Raspberry PI OPTEE setting problem

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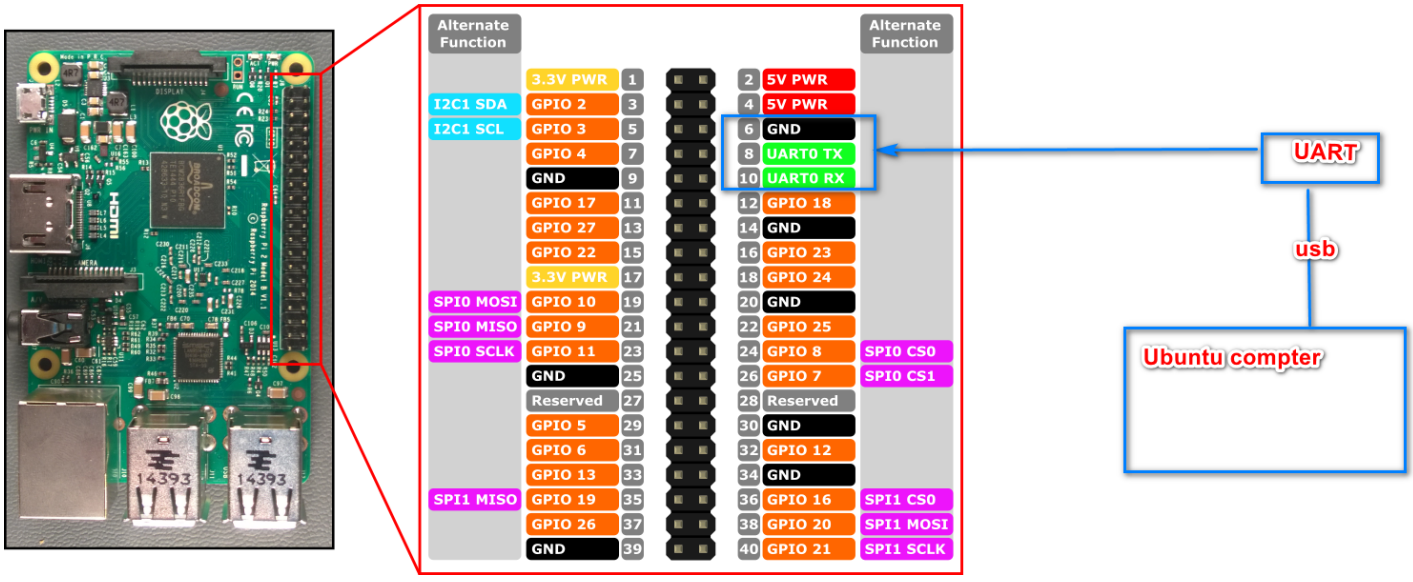
Hi, This is Yuancheng. JunWen and I are trying to set OPTEE on Raspberry PI mode 3. We follow the instruction https://optee.readthedocs.io/building/devices/rpi3.html to set the optee:

Raspberry Pi 3 — OP-TEE documentation documentation

optee.readthedocs.io

Raspberry Pi 3¶. Sequitur Labs did the initial OP-TEE port which at the time also came with modifications in U-Boot, Trusted Firmware A and Linux kernel. Since that initial port more and more patches have found mainline trees and today the OP-TEE setup for Raspberry Pi 3 uses only upstream tree's with the exception of Linux kernel.

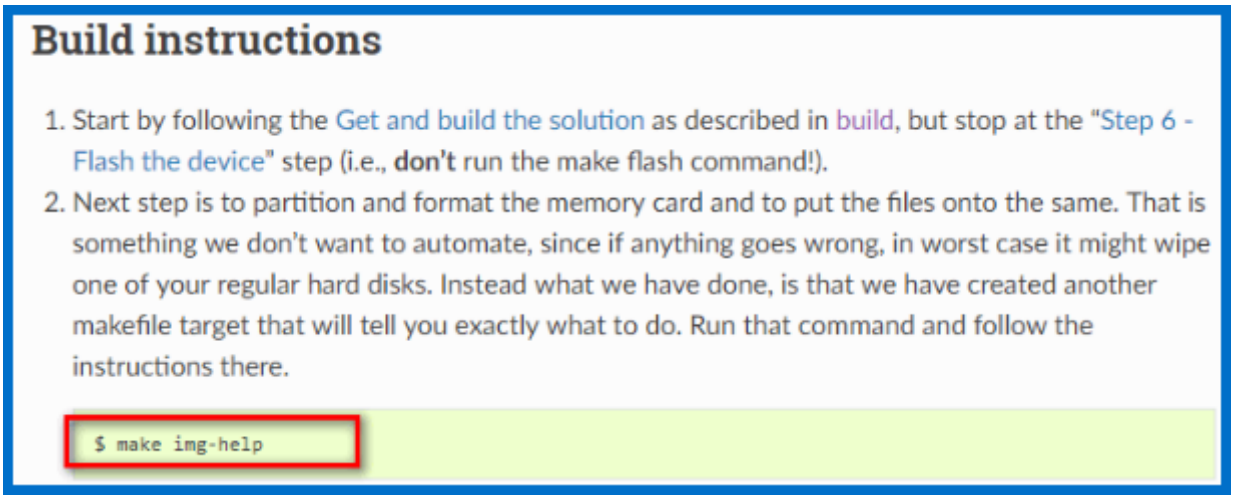
After finished all the test we can use the UART cable to access the normal world and run "xtest":



This is what my Ubuntu computer shows the xtest running on the Raspberry PI:

```
regression_8103 FAILED first error at regression_8100.c:300
regression_2001 OK
regression_2002 OK
regression_2003 OK
regression_2004 OK
+-------------------------------------------------
24014 subtests of which 4 failed
94 test cases of which 3 failed
0 test cases were skipped
TEE test application done!
$ uname -v
#1 SMP PREEMPT Thu May 23 10:08:40 +08 2019
$ uname
Linux
$ uname -r
4.14.56-v8
```

Currently the problem is during we setup OPTEE, we need to run "make img-help" to copy the Optee_os in to the SD card and that will overwrite the original Raspbain_OS on the SD card and the program we are going to protect is running under Raspbain_OS :



(Below is the detail cmd we run to copy the OPTEE_OS)

$make img-help

run the following as root

$ mkfs.vfat -F16 -n BOOT /dev/sdx1

$ mkdir -p /media/boot

$ mount /dev/sdx1 /media/boot

$ cd /media

$ gunzip -cd /home/ck/devel/optee/build/../gen_rootfs/filesystem.cpio.gz | sudo cpio -idmv "boot/*"

$ umount boot

run the following as root

$ mkfs.ext4 -L rootfs /dev/sdx2

$ mkdir -p /media/rootfs

$ mount /dev/sdx2 /media/rootfs

$ cd rootfs

$ gunzip -cd /home/ck/devel/optee/build/../gen_rootfs/filesystem.cpio.gz | sudo cpio -idmv

$ rm -rf /media/rootfs/boot/*

$ cd .. && umount rootfs

I tried copy the OPTEE_OS file directly to Raspbain file system without format the SD card and when the Raspberry PI boot up a "optee probing for conduit method from dt" error appear and the system can not boot up. So do you have any suggestion how we can make the OPTEE work under Raspbain system? (The OPTEE_OS for raspberry PI is a SMP_Linux_4.14 without any UI)

Thank you very much,

Best Regards,

Yuancheng.