

知 MSR5660读取接口流量统计计数不准确问题

MIB SNMP 以太网接口 袁野 2018-06-03 发表

组网及说明

无

问题描述

通过如下两个节点读取接口in/out方向字节数时与设备上接口显示不一致,

1.3.6.1.2.1.2.2.1.10 ifInOctets 进

1.3.6.1.2.1.2.2.1.16 ifOutOctets 出

读取结果如下:

索引值:

IF-MIB::ifDescr.3043 = STRING: GigabitEthernet2/6/2

OUT方向:

IF-MIB::ifInOctets.3043 = Counter32: 3538585514

INT方向:

IF-MIB::ifInOctets.3043 = Counter32: 4288959393

而设备显示如下, 可以看到接口计数未被清除过但是和MIB读取到的计数有很大差距:

```
[dianxin_ar]dis int G2/6/2
GigabitEthernet2/6/2
Current state: UP
Line protocol state: UP
IP Packet Frame Type: PKTFMT_ETHNT_2, Hardware Address:
Description:
Bandwidth: 1000000kbps
Loopback is not set
Media type is twisted pair, port hardware type is 1000_BASE_T
1000Mbps-speed mode, full-duplex mode
Link speed type is autonegotiation, link duplex type is autonegotiation
Flow-control is not enabled
The Maximum Frame Length is 2048
Allow jumbo frame to pass
Broadcast MAX-ratio: 100%
Multicast MAX-ratio: 100%
Unicast MAX-ratio: 100%
PVID: 601
Mdi type: autmdix
Port link-type: access
Tagged Vlan: none
Untagged Vlan: 601
Port priority: 0
Last clearing of counters: Never
Last 300 seconds input: 1400 packets/sec 168536 bytes/sec 0%
Last 300 seconds output: 2361 packets/sec 2434732 bytes/sec 1%
Input (total): 1288439330 packets, 7447324850900 bytes
- unicasts, - broadcasts, - multicasts, 89 pauses
Input (normal): 1288439330 packets, 7447324850900 bytes
1203666894 unicasts, 79116153 broadcasts, 5656194 multicasts, 89 pauses
Input: 0 input errors, 0 runts, 0 giants, - throttles
0 CRC, 0 frame, 0 overruns, 0 aborts
- ignored, - parity errors
Output (total): 1556372847 packets, 130790981112198 bytes
```

- unicasts, - broadcasts, - multicasts, - pauses

Output (normal): 1556372847 packets, 130790981112198 bytes

1556191499 unicasts, 131490 broadcasts, 49858 multicasts, 0 pauses

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

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

- lost carrier, - no carrier

过程分析

通过查阅mib节点资料发现还有如下两个节点也是读取接口的字节数，那么这个和现场使用的有什么区别呢？

1.3.6.1.2.1.31.1.1.1.6 ifHCInOctets

1.3.6.1.2.1.31.1.1.1.10 ifHCOutOctets

通过使用MIB browser 上查看节点properties对比，可以看到：

MIB Node Properties - ifHCInOctets

Smart update Bring to front

Module: IF-MIB

Name:	ifHCInOctets
Type:	OBJECT-TYPE
OID:	1.3.6.1.2.1.31.1.1.6
Full path:	iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).ifMIB(31).ifMIBObjects(1).ifTable(1).ifEntry(1).ifHCInOctets(6)
Module:	IF-MIB
Parent:	ifEntry
Prev sibling:	ifOutBroadcastPkts
Next sibling:	ifHCInUcastPkts
Numerical syntax:	Counter (64 bit)
Base syntax:	Counter64
Composed syntax:	Counter64
Status:	current
Max access:	read-only
Description:	The total number of octets received on the interface, including framing characters. This object is a 64-bit version of ifInOctets. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.

MIB Node Properties - ifInOctets

Smart update Bring to front

Module: IF-MIB

Name:	ifInOctets
Type:	OBJECT-TYPE
OID:	1.3.6.1.2.1.2.1.10
Full path:	iso(1).org(3).dod(6).internet(1).mgmt(2).mib-2(1).interfaces(2).ifTable(2).ifEntry(1).ifInOctets(10)
Module:	IF-MIB
Parent:	ifEntry
Prev sibling:	ifLastChange
Next sibling:	ifInUcastPkts
Numerical syntax:	Counter (32 bit)
Base syntax:	Counter32
Composed syntax:	Counter32
Status:	current
Max access:	read-only
Description:	The total number of octets received on the interface, including framing characters. Discontinuities in the value of this counter can occur at re-initialization of the management system, and at other times as indicated by the value of ifCounterDiscontinuityTime.

通过对比发现，二者读取的节点差别在一个可以读出64bit，而另一个只能读到32bit，而现场的接口统计值超出了32bit读取的范围，因此造成了读取结果不准确的问题。

解决方法

使用合适的mib节点读取后解决。