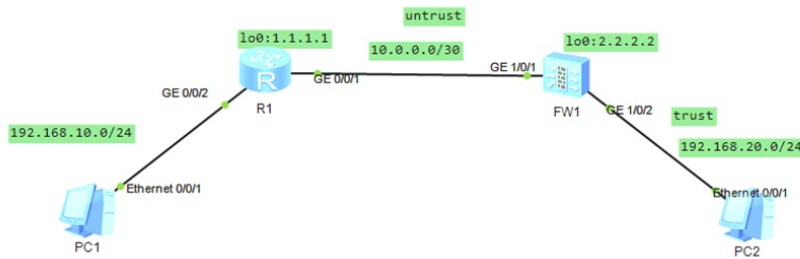


组网及说明



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RIP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RIP。
- 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]rip
[R1-rip-1]version 2
[R1-rip-1]network 10.0.0.0
[R1-rip-1]network 192.168.10.0
[R1-rip-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]rip
```

```
[FW1-rip-1]version 2
[FW1-rip-1]network 10.0.0.0
[FW1-rip-1]network 192.168.20.0
[FW1-rip-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. Are you sure you want to continue?[Y/N]y

```
[FW1-policy-security]quit
```

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 05:51:56.780
Route Flags: R - relay, D - download to fib
-----
Routing Tables: Public
      Destinations : 8           Routes : 8

Destination/Mask    Proto Pre  Cost   Flags NextHop         Interface
-----
          2.2.2.2/32   Direct 0    0           D   127.0.0.1           LoopBack0
          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 RIP    100  1           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 : 8           Routes : 8

Destination/Mask    Proto Pre  Cost   Flags NextHop         Interface
-----
          1.1.1.1/32   Direct 0    0           D   127.0.0.1           LoopBack0
          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 RIP    100  1           D   10.0.0.2            GigabitEthernet
0/0/1
```

PC分别填写IP地址，且能相互PING通。

PC1

基础配置 命令行 组播 UDP发包工具 串口

主机名:

MAC 地址: 54-89-98-4B-3A-D4

IPv4 配置

静态 DHCP 自动获取 DNS 服务器地址

IP 地址: 192 . 168 . 10 . 2 DNS1: 0 . 0 . 0 . 0

子网掩码: 255 . 255 . 255 . 0 DNS2: 0 . 0 . 0 . 0

网关: 192 . 168 . 10 . 1

IPv6 配置

静态 DHCPv6

IPv6 地址: ::

前缀长度: 128

IPv6 网关: ::

应用

PC2

基础配置 命令行 组播 UDP发包工具 串口

主机名:

MAC 地址: 54-89-98-CF-73-AE

IPv4 配置

静态 DHCP 自动获取 DNS 服务器地址

IP 地址: 192 . 168 . 20 . 2 DNS1: 0 . 0 . 0 . 0

子网掩码: 255 . 255 . 255 . 0 DNS2: 0 . 0 . 0 . 0

网关: 192 . 168 . 20 . 1

IPv6 配置

静态 DHCPv6

IPv6 地址: ::

前缀长度: 128

IPv6 网关: ::

应用

PC1

基础配置 命令行 组播 UDP发包工具 串口

```

Welcome to use PC Simulator!

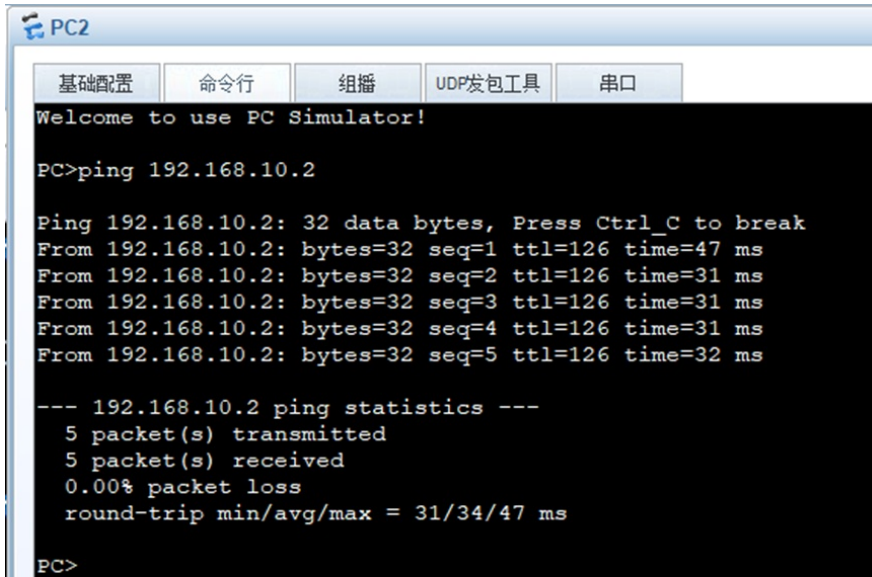
PC>ping 192.168.20.2

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>

```



The image shows a terminal window titled "PC2" with a menu bar containing "基础配置", "命令行", "组播", "UDP发包工具", and "串口". The terminal output is as follows:

```
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（RIP）已完成！