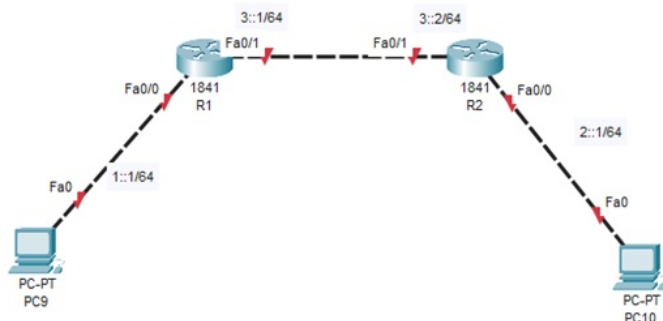


组网及说明



组网说明:

本案例采用思科模拟器的路由器来部署IPv6默认路由，实现PC之间IPv6的互通。

配置步骤

配置思路:

- 1、按照网络拓扑图配置IPv6地址。
- 2、分别配置R1、R2的IPv6默认路由。

配置关键点

R1:

```
Router>ena
```

```
Router#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
Router(config)#hos R1
```

```
R1(config)#int f 0/0
```

```
R1(config-if)#ipv6 enable
```

```
R1(config-if)#ipv6 address 1::1/64
```

```
R1(config-if)#no shutdown
```

```
R1(config-if)#exit
```

```
R1(config)#int f 0/1
```

```
R1(config-if)#ipv6 enable
```

```
R1(config-if)#ipv6 address 3::1/64
```

```
R1(config-if)#no shutdown
```

```
R1(config-if)#exit
```

```
R1(config)#ipv6 unicast-routing
```

```
R1(config)#ipv6 route ::0 3::2
```

```
R1(config)#do wr
```

Building configuration...

[OK]

```
R1(config)#
```

R2:

```
Router>ena
```

```
Router#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
Router(config)#hos R2
```

```
R2(config)#int f 0/0
```

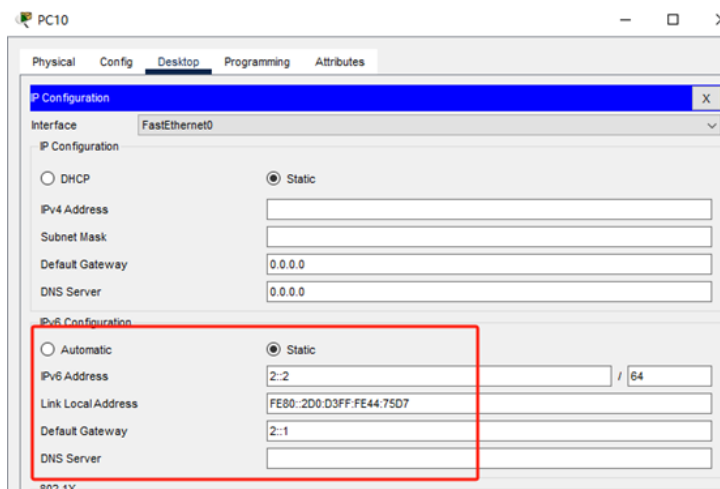
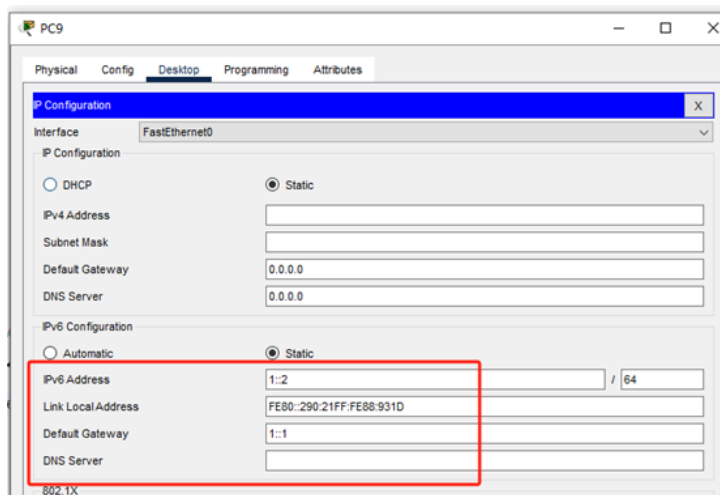
```
R2(config-if)#ipv6 enable
```

```
R2(config-if)#ipv6 address 2::1/64
```

```
R2(config-if)#no shutdown
```

```
R2(config-if)#exit
R2(config)#int f 0/1
R2(config-if)#ipv6 enable
R2(config-if)#ipv6 address 3::2/64
R2(config-if)#no shutdown
R2(config-if)#exit
R2(config)#ipv6 route ::0 3::1
R2(config)#ipv6 unicast-routing
R2(config)#do wr
Building configuration...
[OK]
```

分别给PC设置IPV6的地址，且能相互PING通。



PC9

Physical Config Desktop Programming Attributes

Command Prompt

```
Pinging 2::1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 2::1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 2::2

Pinging 2::2 with 32 bytes of data:

Reply from 2::2: bytes=32 time<1ms TTL=127
Reply from 2::2: bytes=32 time<1ms TTL=127
Reply from 2::2: bytes=32 time<1ms TTL=127
Reply from 2::2: bytes=32 time<1ms TTL=127

Ping statistics for 2::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 2::2

Pinging 2::2 with 32 bytes of data:

Reply from 2::2: bytes=32 time<1ms TTL=126
Reply from 2::2: bytes=32 time<1ms TTL=126
Reply from 2::2: bytes=32 time<1ms TTL=126
Reply from 2::2: bytes=32 time<1ms TTL=126

Ping statistics for 2::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

PC10

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 1::2

Pinging 1::2 with 32 bytes of data:

Reply from 1::2: bytes=32 time<1ms TTL=127
Reply from 1::2: bytes=32 time<1ms TTL=127
Reply from 1::2: bytes=32 time<1ms TTL=127
Reply from 1::2: bytes=32 time<1ms TTL=127

Ping statistics for 1::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 1::2

Pinging 1::2 with 32 bytes of data:

Reply from 1::2: bytes=32 time<1ms TTL=126
Reply from 1::2: bytes=32 time<1ms TTL=126
Reply from 1::2: bytes=32 time=7ms TTL=126
Reply from 1::2: bytes=32 time<1ms TTL=126

Ping statistics for 1::2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 1ms

C:\>
```

分别查看R1、R2的IPv6路由表，发现IPv6默认路由已经写入到路由表中。

```
R1(config)#do sh ipv6 route
IPv6 Routing Table - 6 entries
Codes: C - Connected, L - Local, S - Static, R - RIP, B - BGP
       U - Per-user Static route, M - MIPv6
       I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary
       ND - ND Default, NDp - ND Prefix, DCE - Destination, NDR - Redirect
       O - OSPF intra, OI - OSPF inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
       ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
       E - EIGRP, EX - EIGRP external
S    ::0 [1/0]
    via 3::2
C    1::/64 [0/0]
    via ::, FastEthernet0/0
L    1::1/128 [0/0]
    via ::, FastEthernet0/0
C    3::/64 [0/0]
    via ::, FastEthernet0/1
L    3::1/128 [0/0]
    via ::, FastEthernet0/1
L    FF00::/8 [0/0]
    via ::, Null0
R1(config)#
```

```

R2(config)#do sh ipv6 route
IPv6 Routing Table - 6 entries
Codes: C - Connected, L - Local, S - Static, R - RIP, B - BGP
        U - Per-user Static route, M - MIPv6
        I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary
        ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect
        O - OSPF intra, OI - OSPF inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
        ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
        D - EIGRP, EX - EIGRP external
S  ::0 [1/0]
   via 3::1
C  2::/64 [0/0]
   via ::, FastEthernet0/0
L  2::1/128 [0/0]
   via ::, FastEthernet0/0
C  3::/64 [0/0]
   via ::, FastEthernet0/1
L  3::2/128 [0/0]
   via ::, FastEthernet0/1
L  FF00::/8 [0/0]
   via ::, Null0
R2(config)#

```

至此，思科路由器IPv6默认路由典型组网配置案例已完成！