

RDK-V 64bit migration for R-Pi4 Target

Repo Setup:

- repo init -u <https://code.rdkcentral.com/r/manifests> -b dunfell -m rdkv-nosrc.xml
- repo sync -j `nproc` --no-clone-bundle --no-tags

Build Instructions:

- MACHINE=raspberrypi4-64-rdk-hybrid source meta-cmf-raspberrypi/setup-environment
- bitbake -k rdk-generic-hybrid-wpe-image

Note :


- For Cobalt plugin to work : Refer the Table: Known Issues - Section 2

Machine Configuration and Meta layer changes:

	Meta Layer	Recipe	Change	Code Review	Status
1	meta-cmf-raspberrypi	conf/machine/raspberrypi4-64-rdk-hybrid.conf	New machine configuration added. #@DESCRIPTION: Machine configuration for running a RDK media server (hybrid) on 64bit Raspberry Pi4 #@RDK_FLAVOR: rdkv require conf/machine/raspberrypi4-64.conf MACHINEOVERRIDES .= ":raspberrypi4-64:rpi:hybrid:wpe" # required for image creation MACHINE_IMAGE_NAME = "rdk-generic-hybrid-wpe-image"	https://code.rdkcentral.com/r/c/rdk/components/generic/rdk-oe/meta-cmf-raspberrypi/+67332	Closed
2	meta-cmf-raspberrypi-restricted	meta-rdk-restricted/recipes-qt/servicemanager/servicemanager_git.bbappend	diff --git a/meta-rdk-restricted/recipes-qt/servicemanager/servicemanager_git.bbappend b/meta-rdk-restricted/recipes-qt/servicemanager/servicemanager_git.bbappend index 42bc222..dec69b 100644 --- a/meta-rdk-restricted/recipes-qt/servicemanager/servicemanager_git.bbappend +++ b/meta-rdk-restricted/recipes-qt/servicemanager/servicemanager_git.bbappend @@ -15,3 +15,4 @@ CXXFLAGS += " -I\${QT_INC_BASE_DIR}/QtWidgets" CXXFLAGS += " -I\${QT_INC_BASE_DIR}/QtCore" LDFLAGS += " -lQt5OpenGL" +EXTRA_QMAKEVARS_PRE_append_aarch64 += "DEFINES+=ENABLE_RPI_64BIT"	https://code.rdkcentral.com/r/c/components/generic/rdk-oe/meta-cmf-raspberrypi-restricted/+65911	Closed
		meta-rdk-restricted/recipes-extended/recorder/recorder_git.bbappend	diff --git a/meta-rdk-restricted/recipes-extended/recorder/recorder_git.bbappend b/meta-rdk-restricted/recipes-extended/recorder/recorder_git.bbappend index 71aa115..2f1884f 100644 --- a/meta-rdk-restricted/recipes-extended/recorder/recorder_git.bbappend +++ b/meta-rdk-restricted/recipes-extended/recorder/recorder_git.bbappend @@ -1,2 @@ CXXFLAGS += "-DTRH_DISABLE" +PACKAGECONFIG_remove_aarch64 = "ipvpclient"		Closed

Errors and Fixes:

	Source File	Error/ Warning	Fix	Code Review	Status
1	dsVideoPort.c	In function 'dsError_t dsGetVideoPort(dsVideoPortType_t, int, int)' cast from 'VOPHandle_t' {aka '_VOPHandle_t'} to 'int' loses precision	Change int -> intptr_t	https://code.rdkcentral.com/r/c/rdk/devices/raspberrypi/devicesettings/+65451	Closed
2	dsDisplay.c	137:48: error: cast from 'VDISPHandle_t' {aka '_VDISPHandle_t'} to 'int' loses precision [-fpermissive] 137 *handle = (int)&_handles[m_vType][index];	Change int -> intptr_t	https://code.rdkcentral.com/r/c/rdk/devices/raspberrypi/devicesettings/+65451	Closed

3	dsAudio.c	<p>cast from 'AOPHandle_t' (aka '_AOPHandle_t') to 'int' loses precision [-fpermissive]</p> <pre> 162 *handle = (int)&_handles[type][index];</pre> <p>62:36: error: cast from 'AOPHandle_t' (aka '_AOPHandle_t') to 'int' loses precision [-fpermissive]</p> <pre> 62 if ((int)&_handles[index][0] == uHandle) {</pre>	Change int -> intptr_t	https://code.rdkcentral.com/r/c/rdk/devices/raspberrypi/devicesettings/+65451	Closed
4	git/src/ctrlm_xraudio_hal.c	<p>130:6: error: conflicting types for 'xraudio_hal_available_devices_get'</p> <pre> 130 bool xraudio_hal_available_devices_get(xraudio_devices_input_t *inputs, uint32_t input_qty_max, xraudio_devices_output_t *outputs, size_t output_qty_max) {</pre> <pre> ^~~~~~</pre>	./ctrlm_xraudio_hal.c:130:bool xraudio_hal_available_devices_get(xraudio_devices_input_t *inputs, uint32_t input_qty_max, xraudio_devices_output_t *outputs, uint32_t output_qty_max)	https://code.rdkcentral.com/r/c/rdk/components/generic/xraudio-hal_ctrlm/+67186	Closed
5	git/src/bt-ice/btrCore_dbus_blue5.c	<p>In file included from ./../git/src/bt-ice/btrCore_dbus_blue5.c:36: ./../git/src/bt-ice/btrCore_dbus_blue5.c: In function 'btrCore_BTHandleDusError': ./../git/include/logger/btrCore_logger.h:23:25: error: format '%lu' expects argument of type 'long unsigned int', but argument 4 has type 'int' [-Werror=format=]</p>	BTRCORELOG_DEBUG("Received data is %s with length %d\n", propertyValue, (int) strlen(propertyValue));	https://code.rdkcentral.com/r/c/rdk/components/generic/bluetooth/+67187	Closed
7	cobalt module	<p>imizing-move -frtti -fno-exceptions -c ./../cobalt/configuration/configuration.cc -o obj/cobalt/configuration/configuration.o</p> <p>In file included from ./../base/memory/singleton.h:33, from ./../cobalt/configuration/configuration.cc:18: ./../base/lazy_instance_helpers.h: In instantiation of 'Type* base::subtle::GetOrCreateLazyPointer(base::subtle::AtomicWord*, Type* (*)(void*), void*, void (*)(void*), void*) [with Type = cobalt::configuration::Configuration; base::subtle::AtomicWord = int]': ./../base/memory/singleton.h:236:42: required from 'static Type* base::Singleton<Type, Traits, DifferentiatingType>::get()' [with Type = cobalt::configuration::Configuration; Traits = base::LeakySingletonTraits<cobalt::configuration::Configuration>; DifferentiatingType = cobalt::configuration::Configuration] ./../cobalt/configuration/configuration.cc:29:70: required from here ./../base/lazy_instance_helpers.h:83:11: error: cast from 'cobalt::configuration::Configuration' to 'base::subtle::AtomicWord' (aka 'int') loses precision [-fpermissive]</p> <pre> 83 reinterpret_cast<subtle::AtomicWord>((*creator_func)(creator_arg));</pre> <pre> ^~~~~~</pre> <p>error: unrecognized command line option '-mfpv=neon'</p> <pre>aarch64-rdk-linux-g++: error: unrecognized command line option '-mfpv=vfpv3'</pre> <pre> aarch64-rdk-linux-g++: error: unrecognized command line option '-mfloat-abi=softfp'</pre> <pre> aarch64-rdk-linux-g++: error: unrecognized command line option '-marm'</pre> <pre> ninja: build stopped: subcommand failed.</pre> <p>./../third_party/protobuf/src/google/protobuf/arena.cc:158:113: error: cast from 'google::protobuf::Arena::Block' to 'google::protobuf::internal::AtomicWord' (aka 'int') loses precision [-fpermissive]</p>	removed cobalt module		<p>Taken as a sub task. Yet to address</p> <p>It is removed and merged in the branch and will be reverting in the future and working on it.</p> <div>  <p>REF</p> <p>PLTV</p> <p>-1225</p> <p>- Jira</p> <p>proje</p> <p>ct</p> <p>does</p> <p>n't</p> <p>exist</p> <p>or</p> <p>you</p> <p>don't</p> <p>have</p> <p>permi</p> <p>ssion</p> <p>to</p> <p>view</p> <p>it.</p> </div>
8	src/rmf_sectionfilter.cpp	<p>./.././../git/qamsource/simgr/inband/./src/rmf_sectionfilter.cpp:641:37: error: cast from 'rmf_sf_SectionRequest_t' (aka 'rmf_sf_SectionRequest_s') to 'uint32_t' (aka 'unsigned int') loses precision [-fpermissive]</p> <pre> 641 ReleaseFilterRequest((uint32_t) pRequest);</pre> <pre> ^~~~~~</pre> <p>./.././../git/qamsource/simgr/inband/./src/rmf_sectionfilter.cpp: In member function 'rmf_Error rmf_SectionFilter::ReleaseFilter(uint32_t)':</p> <p>./.././../git/qamsource/simgr/inband/./src/rmf_sectionfilter.cpp:708:37: error: cast from 'rmf_sf_SectionRequest_t' (aka 'rmf_sf_SectionRequest_s') to 'uint32_t' (aka 'unsigned int') loses precision [-fpermissive]</p> <pre> 708 ReleaseFilterRequest ((uint32_t)pFilter_Request);</pre>	(rmf_SiServiceHandle)new_si_entry -> (uintptr_t)new_si_entry	https://code.rdkcentral.com/r/c/rdk/components/generic/mediaframework/+65588	Closed

9	/src /rmf_oobscache. cpp	.J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:8980:42: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 8980 SetSourceId((rmf_SIServiceHandle)new_si_entry, input_si_entry->source_id); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:8983:41: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 8983 SetAppType((rmf_SIServiceHandle)new_si_entry, input_si_entry->isAppType); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:8984:39: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 8984 SetAppld((rmf_SIServiceHandle)new_si_entry, input_si_entry->app_id); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:8985:49: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 8985 SetActivationTime ((rmf_SIServiceHandle)new_si_entry, input_si_entry- ->activation_time); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:8986:47: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 8986 SetChannelNumber((rmf_SIServiceHandle)new_si_entry, input_si_entry- ->virtual_channel_number, RMF_SI_DEFAULT_CHANNEL_NUMBER); ~~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:5852:71: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 5852 pgm->services->push_back((rmf_SIServiceHandle)new_si_entry); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:5856:70: error: cast from 'rmf_SITableEntry' to 'rmf_SIServiceHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 5856 ts->services->push_back((rmf_SIServiceHandle)new_si_entry); ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:5890:73: error: cast from 'rmf_SITransportStreamEntry' to 'rmf_SITransportStreamHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 5890 new_si_entry->ts_handle = (rmf_SITransportStreamHandle) ts; ^~~~~~ .J.J.J./git/qamsource/simgr/oob/. /src/rmf_oobscache.cpp:5891:62: error: cast from 'rmf_SIProgramInfo' to 'rmf_SIProgramHandle' {aka 'unsigned int'} loses precision [-fpermissive] <pre> 5891 new_si_entry->program = (rmf_SIProgramHandle)pgm;</pre></pre></pre></pre></pre></pre></pre></pre></pre>	change the datatype int -> intptr_t	https://code.rdkcentral.com/t/c/components/generic/mediaframework/+/-/65588	Closed
10	/usr/src/debug/websocket-ipplayer2-utils/git-r0/git/src/pp2/RdkLogProvider.cpp	/usr/src/debug/websocket-ipplayer2-utils/git-r0/git/src/pp2/RdkLogProvider.cpp:34: undefined reference to `rdk_logger_init`	Add -lrdklloggers in cmake in "utils source code" build-rasperrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/websocket-ipplayer2-utils/git-r0/git/src/pp2/CMakeLists.txt	https://code.rdkcentral.com/t/c/components/generic/websocket-ipplayer2/+/-/69895	Closed
11	git/src/audioCap/btrMgr_audioCa p.c	In file included from .J.J.J./git/src/audioCap/btrMgr_audioCap.c:58: .J.J.J./git/src/audioCap/btrMgr_audioCap.c: In function 'btrMgr_AC_rmfStatusChangeCb': .J.J.J./git/include/logger/btrMgr_logger.h:23:25: error: format '%d' expects argument of type 'int', but argument 5 has type 'size_t' {aka 'long unsigned int'} [-Werror=format=] 23 #define PREFIX(format) "%dt: %s - " format .J.J.J./git/include/logger/btrMgr_logger.h:39:22: note: in definition of macro 'LOG_WARN' 39 fprintf(stderr, format, __VA_ARGS__);\ .J.J.J./git/include/logger/btrMgr_logger.h:68:53: note: in expansion of macro 'PREFIX' 68 #define BTRMGRLOG_WARN(format, ...) LOG_WARN(PREFIX (format), __LINE__, __FUNCTION__, ##__VA_ARGS__) .J.J.J./git/src/audioCap/btrMgr_audioCap.c:1270:13: note: in expansion of macro 'BTRMGRLOG_WARN' 1270 BTRMGRLOG_WARN("Status Changed - Fifo Depth = %d\n", lstBtrMgrRmfAcStatus.fifoDepth); .J.J.J./git/src/audioCap/btrMgr_audioCap.c:1270:60: note: format string is defined here cc1: all warnings being treated as errors	Add CFLAGS in bbappend in meta-cmf-raspp	https://code.rdkcentral.com/t/c/components/bluetooth_mgr/+/-/65913	Closed

12	git/src/tcjson.cpp	<pre> ./git/src/tcjson.cpp:175:20: error: invalid conversion from 'int (*)(void*, const char*, unsigned int)' to 'int (*)(void*, const char*, size_t)' {aka 'int (*)(void*, const char*, long unsigned int)'} [-fpermissive] 175 ParserContext::parse_number, ~~~~~^~~~~~ int (*)(void*, const char*, unsigned int) ./git/src/tcjson.cpp:176:20: error: invalid conversion from 'int (*)(void*, const unsigned char*, unsigned int)' to 'int (*)(void*, const unsigned char*, size_t)' {aka 'int (*)(void*, const unsigned char*, long unsigned int)'} [-fpermissive] 176 ParserContext::parse_string, ~~~~~^~~~~~ int (*)(void*, const unsigned char*, unsigned int) ./git/src/tcjson.cpp:178:20: error: invalid conversion from 'int (*)(void*, const unsigned char*, unsigned int)' to 'int (*)(void*, const unsigned char*, size_t)' {aka 'int (*)(void*, const unsigned char*, long unsigned int)'} [-fpermissive] 178 ParserContext::parse_map_key, ~~~~~^~~~~~ int (*)(void*, const unsigned char*, unsigned int) ./git/src/tcjson.cpp: In member function 'std::string TcJson::toString(bool) const': ./git/src/tcjson.cpp:700:31: error: cannot convert 'unsigned int*' to 'size_t' {aka 'long unsigned int'} 700 yajl_gen_get_buf(g, &buf, &len); ~~~~~^~~~~~ unsigned int* </pre>	<p>Modified error lines in tcjson.cpp in fog comp</p> <p>change the datatype accordingly</p>	https://code.rdkcentral.com/r/c/components/generic/fog/+67287	Closed
13	rdk services/3.0+gitAUTOINC+1323f96851-r1/git/RDKShell/RDKShell.cpp	<pre> error: cannot bind non-const lvalue reference of type 'uint32_t&' {aka 'unsigned int&'} to an rvalue of type 'uint32_t' {aka 'unsigned int'} </pre>	<p>CompositorController::screenShot(data, (unsigned int&)size) - RDKShell.cpp - rdk service comp</p>	https://github.com/rdkcentral/rdk services/pull/2674	Merged and Closed
14	git/src/ctrlm_database.cpp	<pre> ./git/src/ctrlm_database.cpp:1433:88: error: invalid conversion from 'uint64_t' {aka 'long unsigned int'} to 'sqlite_uint64_t' {aka 'long long unsigned int'} [-fpermissive] 1433 ctrlm_db_read_uint64(CTRLM_DB_TABLE_CTRLMGR, ~~~~~^~~~~~ uint64_t {aka long unsigned int} ./git/src/ctrlm_database.cpp:732:78: note: initializing argument 3 of 'int ctrlm_db_read_uint64(const char*, const char*, sqlite_uint64_t)' 732 int ctrlm_db_read_uint64(const char *table, const char *key, sqlite_uint64_t value) { ~~~~~^~~~~~ ./git/src/ctrlm_database.cpp: In function 'void ctrlm_db_rf4ce_read_polling_methods(ctrlm_network_id_t, ctrlm_controller_id_t, uint8_t)': ./git/src/ctrlm_database.cpp:2306:51: error: invalid conversion from 'uint64_t' {aka 'long unsigned int'} to 'sqlite_uint64_t' {aka 'long long unsigned int'} [-fpermissive] 2306 ctrlm_db_read_uint64(table, "polling_methods", &temp_polling_methods); ~~~~~^~~~~~ </pre>	<p>uint64 -> long long unsigned int (ctrlm_database.cpp)</p>	https://code.rdkcentral.com/r/c/components/generic/control/+69726	Closed

17	/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp	<pre> /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:17719:67: error: invalid conversion from 'int64_t*' {aka 'long int*'} to 'long long int*' [-fpermissive] 17719 if (sessionmgr_GetLongIntFromJson(item, "interval", &uid_interval)) { ^~~~~~ int64_t* {aka long int*} In file included from /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:122: /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.JsonHelper.h:39:90: note: initializing argument 3 of 'bool sessionmgr_GetLongIntFromJson(json_t*, const char*, long long int*)' 39 bool sessionmgr_GetLongIntFromJson(json_t *object, const char* name, long long *val); ~~~~~~^~ /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:17728:67: error: invalid conversion from 'int64_t*' {aka 'long int*'} to 'long long int*' [-fpermissive] 17728 if (sessionmgr_GetLongIntFromJson(uidParamsObject, "count", &uid_count)) { ^~~~~~ int64_t* {aka long int*} In file included from /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:122: /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.JsonHelper.h:39:90: note: initializing argument 3 of 'bool sessionmgr_GetLongIntFromJson(json_t*, const char*, long long int*)' 39 bool sessionmgr_GetLongIntFromJson(json_t *object, const char* name, long long *val); ~~~~~~^~ /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:17730:74: error: invalid conversion from 'int64_t*' {aka 'long int*'} to 'long long int*' [-fpermissive] 17730 if (sessionmgr_GetLongIntFromJson(uidParamsObject, "interval", &uid_interval)) { ^~~~~~ /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:14531:84: error: call of overloaded 'addNum(const char*&, const char [5], int64_t)' is ambiguous 14531 response.addNum(property, "%lld", session->source->getTimeshiftBuffer()); </pre>	Update SessionMgr.cpp datatypes according to the error	https://code.rdkcentral.com/r/c/components/generic/sessionmgr/+72400	Closed
18	recorder/1.99+gitAUTOINC+1ced954c99-r0/git/Recording.cpp	rmfstreamer - undefined reference to `RMFIPPVSrc::purchasePPVEvent(unsigned int&)`	added stub for RMFIPPVSrc::purchasePPVEvent(unsigned int&) in recording.cpp		Closed
19	git/daemon/source/utls/logging.cpp	<pre> /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/asbluetoothrcu/1.99-r0/recipe-sysroot/usr/include/qt5/QtCore/qbasicatomic.h: In instantiation of 'T QBasicAtomicInteger<T>::fetchAndAndOrdered(T) [with T = int]': /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/asbluetoothrcu/1.99-r0/recipe-sysroot/usr/include/qt5/QtCore/qbasicatomic.h:254:14: required from 'T QBasicAtomicInteger<T>::operator&=(T) [with T = int]' /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/asbluetoothrcu/1.99-r0/git/daemon/source/utls/logging.cpp:630:36: required from here /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/asbluetoothrcu/1.99-r0/recipe-sysroot/usr/include/qt5/QtCore/qbasicatomic.h:220:37: error: 'fetchAndAndOrdered' is not a member of 'QBasicAtomicInteger<int>::Ops' {aka 'QAtomicOps<int>'} 220 { return Ops::fetchAndAndOrdered(_q_value, valueToAdd); } ~~~~~~^~~~~~ </pre>	<p>g_logTargets &= ~LoggingTarget::EthanLog;</p> <p>change the expression to</p> <p>g_logTargets = (g_logTargets & ~LoggingTarget::EthanLog);</p>	https://code.rdkcentral.com/r/c/rdk/components/generic/blercudaemon/+67318	Closed
20	servicemanager module	<pre> /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/servicemanager/1.99-r0/recipe-sysroot-native/usr/bin/aarch64-rdk-linux/./libhexec/aarch64-rdk-linux/gcc/aarch64-rdk-linux/9.3.0/ld: ./servicemanager/libservicemanager.so: undefined reference to `QAbstractScrollArea::viewport()' const collect2: error: ld returned 1 exit status Makefile:125: recipe for target 'servicemanagerapp' failed make[1]: *** [servicemanagerapp] Error 1 </pre>	<p>add the below changes in servicemanagerapp.pro</p> <p>QT += widgets</p> <p>QT += opengl</p> <p>Path : servicemanager/1.99-r0/git/build/servicemanagerapp/servicemanagerapp.pro</p>	https://code.rdkcentral.com/r/c/rdk/components/generic/servicemanager/+66389	Closed

21	git/src/helpers/ jsonwriter.cpp	<pre> ../git/src/helpers/jsonwriter.cpp: In member function 'QString JSONWriter::write(const QVariantHash&)': ../git/src/helpers/jsonwriter.cpp:71:49: error: cannot convert 'unsigned int' to 'size_t' {aka 'long unsigned int'} 71 yajl_gen_get_buf((yajl_gen) m_handle, &buf, &len); ^~~~ unsigned int* ../git/src/helpers/jsonwriter.cpp: In member function 'QString JSONWriter::write(const QVariantMap&)': ../git/src/helpers/jsonwriter.cpp:89:49: error: cannot convert 'unsigned int' to 'size_t' {aka 'long unsigned int'} 89 yajl_gen_get_buf((yajl_gen) m_handle, &buf, &len); ^~~~ unsigned int* /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/servicemanager/1.99-r0/recipe-sysroot/usr/include/yajl/yajl_gen.h:146:56: note: initializing argument 3 of 'yajl_gen_status yajl_gen_get_buf(yajl_gen, const unsigned char**, size_t*)' 146 size_t len); ~~~~~~^~~~ ../git/src/helpers/jsonwriter.cpp: In member function 'QString JSONWriter::write(QVariantList&): ../git/src/helpers/jsonwriter.cpp:108:49: error: cannot convert 'unsigned int' to 'size_t' {aka 'long unsigned int'} 108 yajl_gen_get_buf((yajl_gen) m_handle, &buf, &len); ^~~~ unsigned int*</pre>	unsigned int len long unsigned int len	https://code.rdkcentral.com/r/c/rdk/components/generic/servicemanager/+66389	Closed
22	servicemanager module	<pre> /home/pjames993/64bit_dunfell_17nov/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/servicemanager/1.99-r0/recipe-sysroot-native/usr/bin/aarch64-rdk-linux/./libexec/aarch64-rdk-linux/gcc/aarch64-rdk-linux/9.3.0/ld: ../servicemanager/libservicemanager.so: undefined reference to `ServiceManager::HTTPNetworkAccessManager::HTTPNetworkAccessManager(QObject*)'</pre>	comment out the below conditions in build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/servicemanager/1.99-r0/git/build/servicemanager/servicemanager.pro file <pre>#contains(DEFINES, SCREEN_CAPTURE) { . # !contains(DEFINES, DISABLE_SCREEN_CAPTURE) { . . #.) #}</pre>	https://code.rdkcentral.com/r/c/rdk/components/generic/servicemanager/+66389	Closed

Regressions Occured

	Source / Module	Error/Warning	Changes	Code Review / Jira Ticket	
1	Module : rtRemote src /rtRemoteValueWriter. cpp	<pre> [21/45] /home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot-native/usr/bin/aarch64-rdk-linux-g++ -DRAPIDJSON_HAS_STDSTRING -DRT_PLATFORM_LINUX -DRT_REMOTE_LOOPBACK_ONLY -Drtremote_shared_EXPORTS -I/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/git/include -I/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/git/external -I/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/git/src -I/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot/usr/include/pxcore -mcpu=cortex-a72+crccrypto --sysroot=/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot -fmacro-prefix-map=/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot -fdebug-prefix-map=/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot -fdebug-prefix-map=/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot-native -O3 -Wno-deprecated-declarations -Wno-maybe-uninitialized -Wno-address -fno-delete-null-pointer-checks -fno-delete-null-pointer-checks -Wl,-warn-unresolved-symbols -fvisibility-inlines-hidden -mcpu=cortex-a72+crccrypto --sysroot=/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/recipe-sysroot -std=c++0x -O2 -fPIC -std=gnu++11 -MD -MT CMakeFiles/rtremote_shared.dir /src/rtRemoteServer.cpp.o -MF CMakeFiles/rtremote_shared.dir/src/rtRemoteServer.cpp.o -o CMakeFiles/rtremote_shared.dir/src/rtRemoteServer.cpp.o -c /home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/git/src/rtRemoteServer.cpp ninja: build stopped: subcommand failed. WARNING: exit code 1 from a shell command. ERROR: Execution of '/home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/rtremote/2.x+gitAUTOINC+9c5eeba065-r0/temp/run.do_compile.2058993' failed with exit code 1 ERROR: Task (/home/pjames993/64bit_rpi4_apr18/meta-rdk/recipes-common/rtremote/rtremote_git.bb:do_compile) failed with exit code '1' 5c6de480ebf4472c1f688cbbf34387a2c1885c7</pre>	Please refer the review link	https://github.com/pxscene/rtRemote/pull/4	Merged and closed


```
| ../git/src/xrsv_ws/xrsv_ws_action_phone.hash:61:1: error: conflicting types for 'xrsv_ws_action_phone_handler_get'

| In file included from ../git/src/xrsv_ws/xrsv_ws_action_phone.hash:6:

| ../git/src/xrsv_ws/xrsv_ws_private.h:85:36: note: previous declaration of 'xrsv_ws_action_phone_handler_get' was here

| 85 | struct xrsv_ws_action_handler_s * xrsv_ws_action_phone_handler_get(const char *str, unsigned int len);
|
| ^~~~~~

| Makefile:542: recipe for target 'xrsv_ws/xrsv_ws_action_phone.lo' failed

| make[3]: *** [xrsv_ws/xrsv_ws_action_phone.lo] Error 1

| ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_tv_control.hash:61:1: error: conflicting types for 'xrsv_ws_nextgen_tv_control_handler_get'

| In file included from ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_tv_control.hash:6:

| ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_private.h:79:47: note: previous declaration of 'xrsv_ws_nextgen_tv_control_handler_get' was here

| 79 | struct xrsv_ws_nextgen_tv_control_handler_s * xrsv_ws_nextgen_tv_control_handler_get(const char *str, unsigned int len);
|
| ^~~~~~

| ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_msgtype.hash:61:1: error: conflicting types for 'xrsv_ws_nextgen_msgtype_handler_get'

| In file included from ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_msgtype.hash:6:

| ../git/src/xrsv_ws_nextgen/xrsv_ws_nextgen_private.h:78:44: note: previous declaration of 'xrsv_ws_nextgen_msgtype_handler_get' was here

| 78 | struct xrsv_ws_nextgen_msgtype_handler_s * xrsv_ws_nextgen_msgtype_handler_get(const char *str, unsigned int len);
|
| ^~~~~~

| ../git/src/xrsv_ws/xrsv_ws_action.hash:61:1: error: conflicting types for 'xrsv_ws_action_handler_get'

| In file included from ../git/src/xrsv_ws/xrsv_ws_action.hash:6:

| ../git/src/xrsv_ws/xrsv_ws_private.h:84:36: note: previous declaration of 'xrsv_ws_action_handler_get' was here

| 84 | struct xrsv_ws_action_handler_s * xrsv_ws_action_handler_get(const char *str, unsigned int len);
|
| ^~~~~~

| Makefile:542: recipe for target 'xrsv_ws/xrsv_ws_action.lo' failed

| make[3]: *** [xrsv_ws/xrsv_ws_action.lo] Error 1
```

```
@ @ -78,8 +78,8 @ @
typedef bool
(*xrsv_ws_handler_bool_t)
(xrsv_ws_obj_t *obj, json_t
*obj_json);

typedef struct
xrsv_ws_request_handler_s
{ char *name;
xrsv_ws_handler_bool_t
func; }
xrsv_ws_request_handler_t;

typedef struct
xrsv_ws_action_handler_s {
char *name;
xrsv_ws_handler_void_t
func; }
xrsv_ws_action_handler_t;

-struct
xrsv_ws_request_handler_s
*
xrsv_ws_request_handler_g
et(const char *str, unsigned
int len);

-struct
xrsv_ws_action_handler_s
* xrsv_ws_action_handler_g
et(const char *str, unsigned
int len);

-struct
xrsv_ws_action_handler_s
* xrsv_ws_action_phone_ha
ndler_get(const char *str,
unsigned int len);

+struct
xrsv_ws_request_handler_s
*
xrsv_ws_request_handler_g
et(const char *str, size_t
len);

+struct
xrsv_ws_action_handler_s
* xrsv_ws_action_handler_g
et(const char *str, size_t
len);

+struct
xrsv_ws_action_handler_s
* xrsv_ws_action_phone_ha
ndler_get(const char *str,
size_t len);

#endif

diff --git a/src
/xrsv_ws_nextgen
/xrsv_ws_nextgen_private.h
b/src/xrsv_ws_nextgen
/xrsv_ws_nextgen_private.h

index 8daee81..e6bb2a6
100644

--- a/src/xrsv_ws_nextgen
/xrsv_ws_nextgen_private.h

+++ b/src/xrsv_ws_nextgen
/xrsv_ws_nextgen_private.h

@ @ -73,7 +73,7 @ @
typedef void
(*xrsv_ws_nextgen_handler
_void_t)
(xrsv_ws_nextgen_obj_t
*obj, json_

typedef struct
xrsv_ws_nextgen_msgtype_
handler_s { char *name;
xrsv_ws_nextgen_handler_b
ool_t func; }
xrsv_ws_nextgen_msgtype_
handler_t;

typedef struct
xrsv_ws_nextgen_tv_control
_handler_s { char *name;
xrsv_ws_nextgen_handler_v
oid_t func; }
xrsv_ws_nextgen_tv_control
_handler_t;
```

			<pre> -struct xrsv_ws_nextgen_msgtype_ handler_s * xrsv_ws_nextgen_msgtype_ handler_get(const char *str, unsigned int len); -struct xrsv_ws_nextgen_tv_control _handler_s * xrsv_ws_nextgen_tv_control _handler_get(const char *str, unsigned int len); +struct xrsv_ws_nextgen_msgtype_ handler_s * xrsv_ws_nextgen_msgtype_ handler_get(const char *str, size_t len); +struct xrsv_ws_nextgen_tv_control _handler_s * xrsv_ws_nextgen_tv_control _handler_get(const char *str, size_t len); </pre>		
5	Module : mediaframe work qamsource /simgr/oob /include /rmf_sicache .h	<pre> .J.J.J.J./git/qamsource/simgr/oob/.src/rmf_oobsicache.cpp:5856:70: error: cast from 'rmf_SiTableEntry' to 'rmf_SiServiceHandle' (aka 'unsigned int') loses precision [-fpermissive] 5856 ts->services->push_back((rmf_SiServiceHandle)new_si_entry); ^~~~~~ .J.J.J.J./git/qamsource/simgr/oob/.src/rmf_oobsicache.cpp:5890:73: error: cast from 'rmf_SiTransportStreamEntry' to 'rmf_SiTransportStreamHandle' (aka 'unsigned int') loses precision [-fpermissive] 5890 new_si_entry->ts_handle = (rmf_SiTransportStreamHandle) ts; ^~ .J.J.J.J./git/qamsource/simgr/oob/.src/rmf_oobsicache.cpp:5891:62: error: cast from 'rmf_SiProgramInfo' to 'rmf_SiProgramHandle' (aka 'unsigned int') loses precision [-fpermissive] 5891 new_si_entry->program = (rmf_SiProgramHandle)pgm; ^~~ </pre>	<pre> soln : uint32_t -> uintptr_t </pre>	https://code.rdkcentral.com/r/c/rdk/components/generic/mediaframework/+70409	CODE MERG ED

6	<div>Module : wpe-webrtc</div> <div>git/Source/WebCore/platform/ttsclient/PlatformSpeechSynthesizerTTSCient.cpp:185:40: error: cast from "WebCore::PlatformSpeechSynthesisUtterance" to "uint32_t" (aka "unsigned int") loses precision [-fpermissive]</div> <div>git/Source/WebCore/platform/ttsclient/PlatformSpeechSynthesizerTTSCient.cpp:234:78: error: cast from "WebCore::PlatformSpeechSynthesisUtterance" to "uint32_t" (aka "unsigned int") loses precision [-fpermissive]</div> <div>git/Source/WebCore/platform/ttsclient/PlatformSpeechSynthesizerTTSCient.cpp:273:59: error: cast from "WebCore::PlatformSpeechSynthesisUtterance" to "uint32_t" (aka "unsigned int") loses precision [-fpermissive]</div>	<div>Need to do implemenataion as per the comments. Comments will be followed up by Jira Ticket :</div> <div><div><div><div><div><div></div><div>REF</div></div><div><div>PLTV</div><div>-1341</div><div>- Jira</div><div>proje</div><div>ct</div><div>does</div><div>n't</div><div>exist</div><div>or</div><div>you</div><div>don't</div><div>have</div><div>permi</div><div>ssion</div><div>to</div><div>view</div><div>it.</div></div></div></div></div></div>	<div>https://code.rdkcentral.com/r/c/rdk/components/generic/rdk-oe/meta-rdk-ext/+771000</div>	<div>This change will not impact any of the basic functionalities.</div> <div>STATUS: MERGED</div>
---	--	---	--	--

7	Module : qtbaser	<p>../../../../include/QtGui/../../../../qtbase-opensource-src-5.1.1/src/gui/opengl/qopengl.h:97:17: error: conflicting declaration 'typedef GLfloat GLdouble'</p> <pre> 97 typedef GLfloat GLdouble; ^~~~~~ In file included from /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/qtbase/5.1.1-r0/qtbase-opensource-src-5.1.1/src/plugins/platforms/kms/qkmsscreen.h:59, from /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/qtbase/5.1.1-r0/qtbase-opensource-src-5.1.1/src/plugins/platforms/kms/qkmsintegration.cpp:44: /home/kpandu549/keerthana/oct27-v/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/qtbase/5.1.1-r0/recipe-sysroot/usr/include/GLES2/g2ext.h:3092:16: note: previous declaration as 'typedef double GLdouble' 3092 typedef double GLdouble; </pre>	<p>https://code.rdkcentral.com/r/plugins/gtiles/components/generic/rdk-oe/meta-cmf-qt5/+/refs/heads/rdk-next/recipes-qt/qt5/qtbase_5.1.1.bbappend</p> <p>SRC_URI_append_arm = "\nfile://0003-GLdouble-conflict-declaration-fix.patch\n"</p> <p>https://code.rdkcentral.com/r/plugins/gtiles/components/generic/rdk-oe/meta-cmf-qt5/+/refs/heads/rdk-next/recipes-qt/qt5/qtbase-5.1.1/0003-GLdouble-conflict-declaration-fix.patch</p> <pre> diff --git a/src/gui/opengl/qopengl.h b/src/gui/opengl/qopengl.h index 6e8be668..524e1860 100644 --- a/src/gui/opengl/qopengl.h +++ b/src/gui/opengl/qopengl.h @@ -94,7 +94,7 @@ typedef char GLchar; # define GL_DOUBLE GL_FLOAT # endif # ifndef GLdouble -typedef GLfloat GLdouble; +typedef double GLdouble; # endif # endif // Q_OS_MAC </pre>	<p>https://code.rdkcentral.com/r/rdkcentral.com/r/c/components/generic/rdk-oe/meta-cmf-qt5/+/72202</p> <p>Issue is resolved and uploaded for review.</p> <p>Current Status : Code Merged</p>
8	Module : sessionmgr	<p> /home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp: In function 'session_err_t sessionmgr_GetSessionProperty(session_t*, const char*, SimpleJsonEnc&)':</p> <p> /home/pjames993/64bit_rpi4_apr18/build-raspberrypi4-64-rdk-hybrid/tmp/work/aarch64-rdk-linux/sessionmgr/git-r0/git/src/SessionMgr.cpp:14850:88: error: call of overloaded 'addNum(const char*&, const char [4], int64_t)' is ambiguous</p> <pre> 14850 response.addNum(property, "%" PRIu64, session->source->getTimeshiftBuffer()); ^ </pre>	<p>Initial Solution:</p> <pre> response.addNum(property, "%" PRIu64, (long long) session->source->getTimeshiftBuffer()) </pre>	<p>https://code.rdkcentral.com/r/c/components/generic/sessionmgr/+/72400</p> <p>Resolution is identified and added for code review.</p> <p>Status : Code Merged</p>
9	Module : rmfgeneric / mediaframework	<p>In file included from ../../git/anycas/demoCas/demoCas.cpp:22:</p> <p>../../../../git/anycas/demoCas/demoCas.h: In member function 'virtual void DemoCasHelper::processData(std::shared_ptr<anycas::CASHelperContext>, bool, const std::vector<unsigned char>&)':</p> <p>../../../../git/anycas/demoCas/demoCas.h:295:43: error: cast from 'char*' to 'uint32_t' {aka 'unsigned int'} loses precision [-fpermissive]</p> <pre> 295 uint32_t addr = (uint32_t)pvtData; ^~~~~~ </pre>	<p>Initial Solution :</p> <pre> uint32_t addr = (uintptr_t) pvtData; </pre>	<p>https://code.rdkcentral.com/r/c/rdk/components/generic/mediaframework/+/72460</p> <p>STATUS : MERGED</p>

10	Module : rdkmediaplayer <pre> ../git/rdkmediaplayer.cpp: In member function 'rtError RDKMediaPlayer::open(rtString, rtString)': ../git/rdkmediaplayer.cpp:764:42: error: cast from 'RDKMediaPlayerImpl*' to 'uint32_t' {aka 'unsigned int'} loses precision [-fpermissive] 764 resp = (std::to_string((uint32_t)m_plmpl)).c_str(); ^~~~~~ ../git/rdkmediaplayer.cpp:785:51: error: cast from 'RDKMediaPlayerImpl*' to 'uint32_t' {aka 'unsigned int'} loses precision [-fpermissive] 785 resp = (std::to_string((uint32_t)it)).c_str(); ^~ </pre>	Solution : <pre> --- a/rdkmediaplayer.cpp +++ b/rdkmediaplayer.cpp @@ -761,7 +761,7 @@ rtError RDKMediaPlayer:: open(rtString openData, rtString resp) { LOG_INFO("CAS Management session is already avialable"); } - resp = (std::to_string ((uint32_t)m_plmpl)).c_str(); + resp = (std::to_string ((uintptr_t)m_plmpl)).c_str(); LOG_INFO("resp = % x", resp.cString()); } // For Live Playback Session @@ -782,7 +782,7 @@ rtError RDKMediaPlayer:: open(rtString openData, rtString resp) { if(!((*it)- >isManagementSession()) && (*it)->doCanPlayURL (m_currentURL)) { LOG_INFO ("Reusing cached player"); - resp = (std:: to_string((uint32_t)it)). c_str(); + resp = (std:: to_string((uintptr_t)it)). c_str(); LOG_INFO("resp = %x", resp.cString()); } </pre>	https://code.rdkcentral.com/r/c/rdk/components/generic/rdkmediaplayer/+771632/	Status : MERGED
----	---	--	---	--------------------

Logs after 64bit migration:

WPEFramework Logs <pre> Jul 18 10:37:46.325860 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[Config.h:788]: Startup: Accessor: http://192.168.0.105:9998/Service Jul 18 10:37:46.326046 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[Config.h:789]: Startup: Interface IP: 192.168.0.105 Jul 18 10:37:46.330725 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[SystemInfo.h:354]: Startup: EVENT: Identifier: OE5F8BDKx0 Jul 18 10:37:46.330774 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[SystemInfo.h:355]: Startup: EVENT: Architecture: aarch64 Jul 18 10:37:46.330806 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[SystemInfo.h:356]: Startup: EVENT: Chipset: BCM2835 Jul 18 10:37:46.330838 /usr/bin/WPEFramework[1229]: [Mon, 18 Jul 2022 10:37:46]:[SystemInfo.h:357]: Startup: EVENT: FirmwareVersion: 5.10.52-v8 </pre>
Command Line Logs <pre> root@raspberrypi4-64-rdk-hybrid:~# uname -a Linux raspberrypi4-64-rdk-hybrid 5.10.52-v8 #1 SMP PREEMPT Sun Jul 17 09:34:53 UTC 2022 aarch64 GNU/Linux root@raspberrypi4-64-rdk-hybrid:~# uname -m aarch64 </pre>
Compilation Logs

Build Configuration:

```

BB_VERSION      = "1.46.0"
BUILD_SYS       = "x86_64-linux"
NATIVESBSTRING  = "ubuntu-18.04"
TARGET_SYS      = "aarch64-rdk-linux"
MACHINE         = "raspberrypi4-64-rdk-hybrid"
DISTRO          = "rdk"
DISTRO_VERSION  = "2.0"
TUNE_FEATURES   = "aarch64 cortexa72 crc crypto"

```

Console Logs

```

root@raspberrypi4-64-rdk-hybrid:~# file /usr/bin/rdkbrowser2
/usr/bin/rdkbrowser2: ELF 64-bit LSB executable, ARM aarch64, version 1 (GNU/Linux), dynamically linked,
interpreter /lib/ld-linux-aarch64.so.1, BuildID[sha1]=21e3fa1be1046192d65c7a1ffefc7dd3b795f82d, for GNU/Linux
3.14.0, stripped

```

```

root@raspberrypi4-64-rdk-hybrid:~# file /usr/bin/WPEFramework-1.0.0
/usr/bin/WPEFramework-1.0.0: ELF 64-bit LSB executable, ARM aarch64, version 1 (GNU/Linux), dynamically linked,
interpreter /lib/ld-linux-aarch64.so.1, BuildID[sha1]=f27ec6ba8270af029fce09e0eb3deea24b7ac0c6, for GNU/Linux
3.14.0, stripped



```

Validated functionalities:

Status: - Working x - Not Working O - Partially Working				
Sl. No	Tested	Apps	Test Results	Remarks
1	Basic Tests	ssh connection		SSH is working through LAN connection.
2		Default UI		UI is coming up consistently. Checked rebooting 10 times, every time UI is loading
3		Time	X	Current time is not updated in TV UI
4	Featured Content	YouTube		Playback is working fine for selected content.
		Xumo	X	1.AV decoding is not smooth. 2.Audio decoding is also not proper. Looks like rewind audio.
5	Lightning Apps	CNN	X	1.AV decoding is not smooth. 2.AV sync is not proper
		Vimeo		AV Playback is working.
6	Featured Video on Demand	Fantasy-Island		AV Playback is working.
7	Playback	gst-launch		AV playback is working. Tested URL: > gst-launch-1.0 playbin uri=aamp://bitdash-a.akamaihd.net/content/Mi201109210084_1/m3u8s/f08e80da-bf1d-4e3d-8899-f0f6155f6efa.m3u8 video-sink=westerossink > gst-launch-1.0 playbin uri=aamp://bitdash-a.akamaihd.net/content/sintel/hls/playlist.m3u8 video-sink=westerossink
8		aamp-cli		AV playback is working Tested Commands: aamp-cli http://devimages.apple.com/iphone/samples/bipbop/bipbopall.m3u8 aamp-cli http://bitdash-a.akamaihd.net/content/Mi201109210084_1/m3u8s/f08e80da-bf1d-4e3d-8899-f0f6155f6efa.m3u8 aamp-cli http://bitdash-a.akamaihd.net/content/sintel/hls/playlist.m3u8
9	Settings	BT	X	1.Bluetooth pairing instability issue. 2.Paring is successful very randomly.
10		Wi-Fi		1.Connecton is working. 2.Able to take ssh with Wi-Fi IP 3.Able to launch controller UI with Wi-Fi IP

11	Plugins	HTMLApp		Tested the custom URL: https://www.google.com/	
12		LightningApp			
13		Search And DiscoveryApp			
14		Webkitbrowser		Tested the custom URL: https://www.google.com	
15		Cobalt		YouTube application launched properly	

Known Issues:

SI No.	Issue	Jira	Status	Resolution	Code Review
1	Resolution Issues seen. Display on TV is not full screen	<p>UI Display on TV is not coming full screen on RPi4 Image</p> <div>  REFP LTV-1247 - Jira project doesn't exist or you don't have permission to view it. </div>	MERGED and CLOSED	<p>Explanation : boot/config.txt has only one HDMI port (HDMI0) configured properly (which was only need of the day until RPi3 was used.) . This needs configured for the second HDMI port (HDMI1) also.</p> <p>Fix: Add the below lines in boot/config.txt file once RPi4 is booted up.</p> <pre> a. hdmi_group [HDMI:0] hdmi_group=1 [HDMI:1] hdmi_group=1 a. hdmi_mode #hdmi_mode=4 [HDMI:0] hdmi_mode=4 [HDMI:1] hdmi_mode=4 </pre>	https://code.rdkcentral.com/r/c/rdk/components/generic/rdk-oe/meta-cmf-raspberrypi/+72060
2	Cobalt plugin is not available in Controller UI.	<p>Cobalt Configuration for RPi4-64bit build</p> <div>  REFP LTV-1225 - Jira project doesn't exist or you don't have permission to view it. </div>	RESOLUTION IDENTIFIED	<p>Cobalt Issue Resolution :</p> <p>Files:</p> <p>1)git/src/third_party/starboard/rdk/rpi/gyp_configuration.py -> https://code.rdkcentral.com/r/plugins/gitiles/rdk/components/generic/cobalt/+refs/heads/master/src/third_party/starboard/rdk/rpi/gyp_configuration.py?autodive=0%2F%2F%2F%2F change1 -> self.sabi_json_path = 'starboard/sabi/arm64/sabi-v13.json'</p> <p>change2 -></p> <pre> def GetEnvironmentVariables(self): env_variables = {} env_variables.update({ 'CC': os.environ['CC'], 'CXX': os.environ['CXX'], 'LD': os.environ['CXX'], 'CC_host': 'gcc', 'CXX_host': 'g++', }) </pre> <p>2)git/src/starboard/shared/linux/cpu_features_get.cc -> https://cobalt.googlesource.com/cobalt/+refs/heads/master/starboard/shared/linux/cpu_features_get.cc change -></p> <pre> #if SB_IS(32_BIT) ~~~~~ // Construct hwcap bitmask by the feature flags in /proc/cpuinfo uint32_t ConstructHwcapFromCPUInfo(ProcCpuInfo* cpu_info, int16_t architecture_generation, uint32_t hwcap_type) { if (hwcap_type == AT_HWCAP && architecture_generation >= 8) { return hwcap_value; } } #endif //SB_IS(32_BIT) ~~~~~ </pre> <p>3)git/src/third_party/starboard/rdk/shared/rdkservices.cc -> https://code.rdkcentral.com/r/plugins/gitiles/rdk/components/generic/cobalt/+refs/heads/master/src/third_party/starboard/rdk/shared/rdkservices.cc?autodive=0%2F%2F%2F%2F change -> uint32_t inputLen = std::min(kMaxBufferSize, (uint32_t) payload.length()); ~~~~~ </p>	<p>Code Review for source code yet to added</p> <p>Intermediate Code Review added : https://code.rdkcentral.com/r/c/rdk/components/generic/rdk-oe/meta-cmf-raspberrypi/+74129</p>

3.	Outline/box for Password field is not available on WiFi network screen.				
----	---	--	--	--	--