Troubleshoot Contracts when the Zoning-rule Name Field Is Empty

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Related Information

Introduction

This document describes the guidelines to identify an implicit contract on a leaf, such as an override rule.

Prerequisites

Requirements

- Basic knowledge of ACI
- Endpoint Groups and contract
- ELAM configuration

Components Used

This document is not restricted to specific software and hardware versions.

Devices used:

- Cisco ACI running version 5.3(2)
- ELAM Assistant / CLI ELAM

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Background Information

pcTag is a numeric ID used for internal representation of Endpoint Policy Group (EPG) in ACI. The pcTag

assigned to source epg is called SCLASS while the pcTag assigned to destination EPG is called DCLASS.

Shared services Consumer used the reserved PcTag of 14.

System - These are internal system tags from range 1-15.

Global - Range 16-16385 is reserved for global use.

Drop EPG uses the reserved PcTag of 13.

Shared services Consumer uses the reserved PcTag of 14.

l3out with 0.0.0.0/0 uses the reserved PcTag of 15.

Local - The default scope of pcTag is local to VRF and can be reused across VRF's. Its value ranges from 16386-65535.

Steps to Resolve the Contract

ELAM is used on these scenarios. These commands are for CLI ELAM and can be used as reference:

```
vsh_lc
debug platform internal <asic > elam asic <number>
trigger reset
trigger init in-select <in-select_code> out-select 0
set outer ipv4 src_ip <source ip> dst_ip < destination ip address>
start
status
```

Step 1. ELAM TRIGGER

First, gather several aspects from an ELAM: source class 11060, destination class 14, and Stats Index: 51983.

For **shared services > consumer subnet** in provider, class id 14 is used.

This is used for EPGs in provider VRF with local sclass that cannot talk to these subnets.

<#root>

```
IP Protocol : ICMP( 0x1 )

L4 Src Port : 2048( 0x800 )

L4 Dst Port : 56951( 0xDE77 )

sclass (src pcTag) :

11060

( 0x2B34 )

dclass (dst pcTag) :
```

```
14

( 0xE )

-------------------------------------------------------------------------------------------------------------

Contract Result

-------------------------------------------------------------------------------------------------------------

Contract Drop : no
Contract Logging : no
Contract Applied : no
Contract Hit : yes
Contract Aclqos Stats Index : 51983
( show sys int aclqos zoning-rules | grep -B 9 "Idx: 51983 )
```

Step 2. Zoning-rule Verification Based on a Hardware Rule Match

Use the hardware index of match contract 51983 to resolve the rule identifier.

<#root>

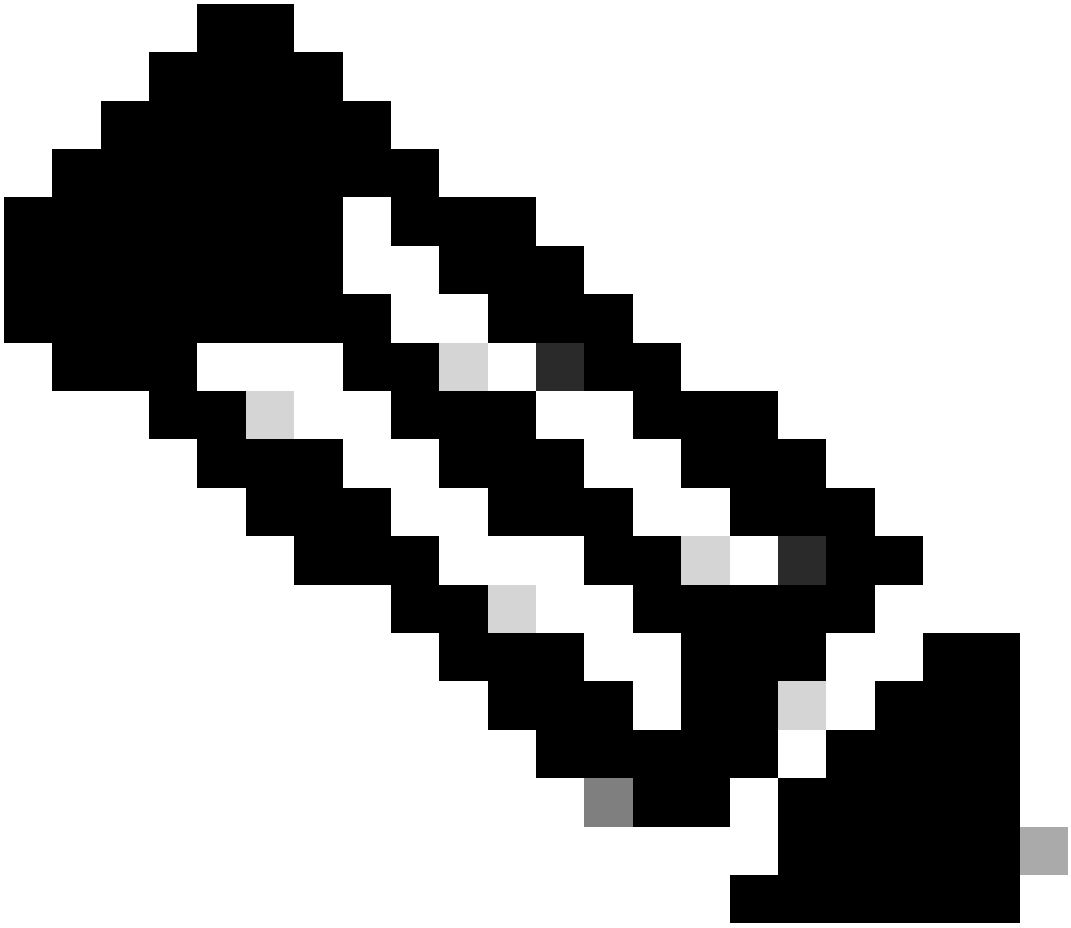
```
module-1# show sys int aclqos zoning-rules | grep -B 9 "Idx: 51983"
========================================
Rule ID: 8640 Scope 20 Src EPG:

11060

 Dst EPG:

14

 Filter 65534
     unit_id: 0
     === Region priority: 2466 (rule prio: 9 entry: 162)===
     sw_index = 13310 | hw_index = 29937 | stats_idx = 51983
   Curr TCAM resource:
   ============================
     === SDK Info ===
     Result/Stats Idx: 51983
```



Note: On version 4.X, the rule cannot appear. Use **show system internal aclqos zoning-rules implicit** command to identify the contract.

The Rule Identifier can be used on the zoning rule to review the contract. For override rules, the contract name is going to be empty:

<#root>

```
S2-LF101# show zoning-rule rule-id 8640
    Config State
    ============
    | Rule ID | SrcEPG | DstEPG | FilterID | Dir | operSt | Scope | Name | Action | Priority | Intent |
    |---------|--------|--------|----------|-----|--------|-------|------|--------|---------|--------|
    | 8640    |
```

11060

```
 |
```

14

```
 | implicit | uni-dir | enabled | 2424832 |    | permit_override | src_dst_any(9) | install |
```

```
Install State
==============
| Rule ID | SrcEPG | DstEPG | FilterID | Dir | Scope | Name | Action | Priority |
|---------|--------|--------|----------|-----|-------|------|--------|----------|
| 8640    | 11060  | 14     | implicit | uni-dir | 2424832 |   | permit_override | src_dst_any(9) |
```

Step 3a. Verify with the Object actrlRule to See if There is a Contract Name

The actrlRule moquery can be used on the leaf with a filter:

```
<#root>

moquery -c actrlRule -f 'actrl.Rule.rn*"s-

<sclass>

-d-

<dclass>

"' | grep ctrctName
```

For the example, this is the contract that is creating the override policy:

```
<#root>

moquery -c actrlRule -f 'actrl.Rule.rn*"s-

11060

-d-

14

"' | grep ctrctName
ctrctName : common:Common-Global
```

It is possible that this field ctrctName can be empty. If that is the case, there is another object that can be used.

Step 3b. Verify with the Object actrlRule to See if There is a Contract Name

The vzRuleOwner moquery can be used on the leaf:

```
<#root>

moquery -c vzRuleOwner -f 'vz.RuleOwner.dn*"

11060

.*

14
```

"'

For the vzRuleOwner example, this is the contract that is creating the override policy:

<#root>

```
MXS2-LF101# moquery -c vzRuleOwner -f 'vz.RuleOwner.dn*"
```

11060

```
.*
```

14

```
"'
Total Objects shown: 1
# vz.RuleOwner
creatorDn : cdef-[uni/tn-common/brc-Common-Global]/epgCont-[uni/tn-common/out-L3OUT-External/instP-Exte
tag : to-epg
action : permit_override
childAction :
ctrctName :
direction : uni-dir
dn : sys/actrl/scope-2424832/rule-2424832-s-
```

11060

```
-d-
```

14-

```
f-implicit/own-[cdef-[uni/tn-common/brc-
```

Common-contract

```
]/epgCont-[uni/tn-common/out-L3OUT/instP-External]/fr-[uni/tn-common/brc-Common-contract/dirass/prov-[u
intent : install
lcOwn : local
markDscp : unspecified
modTs : 2024-08-07T06:16:42.241+00:00
monitorDn : uni/tn-common/monepg-default
name :
nameAlias :
prio : src_dst_any
qosGrp : unspecified
rn : own-[cdef-[uni/tn-common/brc-
```

Common-Global

```
]/epgCont-[uni/tn-common/out-L3OUT-External/instP-External-]/fr-[uni/tn-common/brc-Common-Global/dirass
status :
type : tenant
```

On the DN, after brc, it is going to be the contract name.

RN/DN: brc-<contract name>

For example:

brc-Common-contract

Reference

Cisco Bug ID	Bug Title	Enhancement Add it Version
Cisco bug ID CSCwk84663	The visibility of the rules has been added. This override rule appears in the zoning rules when the configuration is set correctly, but a name is not be explicitly mentioned in the zoning rules.	version 5.X

Related Information

Verify ACI Shared Services - Shared Service Consumer PcTag 14