

知 V7路由器PPP/HPLC接口自环测试方法

广域网接口 罗燕 2020-02-07 发表

组网及说明

日常网络环境中经常遇到POS接口对接起不来的情况，自环测试是常见的基础排查手段。

配置步骤

```
#
interface Pos1/3/2/1
 loopback local
 link-protocol hdlc
 timer-hold 0 // timer-hold 0用于不自动发协议报文
 ip address 2.2.2.2 255.255.255.0

#
<88x>reset counters interface p1/3/2/1 //ping之前清除接口计数
<88x>
<88x>dis int p1/3/2/1
Pos1/3/2/1
Current state: UP
Line protocol state: UP
Description: Pos1/3/2/1 Interface
Bandwidth: 155520kbps
Maximum Transmit Unit: 1500
Hold timer: 0 seconds
Internet Address is 2.2.2.2/24 Primary
Link layer protocol: HDLC
Port priority: 0
Last clearing of counters: 17:27:04 Wed 06/01/2016
Port connector type is No connector
Physical layer is packet over SDH
Port speed type: STM-1
Loopback is local
FCS: 32-bit CRC
Clock source: Slave
Clock grade: LNC(G.812 SSU-B)
SPE scrambling: Enable
BER thresholds:
  SD: 10e-6  SF: 10e-4
Regenerator section layer:
  J0(TX): "SR8800"
    53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
  J0(RX): "SR8800"
    53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
  Alarm: None
  Error: 0 BIP(B1)
Multiplex section layer:
  Alarm: None
  Error: 0 BIP(B2), 0 REI(M1)
Higher order path layer:
  C2(TX): 0x16  C2(RX): 0x16
  J1(TX): "SR8800"
    53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
  J1(RX): "SR8800"
    53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
  Alarm: None
  Error: 0 BIP(B3), 0 REI(G1)
    0 PJE, 0 NJE
Port statistic:start time: 2016-06-01 17:27:05
UP time: 0 H 0 M 1 S
Section: ES    1 SES    1 SEFS    1
Line  : ES    0 SES    0 UAS    0 FE-ES    0
Path1 : ES    1 SES    1 UAS    0 FE-ES    0
```

```

Input speed in last 5 seconds: 0 packets/s, 0 bytes/s
Output speed in last 5 seconds: 0 packets/s, 0 bytes/s
Input: 0 packets, 0 bytes(good), 0 bytes(all) //ping之前保证端口无其他计数
        0 FCS errors, 0 Aborts, 0 FIFO overflow
        0 Runts, 0 Giants
Output: 0 packets, 0 bytes(good), 0 bytes(all)
        0 FIFO underflow, 0 Aborts, 0 Runts
Peak value of input: 0 bytes/sec, at 2016-06-01 17:27:04
Peak value of output: 0 bytes/sec, at 2016-06-01 17:27:04
[88x]ping -a 2.2.2.2 -c 10 -t 0 2.2.2.3 //取同一网段地址ping, 而不是ping接
口ip
Ping 2.2.2.3 (2.2.2.3) from 2.2.2.2: 56 data bytes, press CTRL_C to break
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out
Request time out

--- Ping statistics for 2.2.2.3 ---
10 packet(s) transmitted, 0 packet(s) received, 100.0% packet loss
[88x]%Jun 1 17:34:52:389 2016 88x PING/6/PING_STATIS_INFO: -MDC=1; Ping statist
ics for 2.2.2.3: 10 packet(s) transmitted, 0 packet(s) received, 100.0% packet l
oss.

[88x]
[88x]dis int p1/3/2/1
Pos1/3/2/1
Current state: UP
Line protocol state: UP
Description: Pos1/3/2/1 Interface
Bandwidth: 155520kbps
Maximum Transmit Unit: 1500
Hold timer: 0 seconds
Internet Address is 2.2.2.2/24 Primary
Link layer protocol: HDLC
Port priority: 0
Last clearing of counters: 17:34:15 Wed 06/01/2016
Port connector type is No connector
Physical layer is packet over SDH
Port speed type: STM-1
Loopback is local
FCS: 32-bit CRC
Clock source: Slave
Clock grade: LNC(G.812 SSU-B)
SPE scrambling: Enable
BER thresholds:
    SD: 10e-6   SF: 10e-4
Regenerator section layer:
    J0(TX): "SR8800"
           53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
    J0(RX): "SR8800"
           53 52 38 38 30 30 00 00 00 00 00 00 00 00 00 00
    Alarm: None
    Error: 0 BIP(B1)
Multiplex section layer:
    Alarm: None
    Error: 0 BIP(B2), 0 REI(M1)
Higher order path layer:
    C2(TX): 0x16   C2(RX): 0x16

```

J1(TX): "SR8800"
53 52 38 38 30 30 00 00 00 00 00 00 00 00 00
J1(RX): "SR8800"
53 52 38 38 30 30 00 00 00 00 00 00 00 00 00
Alarm: None
Error: 0 BIP(B3), 0 REI(G1)
0 PJE, 0 NJE
Port statistic:start time: 2016-06-01 17:34:16
UP time: 0 H 0 M 39 S
Section: ES 39 SES 39 SEFS 39
Line : ES 0 SES 0 UAS 0 FE-ES 0
Path1 : ES 39 SES 39 UAS 39 FE-ES 0
Input speed in last 5 seconds: 10 packets/s, 897 bytes/s
Output speed in last 5 seconds: 10 packets/s, 897 bytes/s
//ping 1个报文，接口计数应该是255个；10个就是2550个。
Input: 2550 packets, 224400 bytes(good), 234974 bytes(all)
0 FCS errors, 0 Aborts, 0 FIFO overflow
0 Runts, 0 Giants
Output: 2550 packets, 224400 bytes(good), 234974 bytes(all)
0 FIFO underflow, 0 Aborts, 0 Runts
Peak value of input: 897 bytes/sec, at 2016-06-01 17:34:50
Peak value of output: 897 bytes/sec, at 2016-06-01 17:34:50

配置关键点

自环测试需要使用HDLC协议来测试，不能使用PPP,PPP协议单端协商不起来。