

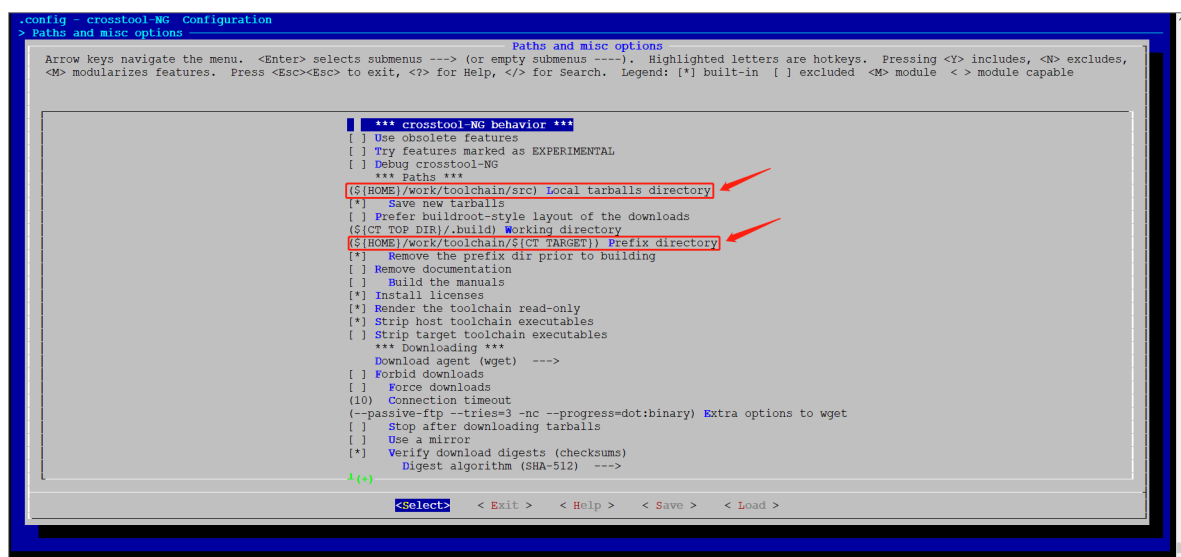
Install crosstool-ng

```
1 $ git clone https://github.com/crosstool-ng/crosstool-ng
2 $ cd crosstool-ng
3 $ ./bootstrap
4 $ make
5 $ make install # maybe need sudo
6
7 # check whether install success
8 $ ct-ng -v
9 GNU Make 4.1
10 Built for x86_64-pc-linux-gnu
11 Copyright (C) 1988-2014 Free Software Foundation, Inc.
12 License GPLv3+: GNU GPL version 3 or later
13 <http://gnu.org/licenses/gpl.html>
14 This is free software: you are free to change and redistribute it.
15 There is NO WARRANTY, to the extent permitted by law.
16 $ ct-ng list-samples
```

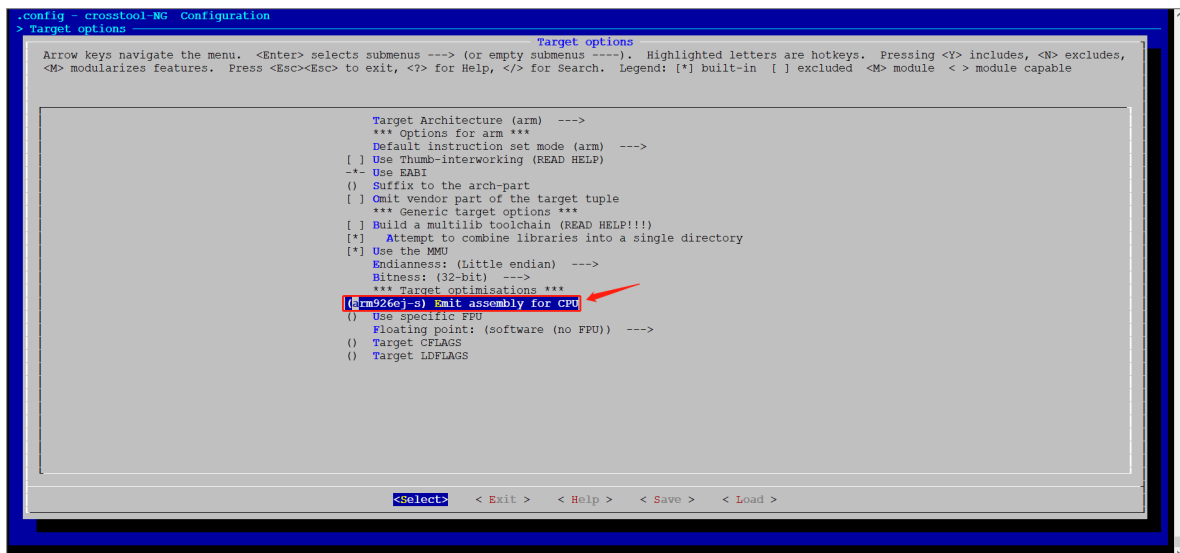
Build Configure

```
1 $ mkdir armv5te-arm926ejs-build
2 $ ct-ng arm-unknown-linux-gnueabi
3 $ ct-ng menuconfig
```

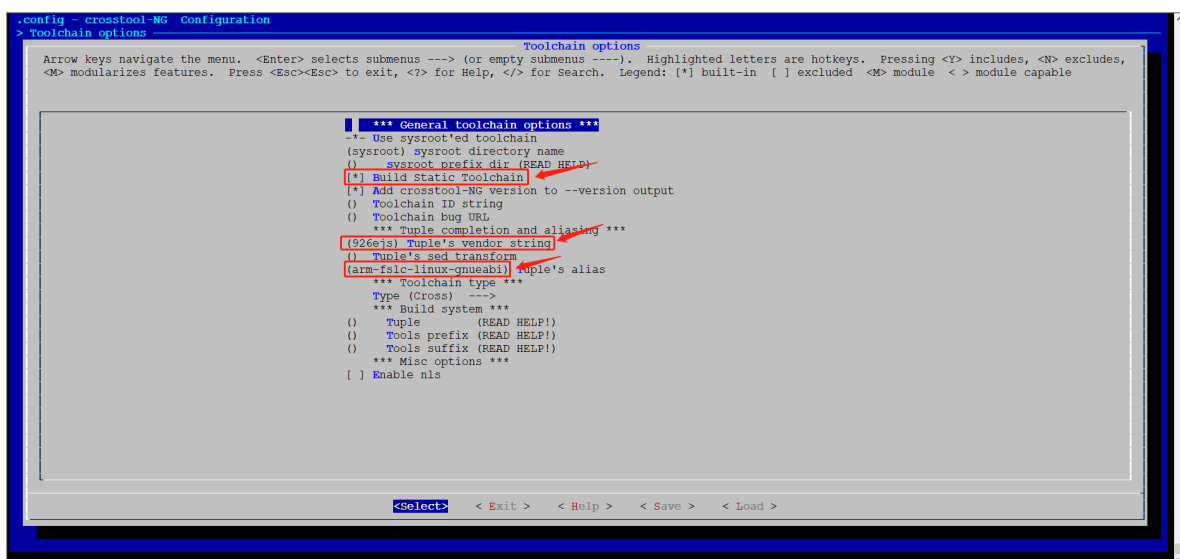
Paths and misc options



Target options



Toolchain options



Config Patch

```

1  --- arm-unknown-linux-gnueabi.config    2020-07-03 15:18:34.168786597
    +0800
2  +++ .config 2020-07-03 15:22:54.876696100 +0800
3  @@ -44,13 +44,13 @@
4      #
5      # Paths
6      #
7  -CT_LOCAL_TARBALLS_DIR="${HOME}/src"
8  +CT_LOCAL_TARBALLS_DIR="${HOME}/work/toolchain/src"
9      CT_SAVE_TARBALLS=y
10     # CT_TARBALLS_BUILDRROOT_LAYOUT is not set
11     CT_WORK_DIR="${CT_TOP_DIR}/.build"
12
    CT_BUILD_TOP_DIR="${CT_WORK_DIR:-${CT_TOP_DIR}/.build}/${CT_HOST:+HOST-${CT_HOST}}/${CT_TARGET}"
13     CT_BUILD_DIR="${CT_BUILD_TOP_DIR}/build"

```

```

14 -CT_PREFIX_DIR="${CT_PREFIX:-${HOME}/x-
    tools}/${CT_HOST:+HOST-${CT_HOST}}/${CT_TARGET}"
15 +CT_PREFIX_DIR="${HOME}/work/toolchain/${CT_TARGET}"
16 CT_RM_RF_PREFIX_DIR=y
17 # CT_REMOVE_DOCS is not set
18 # CT_BUILD_MANUALS is not set
19 @@ -138,8 +138,7 @@
20 # CT_ARCH_XTENSA is not set
21 CT_ARCH="arm"
22 CT_ARCH_CHOICE_KSYM="ARM"
23 -CT_ARCH_CPU=""
24 -CT_ARCH_TUNE=""
25 +CT_ARCH_CPU="arm926ej-s"
26 CT_ARCH_ARM_SHOW=y
27
28 #
29 @@ -187,7 +186,6 @@
30 CT_ARCH_SUPPORTS_WITH_FPU=y
31 CT_ARCH_SUPPORTS_SOFTFP=y
32 CT_ARCH_EXCLUSIVE_WITH_CPU=y
33 -CT_ARCH_ARCH=""
34 CT_ARCH_FPU=""
35 # CT_ARCH_FLOAT_AUTO is not set
36 # CT_ARCH_FLOAT_HW is not set
37 @@ -210,7 +208,7 @@
38 CT_SYSROOT_DIR_PREFIX=""
39 CT_WANTS_STATIC_LINK=y
40 CT_WANTS_STATIC_LINK_CXX=y
41 -# CT_STATIC_TOOLCHAIN is not set
42 +CT_STATIC_TOOLCHAIN=y
43 CT_SHOW_CT_VERSION=y
44 CT_TOOLCHAIN_PKGVERSION=""
45 CT_TOOLCHAIN_BUGURL=""
46 @@ -218,9 +216,9 @@
47 #
48 # Tuple completion and aliasing
49 #
50 -CT_TARGET_VENDOR="unknown"
51 +CT_TARGET_VENDOR="926ejs"
52 CT_TARGET_ALIAS_SED_EXPR=""
53 -CT_TARGET_ALIAS=""
54 +CT_TARGET_ALIAS="arm-fslc-linux-gnueabi"
55
56 #
57 # Toolchain type
58 @@ -364,17 +362,10 @@
59 CT_BINUTILS_HAS_PLUGINS=y
60 CT_BINUTILS_HAS_PKGVERSION_BUGURL=y
61 CT_BINUTILS_GOLD_SUPPORTS_ARCH=y
62 -CT_BINUTILS_GOLD_SUPPORT=y
63 CT_BINUTILS_FORCE_LD_BFD_DEFAULT=y
64 -# CT_BINUTILS_LINKER_LD is not set
65 -CT_BINUTILS_LINKER_LD_GOLD=y
66 -CT_BINUTILS_GOLD_INSTALLED=y
67 -CT_BINUTILS_GOLD_THREADS=y
68 -CT_BINUTILS_LINKER_BOTH=y
69 -CT_BINUTILS_LINKERS_LIST="ld,gold"
70 -CT_BINUTILS_LD_WRAPPER=y

```

```

71 +CT_BINUTILS_LINKER_LD=y
72 +CT_BINUTILS_LINKERS_LIST="ld"
73   CT_BINUTILS_LINKER_DEFAULT="bfd"
74 -CT_BINUTILS_PLUGINS=y
75   CT_BINUTILS_RELRO=m
76   CT_BINUTILS_DETERMINISTIC_ARCHIVES=y
77   CT_BINUTILS_EXTRA_CONFIG_ARRAY=""
78 @@ -533,8 +524,6 @@
79   CT_GCC_REQUIRE_4_9_or_later=y
80   CT_GCC_later_than_4_8=y
81   CT_GCC_4_8_or_later=y
82 -CT_CC_GCC_ENABLE_PLUGINS=y
83 -CT_CC_GCC_GOLD=y
84   CT_CC_GCC_HAS_LIBMPX=y
85   CT_CC_GCC_ENABLE_CXX_FLAGS=""
86   CT_CC_GCC_CORE_EXTRA_CONFIG_ARRAY=""
87 @@ -547,7 +536,6 @@
88   # Optimisation features
89   #
90   CT_CC_GCC_USE_GRAPHITE=y
91 -CT_CC_GCC_USE_LTO=y
92
93   #
94   # Settings for libraries running on target
95 @@ -636,9 +624,8 @@
96   CT_GDB_later_than_7_0=y
97   CT_GDB_7_0_or_later=y
98   CT_GDB_CROSS=y
99 -# CT_GDB_CROSS_STATIC is not set
100 +CT_GDB_CROSS_STATIC=y
101   # CT_GDB_CROSS_SIM is not set
102 -# CT_GDB_CROSS_PYTHON is not set
103   CT_GDB_CROSS_EXTRA_CONFIG_ARRAY=""
104   CT_GDB_NATIVE=y
105   CT_GDB_GDBSERVER=y

```

Build Toolchain

1 | ct-ng build

Test Toolchain

```
1 $ ./arm-926ejs-linux-gnueabi/bin/arm-926ejs-linux-gnueabi-gcc -v
2
3 Using built-in specs.
4 COLLECT_GCC=./arm-926ejs-linux-gnueabi/bin/arm-926ejs-linux-gnueabi-gcc
5 COLLECT_LTO_WRAPPER=/home/xxxxxx/work/toolchain/arm-926ejs-linux-
gnueabi/libexec/gcc/arm-926ejs-linux-gnueabi/9.2.0/lto-wrapper
6 Target: arm-926ejs-linux-gnueabi
7 Configured with: /home/xxxxxx/work/toolchain/arm-unknown-linux-
gnueabi/.build/arm-926ejs-linux-gnueabi/src/gcc/configure --build=x86_64-
build_pc-linux-gnu --host=x86_64-build_pc-linux-gnu --target=arm-926ejs-
linux-gnueabi --prefix=/home/xxxxxx/work/toolchain/arm-926ejs-linux-gnueabi -
-with-sysroot=/home/xxxxxx/work/toolchain/arm-926ejs-linux-gnueabi/arm-
926ejs-linux-gnueabi/sysroot --enable-languages=c,c++ --with-cpu=arm926ej-s -
-with-float=soft --with-pkgversion='crosstool-NG 1.24.0.105_5659366' --
disable-sjlj-exceptions --enable-__cxa_atexit --disable-libmudflap --disable-
libgomp --disable-libssp --disable-libquadmath --disable-libquadmath-support
--disable-lsanitizer --disable-libmpx --with-
gmp=/home/xxxxxx/work/toolchain/arm-unknown-linux-gnueabi/.build/arm-926ejs-
linux-gnueabi/buildtools --with-mpfr=/home/xxxxxx/work/toolchain/arm-unknown-
linux-gnueabi/.build/arm-926ejs-linux-gnueabi/buildtools --with-
mpc=/home/xxxxxx/work/toolchain/arm-unknown-linux-gnueabi/.build/arm-926ejs-
linux-gnueabi/buildtools --with-isl=/home/xxxxxx/work/toolchain/arm-unknown-
linux-gnueabi/.build/arm-926ejs-linux-gnueabi/buildtools --disable-lto --
with-host-libstdcxx='-static-libgcc -Wl,-Bstatic,-lstdc++ -lm' --enable-
threads=posix --enable-target-optspace --disable-plugin --disable-nls --
disable-multilib --with-local-prefix=/home/xxxxxx/work/toolchain/arm-926ejs-
linux-gnueabi/arm-926ejs-linux-gnueabi/sysroot --enable-long-long
8 Thread model: posix
9 gcc version 9.2.0 (crosstool-NG 1.24.0.105_5659366)
```