MSR G2 3G拨号典型配置案例

网点离行路由器MSR 36（V7）通过3G链路与总部进行网络互通。

#将Cellular接口通道化出同/异步串口。
[H3C] controller Cellular0/0
[H3C-Cellular0/0] serial-set 0
配置拨号访问组1以及对应的拨号访问控制条件。
[H3C] dialer-group 1 rule ip permit
配置ACL，匹配内网用户地址
[H3C] acl number 3000
[H3C-acl-adv-3000] rule 0 permit ip source 192.168.0.0 0.0.0.255

#配置3G拨号接口，开启DNS请求、使能传统DDR、将接口加入拨号访问组1、配置DDR可以进行下一次呼叫的间隔时间为60秒，设置拨号用户名和密码均为card，根据运营商设置拨号串，此处采用联通，设置拨号串为*99#，并开启接口nat，匹配内网ACL 3000。
[H3C-Serial0/0:0] interface Serial0/0:0
[H3C-Serial0/0:0] ppp ipcp dns request
[H3C-Serial0/0:0] dialer circular enable
[H3C-Serial0/0:0] dialer-group 1
[H3C-Serial0/0:0] dialer timer idle 0
[H3C-Serial0/0:0] dialer timer autodial 60
[H3C-Serial0/0:0] ppp chap user card
[H3C-Serial0/0:0] ppp chap password simple card
[H3C-Serial0/0:0] ppp pap local-user card password simple card
[H3C-Serial0/0:0] dialer number *99# autodial
[H3C-Serial0/0:0] ip address ppp-negotiate
[H3C-Serial0/0:0] nat outbound 3000

#查找通道化出来的Serial接口对应的TTY值
[H3C]display line

Idx	Type	Tx/Rx	Modem	Auth	Int	Location
0	TTY 1	9600	-	N	S0/0:0	0/0
F 80	AUX 0	9600	-	N	Aux0	0/0
81	VTY 0		-	P	-	0/0
82	VTY 1		-	P	-	0/0
83	VTY 2		-	P	-	0/0
84	VTY 3		-	P	-	0/0
85	VTY 4		-	P	-	0/0
86	VTY 5		-	P	-	0/0
87	VTY 6		-	P	-	0/0
88	VTY 7		-	P	-	0/0
89	VTY 8		-	P	-	0/0
90	VTY 9		-	P	-	0/0
91	VTY 10		-	P	-	0/0

#在TTY1用户线上配，配置允许modem的呼入和呼出。
[H3C] line tty 1
[H3C-line-tty1] modem enable both
#配置完成之后，可以看到TTY状态变化为inout:
[H3C]dis line

Idx	Type	Tx/Rx	Modem	Auth	Int	Location
0	TTY 1	9600	inout	N	S0/0:0	0/0

```
F 80  AUX 0  9600    -   N   Aux0   0/0
  81  VTY 0        -   P   -      0/0
  82  VTY 1        -   P   -      0/0
  83  VTY 2        -   P   -      0/0
  84  VTY 3        -   P   -      0/0
  85  VTY 4        -   P   -      0/0
  86  VTY 5        -   P   -      0/0
  87  VTY 6        -   P   -      0/0
  88  VTY 7        -   P   -      0/0
  89  VTY 8        -   P   -      0/0
  90  VTY 9        -   P   -      0/0
  91  VTY 10       -   P   -      0/0
```

#配置完成之后，添加一条路由，指向3G出接口。
[H3C] ip route-static 0.0.0.0 0 Serial0/0:0

#查看拨号成功后，获取到的IP地址，如下：
[H3C]display ip interface brief
*down: administratively down
(s): spoofing (l): loopback

```
Interface        Physical Protocol IP Address     Description
Aux0          up     down   --       --
GE0/0         up     up     10.84.249.14   --
GE0/1         down   down   --       --
GE0/2         down   down   --       --
GE0/27        down   down   --       --
S0/0:0        up     up(s)  10.84.225.49   --
```

#此时使用display Cellular0/0，可以看到拨号信息如下：
[H3C-3628-LongKouXi-Cellular4/0] display cellular 0/0
Cellular0/0:
  Hardware Information:
    Model: EM770W
    Modem Firmware Version: 11.126.12.01.00
    Hardware Version: MD32TCPU
    International Mobile Subscriber Identity (IMSI): 460018304704499
    International Mobile Equipment Identity (IMEI): 352219040126765
    Factory Serial Number (FSN): GRA5TC9391205492
    Modem Status: Online
  Profile Information:
    Profile 1: Active
      PDP Type: IPv4
      Header Compression: Off
      Data Compression: Off
      Access Point Name (APN): cmnet
      Packet Session Status: Active
  Modem Setup Information:
    Diagnostics Monitor: Close
  Network Information:
    Current Service Status: Service available   //网络服务正常
    Current Service: Combined
    Packet Service: Attached
    Current Roaming Status: Home   //SIM卡未处于漫游状态
    Network Selection Mode: Automatic   //网络选择设置为了自动
    Network Connection Mode: WCDMA precedence //联通3G优先
    Current Network Connection: HSDPA   //连接到了联通的HSDPA网络
    Mobile Network Name: CHN-CUGSM
    Mobile Country Code (MCC): 460   //国家代码，中国为460
    Mobile Network Code (MNC): 01   //网络代码
    Location Area Code (LAC): 42277   //区域代码
    Cell ID: 14741
    Downstream Bandwidth: 7200000 bps   //识别到的速度
  Radio Information:
    Current Band: ANY
    Current RSSI: -65 dBm   //信号值强度为-65dBm，信号值不建议低于-95
```

Modem Security Information:
  PIN Verification: Disabled
  PIN Status: Ready
  Number of Retries remaining: 3
  SIM Status: OK      //SIM卡状态正常


1、联通移动和电信的拨号串不一致，如果是联通移动，拨号串采用*99#，电信的拨号串为#777

2、MSR V7的3G配置均在通道化出来的Serial接口上进行配置；

3、配置时，需要在对应的TTY接口上开启modem的呼入与呼出；

4、配置完成之后，切记添加一条路由，出接口设置为通道化出来的Serial口

5、如果是做VPDN组网的话，需要在Controller Cellular视图下配置相应的APN节点。