

Zilker-SDK Yocto integration for RDKB RPI

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Introduction

This page describes the lists of configuration ,compilation and installation errors while creating the zilker-sdk recipe in yocto build environment.

Build Steps

Please refer the below link for dunfell build steps ,

[RPI 3B/3B+ Model Reference Platform](#)

Recipe Path :

```
~/meta-cmf-broadband/recipes-iot/zilker-sdk/zilker-sdk_git.bb
```

Errors and Challenges in yocto

S. No	Recipe	Layer	Error/Warning	Root Cause	Action
1	zilker_sdk_git.bb	meta-cmf-broadband	Error: Missing SRC_URI checksum	not added checksum	Added sha256sum checksum
2	zilker_sdk_git.bb	meta-cmf-broadband	Error: zilker-sdk_git-r0 do_fetch: Fetcher failure for URL:	not add SRC_URI properly	SRC_URI = "\${CMF_GITHUB_ROOT}/zilker-sdk; protocol=\${CMF_GIT_PROTOCOL}; branch=\${CMF_GITHUB_MAIN_BRANCH};name=zilker-sdk" SRCREV_zilker-sdk = "\${AUTOREV}" SRCREV_FORMAT .= "_zilker-sdk"
3	zilker_sdk_git.bb	meta-cmf-broadband	fatal error: ccronexpr.h: No such file or directory 37 #include <ccronexpr.h> ^~~~~~ compilation terminated. ninja: build stopped: subcommand failed.	ccronexpr source code is not available in zilker-sdk/gitr0/git /source/services/automation/core /src	SRC_URI += "git://github.com/staticlibs/ccronexpr.git; protocol=https;destdsuffix=git/source/services/automation/core/src/ccronexpr;name=zilker-ccronexpr" SRCREV_zilker-ccronexpr = "\${AUTOREV}" SRCREV_FORMAT .= "_zilker-ccronexpr"
4	zilker_sdk_git.bb	meta-cmf-broadband	error: cannot find -lccronexpr	linking Error	Need to remove the ccronexpr lib from ~/source/services /automation/core/CMakeLists.txt
5	zilker_sdk_git.bb	meta-cmf-broadband	error: gradle command not found	gradle bin is not available in comcast VM's	SRC_URI += "https://services.gradle.org/distributions/gradle-4.8.1-bin.zip;name=zilker-gradle" SRC_URI[zilker-gradle.md5sum] = "90db63b9cd864a6e6bc8d0c5e72ca5a2" SRC_URI[zilker-gradle.sha256sum] = "af334d994b5e69e439ab55b5d2b7d086da5ea6763d78054f49f147b06370ed71"
6	zilker_sdk_git.bb	meta-cmf-broadband	Error : java command not found	java bin path is not visible to ipcGenerator script	sed -i "/set \-x/a export PATH=\${PATH}:\${WORKDIR}/gradle-4.8.1/bin:/usr/bin" \${S}/tools/ipcGenerator/ipcGenerator.sh

7	zilker-sdk_git.bb	meta-cmf-broadband	CMake Error at buildTools/cmake/configure.cmake:52 (message): Invalid CONFIG_PRODUCT specified. Call Stack (most recent call first): CMakeLists.txt:55 (include)	CONFIG_PRODUCT should be mapped with site-file.cmake	In -fs \${S}/buildTools/cmake/products/pi.cmake \${WORKDIR}/site-file.cmake
8	zilker-sdk_git.bb	meta-cmf-broadband	CMake Error at filesystem/cmake_install.cmake:69 (file): file INSTALL cannot find ~/zilker/git-r0/recipe-sysroot/usr/bin/curl: No such file or directory. Call Stack (most recent call first): cmake_install.cmake:86 (include)	3rd-Party Dependencies are enabled	Disabled the 3rd-Party Dependencies
9	zilker-sdk_git.bb	meta-cmf-broadband	CMake Error at buildTools/cmake/modules/AddZilkerAPI.cmake:52 (add_library): No SOURCES given to target: xhBackupRestoreServiceAPI Call Stack (most recent call first): source/services/backupRestore/api/c/CMakeLists.txt:26 (add_zilker_api) 	ipcGenerator.sh execution gets failed	Need to export the gradle and java bin path via recipe or ipcGenerator script
10	zilker-sdk_git.bb	meta-cmf-broadband	ERROR : CONFIG_CAP_ZIGBEE_T ELEMETRY	zigbee package is enabled by default in source code	Need to disable the zigbee package by using the below line in recipe sed -i "s/ON DEPENDS/OFF DEPENDS/g" \${S}/buildTools/cmake/capabilities.cmake
11	zilker-sdk_git.bb	meta-cmf-broadband	ERROR: JAVA_HOME is not set and no 'java' command could be found in your PATH. Please set the JAVA_HOME variable in your environment to match the location of your Java installation.	ipcGenerator.sh execution gets failed	Need to export the gradle and java bin path via recipe or ipcGenerator script
12	zilker-sdk_git.bb	meta-cmf-broadband	Image folder is empty after the successful execution of zilker-sdk	oe-install command is not available in pi.cmake	echo "set(OE_INSTALL_PREFIX "/opt/zilker" CACHE INTERNAL "")" >> \${S}/buildTools/cmake/products/pi.cmake Added this line in zilker-sdk_git.bb
13	zilker-sdk_git.bb	meta-cmf-broadband	lib folder is empty under the image directory after the successful execution of zilker-sdk	All lib are generated in /opt/zilker	mv \${D}\${ZILKER_INSTALL_PREFIX}/lib/* \${D}/usr/lib
14	zilker-sdk_git.bb	meta-cmf-broadband	xml file is missing after the successful execution of zilker-sdk	xml file is not generated in /opt/zilker	cp \${S}/source/services/rdkIntegration/config/XHFW.xml \${D}/usr/ccsp/xhfw
15	zilker-sdk_git.bb	meta-cmf-broadband	Error : Files are not shifted	FILES_\${PN} needs to be added	FILES_\${PN} += " \${ZILKER_INSTALL_PREFIX}/bin \ \${ZILKER_INSTALL_PREFIX}/lib \ \${ZILKER_INSTALL_PREFIX}/include \ \${ZILKER_INSTALL_PREFIX}/sbin \ \${ZILKER_INSTALL_PREFIX}/etc \ \${ZILKER_INSTALL_PREFIX}/stock \ \${ZILKER_INSTALL_PREFIX}/ccsp \ /usr/lib/* \ /usr/ccsp/xhfw \ "

Validated Test Results

Below list of libraries and binaries are generated by zilker-sdk recipe in rootfs folder in yocto build environment.

Zilker-sdk

```
kpandu549@dvm-yocto3-docker-kpandu549:~/keerthana/jun1/build-raspberrypi-rdk-broadband/tmp/work/raspberrypi_rdk_broadband-rdk-linux-gnueabi/rdk-generic-broadband-image/1.0-r0/rootfs/opt/zilker$ ls
bin etc include lib sbin stock
```

```
kpandu549@dvm-yocto3-docker-kpandu549:~/keerthana/jun1/build-raspberrypi-rdk-broadband/tmp/work/raspberrypi_rdk_broadband-rdk-linux-gnueabi/rdk-generic-broadband-image/1.0-r0/rootfs/opt/zilker$ cd bin/
kpandu549@dvm-yocto3-docker-kpandu549:~/keerthana/jun1/build-raspberrypi-rdk-broadband/tmp/work/raspberrypi_rdk_broadband-rdk-linux-gnueabi/rdk-generic-broadband-image/1.0-r0/rootfs/opt/zilker/bin$ ls
env.sh                xhBackup.sh          xhCronEventUtil      xhProperties          xhRestore.sh         xhSetup.sh
xhSystemInfo
xhAutomationUtil      xhBackupUtil         xhDeviceUtil         xhResetToFactoryDefaults xhServiceUtil        xhStartup.sh
```

```
kpandu549@dvm-yocto3-docker-kpandu549:~/keerthana/jun1/build-raspberrypi-rdk-broadband/tmp/work/raspberrypi_rdk_broadband-rdk-linux-gnueabi/rdk-generic-broadband-image/1.0-r0/rootfs/usr/lib$ ls -lh libxh*
-rwxr-xr-x 1 kpandu549 kpandu549 18K Jun 1 12:01 libxhAutomationServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 14K Jun 1 12:01 libxhBackupRestoreServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 39K Jun 1 12:01 libxhCommServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 27K Jun 1 12:01 libxhConcurrent.so
-rwxr-xr-x 1 kpandu549 kpandu549 22K Jun 1 12:01 libxhConfig.so
-rwxr-xr-x 1 kpandu549 kpandu549 14K Jun 1 12:01 libxhCron.so
-rwxr-xr-x 1 kpandu549 kpandu549 14K Jun 1 12:01 libxhCrypto.so
-rwxr-xr-x 1 kpandu549 kpandu549 39K Jun 1 12:01 libxhCsIlt.so
-rwxr-xr-x 1 kpandu549 kpandu549 18K Jun 1 12:01 libxhDeviceDescriptors.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.8K Jun 1 12:01 libxhDeviceHelper.so
-rwxr-xr-x 1 kpandu549 kpandu549 93K Jun 1 12:01 libxhDeviceServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.7K Jun 1 12:01 libxhDeviceSimplified.so
-rwxr-xr-x 1 kpandu549 kpandu549 39K Jun 1 12:01 libxhIpc.so
-rwxr-xr-x 1 kpandu549 kpandu549 5.6K Jun 1 12:01 libxhJsonHelper.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.7K Jun 1 12:01 libxhJsonrpc.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.7K Jun 1 12:01 libxhLog.so
-rwxr-xr-x 1 kpandu549 kpandu549 27K Jun 1 12:01 libxhPropsServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 14K Jun 1 12:01 libxhReset.so
-rwxr-xr-x 1 kpandu549 kpandu549 5.6K Jun 1 12:01 libxhSolar.so
-rwxr-xr-x 1 kpandu549 kpandu549 18K Jun 1 12:01 libxhSsdP.so
-rwxr-xr-x 1 kpandu549 kpandu549 5.4K Jun 1 12:01 libxhSysInfoHAL.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.7K Jun 1 12:01 libxhSystem.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.7K Jun 1 12:01 libxhTime.so
-rwxr-xr-x 1 kpandu549 kpandu549 18K Jun 1 12:01 libxhTypes.so
-rwxr-xr-x 1 kpandu549 kpandu549 22K Jun 1 12:01 libxhUrlHelper.so
-rwxr-xr-x 1 kpandu549 kpandu549 26K Jun 1 12:01 libxhUtil.so
-rwxr-xr-x 1 kpandu549 kpandu549 23K Jun 1 12:01 libxhWatchdogServiceAPI.so
-rwxr-xr-x 1 kpandu549 kpandu549 9.6K Jun 1 12:01 libxhXmlHelper.so
```

References

<https://github.com/rdkcentral/zilker-sdk/blob/main/BUILDING.md>