**Android Kernel Project setup and Debugging**

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**For Mac OS X**

1. Creating a case-sensitive disk image

# hdiutil create -type SPARSE -fs 'Case-sensitive Journaled HFS+' -size 100g ~/android.dmg

2. Mount android file image

# hdiutil attach ~/android.dmg.sparseimage -mountpoint /Volumes/android

3. Install repo client

$ cd /Volumes/android

$ curl http://storage.googleapis.com/git-repo-downloads/repo > repo

4. Initialize repo client

$ mkdir ANDROID\_KERNEL  
$ cd ANDROID\_KERNEL

$ repo init -u https://android.googlesource.com/platform/manifest -b android-4.4.2\_r1

5. Download the Android Source tree

$ repo sync

6. Build dependent binaries for Android Kernel project

$ make –j4

7. Launch Eclipse and import the [android\_root] as an Android project.

**Debug Android Kernel**

1. Collect error logs

* This can be done by installing older version of Backpack application on a Nexus 4/5 and Samsung Galaxy Mini III.
* Launch application on Nexus 4/5 in debug mode from eclipse.
* Start capturing logcat logs from the eclipse.
* Start transferring a video file from Samsung Galaxy Mini- III to Nexus 4/5.
* Abort the process once realized that file transfer has been stalled.
* Save logs in a file for analysis.

Following is the snippet of logs

05-08 15:04:23.129: I/BackPackConnector(12308): Creating local file

05-08 15:04:23.139: D/CustomFileObserver(12308): Got event for 20140124T1721\_1.mp4.tmp

05-08 15:04:24.521: D/btif\_config\_util(1435): btif\_config\_save\_file(L153): in file name:/data/misc/bluedroid/bt\_config.new

05-08 15:04:27.994: W/bt-btif(1435): dm\_pm\_timer expires

05-08 15:04:27.994: W/bt-btif(1435): dm\_pm\_timer expires 0

05-08 15:04:27.994: W/bt-btif(1435): proc dm\_pm\_timer expires

05-08 15:04:33.530: W/bt-btif(1435): dm\_pm\_timer expires

05-08 15:04:33.530: W/bt-btif(1435): dm\_pm\_timer expires 0

05-08 15:04:33.530: W/bt-btif(1435): proc dm\_pm\_timer expires

05-08 15:04:45.083: D/ConnectivityService(611): Sampling interval elapsed, updating statistics ..

05-08 15:04:45.123: D/ConnectivityService(611): Done.

05-08 15:04:45.143: D/ConnectivityService(611): Setting timer for 720seconds

05-08 15:04:45.173: I/ActivityManager(611): Start proc com.android.providers.calendar for content provider com.android.providers.calendar/.CalendarProvider2: pid=12490 uid=10007 gids={50007, 3003, 1028, 1015}

Using grep command try to find out the occurrence of Strings dm\_pm\_timer expires , proc dm\_pm\_timer expires

From there try to create flow of control that would have caused the error.