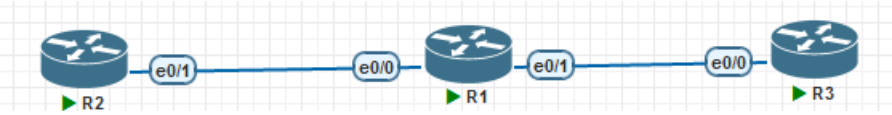
QIUWEN

Static Route Configure



R1 Loopback0 1.1.1.1 255.255.255.255

R2 Loopback0 2.2.2.2 255.255.255.255

R3 Loopback0 3.3.3.3.255.255.255.255

R1----------R2 12.1.1.0/24

R1----------R3 13.1.1.0/24

R1 e0/0----------R2 12.1.1.1

R1 e0/1----------R3 13.1.1.1

R2 e0/1----------R1 12.1.1.2

R3 e0/0----------R1 13.1.1.3

Using the loopback address to simulate the PC

R1

Router>en

Router#conf t

Router(config)#hostname R1

R1(config)#interface ethernet 0/0

R1(config-if)#no shutdown

R1(config-if)#ip address 12.1.1.1 255.255.255.0

R1(config-if)#exit

R1(config)#interface ethernet 0/1

R1(config-if)#no shutdown

R1(config-if)#ip address 13.1.1.1 255.255.255.0

R1(config-if)#exit

R1(config)#interface loopback 0

R1(config-if)#ip address 1.1.1.1 255.255.255.255

R1(config-if)#end

R1#show ip interface brief

```
Interface              IP-Address      OK? Method Status                Protocol
Ethernet0/0            12.1.1.1        YES manual up                    up
Ethernet0/1            13.1.1.1        YES manual up                    up
Ethernet0/2            unassigned      YES unset  administratively down down
Ethernet0/3            unassigned      YES unset  administratively down down
Loopback0              1.1.1.1         YES manual up                    up
```

R1#show ip route

```
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      1.0.0.0/32 is subnetted, 1 subnets
C        1.1.1.1 is directly connected, Loopback0
      12.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        12.1.1.0/24 is directly connected, Ethernet0/0
L        12.1.1.1/32 is directly connected, Ethernet0/0
      13.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        13.1.1.0/24 is directly connected, Ethernet0/1
L        13.1.1.1/32 is directly connected, Ethernet0/1
```

R2

Router>en

Router#conf t

Router(config)#hostname R2

R2(config)#interface loopback 0

R2(config-if)#ip address 2.2.2.2 255.255.255.255

R2(config-if)#exit

R2(config)#interface ethernet 0/1

R2(config-if)#no shutdown

R2(config-if)#ip address 12.1.1.2 255.255.255.0

R2(config-if)#end

R2#show ip interface brief

```
Interface              IP-Address      OK? Method Status                Protocol
Ethernet0/0            unassigned      YES unset  administratively down down
Ethernet0/1            12.1.1.2        YES manual up                    up
Ethernet0/2            unassigned      YES unset  administratively down down
Ethernet0/3            unassigned      YES unset  administratively down down
Loopback0              2.2.2.2         YES manual up                    up
```

```
R2#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      2.0.0.0/32 is subnetted, 1 subnets
C        2.2.2.2 is directly connected, Loopback0
      12.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        12.1.1.0/24 is directly connected, Ethernet0/1
L        12.1.1.2/32 is directly connected, Ethernet0/1
```

R3

Router>en

Router#conf t

Router(config)#hostname R3

R3(config)#interface loopback 0

R3(config-if)#ip address 3.3.3.3 255.255.255.255

R3(config-if)#exit

R3(config)#interface ethernet 0/0

R3(config-if)#no shutdown

R3(config-if)#ip address 13.1.1.3 255.255.255.0

R3(config-if)#end

R3#show ip interface brief

QIUWEN

```
Interface                  IP-Address      OK? Method Status                Protocol
Ethernet0/0                13.1.1.3        YES manual up                    up
Ethernet0/1                unassigned      YES unset  administratively down down
Ethernet0/2                unassigned      YES unset  administratively down down
Ethernet0/3                unassigned      YES unset  administratively down down
Loopback0                  3.3.3.3         YES manual up                    up
```

```
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      3.0.0.0/32 is subnetted, 1 subnets
C        3.3.3.3 is directly connected, Loopback0
      13.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        13.1.1.0/24 is directly connected, Ethernet0/0
L        13.1.1.3/32 is directly connected, Ethernet0/0
```

Static Route

IP	route	NetID	subnet	出接口	下一跳地址

R1(config)#ip route 2.2.2.2 255.255.255.255 ethernet 0/0 12.1.1.2

R1(config)#ip route 3.3.3.3 255.255.255.255 ethernet 0/1 13.1.1.3

R1(config)#end

R1#show ip route

```
R1#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      1.0.0.0/32 is subnetted, 1 subnets
C        1.1.1.1 is directly connected, Loopback0
      2.0.0.0/32 is subnetted, 1 subnets
S        2.2.2.2 [1/0] via 12.1.1.2, Ethernet0/0
      3.0.0.0/32 is subnetted, 1 subnets
S        3.3.3.3 [1/0] via 13.1.1.3, Ethernet0/1
      12.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        12.1.1.0/24 is directly connected, Ethernet0/0
L        12.1.1.1/32 is directly connected, Ethernet0/0
      13.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        13.1.1.0/24 is directly connected, Ethernet0/1
L        13.1.1.1/32 is directly connected, Ethernet0/1
```

R2(config)#ip route 1.1.1.1 255.255.255.255 ethernet 0/1 12.1.1.1

R2(config)#end

R2#show ip route

```
R2#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      1.0.0.0/32 is subnetted, 1 subnets
S        1.1.1.1 [1/0] via 12.1.1.1, Ethernet0/1
      2.0.0.0/32 is subnetted, 1 subnets
C        2.2.2.2 is directly connected, Loopback0
      12.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C        12.1.1.0/24 is directly connected, Ethernet0/1
L        12.1.1.2/32 is directly connected, Ethernet0/1
```

R3(config)#ip route 1.1.1.1 255.255.255.255 ethernet 0/0 13.1.1.1

R3(config)#end

R3#show ip route

```
R3#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
       ia - IS-IS inter area, * - candidate default, U - per-user static route
       o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP
       a - application route
       + - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

      1.0.0.0/32 is subnetted, 1 subnets
S        1.1.1.1 [1/0] via 13.1.1.1, Ethernet0/0
      3.0.0.0/32 is subnetted, 1 subnets
C        3.3.3.3 is directly connected, Loopback0
     13.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C       13.1.1.0/24 is directly connected, Ethernet0/0
L       13.1.1.3/32 is directly connected, Ethernet0/0
```

Result

```
R1#ping 3.3.3.3 source 1.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds:
Packet sent with a source address of 1.1.1.1
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
R1#ping 2.2.2.2 sour
R1#ping 2.2.2.2 source 1.1.1.1
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 2.2.2.2, timeout is 2 seconds:
Packet sent with a source address of 1.1.1.1
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
```

```
R2#ping 1.1.1.1 source 2.2.2.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds:
Packet sent with a source address of 2.2.2.2
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
```

```
R3#ping 1.1.1.1 source 3.3.3.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 1.1.1.1, timeout is 2 seconds:
Packet sent with a source address of 3.3.3.3
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
```