

# RDK Services on RaspberryPi

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## Introduction

RDK Services are nothing but the RDK components are implemented as Thunder Nano Services and maintained in RDK Central's GitHub <https://github.com/rdkcentral/rdkservices>

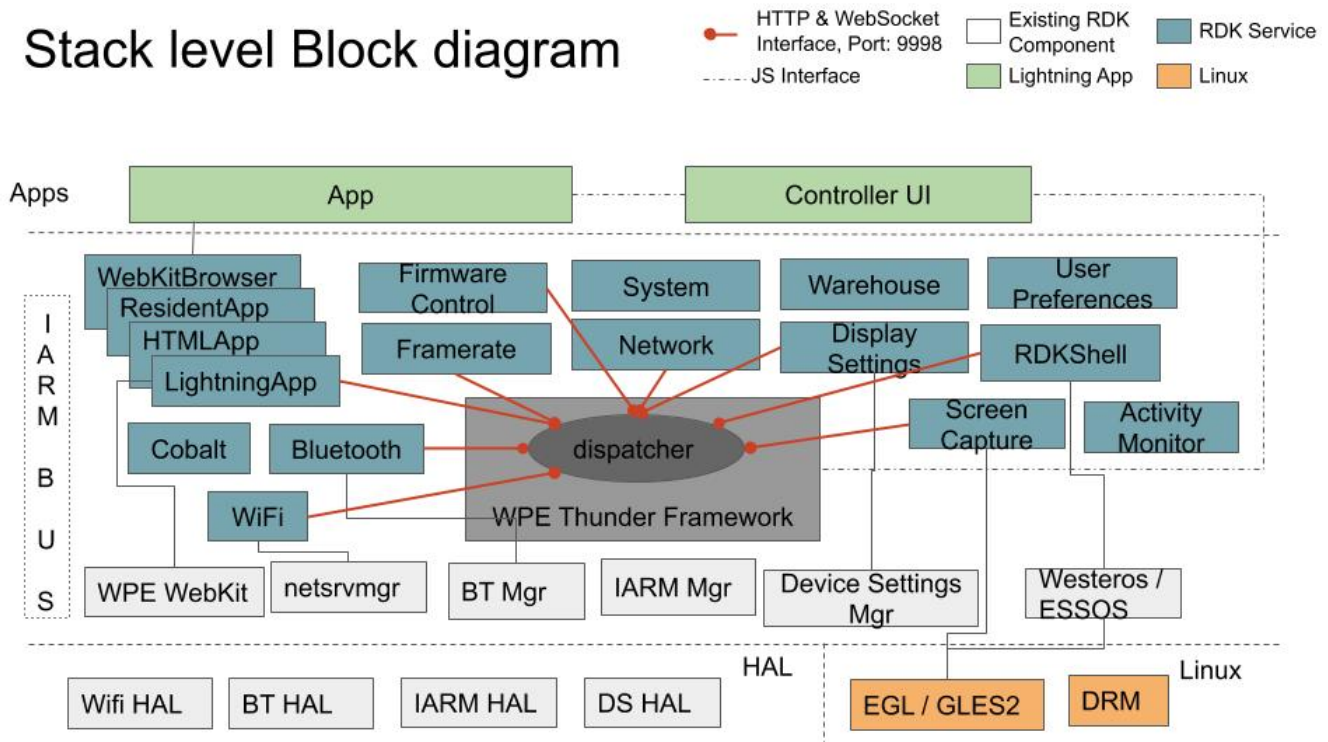
Initially, this is started in the Comcast side and validated on the RPi reference platform and the Yocto recipe is maintained only in meta-rdk-video layer. Recently RDK services are made open-source and available in GitHub so, the recipe to avail this on CMF community (meta-cmf-video layer) as [rdkservices\\_git.bbappend](#) which points to GitHub's repository.

Currently, RDK services are excluded from Thunder Image builds and this depends with ServiceManager and WPE WebKit for (OpenCDM Implementation)

RDK UI Services works on top of [RDK Shell](#) which is an application management native component that provides the Wayland Composition. RDK Shell will be a small shared library that provides this feature. A sample binary is available to validate and also integrated as an RDK Service.

Architecture Wiki Page: [RDKShell](#)

## Stack level Block diagram



For the Integration of RDK Services on Generic RDK image, below are the important components

- RDK Shell
- WPE's Thunder Framework
- RDK Services (Thunder Nano services developed by Comcast)
- WPE Framework's UI (for Controller UI)
- WebKit Browser Plugin (A Thunder Nano service for WPE WebKit Browser)
- RDK Reference App



blockdiagram\_rdkservices.pdf

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## RDK Images

Follow below link for build instructions

- [RDK-V \(Raspberry Pi\) Yocto Build Instructions - Morty](#)
- [RDK-V rdk-next Yocto 3.1 dunfell build for Raspberrypi](#)

Other pages


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Jira Number	Description	Assigned to	Priority	Comments
REFPLTV-794	<a href="#">RDKService: After auto reboot,multi-partition is not created for Firmware Upgrade</a>	balaji vivek	Major	Issue is fixed. Changes to be merged. Target Date - 02/18
REFPLTV-791	<a href="#">RDKService:AV decoding is not smooth in CNN application.</a>	balaji vivek	Major	In progress. Target Date - 02/26
REFPLTV-785	<a href="#">RDKService: Bluetooth connection is not working.</a>	balaji vivek	Major	In progress. Target Date - 02/26
REFPLTV-793	<a href="#">RDKService:Youtube is not launching after enabled cobalt plugin.</a>	Moorthy Baskar	Major	In progress - Finding RCA. Target Date - 02/26

REFPLTV-789	RDKService: Metro apps icons are not loading without ethernet connection.	Mohammad Naseem Sheikh	Major	Issue is reproducible only in Hybrid image, need to do RCA
REFPLTV-788	RDKService:All the resident applicaiton's are taking more time to load the content.	Sri Swati Varahagiri	Major	Issue is reproducible only in dunfell Image not in Morty, need to do RCA
REFPLTV-787	RDKService:Premium content 1 (Test youtube) application is not launching.	Moorthy Baskar	Major	In progress - Finding RCA. Target Date - 02/26
REFPLTV-739	RDK service:After bootup, IP address is not displayed.	kathiravan	Major	currently application start from accelerator-home-ui so this page is not available.need to close
REFPLTV-720	Package file for firmware upgrade plugin is not available in rdk service build	Gopinath Chandran	Major	Issue is fixed. Changes to be merged. Target Date - 02/26
REFPLTV-717	RDKService: Getting LOST and AQUIRED events for eth0 interface while connecting to WiFi	Gopinath Chandran	Major	Waiting for validation on the latest build. Target Date - 02/26
REFPLTV-700	RDKService: Eth0 ip getting changed while connecting to wifi ssid	sravani dandiboina	Major	Issue is observed only in Media Client Image, need to do RCA. Target Date - 02/26
REFPLTV-627	RDKService: Few DisplaySettings APIs are not giving the result properly	Sri Swati Varahagiri	Major	Issue is observed only in Media Client Image, to be addressed. Target Date - 02/25
REFPLTV-613	RDKService: RPI terminal is popping on switching between applications in UI.	Gopinath Chandran	Major	Resolved. Waiting validation. Target Date - 02/25
REFPLTV-727	RDKService: WebProcess crash observed during Cobalt Plugin Suspend and Resume Stress test	Gopinath Chandran	Major	In progress. Target Date - 02/26
REFPLTV-705	RDKService: Channel change is not happening after certain iterations	Gopinath Chandran	Major	In progress. Target Date - 02/26
REFPLTV-615	RDKService: Channel Change Stress test is stuck in less than 200 repeats	Gopinath Chandran	Major	In progress. Target Date - 02/26
REFPLTV-614	RDKService: RPI is not accessible after multiple reboots	Gopinath Chandran	Major	Issue observed only in MC image after 821 reboots
REFPLTV-790	RDKservice:TV show contents are not playing.	Moorthy Baskar	Major	In progress. Target Date - 02/26
REFPLTV-701	RDKService: org.rdk.Wifi.1.connect is giving true for invalid ssid and passphrase	Josekutty Kuriakose	Major	In progress - Finding RCA. Target Date - 02/26
REFPLTV-747	RDKService: TraceControl.1.status API is not listing trace status information for some of the modules	S Vithiya Lakshmi	Major	Issue is Fixed. Waiting Validation. Target Date - 02/20
REFPLTV-628	RDKService: org.rdk.DisplaySettings.1.setGain is giving false success	simi	Major	Issue is Fixed. Waiting Validation. Target Date - 02/22
REFPLTV-695	RDKService: org.rdk.ScreenCapture.1.uploadScreenCapture is not working in RPI	Sri Swati Varahagiri	Major	Feature not supported on R-Pi
REFPLTV-682	RDKService: org.rdk.ScreenCapture.1.uploadScreenCapture is giving true for invalid url in RPI	Sri Swati Varahagiri	Major	Feature not supported on R-Pi
REFPLTV-786	RDKService: Unable to verify the wifi connection behavior.	Josekutty Kuriakose	Major	Issue is fixed. Changes to be merged. Target Date - 02/26
REFPLTV-756	RDK services: Disconnect functionally is not happening on BT service	Josekutty Kuriakose	Major	
REFPLTV-621	RDK services: disconnect is functionally not happening on wifi service	Josekutty Kuriakose	Major	

## Open Issues in JIRA

key summary type created assignee reporter priority status resolution due

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S. No.	Issue Description / log	Root Cause	Action done / Changes at	Remarks
1	ERROR: Layer 'cmf-raspberrypi' depends on layer 'wpe-layer', but this layer is not enabled in your configuration	meta-cmf-raspberrypi's layer has wpe layer dependency	Removed wpe dependency from meta-cmf-raspberrypi /conf/layer.conf  Change-set: <a href="#">43688</a>	addressed from <a href="#">REFPLTV-521</a>
2	ERROR: Nothing RPROVIDES 'gststreamer1.0-plugins-ugly' (but meta-rdk/recipes-core/packagegroups/packagegroup-rdk-media-common.bb RDEPENDS on or otherwise requires it) ERROR: gststreamer1.0-plugins-ugly was skipped: because it has a restricted license not whitelisted in LICENSE_FLAGS_WHITELIST	RDK Media common package group has GStreamer ugly plugins run-time dependency	commercial Whitelist flag added for GStreamer ugly plugin and mpg123.  Also lame is not required for RDK build as it has a restricted license.	addressed from <a href="#">REFPLTV-518</a>
3	ERROR: Nothing RPROVIDES 'gststreamer1.0-plugins-ugly-mpg123' (but meta-rdk-ext/recipes-extended/wpe-webkit/wpe-webkit_0.4.4.bb RDEPENDS on or otherwise requires it)	wpe-webkit has Gstreamer ugly plugins run-time dependency	Change-set: <a href="#">43513</a>	
4	build-raspberrypi-rdk-mc/tmp/work/cortexa7t2hf-neon-vfpv4-rdk-linux-gnueabi/wpe-webkit/0.4.4+gitAUTOINC+5f899bc2e0-r0/git/Source/WebCore/platform/graphics/cairo/CairoUtilities.cpp:46:22: fatal error: cairo-gl.h: No such file or directory   #include <cairo-gl.h>   ^   compilation terminated.	cairo bbappend from meta-rdk-ext is masked from meta-cmf-raspberrypi as meta-wpe has the same bbappend	meta-wpe 's cairo bbappend is masked for Non-Thunder images and meta-rdk-ext 's cairo bbappend is masked for Thunder images  Change-set: <a href="#">43722</a>	addressed from <a href="#">REFPLTV-519</a>
5	<ul style="list-style-type: none"> <li>Not able to get the ssh terminal once the image is booted</li> <li>No way to edit RDK Services configuration file as the rootfs generated with read-only mode</li> </ul>	bbappend files for RDK Images which are maintained in meta-cmf-raspberrypi layer are disabled the <b>read-only-rootfs</b> IMAGE Feature only under that bbappend scope so, if any new image bbappend introduced, the image generated with this feature.	removed read-only-rootfs feature globally for all RPI images Change-set: <a href="#">43245</a>	addressed from <a href="#">REFPLTV-517</a>
6	No controller UI on web browser launched though the port 9998 enabled (confirmed through <i>netstat</i> command)	The binding address is not set for WPE Framework	+ WPEFRAMEWORK_BINDING_rpi = "0.0.0.0"  Change-set : <a href="#">43520</a>	addressed from <a href="#">REFPLTV-520</a>
7	RDK Shell distro feature to be enabled	RDK Shell distro feature includes RDKshell, wpeframework-ui and RDK reference app components into image	Enabled in raspberrypi-rdk-mc.conf file  Change-set: <a href="#">43690</a>	addressed from <a href="#">REFPLTV-522</a>
8	new manifest to avoid meta-wpe	meta-wpe layer is no more needed for RDK services	a new manifest created on master branch of <a href="http://code.rdkcentral.com/reference/manifests">http://code.rdkcentral.com/reference/manifests</a>	addressed from <a href="#">REFPLTV-516</a>
9	remove meta-wpe layer dependency in meta-cmf-raspberrypi layer		removed	addressed from <a href="#">REFPLTV-521</a>

key summary type created assignee reporter priority status resolution resolved



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