

某局点 ICG3000E CPU使用率高处理经验案例

CPU Portal 季晨鹏 2016-04-22 发表

查看诊断信息和现场观察，发现以下几点：

(1)设备CPU持续70%左右,并会突发升高。

```
=====display cpu history=====
=====
100%|#|                                     #
95%|#|      #                               # #
90%|#|      ## #                           # #
85%|#|      ## #                           # #
80%|#|      ## # ## #                       # #
75%|#|      # ## # ## #                     ## #
70%|#|      # # # ##### # # # #          # # # #####
65%|###|#####
60%|#####
55%|#####
50%|#####
45%|#####
40%|#####
35%|#####
30%|#####
25%|#####
20%|#####
15%|#####
10%|#####
5%|#####
-----
      10    20    30    40    50    60 (minutes)
```

查看进程，drtf、sock进程比较高

```
DrTF      15%      0/15e2f048
SOCK      71%      0/63a7ab25
```

(2)接口都使能了快转，但是快转表只有两个

```
=====display ip fast-forwarding cache=====
=====
Fast-Forwarding cache: total 2 items
Index SIP      SPort DIP      DPort Pro Input_If Output_If Flg
398 :0 221.10.166.43 8080 220.248.136.49 54504 6 GE0/16 GE0/16 27
2479:0 221.10.166.43 80 220.248.136.49 21017 6 GE0/16 GE0/16 27
```

(3)接口流量看起来也就是100Mb左右的流量

```
GigabitEthernet0/0 current state: UP
IP Packet Frame Type: PKTFMT_ETHNT_2, Hardware Address: 586a-b13f-1d3e
Description: GigabitEthernet0/0 Interface
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 9216
Broadcast MAX-ratio: 100%
Unicast MAX-ratio: 100%
Multicast MAX-ratio: 100%
PVID: 1
Mdi type: auto
Port link-type: trunk
VLAN passing : 1(default vlan), 2-6
VLAN permitted: 1(default vlan), 2-6
Trunk port encapsulation: IEEE 802.1q
Port priority: 0
```

Last clearing of counters: 18:47:58 Wed 04/20/2016
Last 5 seconds input: 5655 packets/sec 512159 bytes/sec 1%
Last 5 seconds output: 8340 packets/sec 10890510 bytes/sec 9%
Input (total): 14334909 packets, 1379738085 bytes
- unicasts, - broadcasts, - multicasts, - pauses
Input (normal): - packets, - bytes
12995520 unicasts, 1311984 broadcasts, 27405 multicasts, - pauses
Input: 0 input errors, 0 runts, 0 giants, - throttles
0 CRC, - frame, - overruns, - aborts
- ignored, - parity errors
Output (total): 19735176 packets, 25331910866 bytes
- unicasts, - broadcasts, - multicasts, - pauses
Output (normal): - packets, - bytes
19734417 unicasts, 759 broadcasts, 0 multicasts, 0 pauses
Output: 0 output errors, - underruns, - buffer failures
- aborts, 0 deferred, 0 collisions, 0 late collisions
- lost carrier, - no carrier

(4)设备大概有300左右的portal在线用户，把portal关闭了以后，CPU在30-40%

(5)G0/0/0口学到了427个MAC地址

IP Address	MAC Address	VLAN ID	Interface	Aging Type
10.0.0.10	741f-4a65-889c	1	GE0/0	18 D
10.0.0.4	741f-4a6f-19a2	1	GE0/0	18 D
.....				

(1) 接口使能portal后，接口流量不走快转，转发需要cpu处理，导致转发进程占用高；

interface Vlan-interface2

description jiaoxuelou

ip address 10.2.0.1 255.255.0.0

portal server portal method direct

(2) 去掉portal后CPU占用在30%-40%，由于ICG3000E网络带机量规格为200，现场带机量超规格，G0/0/0口学到了427个MAC地址，cpu相应高一些，属于正常现象。

(1) 因为使能了portal的接口的流量不会走快转，建议用户合理规划业务，减少设备上的用户数和流量，降低CPU的利用率；

(2) 为了满足客户的业务需求，建议使用更高性能的设备如MSR56替代。