

ISIS Redistribute Static

Purpose	Redistribute Static routes via ISIS to neighbor.
Test setup	<p>The diagram illustrates a network topology with three routers: R1, R2, and R3. R1 is connected to R2 via interface G0/1 with IP 192.168.2.1/24. R2 is connected to R3 via interface G0/2 with IP 192.168.1.1/24. R2 has a loopback interface Loopback 10 (10.10.10.10). R1 has a loopback interface Loopback 0 (1.1.1.1/32). R3 has two loopback interfaces: Loopback 1 (2.2.2.1/32) and Loopback 5 (5.5.5.5). R1 and R2 are in OSPF Area 1. R2 and R3 are in ISIS Area 1.</p>
Test configuration	<pre> Router 2 interface Loopback0 ip address 10.10.10.10 255.255.255.255 no ip directed-broadcast ip router isis 1 ! interface GigaEthernet0/2 ip address 192.168.1.1 255.255.255.0 no ip directed-broadcast ip router isis 1 ip http firewalltype 0 ! ip route 172.16.253.0 255.255.255.0 172.16.254.1 ! router isis 1 net 00.0001.0000.0000.0001.00 redistribute static level-1-2 Router 3 interface Loopback5 ip address 5.5.5.5 255.255.255.255 no ip directed-broadcast ip router isis 1 ! interface GigaEthernet0/2 ip address 192.168.1.2 255.255.255.0 no ip directed-broadcast ip router isis 1 ip http firewalltype 0 ! router isis 1 net 00.0001.0000.0000.0002.00 </pre>
Procedure	<p>Connect two routers on ethernet port, configure Router ISIS protocol, enable isis routing on interested interfaces, define NET ID on each router under ISIS process. R2 has static route toward 172.16.253.0 /24 network.</p>

	Redistribute static route on R2 via ISIS for R3. Verify ISIS routing table on R3 receives static route advertised by R2.
Test result	<p>R2 ISIS Routing table – Discovered R3 ISIS advertised networks. Ping from R3 to Static route network behind R2.</p> <pre> Router_3_62#sh isis route Codes: C - connected, E - external, L1 - IS-IS level-1, L2 - IS-IS level-2 ia - IS-IS inter area, D - discard, e - external metric INSTANCE 1 :: Destination Metric Next-Hop Interface C 5.5.5.5 10 -- -- L1 10.10.10.10 20 192.168.1.1 GigaEthernet0/2 L2 10.10.10.10 20 192.168.1.1 GigaEthernet0/2 L1 172.16.253.0 10 192.168.1.1 GigaEthernet0/2 L2 172.16.253.0 10 192.168.1.1 GigaEthernet0/2 C 192.168.1.0 10 -- -- Router_3_62#ping 172.16.253.1 PING 172.16.253.1 (172.16.253.1): 56 data bytes --- 172.16.253.1 ping statistics --- 5 packets transmitted, 0 packets received, 100% packet loss Router_3_62#ping 172.16.253.2 PING 172.16.253.2 (172.16.253.2): 56 data bytes !!!! --- 172.16.253.2 ping statistics --- 5 packets transmitted, 5 packets received, 0% packet loss round-trip min/avg/max = 0/0/3 ms Router_3_62# </pre> <p>R2 - show interface</p> <pre> Router_2_20#sh ip int brief Interface IP-Address Method Protocol-Status Null0 unassigned manual up GigaEthernet0/0 172.16.254.234 manual up GigaEthernet0/1 192.168.2.10 manual up GigaEthernet0/2 192.168.1.1 manual up GigaEthernet0/3 unassigned manual down GigaEthernet0/4 unassigned manual down GigaEthernet0/5 unassigned manual down Async0/6 unassigned manual down Loopback0 10.10.10.10 manual up Router_2_20# </pre>
Status	If configured correctly, Router 2 to redistribute static routes via ISIS, neighbor R3 will learn static routes configured on R2.