

知 某局点4G拨号失败问题处理经验案例

3G/4G拨号 孟普 2019-07-24 发表

组网及说明

无

问题描述

某局点使用MSR810-LM 做4G拨号上网，但是一直拨号失败。

过程分析

1.检查设备配置，现场使用的就是电信卡，所以配置没有问题

```
display current-configuration
#
version 7.1.064, Release 0615P15
#
dialer-group 89 rule ip permit#
dhcp server ip-pool 1
gateway-list 10.10.1.254
network 10.10.1.0 mask 255.255.255.0
dns-list 114.114.114.114
#
apn-profile profile69
apn static ctnet
#
controller Cellular1/0
description Single_Line1-TELECOM
eth-channel 0
#
interface Vlan-interface1
ip address 10.10.1.254 255.255.255.0
tcp mss 1280
#
interface Eth-channel1/0:0
dialer circular enable
dialer-group 89
dialer timer autodial 5
dialer number #777 autodial
ip address cellular-alloc
tcp mss 1280
nat outbound
apn-profile apply profile69
#
ip route-static 0.0.0.0 0 Eth-channel1/0:0
#
acl advanced 3001
rule 0 permit ip source 10.10.1.0 0.0.0.255 destination 10.10.0.0 0.0.0.255
#
```

2.检查拨号口的状态，SIM正常识别，信号强度也达标。

```
display cellular 1/0
Cellular1/0:
Modem State:
Hardware Information:
Model: U9300C
Manufacturer: LONGSUNG
Modem Firmware Version: QB30001.1.8_MX10(0016_1.4.1_L0122)
International Mobile Equipment Identity (IMEI): 863284041557378
International Mobile Subscriber Identity (IMSI): 460111183196826
Mobile Equipment Identifier (MEID): 99001289158937
Hardware Version: 10000
Factory Serial Number (FSN): 60000055S18178BQ01388
Modem Status: Online
Modem Status: IPv4 Unkown.
```

Modem Status: IPv6 Unkown.

Profile Information:

Profile index: 1

PDP Type: IPv4v6

Header Compression: Off

Data Compression: Off

Access Point Name (APN): ctnet

Authentication: NONE

* - Default profile

Profile index: 2

PDP Type: IPv4v6

Header Compression: Off

Data Compression: Off

Access Point Name (APN): ctwap

Authentication: NONE

Network Information:

Current Service Status: Service Available

Registration Status: Registered

Current Service: Combined

Current Roaming Status: Home

Current Data Bearer Technology: Unknown

Network Selection Mode: Automatic

Current IP address Mode: Cellular-alloc

Current IPV6 address Mode: Unknown

Location Area Code (LAC): 359

SID: 0x3610

NID: 0x11

BID: 0x29e

Radio Information:

Technology Preference: No preference specified (AUTO)

Technology Selected: Hybrid(1xRTT and 1xEV-DO)

Configured LTE Band = 1,3,5,8,38,39,40,41

1xRTT related info:

Current RSSI: -66 dBm

Current ECIO: -7 dBm

HDR (1xEVDO) related info:

Current RSSI: -63 dBm

Current ECIO: -5 dBm

Current IO: 0 dBm

Modem Security Information:

PIN Verification: Disabled

PIN Status: PIN Requirement Disabled

Number of PIN Retries Remaining: 3

Number of PUK Retries Remaining: 10

SIM Status: OK

ICCID: 89860319442071506258

Error Information:

IPv4 dialing failed: 0x0e: Data call failed

IPv6 dialing failed: N/A

GPS Information:

GPS Info:

GPS State: Enabled

GPS Mode Configured: Standalone

Latitude(WGS84): 0 Deg 0 Min 0.00 Sec North

Longitude(WGS84): 0 Deg 0 Min 0.00 Sec East

Timestamp (UTC): 00/00/0000 00:00:00

Local time: 00/00/0000 00:00:00

Heading: 0.00, Velocity Horiz: 0.00, Velocity Vert: 0.00

Height (MSL): 0.00 m

Satellite Info:

Satellite ID: #2

Elevation: 33.00, Azimuth: 296.00, SNR: 0.00, Processing Status: Search

Satellite ID: #3

Elevation: 1.00, Azimuth: 42.00, SNR: 0.00, Processing Status: Search

Satellite ID: #5
Elevation: 19.00, Azimuth: 226.00, SNR: 0.00, Processing Status: Search
Satellite ID: #6
Elevation: 57.00, Azimuth: 354.00, SNR: 0.00, Processing Status: Search
Satellite ID: #9
Elevation: 36.00, Azimuth: 99.00, SNR: 0.00, Processing Status: Search
Satellite ID: #17
Elevation: 61.00, Azimuth: 113.00, SNR: 0.00, Processing Status: Search
Satellite ID: #19
Elevation: 75.00, Azimuth: 80.00, SNR: 0.00, Processing Status: Search

3.查看拨号日志，最后连接到了2G，怀疑SIM卡的4G功能没有开通。

[5#雨水] %Jan 1 04:22:55:664 2011 5#雨水 CELLULAR/5/CELLULAR:
Controller Cellular1/0: IPv4 dialing failed. Reason: Data call failed

[5#雨水]%Jan 1 04:22:59:375 2011 5#雨水 CELLULAR/5/CELLULAR:
Controller Cellular1/0: Service status changed from Service Available to No Service.

%Jan 1 04:22:59:376 2011 5#雨水 CELLULAR/5/CELLULAR:
Controller Cellular1/0: The network was disconnected.

[5#雨水] %Jan 1 04:23:09:360 2011 5#雨水 CELLULAR/5/CELLULAR:
Controller Cellular1/0: Service status changed from No Service to Service Available.

%Jan 1 04:23:09:360 2011 5#雨水 CELLULAR/5/CELLULAR:
Controller Cellular1/0: The network connection switched to 2G.

4.将SIM卡在手机上测试，确实只有2G信号，4G没有开通。

解决方法

开通4G功能后正常拨号。

MSR路由器不同型号支持不同方式的4G拨号上网，当4G拨号失败时，可以做以下排查：

- 1.确认4G卡状态是否良好；
- 2.确认4G卡是否设置了PIN码；
- 3.确认4G卡是否能够被识别；
- 4.信号强度是否足够；
- 5.确认4G卡是否注册成功；
- 6.APN配置是否正确；
- 7.路由器4G相关配置是否正确。
- 8.可以将SIM在手机上做测试。