

知 M9000-AI-E8 (ADE板卡) 配置SNAT地址池时提示“IPV4地址个数不够, 还缺XX个”问题

双机热备 VRRP 四层服务器负载均衡 孔凡安 2023-04-23 发表

组网及说明

不涉及

告警信息

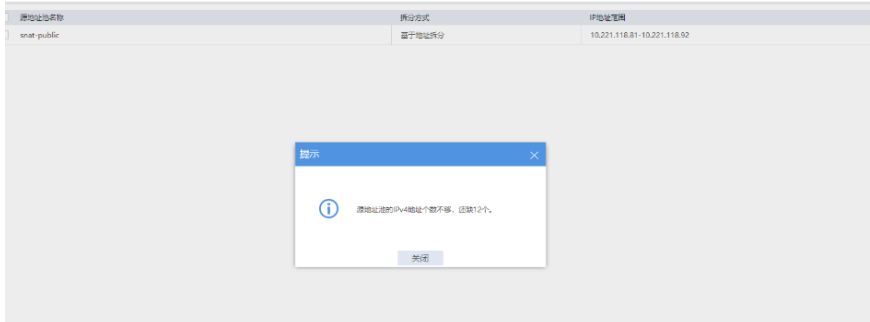
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问题描述

M9000-AI-E8 (ADE板卡) 配置SNAT地址池时提示“IPv4地址个数不够, 还缺XX个”问题

日志:

```
%Apr 17 22:52:12:964 2023 LB-1 LB/4/LB_SNATADDR_NOTENOUGH: SNAT pool snat-public does not have enough IPv4 addresses. A minimum of 12 new IPv4 addresses are required.
```



过程分析

现场为RBM结合VRRP主备组网，每框6块业务板卡，如下：

```
=====display device verbose=====
Slot No. Brd Type      Brd Status  Subslot Sft Ver      Patch Ver
0   NSQM5MBSHA1    Normal    0   M9000-AI-E8-9001P300402 None
   NS-C600-CGQ6A1      1   NONE
   C300-QG4TG16A1      2   NONE
1   NSQM5MBSHA1    Normal    0   M9000-AI-E8-9001P300402 None
   NS-ADEEMPA0(CPU1)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU2)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU3)Normal  2   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU4)Normal  2   M9000-AI-E8-9001P300402
2   NSQM5MBSHA1    Normal    0   M9000-AI-E8-9001P300402 None
   NS-ADEEMPA0(CPU1)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU2)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU3)Normal  2   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU4)Normal  2   M9000-AI-E8-9001P300402
3   NSQM5MBSHA1    Normal    0   M9000-AI-E8-9001P300402 None
   NS-ADEEMPA0(CPU1)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU2)Normal  1   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU3)Normal  2   M9000-AI-E8-9001P300402
   NS-ADEEMPA0(CPU4)Normal  2   M9000-AI-E8-9001P300402
4   NSQM5SUP08A1    Master    0   M9000-AI-E8-9001P300402 None
5   NONE           Absent    0   NONE           None
6   NSQM5FAB08A1    Normal    0   NONE           None
7   NSQM5FAB08A1    Normal    0   NONE           None
```

现场业务板卡为子母卡组合，NSQM5MBSHA1为母版，一个母版内可以插两个子卡，一个子卡有两个CPU。

单框总共12个CPU，理论上地址池的地址个数为12个。但是系统却提示还缺少12个地址。

查看现场配置发现，现场SNAT地址池已被server-farm调用。但是server-farm没有调用在虚服务下。

```
#
loadbalance snat-pool snat-public
ip range start 10.221.118.81 end 10.221.118.92
#
server-farm csdesk-9007
predictor hash address source
snat-pool snat-public
probe csdesk-scan
success-criteria at-least 1
real-server csdesk_minio_1 port 9007
success-criteria at-least 1
real-server csdesk_minio_2 port 9007
success-criteria at-least 1
real-server csdesk_minio_3 port 9007
success-criteria at-least 1
real-server csdesk_minio_4 port 9007
success-criteria at-least 1
#
```

解决方法

ADE板卡地址池地址的分配是基于CPU来的。SNAT地址池未在绑定了vrid的虚服务VS应用时，SNAT地址分配是按照两框的CPU分别分配的，也就是说需要24个地址。地址拆分的顺序为1框，2框，1框，2框... 如此。

如果SNAT地址池被server-farm引用，server-farm被虚服务VS引用，虚服务绑定了vrid，SSNAT地址池地址分配就是单边分配，只分给主框的各个板卡。

小tips:

可以使用该命令查看地址池的分配情况:

```
RBM_P[E8-1-probe]display system internal loadbalance snat-pool snat1 slot 0 c
pu 1
Slot 0 CPU 1:
  IPv4 Running configuration:
  Local:
    Start address      End address
    1.1.1.1            1.1.1.1
  IPv6 Running configuration:
    Start address      End address
    --                --
```

