

RDK-C RDKC Media Server(RMS) - Community

- [Introduction](#)
- [Required Equipment](#)
- [System Setup](#)
- [RMS Flow - Environment Setup Diagram](#)
- [Yocto Build Steps](#)
- [Image Flash Procedure](#)
- [RMS Validation Procedure](#)

Introduction

The RDKC Media Server is much more than a multi-format, multi-protocol server that delivers your media rich content across multiple screens and platforms. The RDK camera software runs on RPi-0 device. This page dedicated to bringing up and validation of RMS functionality in R-Pi Zero.

Required Equipment

- Raspberry Pi 0 Device
- SD Card
- Power Cable
- OTG Cable
- Standard USB keyboard
- Mini HDMI connector
- HDMI Cable
- Television set/monitor with HDMI input

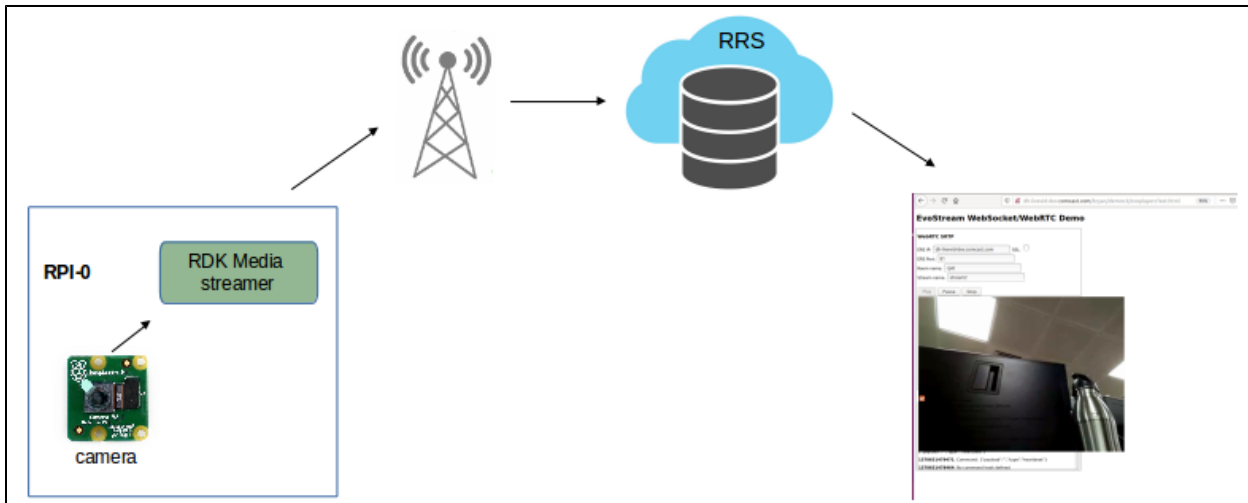
System Setup

[blocked URL](#)

Please refer below link for RPI-0 Environment setup

[RDK-C Environment Setup](#)

RMS Flow - Environment Setup Diagram



Yocto Build Steps

Build steps

```
$ repo init -u "https://code.rdkcentral.com/r/manifests" -m rdkc-nosrc.xml -b rdk-next
$ repo sync
$ source meta-cmf-raspberrypi/setup-environment
    select meta-cmf-raspberrypi/conf/machine/raspberrypi0-rdk-camera.conf
$ bitbake rdk-generic-camera-image
```

Image Flash Procedure

Image Flash step

```
$ sudo dd if="Image Name" of="Device Name" bs=4M
```

Example:

```
sudo dd if=rdk-generic-camera-image_default_20200130060729.rootfs.rpi-sdimg of=/dev/sdb bs=4M
```

RMS Validation Procedure

STEP 1:

Add require SSID and PSK in /etc/wpa_supplicant.conf file in below format

```
network={
ssid="username"
psk="password"
}
```

Console output

```
ctrl_interface=/var/run/wpa_supplicant
ctrl_interface_group=0
update_config=1

network={
ssid="XXXX"
psk="YYYYYYYYYY"
}
```

STEP 2:

Reboot the Target

After Reboot don't do step 1 and 2.

Note : Step 1 & 2 is only applicable for fresh target boot-up with new image.

STEP 3:

Modify needed resolution in rms configuration file

Supported Resolution:

SD:

Width - 640 , Height - 480

Width - 720 , Height - 576

HD:

Width - 1280 , Height - 720

FULL HD :

Width - 1920 , Height - 1080

Modify resolution in below configuration file

```
cd /usr/local/rms/bin
```

```
vi rms.conf
```

Console output

```
RRSIP=XXX.XXX.XXX.XXX
RRSPORT=81
ROOMID=rpi0
RRSSL=0
WIDTH=1280
HEIGHT=72
```

After resolution modification need to reboot the target.

Note: This step is not necessary, it depends on your resolution validation.

STEP 4:

WiFi connection is must needed for RMS validation.

Check WiFi connection by using below command.

```
ifconfig
```

Console output

```
root@raspberrypi0-rdk-camera:~# ifconfig
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:87 errors:0 dropped:0 overruns:0 frame:0
          TX packets:87 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:4552 (4.4 KiB)  TX bytes:4552 (4.4 KiB)

wlan0     Link encap:Ethernet  HWaddr B8:27:EB:2E:72:2B
          inet addr:192.168.43.246  Bcast:192.168.43.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:23 errors:0 dropped:0 overruns:0 frame:0
          TX packets:44 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:2893 (2.8 KiB)  TX bytes:5887 (5.7 KiB)
```

STEP 5:

check loaded module by using below command

lsmod

Console output

```
root@raspberrypi0-rdk-camera:~# lsmod
Module              Size  Used by
bcm2835_v4l2        40563  0
v4l2_common         4809  1 bcm2835_v4l2
videobuf2_vmalloc   6264  1 bcm2835_v4l2
videobuf2_memops    1528  1 videobuf2_vmalloc
videobuf2_v4l2     12640  1 bcm2835_v4l2
videobuf2_core      27389  2 bcm2835_v4l2,videobuf2_v4l2
videodev            154457  4 v4l2_common,videobuf2_core,bcm2835_v4l2,videobuf2_v4l2
media                23307  1 videodev
brcmfmac            258239  0
brcmutil             7590  1 brcmfmac
snd_bcm2835          21405  0
cfg80211            492836  1 brcmfmac
snd_pcm              79872  1 snd_bcm2835
rfkill              19936  3 cfg80211
snd_timer            20294  1 snd_pcm
snd                  52949  3 snd_timer,snd_bcm2835,snd_pcm
lirc_rpi             6840  0
lirc_dev             7533  1 lirc_rpi
uio_pdrv_genirq      3469  0
uio                  8703  1 uio_pdrv_genirq
fixed                2876  0
sch_fq_codel         9662  2
ipv6                 384101  18
```

STEP 6:

check camera device there or not by using below command

ls /dev/video0

Console output

```
root@raspberrypi0-rdk-camera:~# ls /dev/video0
/dev/video0
```

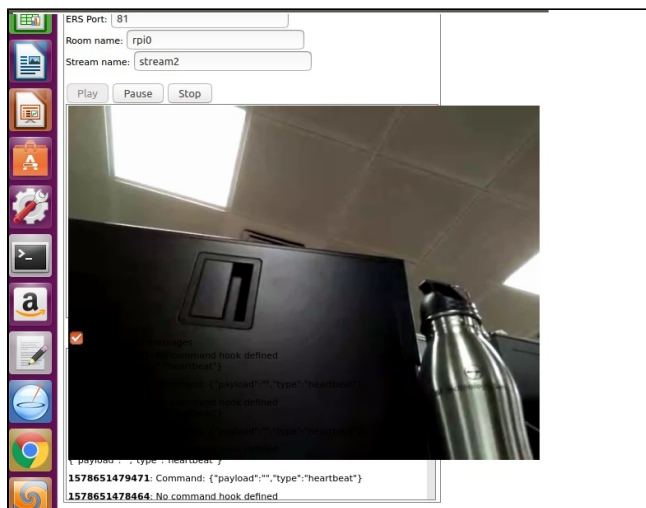
STEP 7:

On Browser of PC:

<http://community.dummysserver.com>

Need to modify roomid as rpi0

Press "PLAY" button in WebBrowser page.



We can able to see the capturing content on WebBrowser.