 docs/kconfig-language.txt docs/kconfig.txt
'/usr/local/share/doc/kconfig-frontends'
/bin/mkdir -p '/usr/local/include/kconfig'
/usr/bin/install -c -m 644 libs/parser/list.h libs/parser/lkc.h
libs/parser/expr.h libs/parser/lkc_proto.h '/usr/local/include/kconfig'
/bin/mkdir -p '/usr/local/lib/pkgconfig'
/usr/bin/install -c -m 644 libs/parser/kconfig-parser.pc
'/usr/local/lib/pkgconfig'
xubuntu64:~/src/NuttX/tools/kconfig-frontends$
```

```
xubuntu64:~/src/NuttX/tools/kconfig-frontends$ ls -l /usr/local/bin/
合計 428
-rwxr-xr-x 1 root root 942 3月 7 12:59 kconfig
-rwxr-xr-x 1 root root 56088 3月 7 12:59 kconfig-conf
-rwxr-xr-x 1 root root 3772 3月 7 12:59 kconfig-diff
-rwxr-xr-x 1 root root 25112 3月 7 12:59 kconfig-gettext
-rwxr-xr-x 1 root root 193880 3月 7 12:59 kconfig-mconf
-rwxr-xr-x 1 root root 4298 3月 7 12:59 kconfig-merge
-rwxr-xr-x 1 root root 128184 3月 7 12:59 kconfig-nconf
-rwxr-xr-x 1 root root 4600 3月 7 12:59 kconfig-tweak
xubuntu64:~/src/NuttX/tools/kconfig-frontends$
```

共有ライブラリ 依存関係情報の更新

make install 時に下記のように出力されているとおり、共有ライブラリの依存関係情報を更新する必要があります。

```
Libraries have been installed in:
  /usr/local/lib
```

If you ever happen to want to link against installed libraries in a given directory, LIBDIR, you must either use libtool, and specify the full pathname of the library, or use the '-LLIBDIR' flag during linking and do at least one of the following:

- add LIBDIR to the 'LD_LIBRARY_PATH' environment variable during execution
- add LIBDIR to the 'LD_RUN_PATH' environment variable during linking

- use the '-Wl,-rpath -Wl,LIBDIR' linker flag
- have your system administrator add LIBDIR to '/etc/ld.so.conf'

See any operating system documentation about shared libraries for more information, such as the ld(1) and ld.so(8) manual pages.

ldconfig を実行します。

```
xubuntu64:~/src/NuttX/tools/kconfig-frontends$ sudo /sbin/ldconfig
```

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https://ma-tech.centurysys.jp/doku.php?id=xg_series_devel:setup_kconfig:start

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