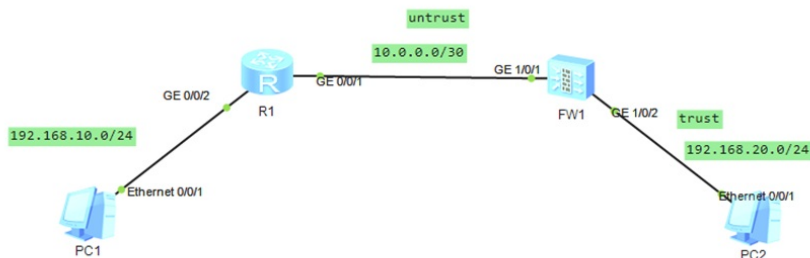


组网及说明



组网说明:

本案例采用ENSP模拟器的防火墙来部署路由模式的典型配置，安全域在网络拓扑图中已经有了明确的标识，全网通过ISIS路由协议实现PC之间的互通。

配置思路:

- 1、按照网络拓扑图配置IP地址和ISIS。
- 2、配置防火墙的安全域和安全策略。

配置步骤

R1:

```
<Huawei>u t m
Info: Current terminal monitor is off.
<Huawei>u t d
Info: Current terminal debugging is off.
<Huawei>system
Enter system view, return user view with Ctrl+Z.
[Huawei]sysname R1
[R1]int gi 0/0/2
[R1-GigabitEthernet0/0/2]ip address 192.168.10.1 24
[R1-GigabitEthernet0/0/2]quit
[R1]int gi 0/0/1
[R1-GigabitEthernet0/0/1]ip address 10.0.0.1 30
[R1-GigabitEthernet0/0/1]quit

[R1]isis 1
[R1-isis-1]network 10.0000.0000.0001.00
[R1-isis-1]is-level level-2
Info: IS Level Changed, Resetting ISIS...
[R1-isis-1]quit

[R1]int gi 0/0/2
[R1-GigabitEthernet0/0/2]isis enable 1
[R1-GigabitEthernet0/0/2]quit
[R1]int gi 0/0/1
[R1-GigabitEthernet0/0/1]isis enable 1
[R1-GigabitEthernet0/0/1]quit
```

FW1:

```
<USG6000V1>u t m
Info: Current terminal monitor is off.
<USG6000V1>u t d
Info: Current terminal debugging is off.
<USG6000V1>system
Enter system view, return user view with Ctrl+Z.
[USG6000V1]sysname FW1
[FW1]int gi 1/0/1
```

```
[FW1-GigabitEthernet1/0/1]ip address 10.0.0.2 30
[FW1-GigabitEthernet1/0/1]quit
[FW1]int gi 1/0/2
[FW1-GigabitEthernet1/0/2]ip address 192.168.20.1 24
[FW1-GigabitEthernet1/0/2]quit
```

```
[FW1]isis 1
[FW1-isis-1]network 10.0000.0000.0002.00
[FW1-isis-1]quit
[FW1]int gi 1/0/2
[FW1-GigabitEthernet1/0/2]isis enable 1
[FW1-GigabitEthernet1/0/2]quit
[FW1]int gi 1/0/1
[FW1-GigabitEthernet1/0/1]isis enable 1
[FW1-GigabitEthernet1/0/1]quit
```

```
[FW1]firewall zone trust
[FW1-zone-trust]add int gi 1/0/2
[FW1-zone-trust]quit
[FW1]firewall zone untrust
[FW1-zone-untrust]add int gi 1/0/1
[FW1-zone-untrust]quit
[FW1]security-policy
[FW1-policy-security]default action permit
Warning:Setting the default packet filtering to permit poses security risks. You
are advised to configure the security policy based on the actual data flows. Ar
e you sure you want to continue?[Y/N]y
[FW1-policy-security]quit
```

使用dis isis peer命令分别查看FW1和R1的isis邻居关系建立的情况，已完成建立！

```
[FW1]dis isis peer
2024-09-13 03:55:30.410

Peer information for ISIS(1)

  System Id      Interface      Circuit Id      State HoldTime Type      PRI
-----
0000.0000.0001  GE1/0/1        0000.0000.0001.02 Up    9s      L2      64

Total Peer(s): 1
[FW1]
```

```
[R1]dis isis peer

Peer information for ISIS(1)

  System Id      Interface      Circuit Id      State HoldTime Type      PRI
-----
0000.0000.0002  GE0/0/1        0000.0000.0001.02 Up    29s     L2      64

Total Peer(s): 1
[R1]
```

使用dis ip routing-table命令查看FW1和R1的路由表，均能学习到对端传递过来的路由。

```
[FW1]dis ip routing-table
2024-09-13 03:56:30.020
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
  Destinations : 7          Routes : 7

Destination/Mask    Proto  Pre  Cost    Flags NextHop         Interface
-----
10.0.0.0/30         Direct 0    0        D    10.0.0.2           GigabitEthernet
1/0/1
10.0.0.2/32         Direct 0    0        D    127.0.0.1          GigabitEthernet
1/0/1
127.0.0.0/8         Direct 0    0        D    127.0.0.1          InLoopBack0
127.0.0.1/32        Direct 0    0        D    127.0.0.1          InLoopBack0
192.168.10.0/24     ISIS-L2 15   20       D    10.0.0.1           GigabitEthernet
1/0/1
192.168.20.0/24     Direct 0    0        D    192.168.20.1      GigabitEthernet
1/0/2
192.168.20.1/32     Direct 0    0        D    127.0.0.1          GigabitEthernet
1/0/2
```

```
[R1]dis ip routing-table
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
Destinations : 7          Routes : 7

Destination/Mask    Proto  Pre  Cost    Flags NextHop         Interface
-----
10.0.0.0/30        Direct  0    0        D    10.0.0.1           GigabitEthernet
0/0/1
10.0.0.1/32        Direct  0    0        D    127.0.0.1          GigabitEthernet
0/0/1
127.0.0.0/8        Direct  0    0        D    127.0.0.1          InLoopBack0
127.0.0.1/32       Direct  0    0        D    127.0.0.1          InLoopBack0
192.168.10.0/24    Direct  0    0        D    192.168.10.1       GigabitEthernet
0/0/2
192.168.10.1/32    Direct  0    0        D    127.0.0.1          GigabitEthernet
0/0/2
192.168.20.0/24    ISIS-L2 15   20        D    10.0.0.2           GigabitEthernet
0/0/1
```

PC分别填写IP地址，且能相互PING通。

PC1 Configuration Window:

- Host Name: [Empty]
- MAC Address: 54-89-98-4B-3A-D4
- IPv4 Configuration:
 - Mode: Static DHCP
 - IP Address: 192.168.10.2
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.10.1
 - DNS1: 0.0.0.0
 - DNS2: 0.0.0.0
 - Automatically acquire DNS server address
- IPv6 Configuration:
 - Mode: Static DHCPv6
 - IPv6 Address: ::
 - Prefix Length: 128
 - IPv6 Gateway: ::
- Buttons: [应用]

PC2 Configuration Window:

- Host Name: [Empty]
- MAC Address: 54-89-98-CF-73-AE
- IPv4 Configuration:
 - Mode: Static DHCP
 - IP Address: 192.168.20.2
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.20.1
 - DNS1: 0.0.0.0
 - DNS2: 0.0.0.0
 - Automatically acquire DNS server address
- IPv6 Configuration:
 - Mode: Static DHCPv6
 - IPv6 Address: ::
 - Prefix Length: 128
 - IPv6 Gateway: ::
- Buttons: [应用]

PC1

基础配置 命令行 组播 UDP发包工具 串口

```
Welcome to use PC Simulator!

PC>ping 192.168.20.2

Ping 192.168.20.2: 32 data bytes, Press Ctrl_C to break
Request timeout!
From 192.168.20.2: bytes=32 seq=2 ttl=126 time=31 ms
From 192.168.20.2: bytes=32 seq=3 ttl=126 time=16 ms
From 192.168.20.2: bytes=32 seq=4 ttl=126 time=31 ms
From 192.168.20.2: bytes=32 seq=5 ttl=126 time=31 ms

--- 192.168.20.2 ping statistics ---
 5 packet(s) transmitted
 4 packet(s) received
20.00% packet loss
round-trip min/avg/max = 0/27/31 ms

PC>
```

PC2

基础配置 命令行 组播 UDP发包工具 串口

```
Welcome to use PC Simulator!

PC>ping 192.168.10.2

Ping 192.168.10.2: 32 data bytes, Press Ctrl_C to break
From 192.168.10.2: bytes=32 seq=1 ttl=126 time=47 ms
From 192.168.10.2: bytes=32 seq=2 ttl=126 time=31 ms
From 192.168.10.2: bytes=32 seq=3 ttl=126 time=31 ms
From 192.168.10.2: bytes=32 seq=4 ttl=126 time=31 ms
From 192.168.10.2: bytes=32 seq=5 ttl=126 time=32 ms

--- 192.168.10.2 ping statistics ---
 5 packet(s) transmitted
 5 packet(s) received
 0.00% packet loss
round-trip min/avg/max = 31/34/47 ms

PC>
```

至此，华为防火墙路由模式典型组网配置案例（ISIS）已完成！