

知

某局点 6550XE-56HF-HI route-policy修改路由下一跳不生效

路由策略

IPv4

BGP

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组网及说明

不涉及

告警信息

不涉及

问题描述

客户配置route-policy对路由下一跳进行修改，发现apply next-hop是非直连的地址时，无法生效，指定直连下一跳是ok的，怀疑是该产品对非直连下一跳有限制

过程分析

1.配置非直连IP，这个下一跳是通过静态路由打通的，理论上可以迭代的，但是看BGP路由显示 **Rely nexthop : not resolved:**

route-policy XXX permit node 50 if-match as-path XXX if-match ip address prefix-list XXXX apply community XXX apply cost 0 apply ip-address next-hop 192.X.2.99 apply local-preference 600
dis ip routing-table 86.51.X.0 Summary count : 1 Destination/Mask Proto Pre Cost NextHop Interface 0.0.0.0/0 BGP 200 0 193.23.X.8 RAGG10
dis bgp routing-table ipv4 unicast 86.51.X.0 24 BGP local router ID: 156.59.X.2 Local AS number: 21859 Paths: 1 available, 0 best BGP routing table information of 86.51.X.0/24: From : 193.23.X.8 (10.188.X.20) Rely nexthop : not resolved Original nexthop: 192.0.X.99 OutLabel : NULL

[H3C]display ip routing-table 192.0.X.1 32 verbose 下一跳地址有路由

Summary count : 1

Destination: 192.0.X.1/32

Protocol: Static

Process ID: 0

SubProtID: 0x1 Age: 261d19h27m03s

Cost: 0 Preference: 60

IpPre: N/A QoSLocalID: N/A

Tag: 0 State: Active Adv

OrigTblID: 0x0 OrigVrf: default-vrf

TableID: 0x2 OrigAs: 0

NibID: 0x11000000 LastAs: 0

AttrID: 0xffffffff Neighbor: 0.0.0.0

Flags: 0x10000 OrigNextHop: 0.0.0.0

Label: NULL RealNextHop: 0.0.0.0

BkLabel: NULL BkNextHop: N/A

SRLabel: NULL BkSRLabel: NULL

SIDIndex: NULL InLabel: NULL

Tunnel ID: Invalid Interface: NULL0

BkTunnel ID: Invalid BkInterface: N/A

FtnIndex: 0x0 TrafficIndex: N/A

Connector: N/A PathID: 0x0

[H3C]display ip routing-table 192.0.X.99 32 verbose

Summary count : 2

Destination: 192.0.X.99/32

Protocol: Static

Process ID: 0

SubProtID: 0x1 Age: 02h30m25s

Cost: 0 Preference: 60

IpPre: N/A QoSLocalID: N/A

Tag: 190 State: Active Adv

OrigTblID: 0x0 OrigVrf: default-vrf

TableID: 0x2 OrigAs: 0

NibID: 0x11000003 LastAs: 0

AttrID: 0xffffffff Neighbor: 0.0.0.0

解决方法: 0x10040 OrigNextHop: 185.1.X.241

Label: NULL RealNextHop: 185.1.X.241
使用直连下一跳或者使用非直连下一跳+peer ebgp-max-hop
BkLabel: NULL BkNextHop: N/A
SRLabel: NULL BkSRLabel: NULL
SIDIndex: NULL InLabel: NULL
Tunnel ID: Invalid Interface: Route-Aggregation11
BkTunnel ID: Invalid BkInterface: N/A
FtnIndex: 0x0 TrafficIndex: N/A
Connector: N/A PathID: 0x0
LinkCost: 0 MicroSegID: 0
RealFIRType: Normal RealThres: 0

Destination: 192.0.X.99/32
Protocol: Static
Process ID: 0
SubProtID: 0x1 Age: 02h30m02s
Cost: 0 Preference: 60
IpPre: N/A QosLocalID: N/A
Tag: 190 State: Active Adv
OrigTblID: 0x0 OrigVrf: default-vrf
TableID: 0x2 OrigAs: 0
NibID: 0x11000004 LastAs: 0
AttrID: 0xffffffff Neighbor: 0.0.0.0
Flags: 0x10040 OrigNextHop: 185.1.X.242
Label: NULL RealNextHop: 185.1.X.242
BkLabel: NULL BkNextHop: N/A
SRLabel: NULL BkSRLabel: NULL
SIDIndex: NULL InLabel: NULL
Tunnel ID: Invalid Interface: Route-Aggregation11
BkTunnel ID: Invalid BkInterface: N/A
FtnIndex: 0x0 TrafficIndex: N/A
Connector: N/A PathID: 0x0
LinkCost: 0 MicroSegID: 0
RealFIRType: Normal RealThres: 0

APPLY 到 直连IP是正常的

XXX permit node 950 if-match as-path XXX if-match ip address prefix-list XXX apply cost 0 apply ip-address next-hop 185.1.X.241 apply local-preference 600					
Destination/Mask	Proto	Pre	Cost	NextHop	Interface
0.0.0.0/0	BGP	200	0	193.23.X.8	RAGG10
86.51.X.0/24	BGP	200	0	185.1.X.241	RAGG11
BGP routing table information of 86.51.X.0/24: From : 193.23.180.8 (10.188.X.20) Rely nexthop : 185.1.X.241 Original nexthop: 185.1.X.241					

反馈研发确认如下限制:

1. 该型设备是否存在这个无法apply 非直连next hop的限制? -----是有限制的, 参考友商规格, 对于直连EBGP邻居的下一跳限制只能迭代直连
2. 是否有什么方法可以实现apply 一个非直连next hop 吗? -----对直连EBGP邻居, 使用入口策略修改下一跳地址, 且下一跳为非直连接口地址时, 需要配置peer ebgp-max-hop命令
配置peer ebgp-max-hop后, 有可能的影响:
 - 1) 如果现网有默认路由或大网段路由, 当直连出接口down掉时, bgp路由下一跳可能走了默认路由或大网段出口, 造成路径不对。因此, 是否能修改非直连, 需要根据现网是否有直连路由相同的大网段情况而定。
 - 2) 配置peer ebgp-max-hop后, 无法响应接口down快速断邻居。

