

Modem NVs for CGW bands:

NV441/946/2954.

Each CGW band has been enumerated in sys_sband_e_type @sys.h

NV441 have 16 bits and representative the 0~15 in sys_sband_e_type.

NV946 have 16 bits and representative the 16~31 in sys_sband_e_type.

NV2954 have 32 bits and representative the 32~63 in sys_sband_e_type.

For example, if you want to enable GSM_DCS_1800 & WCDMA_II_PCS_1900 & WCDMA_VIII_900 only, then value of these NV as blew:

NV441 = 0x80

NV946 = 0x80

NV2954 = 0x20000

LTE bands:

NV65633 (/nv/item_files/modem/mmode/lte_bandpref)

NV73680 (/nv/item_files/modem/mmode/lte_bandpref_extn_65_256)

Each LTE band has been enumerated in sys_sband_lte_e_type @sys.h

NV65633 have 64 bits and representative the 0~63 in sys_sband_lte_e_type

NV73680 have 192 bits and representative the 64~255 in sys_sband_lte_e_type

For example, if you want to enable LTE band3 and band71 only, then value of these NV as blew:

NV65633 = 0x4

NV73680 = 0x40

NR bands:

NV74213 (/nv/item_files/modem/mmode/nr_nsa_band_pref), for NSA band.

NV74087 (/nv/item_files/modem/mmode/nr_band_pref), for SA band.

NR band has been enumerated in sys_sband_nr5g_e_type@sys.h

For example, if need to enable N1 and N30 for both SA and NSA band, then value of NV as blew:

NV74213 = NV74087 = 0x20000001

How to set these NVs in MBN:

For nv441/946/2954, they are old style nv, so need to make sure the mcfgAttributes="0x39":

```
<NvItemData name="Band Class Preference" id="441" description="" comment="" category="CDMA"
subscription_mask="0x07" mcfgAttributes="0x39" mcfgVariant="1">
    <Member name="nam" description="" comment="" sizeOf="1" type="uint8">0 </Member>
    <Member name="band" description="" comment="" sizeOf="1" type="int16">128 </Member>
</NvItemData>
```

```
<NvItemData name="Expand Band Preference 16 To 32 Bits" id="946" description="" comment=""
category="System" subscription_mask="0x07" mcfgAttributes="0x39" mcfgVariant="1">
    <Member name="nam" description="" comment="" sizeOf="1" type="uint8">0 </Member>
    <Member name="band_pref_16_31" description="" comment="" sizeOf="1" type="int16">128
</Member>
</NvItemData>
```

```
<NvItemData name="Bits 32 To 63 Of Band Pref" id="2954" description="Bits 32 to 63 of Band Pref"
comment="" category="System" subscription_mask="0x07" mcfgAttributes="0x39" mcfgVariant="1">
```

```
<Member name="nam" description="Bits 32 to 63 of Band Pref" comment="" sizeOf="1"
type="uint8">0 </Member>
<Member name="band" description="band" comment="" sizeOf="1" type="int32">131072
</Member>
</NvItemData>
```

For LTE and NR band nv, these are EFS files, pls follow below steps to config these in MBN:

1. get correct value of each NV
2. write the value into NV with QXDM NV browser
3. use EFS explorer to get the EFS file
4. include the EFS file into MBN.

```
<NvEfsFile name="lte_bandpref" id="65633" description="" comment="" category="MMode"
subscription_mask="0x07" mcfgAttributes="0x19" mcfgVariant="2"
targetPath="/nv/item_files/modem/memode/lte_bandpref"
buildPath="modem_proc/mmcp/config/EFS_files/XXXX/lte_bandpref"/>
```

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