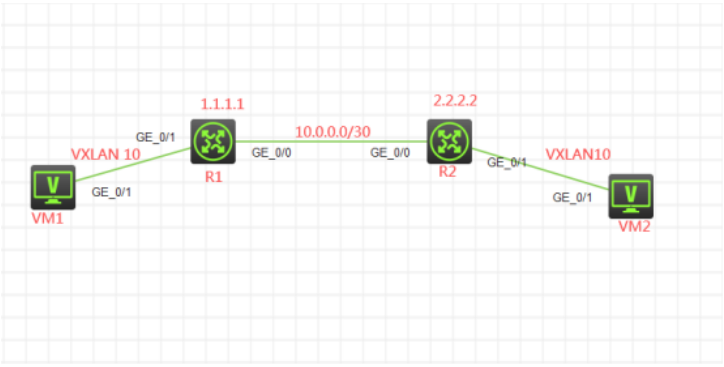
HCL模拟器模拟VXLAN头端复制典型组网配置

VxLAN H3C模拟器 韦家宁 2020-10-24 发表

组网及说明



组网说明:

本案例采用H3C HCL模拟器来模拟VXLAN头端复制典型组网配置。R1与R2分别连接着服务器的VTEP设备。VM1与VM2同属于VXLAN10。通过VXLAN实现不同站点之间的二层互联，确保虚拟机在站点之间迁移的时候用户的访问的流量不会中断。

配置步骤

1、按照网络拓扑图正确配置IP地址

2、R1与R2建立OSPF邻居关系

3、R1与R2建立VXLAN隧道

4、VM1与VM2划分到VXLAN10

配置关键点

R1:

```
sys
System View: return to User View with Ctrl+Z.
[H3C]sysname R1
[R1]int loopback 0
[R1-LoopBack0]ip address 1.1.1.1 32
[R1-LoopBack0]quit
[R1]int gi 0/0
[R1-GigabitEthernet0/0]des
[R1-GigabitEthernet0/0]ip address 10.0.0.1 30
[R1-GigabitEthernet0/0]quit
[R1]ospf 1 router-id 1.1.1.1
[R1-ospf-1]area 0.0.0.0
[R1-ospf-1-area-0.0.0.0]network 10.0.0.1 0.0.0.0
[R1-ospf-1-area-0.0.0.0]network 1.1.1.1 0.0.0.0
[R1-ospf-1-area-0.0.0.0]quit
[R1-ospf-1]quit
```

R1 VXLAN关键配置点:

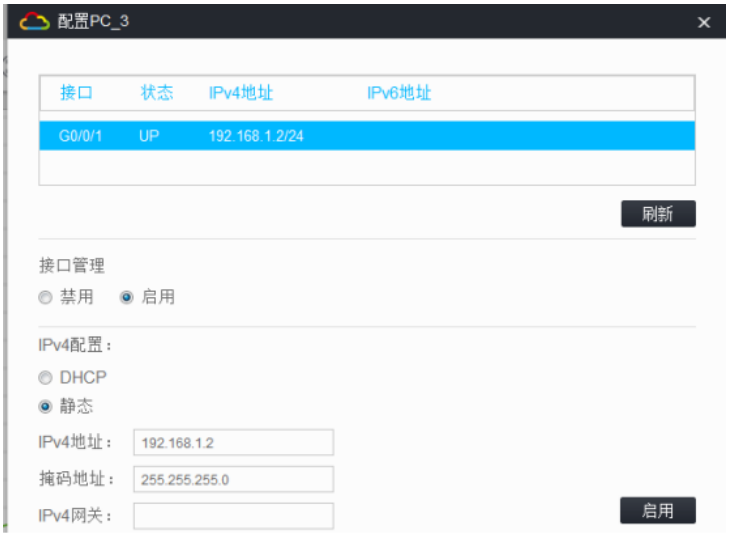
```
[R1]l2vpn enable
[R1]vsi vpna
[R1-vsi-vpna]vxlan 10
[R1-vsi-vpna-vxlan-10]quit
[R1-vsi-vpna]quit
[R1]int Tunnel 0 mode vxlan
[R1-Tunnel0]source 1.1.1.1
[R1-Tunnel0]destination 2.2.2.2
[R1-Tunnel0]quit
[R1]vsi vpna
[R1-vsi-vpna]vxlan 10
[R1-vsi-vpna-vxlan-10]tunnel 0
[R1-vsi-vpna-vxlan-10]quit
[R1-vsi-vpna]quit
[R1]int gi 0/1
```

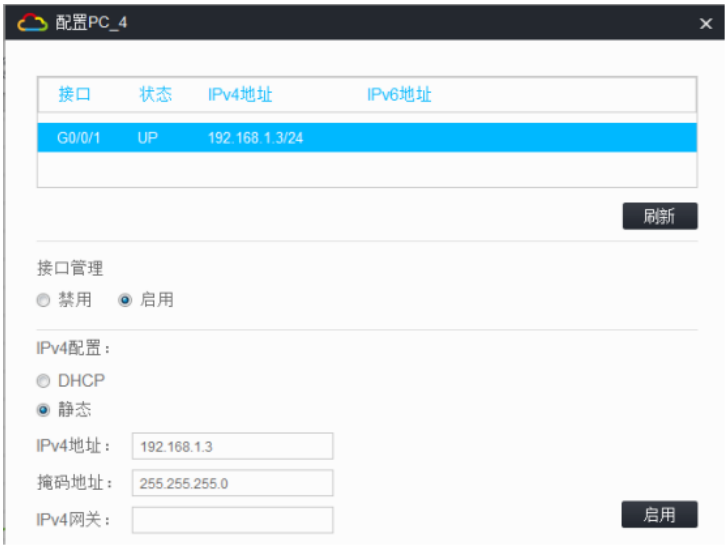
[R1-GigabitEthernet0/1]xconnect vsi vpna
[R1-GigabitEthernet0/1]quit

R2：
sys
System View: return to User View with Ctrl+Z.
[H3C]sysname R2
[R2]int loopback 0
[R2-LoopBack0]ip address 2.2.2.2 32
[R2-LoopBack0]quit
[R2]int gi 0/0
[R2-GigabitEthernet0/0]des
[R2-GigabitEthernet0/0]ip address 10.0.0.2 30
[R2-GigabitEthernet0/0]quit
[R2]ospf 1 router-id 2.2.2.2
[R2-ospf-1]area 0.0.0.0
[R2-ospf-1-area-0.0.0.0]network 10.0.0.2 0.0.0.0
[R2-ospf-1-area-0.0.0.0]network 2.2.2.2 0.0.0.0
[R2-ospf-1-area-0.0.0.0]quit
[R2-ospf-1]quit

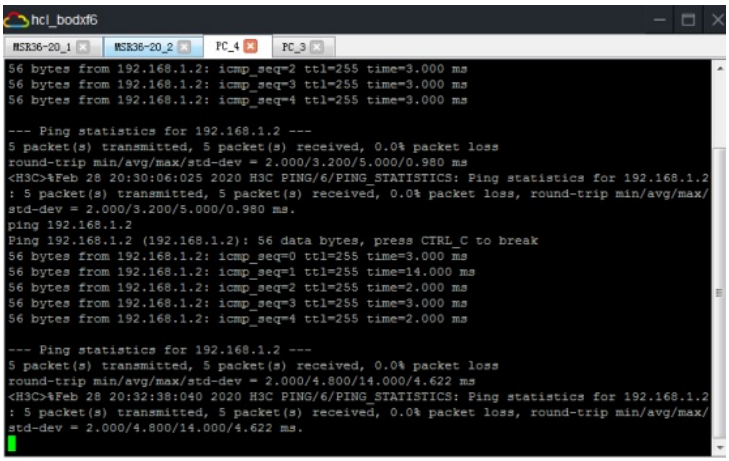
R2 VXLAN关键配置点：
[R2]l2vpn enable
[R2]vsi vpna
[R2-vsi-vpna]vxlan 10
[R2-vsi-vpna-vxlan-10]quit
[R2-vsi-vpna]quit
[R2]int Tunnel 0 mode vxlan
[R2-Tunnel0]source 2.2.2.2
[R2-Tunnel0]destination 1.1.1.1
[R2-Tunnel0]quit
[R2]vsi vpna
[R2-vsi-vpna]vxlan 10
[R2-vsi-vpna-vxlan-10]tunnel 0
[R2-vsi-vpna-vxlan-10]quit
[R2-vsi-vpna]quit
[R2]int gi 0/1
[R2-GigabitEthernet0/1]xconnect vsi vpna
[R2-GigabitEthernet0/1]quit

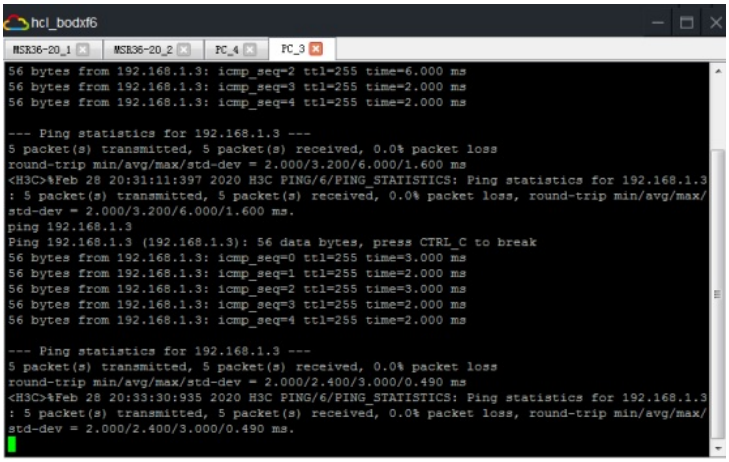
测试：
VM1和VM2分别填写IP地址。由于是VXLAN的大二层，因此需要填写同一个网段的IP地址，而且不需要填写网关。





VM1与VM2能相互PING通：





根据测试结果说明，VM1与VM2能通过搭建的VXLAN穿越三层网络实现二层互通.

查看R1 VXLAN的隧道显示信息：

```
<R1>dis l2vpn vsi
Total number of VSIs: 1, 1 up, 0 down, 0 admin down

VSI Name                        VSI Index       MTU     State
vpna                            0               1500    Up
<R1>
```

```
<R1>dis vxlan tunnel
Total number of VXLANs: 1

VXLAN ID: 10, VSI name: vpna, Total tunnels: 1 (1 up, 0 down, 0 defect, 0 blocked)
Tunnel name          Link ID    State    Type        Flood proxy
Tunnel0              0x5000000  UP       Manual      Disabled
<R1>
```

```
<R1>dis l2vpn vsi verbose
VSI Name: vpna
  VSI Index               : 0
  VSI State               : Up
  MTU                     : 1500
  Bandwidth               : -
  Broadcast Restrain      : -
  Multicast Restrain      : -
  Unknown Unicast Restrain: -
  MAC Learning            : Enabled
  MAC Table Limit         : -
  MAC Learning rate       : -
  Drop Unknown            : -
  Flooding                : Enabled
  VXLAN ID                : 10
  Tunnels:
    Tunnel Name          Link ID    State    Type        Flood proxy
    Tunnel0              0x5000000  UP       Manual      Disabled
  ACs:
    AC                              Link ID    State
    GE0/1                           0          Up
<R1>
```

```
<R1>dis l2vpn mac-address
MAC Address      State    VSI Name                        Link ID/Name  Aging
a07e-5cc2-0306   Dynamic  vpna                            0             Aging
a07e-61de-0406   Dynamic  vpna                            Tunnel0       Aging
--- 2 mac address(es) found  ---
<R1>
```

查看R2 VXLAN的隧道信息显示:

```
[R2]dis l2vpn vsi
Total number of VSIs: 1, 1 up, 0 down, 0 admin down

VSI Name                          VSI Index       MTU     State
vpna                              0               1500    Up
[R2]
```

```
[R2]dis vxlan tunnel
Total number of VXLANs: 1

VXLAN ID: 10, VSI name: vpna, Total tunnels: 1 (1 up, 0 down, 0 defect, 0 blocked)
Tunnel name          Link ID    State    Type        Flood proxy
Tunnel0              0x5000000  UP       Manual      Disabled
[R2]
```

```
[R2]dis l2vpn mac-address
MAC Address      State    VSI Name                        Link ID/Name  Aging
a07e-5cc2-0306   Dynamic  vpna                            Tunnel0       Aging
a07e-61de-0406   Dynamic  vpna                            0             Aging
--- 2 mac address(es) found  ---
[R2]
```

至此，VXLAN头端复制典型组网配置案例已完成!