Generating Standalone SDK Toolchain

MA35XX

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Introduction

- For third-party developers, standalone SDK toolchain is must be have on hand.
- By distributing standalone SDK tool to independent software vendors, OEM manufacturers need not to disclose proprietary source code to the public.
- Resort to the local makefile local.mk, SDK toolchain can be generated without user intervention by the extensions of build instruction.

Generating standalone SDK toolchain

- Change directory to ***the root of Buildroot*** **(${BR2_DIR})**

  $ cd ${BR2_DIR}

- Fetch and put the file ***local.mk*** into the root of Buildroot.

  LINK: https://raw.githubusercontent.com/symfund/ma35d1-portal/master/mk/local.mk

- Override the source directories of TF-A, U-Boot, Linux and optee-os in file ***local.mk***

  ARM_TRUSTED_FIRMWARE_OVERRIDE_SRCDIR=*/path/to/actual/source/directory/of/tf-a*

  UBOOT_OVERRIDE_SRCDIR=*/path/to/actual/source/directory/of/uboot*

  LINUX_OVERRIDE_SRCDIR=*/path/to/actual/source/directory/of/linux*

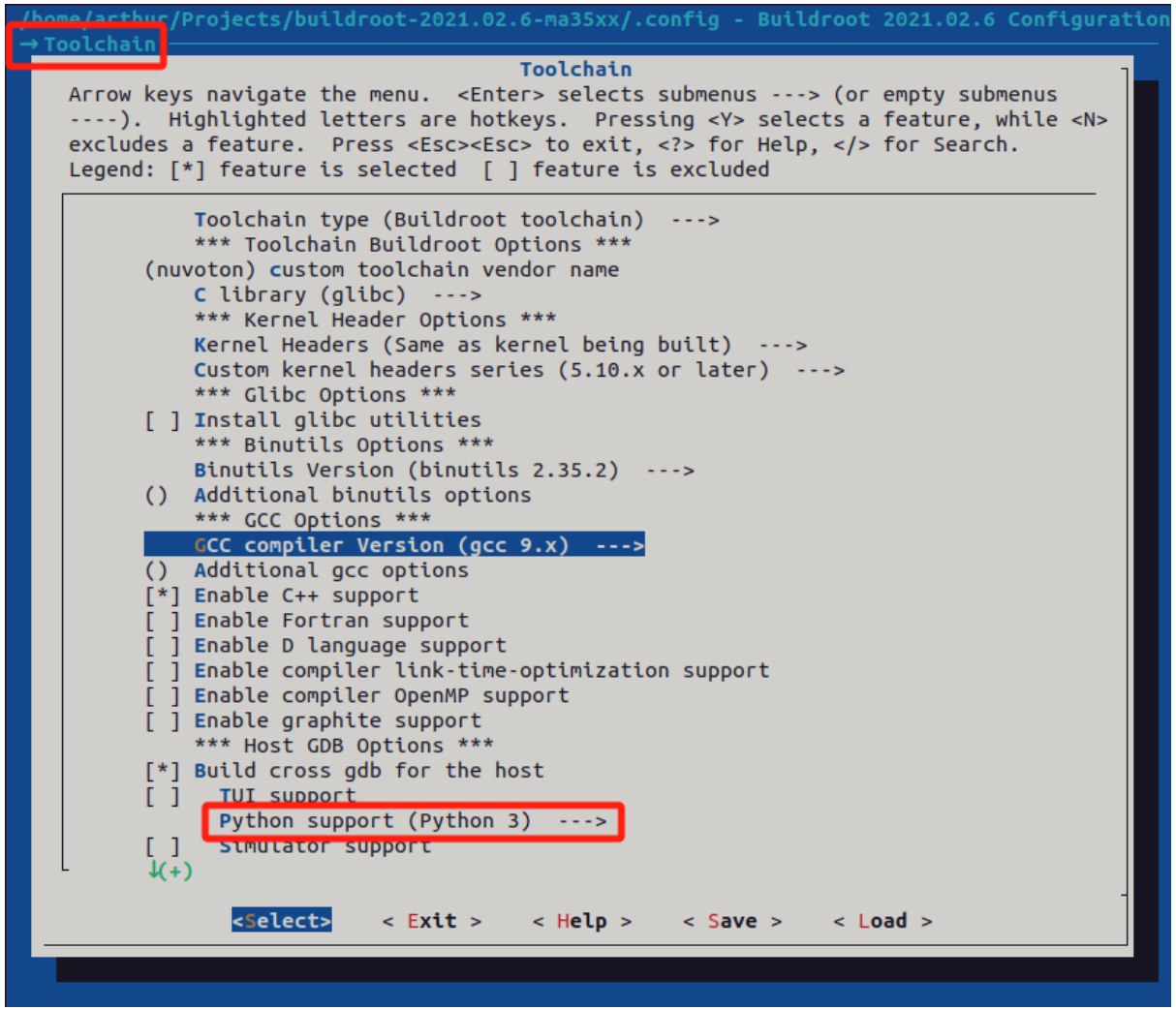
  OTEE_OS_OVERRIDE_SRCDIR=*/path/to/actual/source/directory/of/optee-os*

Toolchain Requirements

- Before generating SDK tool, Buildroot must be correctly configured. That means toolchain options are tailored to meet actual requirements, some mandatory packages are selected in mind.

$ make menuconfig

→Toolchain
  [*] Build cross gdb for the host
      Python support (Python 3)
→Target packages →Networking applications
  [*] openssh
  [*]   client
  [*]   server
  [*]   key utilities
  [*] rsync



Generating standalone SDK toolchain

- Begin building SDK toolchain, the action ***make clean*** is optional, if want to save the build time.
  $ make clean ; make sdk-tool
- When complete generating SDK tool, the SDK tool is located at ***output/images/aarch64-nuvoton-linux-gnu_sdk-buildroot_installer***
- To install the SDK tool on local computer in which the SDK tool is built or another computer, launch the SDK tool installer show below.

  $ sudo output/images/aarch64-nuvoton-linux-gnu_sdk-buildroot_installer
- By default, the SDK tool is installed in ***/opt/aarch64-nuvoton-linux-gnu_sdk-buildroot***
- Before using the SDK tool, open a terminal window and set up the build environment for the new terminal.

  $ source /opt/aarch64-nuvoton-linux-gnu_sdk-buildroot/environment-setup

Joy of innovation

NUVOTON

谢谢

謝謝

Děkuji

Bedankt

Thank you

Kiitos

Merci

Danke

Grazie

ありがとう

감사합니다

Dziękujemy

Obrigado

Спасибо

Gracias

Teşekkür ederim

Cảm ơn