

# 知 某局点S7506E-NP 设备报ACL资源不足问题

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## 问题描述

现场设备偶尔会报资源不足，但是看前后日志没有添加acl相关配置。

```
[CORE_A]dis qos-acl resource
Interfaces: GE2/0/1 to GE2/0/44, XGE2/0/45 to XGE2/0/48 (slot 2)
-----
Type          Total    Reserved  Configured  Remaining  Usage
-----
VFP ACL       2048     1024       0            1024       50%
IFP ACL       4096     1024      2218          854       79%
IFP Meter     2048     512        0           1536       25%
IFP Counter   2048     512        0           1536       25%
EFP ACL       1024      0          124          900       12%
EFP Meter     512      0          0            512        0%
EFP Counter   512      0          0            512        0%

Interfaces: GE3/0/1 to GE3/0/44, XGE3/0/45 to XGE3/0/48 (slot 3)
-----
Type          Total    Reserved  Configured  Remaining  Usage
-----
VFP ACL       2048     1024       0            1024       50%
IFP ACL       4096     1280      1606          1210       70%
IFP Meter     2048     768        0           1280       37%
IFP Counter   2048     640        0           1408       31%
EFP ACL       1024      0          124          900       12%
EFP Meter     512      0          0            512        0%
EFP Counter   512      0          0            512        0%
```

### 报错前后有接口震荡:

```

%@14911845%Mar 28 15:44:19:607 2023 CORE_A IFNET/3/PHY_UPDOWN: Physical state on the
interface GigabitEthernet2/0/40 changed to up.
%@14911846%Mar 28 15:44:19:607 2023 CORE_A
IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet2/0/40
changed to up.
%@14911847%Mar 28 15:44:20:251 2023 CORE_A IFNET/3/PHY_UPDOWN: Physical state on the
interface GigabitEthernet2/0/40 changed to down.
%@14911848%Mar 28 15:44:20:261 2023 CORE
_A IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet2/0/40
changed to d
own.
%@14911856%Mar 28 15:47:49:443 2023 CORE_A PORTAL/4/RULE: -Slot=2; Not enough re
sources.
%@14911857%Mar 28 15:48:22:496 2023 CORE_A PORTAL/4/RULE: -Slot=2; Not
enough resources.
%@14911858%Mar 28 15:49:59:589 2023 CORE_A PORTAL/4/RULE: -Slot=2;
Not enough resources.
```

## 过程分析

查看配置发现配置了portal, 和大量的Free-rule, 现场是在新增free-rule的时候报资源不足的:

```
%Mar 28 14:00:58:385 2023 CORE_A SHELL/6/SHELL_CMD: -Line=vty0-IPAddr=172.16.7.55-User=admin; Command is dis arp | inc 172.16.5.41
```

```
%Mar 28 14:00:58:420 2023 CORE_A SHELL/6/SHELL_CMD: -Line=vty1-IPAddr=172.16.7.125-User=admin; Command is portal free-rule 550 source ip 172.16.149.208 32
```

```
%Mar 28 14:00:58:707 2023 CORE_A SHELL/6/SHELL_CMD: -Line=vty0-IPAddr=172.16.7.55-User=admin; Command is dis arp | inc 172.16.144.108
```

```
%Mar 28 14:00:58:995 2023 CORE_A SHELL/6/SHELL_CMD: -Line=vty0-IPAddr=172.16.7.55-User=admin; Command is dis arp | inc 172.16.63.38
```

```
%Mar 28 14:00:59:338 2023 CORE_A SHELL/6/SHELL_CMD: -Line=vty0-IPAddr=172.16.7.55-User=admin; Command is dis arp | inc 172.16.144.155
```

```
%Mar 28 14:01:00:125 2023 CORE_A PORTAL/4/RULE: -Slot=2; Not enough resources.
```

当端口updown的时候, 涉及新的portal用户上线, 也要下发acl, 资源不足也会报的。

现场已经没有空闲的slice了, 其它slice计算有空闲的acl因为类型不同也无法给portal使用。

```
====debug qacl show acl-resc slot 2 chip 0====
```

```
-----Qacl Group UsedResc Info-----
```

```
Acl Hw Resource: VFP, Pipe:0
```

```
Pri 2, Group 3,usedEntries 18 ,mode Single, physlice 2/
```

```
=====  
acl type          usedEntries[18]
```

```
=====  
[107]Pdt VFP FirstNh2Classid    18
```

```
-----  
Pri 3, Group 2,usedEntries 1 ,mode Single, physlice 3/
```

```
=====  
acl type          usedEntries[1]
```

```
=====  
[91 ]STMVLAN_PERMIT            1
```

```
-----  
Acl Hw Resource: EFP, Pipe:0
```

```
-----  
Pri 2, Group 7,usedEntries 62 ,mode Double, physlice 2/3/
```

```
=====  
acl type          usedEntries[62]
```

```
=====  
[100]PktFilter IP on VRF        62
```

```
-----  
Acl Hw Resource: IFP, Pipe:0
```

```
-----  
Pri 7, Group 6,usedEntries 10 ,mode Double, physlice 0/1/
```

```
=====  
acl type          usedEntries[10]
```

```
=====  
[148]PDT LOW INITIAL            1
```

```
[23 ]RX Low                      7
```

```
[25 ]Super_RX Low                1
```

```
[27 ]TCP_RX_MISS_LOWEST         1
```

```
-----  
Pri 9, Group 8,usedEntries 1017,mode Double, physlice 2/3/4/5/6/7/8/9/
```

```
=====  
acl type          usedEntries[1017]
```

```
=====  
[35 ]Portal Free                439
```

```
[36 ]Portal User                 527
```

```
[37 ]Portal Redirect             34
```

现场配置了portal,包过滤和pbr,其中portal占用了非常多的acl,其中portal中配置了较多的portal-free rule,建议精简到5条内优化解决。

Pri 11, Group 5,usedEntries 48 ,mode Single, physlice 11/

同时也可以核对其它包过滤和pbr配置的必要性,如果不需要可以删除配置来释放acl,腾出acl资源。

```

acl type          usedEntries[48]
=====
[116]Policy Based Routing V4      48
=====

```

Pri 12, Group 4,usedEntries 70 ,mode Double, physlice 12/13/

```

acl type          usedEntries[70]
=====
[101]PktFilter Eth_Mac on VRF      2
[100]PktFilter IP on VRF           68
=====

```

Pri 14, Group 1,usedEntries 50 ,mode Double, physlice 14/15/

```

acl type          usedEntries[50]
=====
[147]PDT HIGH INITIAL                1
[91 ]STMVLAN_PERMIT                  2
[92 ]STM_DENYALL                     1
[7 ]RX IPv4 Super High                2
[8 ]RX IPv4 High                      11
[9 ]RX IPv4 Middle High               5
[10 ]RX IPv4 Middle                   26
[14 ]RX IPv6 Middle_High              1
[64 ]Zero-Mac-Deny                   1
=====

```

现场一个slice的长度是256, portal占用了8个, 共有8\*256=2048, 现场有1017个entry, 因为是double模式, 所以使用了1017\*2=2034条。所以已占用的slice已经只剩14条资源。同时通过debug qacl show acl-resc slot 2 chip 0可以看到该单板0~15的slice全部都被使用了, 没有空闲的slice腾出来给portal用。所以就资源不足了。现场如果不去优化acl, 想要删除配置来腾出slice, 可以看下这些能不能删除:

Pri 12, Group 4,usedEntries 70 ,mode Double, physlice 12/13/

```

acl type          usedEntries[70]
=====
[101]PktFilter Eth_Mac on VRF      2
[100]PktFilter IP on VRF           68
=====

```

