组网及说明

组网说明：

本案例采用H3C HCL模拟器的F1060防火墙来模拟防火墙路由模式的典型部署。为了实现PC之间能够
相互通信，因此需要分别在FW、FW2采用三层互联，同时FW1、FW2采用路由模式，最终实现PC之
间能够相互PING通。

配置步骤

1、按照网络拓扑图正确配置IP地址

2、FW1、FW2建立OSPF邻居关系，为建立IBGP邻居关系奠定基础。

3、FW1、FW2建立IBGP邻居关系

配置关键点

FW1：

<H3C>sys

System View: return to User View with Ctrl+Z.

[H3C]sysname FW1

[FW1]acl basic 2002

[FW1-acl-ipv4-basic-2002]rule 0 permit source any

[FW1-acl-ipv4-basic-2002]quit

[FW1]

[FW1]zone-pair security source trust destination untrust

[FW1-zone-pair-security-Trust-Untrust]packet-filter 2002

[FW1-zone-pair-security-Trust-Untrust]quit

[FW1]

[FW1]zone-pair security source untrust destination trust

[FW1-zone-pair-security-Untrust-Trust]packet-filter 2002

[FW1-zone-pair-security-Untrust-Trust]quit

[FW1]

[FW1]zone-pair security source trust destination local

[FW1-zone-pair-security-Trust-Local]packet-filter 2002

[FW1-zone-pair-security-Trust-Local]quit

[FW1]

[FW1]zone-pair security source local destination trust

[FW1-zone-pair-security-Local-Trust]packet-filter 2002

[FW1-zone-pair-security-Local-Trust]quit

[FW1]

[FW1]zone-pair security source untrust destination local

[FW1-zone-pair-security-Untrust-Local]packet-filter 2002

[FW1-zone-pair-security-Untrust-Local]quit

[FW1]

[FW1]zone-pair security source local destination untrust

[FW1-zone-pair-security-Local-Untrust]packet-filter 2002

[FW1-zone-pair-security-Local-Untrust]quit

[FW1]

[FW1]zone-pair security source trust destination trust

[FW1-zone-pair-security-Trust-Trust]packet-filter 2002

[FW1-zone-pair-security-Trust-Trust]quit

[FW1]

[FW1]zone-pair security source untrust destination untrust

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[FW1-zone-pair-security-Untrust-Untrust]packet-filter 2002
[FW1-zone-pair-security-Untrust-Untrust]quit
[FW1]int loopback 0
[FW1-LoopBack0]ip address 1.1.1.1 32
[FW1-LoopBack0]quit
[FW1]int gi 1/0/2
[FW1-GigabitEthernet1/0/2]ip address 192.168.1.1 24
[FW1-GigabitEthernet1/0/2]quit
[FW1]int gi 1/0/3
[FW1-GigabitEthernet1/0/3]des <connect to FW2>
[FW1-GigabitEthernet1/0/3]ip address 10.0.0.1 30
[FW1-GigabitEthernet1/0/3]quit
[FW1]security-zone name Trust
[FW1-security-zone-Trust]import interface GigabitEthernet 1/0/2
[FW1-security-zone-Trust]quit
[FW1]security-zone name Untrust
[FW1-security-zone-Untrust]import interface GigabitEthernet 1/0/3
[FW1-security-zone-Untrust]import interface LoopBack 0
[FW1-security-zone-Untrust]quit
[FW1]ospf 1 router-id 1.1.1.1
[FW1-ospf-1]area 0.0.0.0
[FW1-ospf-1-area-0.0.0.0]network 10.0.0.1 0.0.0.0
[FW1-ospf-1-area-0.0.0.0]network 1.1.1.1 0.0.0.0
[FW1-ospf-1-area-0.0.0.0]quit
[FW1-ospf-1]quit
[FW1]bgp 100
[FW1-bgp-default]router-id 1.1.1.1
[FW1-bgp-default]peer 2.2.2.2 as-number 100
[FW1-bgp-default]peer 2.2.2.2 connect-interface LoopBack 0
[FW1-bgp-default]address-family ipv4 unicast
[FW1-bgp-default-ipv4]peer 2.2.2.2 enable
[FW1-bgp-default-ipv4]network 192.168.1.0 255.255.255.0
[FW1-bgp-default-ipv4]quit
[FW1-bgp-default]quit


FW2：
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname FW2
[FW2]acl basic 2002
[FW2-acl-ipv4-basic-2002]rule 0 permit source any
[FW2-acl-ipv4-basic-2002]quit
[FW2]
[FW2]zone-pair security source trust destination untrust
[FW2-zone-pair-security-Trust-Untrust]packet-filter 2002
[FW2-zone-pair-security-Trust-Untrust]quit
[FW2]
[FW2]zone-pair security source untrust destination trust
[FW2-zone-pair-security-Untrust-Trust]packet-filter 2002
[FW2-zone-pair-security-Untrust-Trust]quit
[FW2]
[FW2]zone-pair security source trust destination local
[FW2-zone-pair-security-Trust-Local]packet-filter 2002
[FW2-zone-pair-security-Trust-Local]quit
[FW2]
[FW2]zone-pair security source local destination trust
[FW2-zone-pair-security-Local-Trust]packet-filter 2002
[FW2-zone-pair-security-Local-Trust]quit
[FW2]
[FW2]zone-pair security source untrust destination local
[FW2-zone-pair-security-Untrust-Local]packet-filter 2002
[FW2-zone-pair-security-Untrust-Local]quit
[FW2]
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[FW2]zone-pair security source local destination untrust

[FW2-zone-pair-security-Local-Untrust]packet-filter 2002

[FW2-zone-pair-security-Local-Untrust]quit

[FW2]

[FW2]zone-pair security source trust destination trust

[FW2-zone-pair-security-Trust-Trust]packet-filter 2002

[FW2-zone-pair-security-Trust-Trust]quit

[FW2]

[FW2]zone-pair security source untrust destination untrust

[FW2-zone-pair-security-Untrust-Untrust]packet-filter 2002

[FW2-zone-pair-security-Untrust-Untrust]quit

[FW2]int loopback 0

[FW2-LoopBack0]ip address 2.2.2.2 32

[FW2-LoopBack0]quit

[FW2]int gi 1/0/2

[FW2-GigabitEthernet1/0/2]ip address 172.16.1.1 24

[FW2-GigabitEthernet1/0/2]quit

[FW2]int gi 1/0/3

[FW2-GigabitEthernet1/0/3]des <connect to FW1>

[FW2-GigabitEthernet1/0/3]ip address 10.0.0.2 30

[FW2-GigabitEthernet1/0/3]quit

[FW2]security-zone name Trust

[FW2-security-zone-Trust]import interface GigabitEthernet 1/0/2

[FW2-security-zone-Trust]quit

[FW2]security-zone name Untrust

[FW2-security-zone-Untrust]import interface GigabitEthernet 1/0/3

[FW2-security-zone-Untrust]import interface LoopBack 0

[FW2-security-zone-Untrust]quit

[FW2]ospf 1 router-id 2.2.2.2

[FW2-ospf-1]area 0.0.0.0

[FW2-ospf-1-area-0.0.0.0]network 10.0.0.2 0.0.0.0

[FW2-ospf-1-area-0.0.0.0]network 2.2.2.2 0.0.0.0

[FW2-ospf-1-area-0.0.0.0]quit

[FW2-ospf-1]quit

[FW2]bgp 100

[FW2-bgp-default]router-id 2.2.2.2

[FW2-bgp-default]peer 1.1.1.1 as-number 100

[FW2-bgp-default]peer 1.1.1.1 connect-interface LoopBack 0

[FW2-bgp-default]address-family ipv4 unicast

[FW2-bgp-default-ipv4]peer 1.1.1.1 enable

[FW2-bgp-default-ipv4]network 172.16.1.0 255.255.255.0

[FW2-bgp-default-ipv4]quit

[FW2-bgp-default]quit

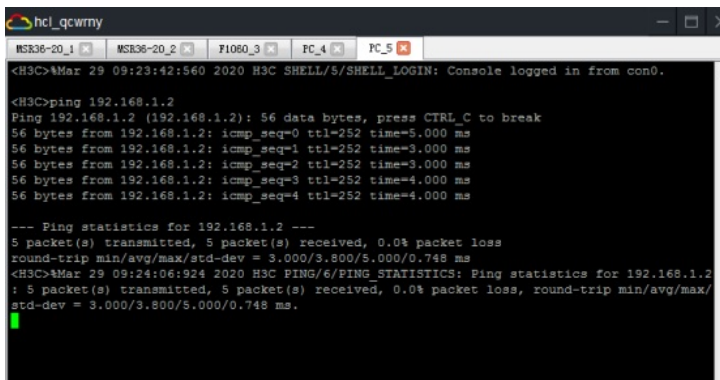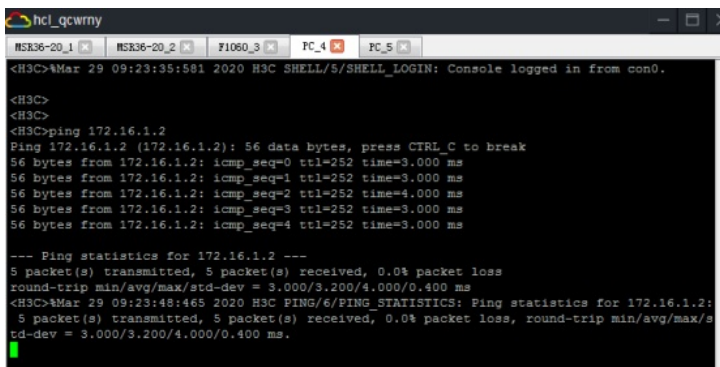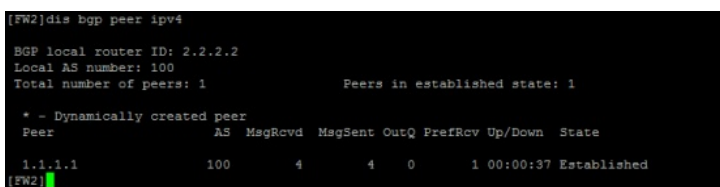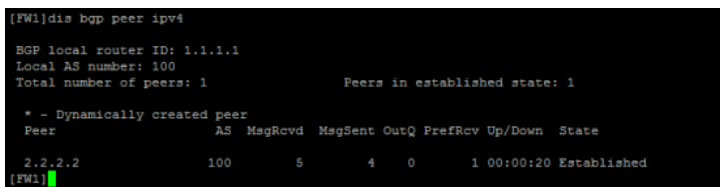测试：
PC都填写IP地址：
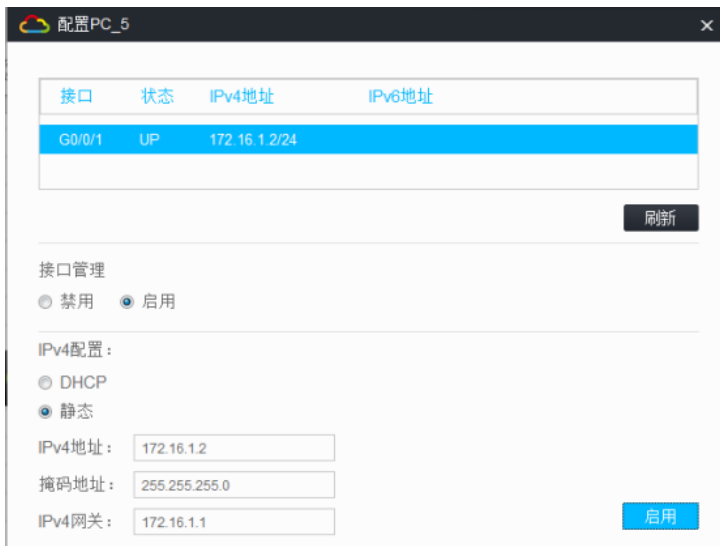
PC之间可以相互PING通：

分别查看FW1、FW2的BGP邻居信息：

分别查看FW1、FW2的路由表：

F1060_3 ✖   F1060_6 ✖   PC_4 ✖   PC_5 ✖

```
[FW1]dis ip routing-table

Destinations : 19      Routes : 19

Destination/Mask    Proto    Pre Cost    NextHop        Interface
0.0.0.0/32          Direct   0   0       127.0.0.1      InLoop0
1.1.1.1/32          Direct   0   0       127.0.0.1      InLoop0
2.2.2.2/32          O_INTRA  10  1       10.0.0.2       GE1/0/3
10.0.0.0/30         Direct   0   0       10.0.0.1       GE1/0/3
10.0.0.0/32         Direct   0   0       10.0.0.1       GE1/0/3
10.0.0.1/32         Direct   0   0       127.0.0.1      InLoop0
10.0.0.3/32         Direct   0   0       10.0.0.1       GE1/0/3
127.0.0.0/8         Direct   0   0       127.0.0.1      InLoop0
127.0.0.0/32        Direct   0   0       127.0.0.1      InLoop0
127.0.0.1/32        Direct   0   0       127.0.0.1      InLoop0
127.255.255.255/32  Direct   0   0       127.0.0.1      InLoop0
172.16.1.0/24       BGP      255 0       2.2.2.2        GE1/0/3
192.168.1.0/24      Direct   0   0       192.168.1.1    GE1/0/2
192.168.1.0/32      Direct   0   0       192.168.1.1    GE1/0/2
192.168.1.1/32      Direct   0   0       127.0.0.1      InLoop0
192.168.1.255/32    Direct   0   0       192.168.1.1    GE1/0/2
224.0.0.0/4         Direct   0   0       0.0.0.0        NULL0
224.0.0.0/24        Direct   0   0       0.0.0.0        NULL0
255.255.255.255/32  Direct   0   0       127.0.0.1      InLoop0
[FW1]
```

F1060_3 ✖   F1060_6 ✖   PC_4 ✖   PC_5 ✖

```
[FW2]dis ip routing-table

Destinations : 19      Routes : 19

Destination/Mask    Proto    Pre Cost    NextHop        Interface
0.0.0.0/32          Direct   0   0       127.0.0.1      InLoop0
1.1.1.1/32          O_INTRA  10  1       10.0.0.1       GE1/0/3
2.2.2.2/32          Direct   0   0       127.0.0.1      InLoop0
10.0.0.0/30         Direct   0   0       10.0.0.2       GE1/0/3
10.0.0.0/32         Direct   0   0       10.0.0.2       GE1/0/3
10.0.0.2/32         Direct   0   0       127.0.0.1      InLoop0
10.0.0.3/32         Direct   0   0       10.0.0.2       GE1/0/3
127.0.0.0/8         Direct   0   0       127.0.0.1      InLoop0
127.0.0.0/32        Direct   0   0       127.0.0.1      InLoop0
127.0.0.1/32        Direct   0   0       127.0.0.1      InLoop0
127.255.255.255/32  Direct   0   0       127.0.0.1      InLoop0
172.16.1.0/24       Direct   0   0       172.16.1.1     GE1/0/2
172.16.1.0/32       Direct   0   0       172.16.1.1     GE1/0/2
172.16.1.1/32       Direct   0   0       127.0.0.1      InLoop0
172.16.1.255/32     Direct   0   0       172.16.1.1     GE1/0/2
192.168.1.0/24      BGP      255 0       1.1.1.1        GE1/0/3
224.0.0.0/4         Direct   0   0       0.0.0.0        NULL0
224.0.0.0/24        Direct   0   0       0.0.0.0        NULL0
255.255.255.255/32  Direct   0   0       127.0.0.1      InLoop0
[FW2]
```

至此，F1060路由模式典型组网配置案例10（IBGP）已完成！