**Steps to have DragonBoard setup**

1) Make sure your ubuntu version is 14.04

Command to check version: lsb\_release -a

2) Make sure you have available free space: 150-200GB

3) Download "Android Board Support Package vLA.BR.1.2.7-01010-8x16.0-4"

from <https://developer.qualcomm.com/hardware/dragonboard-410c/software>

(you can register and download it, if cannot download let me know)

4) mkdir LA.BR.1.2.7-01010-8x16.0

cd LA.BR.1.2.7-01010-8x16.0

unzip downloaded (BSP) “android\_board\_support\_package\_vla.br\_.1.2.7-01010-8x16.0-4.zip”

8) Open terminal and

cd LA.BR.1.2.7-01010-8x16.0

chmod a+x DB410c\_build.sh

./DB410c\_build.sh

This step will sync the Android source, integrates the Qualcomm’s proprietary code in the build and builds whole android code base and images like boot.img, system.img, userdata.img, persist.img, cache.img, recovery.img will be generated in **out/target/product/msm8916\_64** folder.

And along with that **vmlinux** (Android apps elf) also gets generated in **out/target/product/msm8916\_64/obj/KERNEL\_OBJ** folder.

**Set up for RAM dump collection**

1. Download and install QPST(Qualcomm Product Support Tool) from <https://www.qpstflash.com> to get the RAM dump from the device

**Note**: Password to extract the downloaded zip file is qpstflash.com

1. Download and install Python 2.7 tool from <https://www.python.org/downloads/release/python-2715>
2. Download and extract **linuxramdumpparser** tool from below path:

<https://sumancluster.wordpress.com/2015/10/05/android-crash-debugging-using-rampdump-parser/>

and also install supported tools like gdb.exe/nm.exe/objdump.exe

Example command:

cd D:\Tools\linux-ramdump-parser-v2

D:\Tools\linux-ramdump-parser-v2>ramparse.py **-a** c:\ProgramData\Qualcomm\QPST\Sahara\Port\_COM4 **-v** c:\ProgramData\Qualcomm\QPST\Sahara\Port\_COM4\vmlinux **-g** D:\Tools\gcc-linaro-6.3.1-2017.05-i686-mingw32\_aarch64-linux-gnu\bin\aarch64-linux-gnu-gdb.exe  **-n** D:\Tools\gcc-linaro-6.3.1-2017.05-i686-mingw32\_aarch64-linux-gnu\bin\aarch64-linux-gnu-gcc-nm.exe **-o** out1 **--objdump-path** D:\Tools\gcc-linaro-6.3.1-2017.05-i686-mingw32\_aarch64-linux-gnu\bin\aarch64-linux-gnu-objdump.exe **64-bit -x --force-hardware** 8916

1. Download [Qualcomm HS-USB QDLoader 9008 Driver](https://gsmusbdrivers.com/download/qualcomm-hs-usb-qdloader-9008-driver-64-bit-windows/) from <https://gsmusbdrivers.com/download/android-qualcomm-usb-driver/>

And install this driver in your Windows PC to get your Qualcomm device detected.

1. Install adb and fastboot tool setup in your PC.

Command to force crash the device: **adb shell “echo c > /proc/sysrq-trigger”**

1. Open QPST to collect the RAM dump.