

How to check poweroff alarm RTC alarm

KBA number: KBA- 180425014906

Applicable platform: generic

Issue/problem description:

Many customer found the poweroff alarm is not work..
and we have document < Power Off Alarm On Android O> Application Note, its number is 80-PE473-1 A September 21, 2017

Solution:

. But the customer still cannot find the clue. So We have some check point:

Check point 1

1 DeskClock : Add set and cancel power off alarm actions
platform/packages/apps/DeskClock

src/com/android/deskclock/alarms/AlarmStateManager.java

```
private static void setPowerOffAlarm(Context context, AlarmInstance instance) {    1014
    LogUtils.i("Set next power off alarm : instance id "+ instance.mId);    1015
    Intent intent = new
Intent(ACTION_SET_POWEROFF_ALARM);    1016
    intent.setPackage(POWER_OFF_ALARM_PACKAGE);    1017
    intent.putExtra(TIME,
instance.getAlarmTime().getTimeInMillis());    1018
    context.sendBroadcast(intent);    1019
}
```

Logs: 04-24 19:52:34.617 7664 7702 I AlarmClock: Set next power off alarm : instance id 1

2 Add PowerOffAlarmHandler app to handler power off alarm request
platform/vendor/qcom-proprietary/qrdplus/Extension

apps/PowerOffAlarmHandlerApp/src/com/qualcomm/qti/poweroffalarm/PowerOffAlarmBroadcastReceiver.java

```
public void onReceive(Context context, Intent intent) { 44
    Log.d(TAG, "Receive " + intent.getAction() + " intent. ");
```

04-24 19:52:34.868 7705 7705 D PowerOffAlarm: Receive
org.codeaurora.poweroffalarm.action.SET_ALARM intent.

3 Enable power-on alarm feature
platform/vendor/qcom/cobal

```
init.target.rc
/sys/module/qnpn_rtc/parameters/poweron_alarm 1
```

So , could you use the adb shell to check the : # adb shell
cat /sys/module/qnpn_rtc/parameters/poweron_alarm , make sure it is Y.

4 setAlarmToRtc

vendor/qcom/proprietary/qrdplus/Extension/apps/PowerOffAlarm/src/com/qualcomm/qti/poweroffalarm/PowerOffAlarmUtils.java#107

```
107 public static long setAlarmToRtc(long alarmTime) {
108     Log.d(TAG, "setAlarmToRtc time: " + alarmTime);
109
```

Check point 2

The full list of PowerOffAlarm.apk should be:

```
/vendor/app/PowerOffAlarm/PowerOffAlarm.apk
/vendor/bin/hw/vendor.qti.hardware.alarm@1.0-service
/vendor/bin/power_off_alarm
/vendor/etc/init/vendor.qti.hardware.alarm@1.0-service.rc
/vendor/framework/vendor.qti.hardware.alarm-V1.0-java.jar
/vendor/lib/hw/vendor.qti.hardware.alarm@1.0-impl.so
/vendor/lib/libalarmservice_jni.so
/vendor/lib/vendor.qti.hardware.alarm@1.0.so
/vendor/lib64/hw/vendor.qti.hardware.alarm@1.0-impl.so
/vendor/lib64/libalarmservice_jni.so
/vendor/lib64/vendor.qti.hardware.alarm@1.0.so
```

If missing someone, please make sure

TARGET_USES_QTIC as true in msmXXXX.mk.

And check if PowerOffAlarmApp exists in /vendor/app/ after rebuilding the images.

Check point 3

How to check if alarm is set successfully

adb root

adb shell cat /proc/driver/rtc

The alarm irq should be "Yes", the delta between alarm time and rtc time is right.