How to check LTE/NR band passed from RF to Policyman

1. Issue summary:

LTE/NR band can be limited by both RF and Policyman. So it will helps us to narrow down this kind of band issue quickly to know the band limit from RF

2. Solution:

PM hardware bands contains the bands given by RF and the restrictions from hardware_band_filtering.xml. We can know if band is limited by RF with below steps

1. Check PM hardware bands (plz follow 2.1 for this) and the restrictions at hardware_band_filtering.xml(plz refer to KBA-200130161223).
2. If the band if limited at PM hardware bands, but not limited by hardware_band_filtering.xml, then it's limited by RF.

2.1. How to check the PM hardware bands:

a. Search keyword "Default RF bands" or "oprt_mode changed to SYS_OPRT_MODE_ONLINE" in print and check next log 0x1CCA after it. Below is the sample log for this.

00:41:16.877062 PM/HighFreq/High/PM [policyman_rf.c 673] Default RF bands:1

//log 0x1CCA after this print is PM hardware bands

00:41:16.877062 [0x1CCA] PM RF Band Info

09:38:26.992823 PM/HighFreq/Medium/PM [policyman_state.c 591] oprt_mode changed to

SYS_OPRT_MODE_ONLINE, print all configuration database

09:38:26.992832 QSH/POWERON/High/PM [policyman_rf.c 677] RF bands: (from item

0x88d0f240, seqno 1)1

09:38:26.992831 [0x1CCA] PM RF Band Info

b. Check the RF band after executing device_config.xml (after executing the line set band to "hardware")

//Policy 2017.2.7

 <rf_bands base="hardware" />

//RF bands after this print is from RF

19:53:41.922407   MSF/MRE/High/PM   [mre_engine.c   797] client 0 ----------- Started executing policy version 2017.2.7.0 (12215027) -----------1

19:53:41.922761   PM/HighFreq/High/PM   [policyman_rf.c   510] {line 82} action <rf_bands> set:

19:53:41.922802 [0x1CCA] PM RF Band Info

Lte Bands {

Lte Bands 1_64 = 0x000001E2020F08DF

Lte Bands 65_128 = 0x0000000000000000

Lte Bands 129_192 = 0x0000000000000000

Lte Bands 193_256 = 0x0000000000000000

}

Nr5g Sa Bands {

Nr5g Sa Bands 1_64 = 0x0000010008000001

Nr5g Sa Bands 65_128 = 0x0000000000006000

Q&&A:

Q1. Why there's no log 0x1CCA in our QXDM log?

Plz make sure below log packet enabled in log mask. All Policyman band print is moved to this log now. On HI.2.5/HI.4.3/DE.1.0 build, plz refer to KBA-220516220557 to enable more 0x1CCA log.

log->Common->PM->0x1CCA PM band info

Q2 If RF band enabled in log 0xB826(NR5G RRC Supported CA Combos) and 0xB0CD(LTE RRC Supported CA Combos), does this mean RF also pass the correct band to Policyman?

No, RF could pass different to AS and Policyman. We met such issue before