

知 某局点S12504-S 调用端口range包过滤失败的经验案例

ACL packet-filter 丁佳欣 2021-09-30 发表

组网及说明

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问题描述

现场查看某一接口下调用的包过滤ACL 状态为Failed失败，然后端口重新配置调用时报资源不足。

过程分析

1、接口下调用包过滤:

```
interface HundredGigE5/0/1
```

```
port link-mode route
```

```
ip address 10.xx.xxx.7 255.255.255.252
```

```
packet-filter 3108 inbound hardware-count
```

```
packet-filter 3106 outbound
```

查看调用失败的acl情况:

```
[Rml-MH-0-0-acl-ipv4-adv-3108]dis packet-filter statistics interface HundredGigE 5/0/1 inbound | include Failed
rule 22127 permit tcp destination 11.11.11.11 35 0 destination-port range 8083 8084 (Failed)
rule 22129 permit tcp destination 200.1.1.1 86 0 destination-port range 10017 10022 (Failed)
[Rml-MH-0-0-acl-ipv4-adv-3108]dis qos-
```

2、在接口HG5/0/1重新调用包过滤提示资源不足, 调用失败

```
[Rml-MH-0-0-HundredGigE5/0/1]packet-filter 3108 inbound hardware-count
Failed to apply or refresh IPv4 ACL 3108 rule 10 to the inbound direction of interface HundredGigE5/0/1. The resources are insufficient.
[Rml-MH-030540-HundredGigE5/0/1]packet-filter 3108 inbound
Failed to apply or refresh IPv4 ACL 3108 rule 10 to the inbound direction of interface HundredGigE5/0/1. The resources are insufficient.
[Rml-MH-0-0-HundredGigE5/0/1]dis qos-acl resource
```

3、将部分tcp的端口range规则改为ip规则, ACL能在端口重新应用。此时qos也没有明显不足, 可以调用生效:

```
[Rml-MH-0-0-40-HundredGigE5/0/1]acl num 3108
[Rml-MH-0-0-40-acl-ipv4-adv-3108]rule 22041 permit ip destination 200.1.1.1 .7.24 0
The rule was edited successfully.
[Rml-MH-0-0-acl-ipv4-adv-3108]int HundredGigE 5/0/1
[Rml-MH-0-0-HundredGigE5/0/1]packet-filter 3108 inbound ha
[Rml-MH-0-0-HundredGigE5/0/1]packet-filter 3108 inbound hardware-count
[Rml-MH-030540-HundredGigE5/0/1]dis packet-filter statistics interface HundredG
```

4、查看设备资源情况, 入方向资源占用情况还有较多剩余:

```
Interfaces: HGE5/0/1 (slot 5)
-----
Type                Total      Reserved  Configured  Remaining  Usage
-----
VFP ACL              2048       1536       0            512       75%
IFP ACL              8192       3072      1030         4090       50%
IFP Meter            4096       1536       0            2560       37%
IFP Counter          4096       1536       450          2110       48%
EFP ACL              1024        0          130          894        12%
EFP Meter            512         0           0            512         0%
EFP Counter          512         0           0            512         0%
```

5、查看底层slice资源与acl资源充足:

```
====debug port mapping chassis 0 slot 5====
```

```
[Interface] [Unit] [Port] [Name] [Combo?] [Active?] [IfIndex] [MID] [Link]
```

```
=====
```

```
===
```

```
HGE5/0/1    2  5  ce0  no  no  0x1e6  15  up
HGE5/0/2    1  5  ce0  no  no  0x1e7  14  down
```

```
====debug qacl show acl-resc slot 5 chip2====
```

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

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

```
-----
```

```
Pri 1, Group 4,usedEntries 2 ,mode Single,physlice 1/
```

```
=====
```

```
acl type          usedEntries[2]
```

```
=====
```

```
[111]VFP HIGH          2
```

```
=====
```

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

```
=====
acl type          usedEntries[18]
解决方法
```

对于此端口号范围小的acl, 建议通过eq的方式写成等价的多条, 减少range资源的使用; 也可以修改下发到出方向, 或其他设备上实现。也可以升级到当前官网最新的R7596P09版本优化。

```
-----
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 3, Group 8,usedEntries 130,mode Single, physlice 3/
```

```
=====
acl type          usedEntries[130]
```

```
=====
[123]PktFilter IPV4 on RPORT      119
[100]PktFilter IP on VRF          11
=====
```

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

```
-----
Pri 8, Group 6,usedEntries 23 ,mode Double, physlice 6/7/
```

```
=====
acl type          usedEntries[23]
```

```
=====
[148]PDT LOW INITIAL      1
[23 ]RX Low               14
[25 ]Super_RX Low        3
[89 ]RX PRIO LLOW        4
[27 ]TCP_RX_MISS_LOWEST  1
=====
```

```
-----
Pri 10, Group 7,usedEntries 10 ,mode Double, physlice 8/9/
```

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

```
=====
[125]MPLS Vpn High       4
[126]MPLS Vpn Middle     6
=====
```

```
-----
Pri 12, Group 5,usedEntries 515,mode Double, physlice 10/11/12/13/
```

```
=====
acl type          usedEntries[515]
```

```
=====
[123]PktFilter IPV4 on RPORT      450
[100]PktFilter IP on VRF          65
=====
```

```
-----
Pri 14, Group 1,usedEntries 75 ,mode Double, physlice 14/15/
```

```
=====
acl type          usedEntries[75]
```

```
=====
[147]PDT HIGH INITIAL      1
[91 ]STMVLAN_PERMIT      2
[92 ]STM_DENYALL          1
[7 ]RX IPv4 Super High    2
[8 ]RX IPv4 High          18
[9 ]RX IPv4 Middle High   7
[10 ]RX IPv4 Middle       28
[13 ]RX IPv6 High         9
=====
```

[14]RX IPv6 Middle_High 3

[15]RX IPv6 Middle 3