

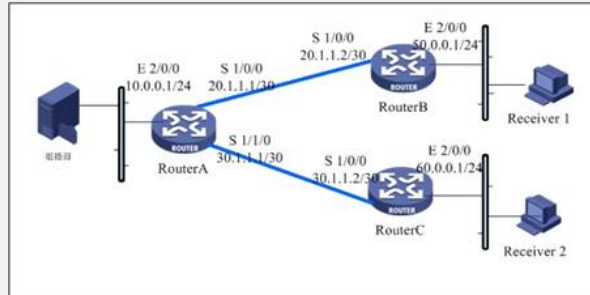
Typical Configuration of Multicast

1.1 PIM-DM Mode

[Requirements]

Multicast Source is the multicast source. Receiver 1 and Receiver 2 are two receivers of the multicast group.

[Networking diagram]



[Configuration script]

Configuration script on Router A

```
#
sysname RouterA
#
router id 1.1.1.1
#
multicast routing-enable      /Enable the multicast routing/
#
radius scheme system
#
domain system
#
interface Ethernet2/0/0
ip address 10.1.1.1 255.255.255.0
pim dm                        /Set the PIM-DM mode/
#
interface Serial1/0/0
link-protocol ppp
ip address 20.1.1.1 255.255.255.252
pim dm                        /Set the PIM-DM mode/
#
interface Serial1/1/0
link-protocol ppp
ip address 30.1.1.1 255.255.255.252
pim dm                        /Set the PIM-DM mode/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.1 0.0.0.0
network 10.1.1.0 0.0.0.255
network 20.1.1.0 0.0.0.3
network 30.1.1.0 0.0.0.3
#
user-interface con 0
user-interface vty 0 4
#
return
```

Configuration script on Router B

```

#
sysname RouterB
#
router id 1.1.1.2
#
multicast routing-enable      /Enable the multicast routing/
#
radius scheme system
#
domain system
#
interface Ethernet2/0/0
ip address 50.1.1.1 255.255.255.0
pim dm                        /Set the PIM-DM mode/
#
interface Serial1/0/0
link-protocol ppp
ip address 20.1.1.2 255.255.255.252
pim dm                        /Set the PIM-DM mode/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.2 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.2 0.0.0.0
network 20.1.1.0 0.0.0.3
network 50.1.1.0 0.0.0.255
#
user-interface con 0
user-interface vty 0 4
#
return

```

Configuration script on Router C

```

#
sysname RouterC
#
router id 1.1.1.3
#
multicast routing-enable      /Enable the multicast routing/
#
radius scheme system
#
domain system
#
interface Ethernet2/0/0
ip address 60.1.1.1 255.255.255.0
pim dm                        /Set the PIM-DM mode/
#
interface Serial1/0/0
link-protocol ppp
ip address 30.1.1.2 255.255.255.252
pim dm                        /Set the PIM-DM mode/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.3 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.3 0.0.0.0
network 30.1.1.0 0.0.0.3
network 60.1.1.0 0.0.0.255
#
user-interface con 0
user-interface vty 0 4
#
return

```

[Verification]

```

Multicast routing table of Router A:
[RouterA]disp multicast routing-table
Multicast Routing Table
Total 1 entry
(10.1.1.2, 226.1.1.1)
Uptime: 00:00:18, Timeout in 289 sec
Upstream interface: Ethernet2/0/0(10.1.1.1)
Downstream interface list: NULL
Matched 1 entry

```

[Tip]

1. PIM is independent of specific unicast routing protocols. Therefore, we suppose that all routers are mutually reachable without concerning about the unicast routing protocol.

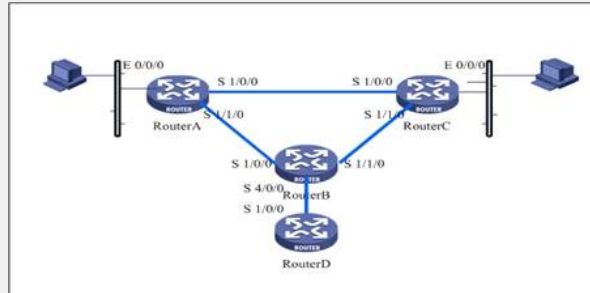
2. It is recommended to configure C-BSR and C-RP on the loopback interface of the same router.

1.2 PIM-SM Mode

[Requirements]

Multicast Source is the multicast source. Receiver 1 and Receiver 2 are two receivers of the multicast group.

[Networking diagram]



[Configuration script]

Configuration script on Router A

```
#
sysname RouterA
#
router id 1.1.1.1
#
multicast routing-enable          /Enable the multicast routing/
#
radius scheme system
#
domain system
#
acl number 2005
rule 0 permit source 225.0.0.0 0.0.0.255
#
interface Ethernet0/0/0
ip address 10.1.1.1 255.255.255.0
pim sm                            /Set the PIM-SM mode/
#
interface Serial1/0/0
link-protocol ppp
ip address 192.168.1.1 255.255.255.252
pim sm                            /Set the PIM-SM mode/
#
interface Serial1/1/0
link-protocol ppp
ip address 192.168.2.1 255.255.255.252
pim sm                            /Set the PIM-SM mode/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.1 0.0.0.0
network 10.1.1.0 0.0.0.255
network 192.168.1.0 0.0.0.3
network 192.168.2.0 0.0.0.3
#
pim
spt-switch-threshold 10 group-policy 2005  /Configure the candidate RP/
#
user-interface con 0
user-interface vty 0 4
#
return
```

Configuration script on Router B

```
#
sysname RouterB
#
router id 1.1.1.2
#
multicast routing-enable          /Enable the multicast routing/
#
radius scheme system
#
domain system
#
acl number 2005
rule 0 permit source 225.0.0.0 0.0.0.255
#
interface Serial1/0/0
link-protocol ppp
ip address 192.168.2.2 255.255.255.252
pim sm                            /Set the PIM-SM mode/
#
interface Serial1/1/0
link-protocol ppp
ip address 192.168.3.1 255.255.255.252
pim sm                            /Set the PIM-SM mode/
#
interface Serial4/0/0
link-protocol ppp
ip address 192.168.4.1 255.255.255.252
pim sm                            /Set the PIM-SM mode/
pim bsr-boundary                  /Configure the PIM boundary/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.2 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.2 0.0.0.0
network 192.168.2.0 0.0.0.3
network 192.168.3.0 0.0.0.3
network 192.168.4.0 0.0.0.3
#
pim
c-bsr Serial1/0/0 30 2           /Configure the candidate BSR/
#
user-interface con 0
user-interface vty 0 4
#
return
```

Configuration script on Router C

```
#
sysname RouterC
#
router id 1.1.1.3
#
multicast routing-enable           /Enable the multicast routing/
#
radius scheme system
#
domain system
#
interface Ethernet0/0/0
ip address 20.1.1.1 255.255.255.0
pim sm                             /Set the PIM-SM mode/
#
interface Serial1/0/0
link-protocol ppp
ip address 192.168.1.2 255.255.255.252
pim sm                             /Set the PIM-SM mode/
#
interface Serial1/1/0
link-protocol ppp
ip address 192.168.3.2 255.255.255.252
pim sm                             /Set the PIM-SM mode/
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.3 255.255.255.255
#
ospf 1
area 0.0.0.0
network 1.1.1.3 0.0.0.0
network 20.1.1.0 0.0.0.255
network 192.168.1.0 0.0.0.3
network 192.168.3.0 0.0.0.3
#
user-interface con 0
user-interface vty 0 4
#
return
```