

Deploy gstreamer on raspberrypi

本次部署使用硬件为Raspberrypi 3 Model B+, 使用系统镜像为2021-01-11-raspbian-buster-armhf-lite.img

部署前步骤

树莓派apt包管理器换源

使用镜像站为科大镜像站。具体操作步骤如下：

```
# 编辑 `/etc/apt/sources.list` 文件，删除原文件所有内容，用以下内容取代：
deb http://mirrors.ustc.edu.cn/raspbian/raspbian/ buster main contrib non-free rpi
# deb-src http://mirrors.ustc.edu.cn/raspbian/raspbian/ buster main contrib non-free rpi

# 编辑 `/etc/apt/sources.list.d/raspi.list` 文件，删除原文件所有内容，用以下内容取代：
deb http://mirrors.ustc.edu.cn/archive.raspberrypi.org/debian/ buster main ui
#deb-src http://mirrors.ustc.edu.cn/archive.raspberrypi.org/debian/ buster main ui
```

执行完成后运行 `sudo apt-get update`

部署gstreamer

apt-get下载

```
sudo apt-get install gstreamer1.0-tools gstreamer1.0-omx gstreamer1.0-plugins-base gstreamer1.0-plugins-good gstreamer1.0-plugins-bad gstreamer1.0-plugins-ugly libgstreamer1.0-dev libgstreamer-plugins-base1.0-dev gtk-doc-tools
```

clone gst-rtsp-server 代码仓库

```
git clone https://github.com/GStreamer/gst-rtsp-server.git
```

根据gst版本源码编译gst-rtsp-server

```
apt show gstreamer1.0-tools
```

在我这里的输出为

```
Package: gstreamer1.0-tools
Version: 1.14.4-1
Priority: optional
Section: utils
Source: gstreamer1.0
Maintainer: Maintainers of GStreamer packages <gstreamer1.0@packages.debian.org>
Installed-Size: 1196 kB
Depends: libc6 (>= 2.7), libglib2.0-0 (>= 2.40), libgstreamer1.0-0 (>= 1.14.3)
```

```
Suggests: gstreamer1.0-plugins-base
Homepage: https://gstreamer.freedesktop.org
Download-Size: 1109 kB
APT-Manual-Installed: yes
APT-Sources: https://mirrors.ustc.edu.cn/raspbian/raspbian buster/main armhf
Packages
Description: Tools for use with GStreamer
GStreamer is a streaming media framework, based on graphs of filters
which operate on media data. Applications using this library can do
anything from real-time sound processing to playing videos, and just
about anything else media-related. Its plugin-based architecture means
that new data types or processing capabilities can be added simply by
installing new plug-ins.
.
This package contains versioned command-line tools for GStreamer.
```

版本为1.14.4，将gst-rtsp-server1.14.4版本进行源码编译

```
cd gst-rtsp-server
git checkout 1.14.4
./autogen.sh
make
```

验证输出

在树莓派上安装csi摄像头并启动，运行以下命令

```
cd examples
raspivid -n -w 1280 -h 720 -b 10000000 -fps 30 -t 0 -o - | ./test-launch "( fdsrsc
! h264parse ! rtph264pay name=pay0 pt=96 )" -p 5600 --gst-debug-level=3
```

即可在树莓派5600端口读取到rtsp视频流输出。演示图像如下：



