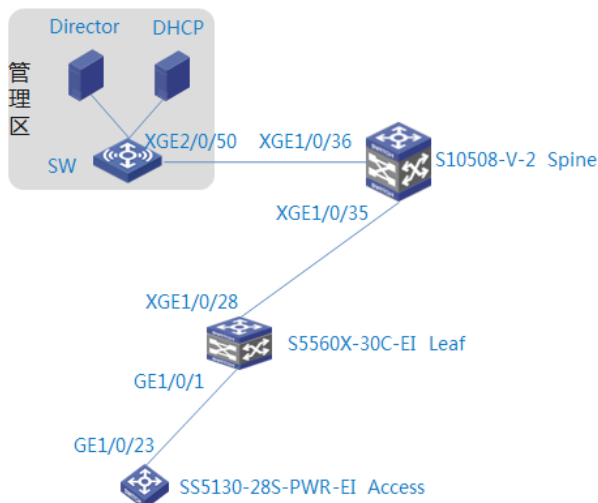


知 ADCampus自动化上线设备vsi4094错误获取vlan1网段地址

ADCampus方案 孙兆强 2019-03-29 发表

组网及说明



dhcp server的vlan1网段为192.168.110.0/24 vlan 4094网段为192.168.120.0/24

问题描述

设备自动化部署，DR2000首先通过vlan1纳管设备。修改spine和服务器互联的口为AC口，interface Vsi-interface4094 up后错误的获取到了vlan 1作用域的地址。排查DHCP服务器配置，vlan4094作用域没有配置。但是配置上之后updown设备接口vsi4094依旧获取到vlan1作用域地址。

过程分析

DHCP服务器配置再次确认策略配置准确无误，所以在dhcp服务器上抓包确认。

设备interface Vsi-interface4094 的mac地址为5cdd-704f-0aad

```
> Frame 195: 354 bytes on wire (2832 bits), 354 bytes captured (2832 bits)
> Ethernet II, Src: Hangzhou_4f:0a:ad (5c:dd:70:4f:0a:ad), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
> Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255
> User Datagram Protocol, Src Port: 68, Dst Port: 67
* Bootstrap Protocol (Discover)
  Message type: Boot Request (1)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 0
  Transaction ID: 0x7884478c
  Seconds elapsed: 0
  > Bootp flags: 0x8000, Broadcast flag (Broadcast)
  Client IP address: 0.0.0.0
  Your (client) IP address: 0.0.0.0
  Next server IP address: 0.0.0.0
  Relay agent IP address: 0.0.0.0
  Client MAC address: Hangzhou_4f:0a:ad (5c:dd:70:4f:0a:ad)
  Client hardware address padding: 00000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP
  > Option: (53) DHCP Message Type (Discover)
  * Option: (50) Requested IP Address
    Length: 4
    Requested IP Address: 192.168.110.1
  > Option: (55) Parameter Request List
  > Option: (57) Maximum DHCP Message Size
  > Option: (60) Vendor class identifier
  > Option: (61) Client identifier
  > Option: (255) End
```

从抓包信息看是spine发出的discover报文携带了option 50属性字段，请求的地址是vlan1地址段192.168.110.1的地址。按照协议规定，优先给client分配请求的地址，所以策略不生效，spine的vsi 4094获取到了vlan1地址段的地址。

那为何spine会请求vlan1地址段的地址呢？因为最开始没有配置vlan 4094作用域的策略，导致spine发出的dhcp报文无法命中vlan 4094作用域的策略，dhcp中目前只有两个作用域，只能到vlan1去获取地址。

那为何updown设备接口spine发出的discover报文还是携带option 50字段呢？原因是设备接口updown之后还是会保留之前的dhcp获取记录。

解决方法

按照如下顺序操作

- 1、将vlan1和vlan 4094作用域的策略正确配置
- 2、将interface Vsi-interface4094接口删除掉

3、 将dhcp作用域里错误记录删除掉。

在vlan1作用域的地址租用里找到错误dhcp分配记录，右键删除。

4、 将interface Vsi-interface4094重新创建。

注意： 接口删除时vsi vxlan4094下的gateway vsi-interface 4094会同步删除， 重新创建interface Vsi-interface4094时要把gateway vsi-interface 4094重新添加以下， 要不然Vsi-interface4094接口不会up。

按照如上操作后重新抓包spine首次发出的discover报文将不携带option 50字段

```

> Frame 4183: 348 bytes on wire (2784 bits), 348 bytes captured (2784 bits)
> Ethernet II, Src: Hangzhou_4f:0a:ad (5c:dd:70:4f:0a:ad), Dst: Broadcast (ff:ff:ff:ff:ff:ff)
> Internet Protocol Version 4, Src: 0.0.0.0, Dst: 255.255.255.255
> User Datagram Protocol, Src Port: 68, Dst Port: 67
+ Bootstrap Protocol (Discover)
  Message type: Boot Request (1)
  Hardware type: Ethernet (0x01)
  Hardware address length: 6
  Hops: 0
  Transaction ID: 0x3fbb6470
  Seconds elapsed: 0
  > Bootp flags: 0x8000, Broadcast flag (Broadcast)
  Client IP address: 0.0.0.0
  Your (client) IP address: 0.0.0.0
  Next server IP address: 0.0.0.0
  Relay agent IP address: 0.0.0.0
  Client MAC address: Hangzhou_4f:0a:ad (5c:dd:70:4f:0a:ad)
  Client hardware address padding: 00000000000000000000
  Server host name not given
  Boot file name not given
  Magic cookie: DHCP
  > Option: (53) DHCP Message Type (Discover)
  > Option: (55) Parameter Request List
  > Option: (57) Maximum DHCP Message Size
  > Option: (60) Vendor class identifier
  > Option: (61) Client identifier
  > Option: (255) End
```

附件下载: DHCP抓包.rar