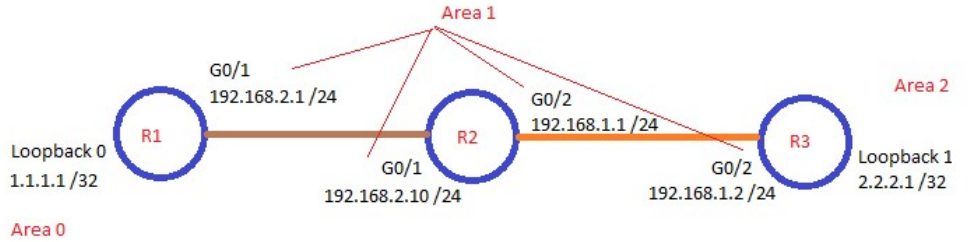


OSPF Virtual Link

Purpose	Establish Virtual Link between non-continuous area.
Test setup	
Test configuration	<pre> Router1 config interface Loopback0 ip address 1.1.1.1 255.255.255.255 no ip directed-broadcast ! interface GigaEthernet0/1 ip address 192.168.2.1 255.255.255.0 no ip directed-broadcast ipv6 enable ipv6 address 10::1/64 ipv6 dhcp server IPv6 ip http firewalltype 0 ! router ospf 1 router-id 1.1.1.1 network 192.168.2.0 255.255.255.0 area 1 network 1.1.1.1 255.255.255.255 area 0 area 1 virtual-link 2.2.2.1 Router2 config interface GigaEthernet0/1 ip address 192.168.2.10 255.255.255.0 no ip directed-broadcast ipv6 enable ipv6 address autoconfig ipv6 dhcp client na ip ospf message-digest-key 1 md5 0 test ip http firewalltype 0 ! interface GigaEthernet0/2 ip address 192.168.1.1 255.255.255.0 no ip directed-broadcast ip http firewalltype 0 ! router ospf 1 router-id 192.168.2.10 network 192.168.2.0 255.255.255.0 area 1 network 192.168.1.0 255.255.255.0 area 1 </pre>

	<p>Router3 config</p> <pre> interface Loopback1 ip address 2.2.2.1 255.255.255.255 no ip directed-broadcast ip ospf password 0 test ! interface GigaEthernet0/0 ip address 172.16.254.235 255.255.255.0 no ip directed-broadcast ip http firewalltype 0 ! interface GigaEthernet0/1 no ip address no ip directed-broadcast ip http firewalltype 0 ! interface GigaEthernet0/2 ip address 192.168.1.2 255.255.255.0 no ip directed-broadcast ip http firewalltype 0 router ospf 1 router-id 2.2.2.1 network 2.2.2.0 255.255.255.0 area 2 network 192.168.1.0 255.255.255.0 area 1 area 1 virtual-link 1.1.1.1 </pre>
Procedure	
Test result	<p>Virtual Link status will be "UP"</p> <pre> Router_1_10#sh ip ospf virtual-link Virtual Link Neighbor ID 2.2.2.1, 0x1c731858, (UP) Run as Demand-Circuit TransArea: 1, Cost is 2 Hello interval is 10, Dead timer is 40 Retransmit is 5 INTF Adjacency state is IPOINT_TO_POINT Null authentication enabled </pre> <pre> Router_3_62#sh ip ospf virtual-link Virtual Link Neighbor ID 1.1.1.1, 0x1c75b11c, (UP) Run as Demand-Circuit TransArea: 1, Cost is 2 Hello interval is 10, Dead timer is 40 Retransmit is 5 INTF Adjacency state is IPOINT_TO_POINT Null authentication enabled </pre> <p>Ping between Virtual link will be successful.</p>

	<pre>Router_1_10#ping 2.2.2.1 PING 2.2.2.1 (2.2.2.1): 56 data bytes !!!! --- 2.2.2.1 ping statistics --- 5 packets transmitted, 5 packets received, 0% packet loss round-trip min/avg/max = 0/0/0 ms Router_1_10# Router_3_62#ping 1.1.1.1 PING 1.1.1.1 (1.1.1.1): 56 data bytes !!!! --- 1.1.1.1 ping statistics --- 5 packets transmitted, 5 packets received, 0% packet loss round-trip min/avg/max = 0/0/1 ms Router_3_62#</pre>
Status	Virtual Link status will be UP. Ping will work.