RTA：

enable

configure terminal

host RTA

**ip multicast-routing**

interface gigabitethernet 0/1

ip address 10.2.3.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface gigabitethernet 0/2

ip address 10.2.4.1 255.255.255.0

**ip pim sparse-mode**

**bandwidth 100**

no shutdown

exit

interface gigabitethernet 0/0

ip address 10.2.9.2 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface loopback 0

ip address 10.2.0.4 255.255.255.255

no shutdown

exit

interface fastethernet 1/1

ip address 10.0.16.6 255.255.255.252

no shutdown

exit

**ip pim rp-address 10.2.0.1**

router ospf 1

**router-id 10.2.0.4**

network 10.2.3.0 0.0.0.255 area 0

network 10.2.4.0 0.0.0.255 area 0

network 10.2.0.4 0.0.0.0 area 0

network 10.2.9.0 0.0.0.255 area 0

exit

router bgp 12（since our AS number is 12）

network 10.1.0.48 mask 255.255.255.252

redistribute ospf 1

%network 10.2.9.0 mask 255.255.255.0

%network 10.2.1.0 mask 255.255.255.0

%network 10.2.5.0 mask 255.255.255.0

%network 10.2.3.0 mask 255.255.255.0

%network 10.2.4.0 mask 255.255.255.0

network 10.2.0.0 mask 255.255.240.0

aggregate-address 10.2.0.0 255.255.240.0 summary-only

neighbor 10.2.0.2 remote-as 12

neighbor 10.2.0.2 update-source loopback 0

neighbor 10.2.0.2 next-hop-self

neighbor 10.0.16.5 remote-as 1

neighbor 10.0.16.5 route-map PREF-FROM\_AS1 in

route-map PREF-FROM\_AS1 20

set local-preference 300

exit

no auto-summary

no synchronization

ip name-server 10.2.6.2

RTB:

enable

configure terminal

host RTB

**ip multicast-routing**

interface gigabitethernet 0/0

ip address 10.2.1.1 255.255.255.0

**ip pim sparse-mode**

**bandwidth 100**

no shutdown

exit

interface gigabitethernet 0/1

ip address 10.2.9.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface gigabitethernet 0/2

ip address 10.2.5.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface loopback 0

ip address 10.2.0.2 255.255.255.255

no shutdown

exit

interface fastethernet 1/0

ip address 10.1.0.51 255.255.255.252

no shutdown

exit

**ip pim rp-address 10.2.0.1**

router ospf 1

**router-id 10.2.0.2**

network 10.2.1.0 0.0.0.255 area 0

network 10.2.5.0 0.0.0.255 area 0

network 10.2.0.2 0.0.0.0 area 0

network 10.2.9.0 0.0.0.255 area 0

end

router bgp 12

network 10.1.0.48 mask 255.255.255.252

redistribute ospf 1

%network 10.2.9.0 mask 255.255.255.0

%network 10.2.1.0 mask 255.255.255.0

%network 10.2.5.0 mask 255.255.255.0

%network 10.2.3.0 mask 255.255.255.0

%network 10.2.4.0 mask 255.255.255.0

neighbor 10.1.0.49 remote-as 11

neighbor 10.2.0.4 remote-as 12

neighbor 10.2.0.4 update-source loopback 0

neighbor 10.2.0.4 next-hop-self

no auto-summary

no synchronization

exit

ip name-server 10.2.6.2

RTC:

enable

configure terminal

host RTC

**ip multicast-routing**

interface gigabitethernet 0/0

ip address 10.2.1.2 255.255.255.0

**ip pim sparse-mode**

**bandwidth 100**

no shutdown

exit

interface gigabitethernet 0/1

ip address 10.2.2.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface gigabitethernet 0/2

ip address 10.2.4.2 255.255.255.0

**ip pim sparse-mode**

**bandwidth 100**

no shutdown

exit

interface fastethernet 1/0

ip address 10.2.7.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface loopback 0

ip address 10.2.0.1 255.255.255.255

no shutdown

exit

**ip pim rp-address 10.2.0.1**

interface fastethernet 1/0

ip address 10.2.7.1 255.255.255.0

ip helper-address 10.2.6.2

no shutdown

exit

router ospf 1

**router-id 10.2.0.1**

network 10.2.1.0 0.0.0.255 area 0

network 10.2.2.0 0.0.0.255 area 0

network 10.2.0.1 0.0.0.0 area 0

network 10.2.4.0 0.0.0.255 area 0

network 10.2.7.0 0.0.0.255 area 0

end

ip name-server 10.2.6.2

RTD:

enable

configure terminal

host RTD

**ip multicast-routing**

interface gigabitethernet 0/0

ip address 10.2.3.2 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface gigabitethernet 0/1

ip address 10.2.2.fhelp 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface gigabitethernet 0/2

ip address 10.2.5.2 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

interface loopback 0

ip address 10.2.0.3 255.255.255.255

no shutdown

exit

interface fastethernet 1/0

ip address 10.2.6.1 255.255.255.0

**ip pim sparse-mode**

no shutdown

exit

**ip pim rp-address 10.2.0.1**

router ospf 1

**router-id 10.2.0.3**

network 10.2.2.0 0.0.0.255 area 0

network 10.2.3.0 0.0.0.255 area 0

network 10.2.0.3 0.0.0.0 area 0

network 10.2.5.0 0.0.0.255 area 0

network 10.2.6.0 0.0.0.255 area 0

end

ip name-server 10.2.6.2

For IPv6:

RTA：

configure terminal

interface gigabitethernet 0/0

ipv6 address fd00:10:2::C003:1/112

ipv6 enable

no shutdown

exit

ipv6 unicast-routing

interface gigabitethernet 0/1

ipv6 address fd00:10:2::C009:2/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/2

ipv6 address fd00:10:2::C004:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/0

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/1

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/2

ipv6 ospf 1 area 0

exit

RTB:

interface gigabitethernet 0/0

ipv6 address fd00:10:2::C001:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/1

ipv6 address fd00:10:2::C009:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/2

ipv6 address fd00:10:2::C005:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/0

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/1

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/2

ipv6 ospf 1 area 0

exit

RTC:

interface gigabitethernet 0/1

ipv6 address fd00:10:2::C002:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/0

ipv6 address fd00:10:2::C001:2/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/2

ipv6 address fd00:10:2::C004:2/112

ipv6 enable

no shutdown

exit

interface fastethernet 1/0

ipv6 address fd00:10:2::C007:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/0

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/1

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/2

ipv6 ospf 1 area 0

exit

interface fastethernet 1/0

ipv6 ospf 1 area 0

exit

RTD:

interface gigabitethernet 0/0

ipv6 address fd00:10:2::C003:2/112

ipv6 enable

no shutdown

exit

ipv6 unicast-routing

interface gigabitethernet 0/1

ipv6 address fd00:10:2::C002:2/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/2

ipv6 address fd00:10:2::C005:2/112

ipv6 enable

no shutdown

exit

interface fastethernet 1/0

ipv6 address fd00:10:2::C006:1/112

ipv6 enable

no shutdown

exit

interface gigabitethernet 0/0

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/1

ipv6 ospf 1 area 0

exit

interface gigabitethernet 0/2

ipv6 ospf 1 area 0

exit

interface fastethernet 1/0

ipv6 ospf 1 area 0

exit