

ISIS Multiple Process (Instance)

Purpose	Configuring & running multiple processes (Instances) of ISIS on single Router.
Test setup	<p>The diagram illustrates a network topology with three routers: R1, R2, and R3. R1 and R2 are connected via their G0/1 interfaces (192.168.2.1/24 and 192.168.2.10/24). R2 and R3 are connected via their G0/2 interfaces (192.168.1.1/24 and 192.168.1.2/24). R1 has two loopback interfaces: Loopback 0 (1.1.1.1/32) and Loopback 50 (50.1.1.1). R2 has two loopback interfaces: Loopback 10 (10.10.10.10) and Loopback 100 (100.1.1.1). R3 has two loopback interfaces: Loopback 1 (2.2.2.1/32) and Loopback 5 (5.5.5.5). ISIS Area 2 (red) is configured on R1 and R2. ISIS Area 1 (blue) is configured on R2 and R3.</p>
Test configuration	<pre> Router 1 ! interface Loopback50 ip address 50.1.1.1 255.255.255.255 no ip directed-broadcast ip router isis 2 ! interface GigaEthernet0/1 ip address 192.168.2.1 255.255.255.0 no ip directed-broadcast ipv6 enable ip router isis 2 ip http firewalltype 0 ! router isis 2 net 00.0002.0000.0000.0003.00 ! Router 2 ! interface Loopback0 ip address 10.10.10.10 255.255.255.255 no ip directed-broadcast ip router isis 1 ! interface Loopback100 ip address 100.1.1.1 255.255.255.255 no ip directed-broadcast ip router isis 2 ! interface GigaEthernet0/1 ip address 192.168.2.10 255.255.255.0 </pre>

	<pre> no ip directed-broadcast ipv6 enable ipv6 address autoconfig ipv6 dhcp client na ip router isis 2 ip http firewalltype 0 ! 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 ! router isis 1 net 00.0001.0000.0000.0001.00 router isis 2 is-type level-1 net 00.0002.0000.0000.0002.00 ! 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>Configure 2 ISIS process (instances) on R2. Configure single ISIS process on R1 & R2. Check R2 is forming ISIS neighborship with R1 & R3 using different process.</p>
Test result	

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Router_2_20#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
L1  0.0.0.0         10           192.168.1.2   GigaEthernet0/2
L1  5.5.5.5         20           192.168.1.2   GigaEthernet0/2
L2  5.5.5.5         20           192.168.1.2   GigaEthernet0/2
C   10.10.10.10     10           --            --
C   192.168.1.0     10           --            --

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 2 ::
  Destination      Metric      Next-Hop      Interface
L1  50.1.1.1        20           192.168.2.1   GigaEthernet0/1
C   100.1.1.1       10           --            --
C   192.168.2.0     10           --            --

Router_2_20#

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Router_1_10#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 2 ::
  Destination      Metric      Next-Hop      Interface
C   50.1.1.1        10           --            --
L1  100.1.1.1       20           192.168.2.10  GigaEthernet0/1
C   192.168.2.0     10           --            --

Router_1_10#

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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
L2  0.0.0.0         20           192.168.1.1   GigaEthernet0/2
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
L2  50.1.1.1        30           192.168.1.1   GigaEthernet0/2
L2  100.1.1.1       20           192.168.1.1   GigaEthernet0/2
C   192.168.1.0     10           --            --
L2  192.168.2.0     20           192.168.1.1   GigaEthernet0/2

Router_3_62#

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Status

Different Instances shows respective neighborhood UP.
 Routing table shows Individual routing entries for both ISIS process (instances).