

知 某局点 S10512 CPU进程占用高经验案例

CPU 其他硬件相关 刺梨 2018-11-12 发表

组网及说明

无

问题描述

某局点Slot 5 CPU利用率异常高，查看框1和框2 Slot5的CPU利用率

```
=====display cpu=====
```

Chassis 1 Slot 5 CPU 0 CPU usage:

45% in last 5 seconds

5% in last 1 minute

19% in last 5 minutes

Chassis 2 Slot 5 CPU 0 CPU usage:

50% in last 5 seconds

5% in last 1 minute

17% in last 5 minutes

```
=====display device verbose=====
```

Slot	Type	State	Subslot	Soft Ver	Patch Ver
1/0	LSUM1TGS48SG0	Normal	0	S10500-7186P01	None
1/1	LSUM2GP44TSSE0	Normal	0	S10500-7186P01	None

.....

1/5	LSQ1FWBSC0	Normal	0	S10500-7186P01	None	//两个框都是防火墙板卡
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寻找占用CPU高的进程，发现两个框都是KMAC进程异常高。

```
=====display process cpu slot 1=====
```

CPU utilization in 5 secs: 13.9%; 1 min: 14.1%; 5 mins: 14.5%

JID 5Sec 1Min 5Min Name

107 **37.8%** 8.1% 6.8% [kmac/1]

```
=====display process cpu slot 2=====
```

CPU utilization in 5 secs: 13.9%; 1 min: 14.1%; 5 mins: 14.5%

JID 5Sec 1Min 5Min Name

107 **42.7%** 12.2% 8.4% [kmac/1]

过程分析

查看logbuffer日志，大量打印

```
%Nov 8 12:22:52:202 2018 SLH-Server-S10512-IRF STP/6/STP_NOTIFIED_TC: Instance 0's port B ridge-Aggregation10 was notified a topology change.
```

```
%Nov 8 12:22:54:715 2018 SLH-Server-S10512-IRF STP/6/STP_NOTIFIED_TC: Instance 0's port B ridge-Aggregation10 was notified a topology change.
```

```
%Nov 8 12:22:57:076 2018 SLH-Server-S10512-IRF STP/6/STP_NOTIFIED_TC: Instance 0's port B ridge-Aggregation10 was notified a topology change.
```

```
%Nov 8 12:22:58:656 2018 SLH-Server-S10512-IRF STP/6/STP_NOTIFIED_TC: Instance 0's port B ridge-Aggregation10 was notified a topology change.
```

kmac也是mac地址学习的进程，每个槽位的mac地址学习能力不一样，因此体现在cpu的利用率上。

查看日志聚合10接口下一直在收发tc

```
----- STP chassis 1 slot 6 TC or TCN count -----
```

MST ID	Port	Receive	Send
0	Bridge-Aggregation10	1723002	7593

每次收到tc，会刷新mac表项，进行mac重新学习，因此KMAC进程利用率高，建议排查聚合10互联设备产生tc的原因。

解决方法

1、根据核心12516日志查询发现有台接入设备一直在发TC报文

```
%Nov 9 10:44:38:655 2018 SLH-HX-512516-RRF STP/6/STP_NOTIFIED_TC: Instance 0's port Bridge-Aggregation301 was notified a topology change.  
%Nov 9 10:44:38:655 2018 SLH-HX-512516-RRF STP/6/STP_NOTIFIED_TC: Instance 0's port Bridge-Aggregation301 was notified a topology change.  
%Nov 9 10:44:38:696 2018 SLH-HX-512516-RRF STP/6/STP_NOTIFIED_TC: Instance 0's port Bridge-Aggregation301 was notified a topology change.
```

2: 进入楼层接入设备查看:

```
[F-S5560-EB1]dis logbuffer reverse  
Log buffer: Enabled  
Max buffer size: 1024  
Actual buffer size: 512  
Dropped messages: 0  
Overwritten messages: 2793035  
Current messages: 512  
%Nov 9 10:46:54:590 2018 F-S5560-EB1 SHELL/6/SHELL_CMD: -Line=vtY0-IPAddr=10.1.48.217-User=admin; Command is dis logbuffer reverse  
%Nov 9 10:46:48:984 2018 F-S5560-EB1 SHELL/6/SHELL_CMD: -Line=vtY0-IPAddr=10.1.48.217-User=admin; Command is dis logbuffer  
%Nov 9 10:46:41:656 2018 F-S5560-EB1 SHELL/6/SHELL_CMD: -Line=vtY0-IPAddr=10.1.48.217-User=admin; Command is sys  
%Nov 9 10:46:39:953 2018 F-S5560-EB1 SHELL/4/SHELL_CMD_MISMATCH: -User=admin-IPAddr=10.1.48.217; Command s in view shell failed to be  
%Nov 9 10:46:39:785 2018 F-S5560-EB1 SHELL/5/SHELL_LOGIN: admin logged in from 10.1.48.217.  
%Nov 9 10:46:38:667 2018 F-S5560-EB1 SSHS/6/SSHS_CONNECT: SSH user admin (IP: 10.1.48.217) connected to the server successfully.  
%Nov 9 10:46:38:584 2018 F-S5560-EB1 SSHS/6/SSHS_LOG: Accepted password for admin from 10.1.48.217 port 53568 ssh2.  
%Nov 9 10:46:35:201 2018 F-S5560-EB1 STP/6/STP_NOTIFIED_TC: Instance 0's port GigabitEthernet1/0/47 was notified a topology change.  
%Nov 9 10:46:33:200 2018 F-S5560-EB1 STP/6/STP_NOTIFIED_TC: Instance 0's port GigabitEthernet1/0/47 was notified a topology change.  
%Nov 9 10:46:31:200 2018 F-S5560-EB1 STP/6/STP_NOTIFIED_TC: Instance 0's port GigabitEthernet1/0/47 was notified a topology change.
```

发现这个端口一直在拓扑改变:

3: 通过命令查询发现TC 每隔多少秒就会增长, 随着接口TC报文增长, 核心日志会增加和楼层聚合30

1 STP拓扑造成震动, 汇聚日志会增加与核心相连的聚合口10 STP拓扑造成震动.

```
[F-S5560-EB1]dis stp tc  
----- STP slot 1 TC or TCN count -----  
MST ID Port Receive Send  
0 Bridge-Aggregation301 431615 2743979  
0 GigabitEthernet1/0/47 505 32
```

4: 做了测试, 在楼层设备全局增加stp bpd-protection 保护和接口g1/0/47 增加成STP边缘端口, 发现由于全局开启了BPDU保护, 使g1/0/47 直接DOWN, 再次查看10512:汇聚交换机CPU占用率发现正常。

5: 接入设备g1/0/47下联连接的一台down-link 设备, 建议相关人员去排查。