

知 MSR36 5G拨号失败问题经验案例

广域网接口 郭昊 2022-05-13 发表

问题描述

某局点MSR3640路由器SIC-5G子卡拨电信5G，获取不到ip地址。

过程分析

查看设备dis cellular信息，信号切换到3G了，说明5G拨号失败。

```
[H3C]display cellular 1/0
```

```
Cellular1/0:
```

```
Modem State:
```

```
Hardware Information:
```

```
Model: RM500QGL_VH
```

```
.....
```

```
Radio Information:
```

```
Technology Preference: No preference specified (AUTO)
```

```
Technology Selected: UMTS
```

```
Configured LTE Band: 1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,34,38,39,40,41,42,43,46,48,66,71
```

```
Configured NR Band: 28
```

手动强制拨5G，重启modem，仍拨号失败，日志显示状态为limited。信号强度-97dBm较弱，但还在可以用的范围内，请现场调整天线位置和角度，信号强度无明显改善。

继续检查dis cellular信息，发现NR Band 28有异常。N28是广电频段，现场使用的是电信卡，拨号会有问题。经现场确认，之前手工指定过band n28。

```
[H3C]controller Cellular 1/0
```

```
[H3C-Cellular1/0]mode nr
```

```
[H3C-Cellular1/0]modem reboot
```

```
<H3C>dis cellular
```

```
Cellular1/0:
```

```
.....
```

```
Radio Information:
```

```
Technology Preference: NR only
```

```
Technology Selected: NR
```

```
Configured LTE Band: 1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,34,38,39,40,41,42,43,46,48,66,71
```

```
Configured NR Band: 28
```

```
NR related info:
```

```
Current RSRQ: -17 dB
```

```
Current RSRP: -97 dBm
```

```
Current SNR: -50 dB
```

```
Current NR MODE: NONE
```

```
Active Band: NR Operating Band 28
```

```
%May 6 14:56:27:889 2022 H3C CELLULAR/5/CELLULAR:
```

```
Controller Cellular1/0: Service status changed from No Service to Limited.
```

Undo band后，重启modem，拨号正常。

```
[H3C-Cellular1/0]undo nr band
```

```
[H3C-Cellular1/0]modem reboot
```

```
%May 6 15:32:32:630 2022 H3C CELLULAR/5/CELLULAR:
```

```
Controller Cellular1/0: Service status changed from No Service to Service Available.
```

```
%May 6 15:32:32:630 2022 H3C CELLULAR/5/CELLULAR:
```

```
Controller Cellular1/0: The network connection switched to NR.
```

```
%May 6 15:32:38:702 2022 H3C IFNET/3/PHY_UPDOWN: Physical state on the interface Eth-channel1/0/0 changed to up.
```

```
%May 6 15:32:38:703 2022 H3C IFNET/5/LINK_UPDOWN: Line protocol state on the interface Eth-channel1/0/0 changed to up.
```

```
[H3C-Cellular1/0]dis cellular
```

```
Cellular1/0:
```

```
Modem State:
```

```
Hardware Information:
```

```
.....
```

```
Network Information:
```

Current Service Status: Service Available

Registration Status: Registered

Current Service: Packet-switched

解决方法 Roaming Status: Home

Current Data Bearer Technology: LTE-M
指定nr band n18, 或no nr band不指定频段, 可以正常拨号。

Network Selection Mode: Automatic

Current Address Mode: Cellular-alloc
附运营商5G频段支持情况:

Current IPv6 address Mode: Unkown
移动n49、n79, 电信n28, 联通n78。

Mobile Network Name: CHN-UNICOM

Mobile Country Code (MCC): 460

Mobile Network Code (MNC): 01

Radio Information:

Technology Preference: NR only

Technology Selected: NR

Configured LTE Band: 1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,34,38,39,40,41,42,43,46,48,66,71

Configured NR Band: 1,2,3,5,7,8,12,20,28,38,40,41,48,66,71,77,78,79

NR related info:

Current RSRQ: -12 dB

Current RSRP: -97 dBm

Current SNR: 10 dB

Current NR MODE: NONE

