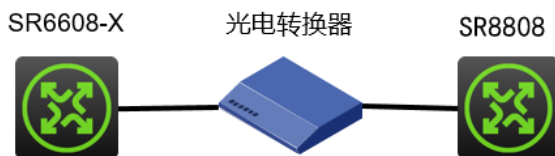


知 某局点SR6608-X路由器ping直连大包丢包问题经验案例

何理 2017-04-21 发表



客户SR6608-X与对端SR8808中间跨光电转换器互通，客户反馈SR6608-X下挂业务出现卡顿，经测试发现SR6608-X与SR8808 ping 3000+的大包会出现大量丢包；

```
<HNN-YIY-D-R2>ping -s 8000 -c 1000000 130.82.151.6
```

```
Ping 130.82.151.6 (130.82.151.6): 8000 data bytes, press CTRL_C to break
```

```
Request time out
```

```
Request time out
```

```
Request time out
```

```
Request time out
```

```
8000 bytes from 130.82.151.6: icmp_seq=4 ttl=255 time=12.779 ms
```

```
Request time out
```

```
8000 bytes from 130.82.151.6: icmp_seq=6 ttl=255 time=12.995 ms
```

```
8000 bytes from 130.82.151.6: icmp_seq=7 ttl=255 time=13.039 ms
```

```
Request time out
```

```
8000 bytes from 130.82.151.6: icmp_seq=9 ttl=255 time=12.789 ms
```

```
Request time out
```

```
--- Ping statistics for 130.82.151.6 ---
```

```
63 packets transmitted, 33 packets received, 47.6% packet loss
```

```
round-trip min/avg/max/std-dev = 12.388/13.931/36.305/4.090 ms
```

在SR6608-X侧debug icmp 发现部分分片报文被丢弃，丢弃原因分片报文重组超时：

```
*Apr 20 15:26:29:129 2017 HNN-YIY-D-R2 SOCKET/7/ICMP:
```

```
ICMP Discard: not the first fragment of message.
```

```
Request time out
```

```
*Apr 20 15:26:31:129 2017 HNN-YIY-D-R2 SOCKET/7/ICMP:
```

```
ICMP Output:
```

```
ICMP Packet: src = 130.82.151.5, dst = 130.82.151.6
```

```
type = 11, code = 1 (reassembly-timeout)
```

```
Original IP: src = 130.82.151.6, dst = 130.82.151.5
```

```
proto = 1, first 8 bytes = 00002B53 038C0024
```

查看接口信息如下：

```
GigabitEthernet3/1/1
```

```
Current state: UP
```

```
Line protocol state: UP
```

```
Description: to shengju by liantong
```

```
Bandwidth: 100000kbps
```

```
Maximum Transmit Unit: 1500
```

```
Internet Address is 130.82.151.5/30 Primary
```

```
IP Packet Frame Type:PKTFMT_ETHNT_2, Hardware Address: d461-fe31-ab31
```

```
IPv6 Packet Frame Type:PKTFMT_ETHNT_2, Hardware Address: d461-fe31-ab31
```

```
Media type is twisted pair, loopback not set, promiscuous mode not set
```

100Mbps, Half, link type is autonegotiation

```
Output flow-control is disabled, input flow-control is disabled
```

```
Output queue - Urgent queuing: Size/Length/Discards 0/100/0
```

```
Output queue - Protocol queuing: Size/Length/Discards 0/500/0
```

```
Output queue - FIFO queuing: Size/Length/Discards 0/1024/0
```

```
Last clearing of counters: 13:56:19 Thu 04/20/2017
```

```
Peak value of input: 130071 bytes/sec, at 2017-04-20 14:06:16
```

```
Peak value of output: 442782 bytes/sec, at 2017-04-20 14:06:16
```

```
Last 300 seconds input: 320 packets/sec 109643 bytes/sec 0%
```

Last 300 seconds output: 1100 packets/sec 438631 bytes/sec 3%

Input (total): 334386 packets, 105221495 bytes

332293 unicasts, 0 broadcasts, 2093 multicasts, - pauses

Input (normal): 334386 packets, 105221495 bytes

332293 unicasts, 0 broadcasts, 2093 multicasts, - pauses

Input: 0 input errors, 0 runts, 0 giants, - throttles

0 CRC, - frame, 0 overruns, - aborts

- ignored, - parity errors

Output (total): 1147539 packets, 462173577 bytes

1145982 unicasts, 0 broadcasts, 1557 multicasts, - pauses

Output (normal): 1147539 packets, 462173577 bytes

1145982 unicasts, 0 broadcasts, 1557 multicasts, - pauses

Output: 0 output errors, 0 underruns, - buffer failures

- aborts, 0 deferred, 0 collisions, 0 late collisions

0 lost carrier, - no carrier

查看端口统计，发现设备直连端口G3/1/1端口协商成了百兆半双工模式；端口工作在半双工模式下确实会导致报文超时等现象，所以确认ping大包丢包是由于端口协商成了百兆半双工模式导致；

将G3/1/1端口及对端光电转换器的端口强制为百兆全双工后问题解决；

网络中一定要保证网络质量，尤其是光电转换器是问题的高发点，一定要确保相关端口状态协商正常

；