

# RDK-V Media Client Hybrid (Raspberry Pi) Build Instructions - Morty

? Unknown Attachment

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## Host Setup

The OpenEmbedded build system should be able to run on any modern distribution with the following versions for Git, tar, and Python.

- Git 1.8.3.1 or greater.
- tar 1.24 or greater.
- Python 2.7.3 or greater excluding Python 3.x, which is not supported

Below is the host environment details

- Operating System: Ubuntu 16.04.6 LTS or above
- Kernel: Linux 4.4.0-173-generic or above
- Architecture: x86\_64

**Note:** You should also have about 50 Gbytes of free disk space for building images.

## Ubuntu and Debian

The essential packages you need for a supported Ubuntu or Debian distribution are shown in the following command

```
$ sudo apt-get install make gcc g++ diffstat texinfo chrpath gcc-multilib git gawk build-essential autoconf libtool libncurses-dev gettext gperf lib32z1 libc6-i386 g++-multilib python-git
```

## Repo setup

In order to use Yocto build system, the repo tool must be properly installed on the machine. Make sure you have a /bin directory in your home directory and that it is included in your path

```
$ mkdir ~/bin
$ PATH=~/bin:$PATH
```

Download the repo tool and ensure that it is executable

```
$ curl http://commondatastorage.googleapis.com/git-repo-downloads/repo > ~/bin/repo
$ chmod a+x ~/bin/repo
```

**Note:** it is also recommended to put credentials in .netrc when interacting with repo.

A sample .netrc file is illustrated below

```
machine code.rdkcentral.com
login YOUR_USERNAME
password YOUR_PASSWORD
```

## Build Setup

All RPi based RDK images with latest features are from rdk-next branch

## Initializing the Build Environment

To build the image, follow the below instructions

```
$ mkdir <workspace dir>
$ cd <workspace dir>
$ repo init -u https://code.rdkcentral.com/r/manifests -b rdk-next -m rdkv-extsrc.xml
```

for ASP:

```
$ repo init -u https://code.rdkcentral.com/r/manifests -b rdk-next -m rdkv-asp-extsrc.xml
$ repo sync -j`nproc` --no-clone-bundle
```

## Hybrid

**Choose hybrid machine configuration to build the image with default compositor**

```
$ MACHINE=raspberrypi-rdk-hybrid source meta-cmf-raspberrypi/setup-environment
$ bitbake rdk-generic-hybrid-wpe-image
for Mediaclient image with TDK
$ bitbake rdk-generic-hybrid-wpe-tdk-image
```

**Choose the hybrid westeros machine configuration to build the image with westeros compositor**

```
$ MACHINE=raspberrypi-rdk-hybrid-westeros source meta-cmf-raspberrypi/setup-environment
$ bitbake rdk-generic-hybrid-westeros-wpe-image
for Hybrid image with TDK
$ bitbake rdk-generic-hybrid-wpe-tdk-image
```

Link to check possible RDK images on RPi - <https://code.rdkcentral.com/r/plugins/gitiles/components/generic/rdk-oe/meta-cmf-raspberrypi+/refs/heads/rdk-next/recipes-core/images/>

## Development Branch

#To build the image from the development branch, the respective sprint month's development branch to be chosen and follow the below build procedure

```
$ mkdir <workspace dir>
$ cd <workspace dir>
For example to take development branch of September 2020, the rdk-dev-2009 branch to be used
for Non-ASP:
$ repo init -u https://code.rdkcentral.com/r/manifests -b rdk-dev-2009 -m rdkv-extsrc.xml
```

for ASP:

```
$ repo init -u https://code.rdkcentral.com/r/manifests -b rdk-dev-2009 -m rdkv-asp-extsrc.xml
$ repo sync -j`nproc` --no-clone-bundle
```

**Note:** The Kernel image and root filesystem will be created under `./build-raspberrypi-rdkmc/tmp/deploy/images/raspberrypi-rdk-mc` folder