The configuration of PIM-SM C-BSR and C-RP In MSR Series

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Keywords: MSR; PIM-SM;IGMP;Multicast;C-BSR;C-RP

I Requirement for the diagram

The E0/1 of RTA connect to the multicast source, S0/1 of RTA connect to RTB, S0/2 of RTA connect to RTC, enable PIM-SM under every interface; The S0/2 connect to RTA, The S0/1 of RTB connect to RTC, E0/1 of RTB connect to PC Receiver2. The S0/1 of RTC connect to RTA, S0/2 of RTC connect to RTB, E0/1 connect to PC Rec eiver1. Enable PIM-SM of every router connected interface, and enable IGMP of con nected to PC interface.

Device List: 3 MSR

II Network topology

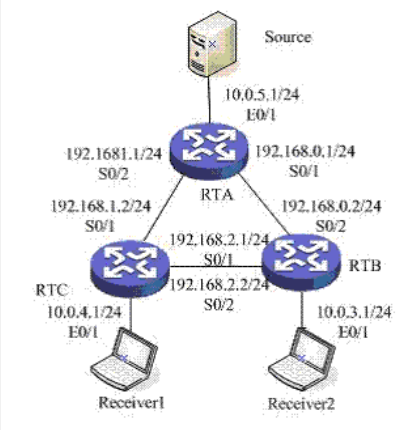

Figure 1 PIM-SM C-BSR and C-RP

III Steps of configuration

RTA

```
#
 router id 10.0.5.1
#
//enable muticast globally
 multicast routing-enable
#
//connect to source of multicast
interface Ethernet0/1
 port link-mode route
 ip address 10.0.5.1 255.255.255.0
 pim sm
#
//connect to RTB
interface Serial0/1
 link-protocol ppp
 ip address 192.168.0.1 255.255.255.0
 pim sm
 #
//connect to RTC
interface Serial0/2
 link-protocol ppp
 ip address 192.168.1.1 255.255.255.0
 pim sm
#
ospf 1
 area 0.0.0.0
  network 10.0.5.0 0.0.0.255
  network 192.168.0.0 0.0.0.255
  network 192.168.1.0 0.0.0.255
#
```

RTB

```
#
 router id 10.0.3.1
#
 //enable multicat golbally
 multicast routing-enable
#
//connect to RTA
interface Serial0/2
 link-protocol ppp
 ip address 192.168.0.2 255.255.255.0
 pim sm
#
//connect to RTC
interface Serial0/1
 link-protocol ppp
 ip address 192.168.2.1 255.255.255.0
 pim sm
#
//connect to PC Receiver2
interface Ethernet0/1
 port link-mode route
 ip address 10.0.3.1 255.255.255.0
 igmp enable
 igmp version 3
#
ospf 1
 area 0.0.0.0
  network 10.0.3.0 0.0.0.255
  network 192.168.0.0 0.0.0.255
  network 192.168.2.0 0.0.0.255
#
```

RTC

```
#
 router id 10.0.4.1
#
//enable multicast globally
 multicast routing-enable
#
//set ACL
acl number 2005
 rule 0 permit source 224.1.1.0 0.0.0.255
#
//connect to RTA
interface Serial0/1
 link-protocol ppp
 ip address 192.168.1.2 255.255.255.0
 pim sm
#
//connect to RTB
interface Serial0/2
 link-protocol ppp
 ip address 192.168.2.2 255.255.255.0
 pim sm
#
//connect to PC Receiver1
interface Ethernet0/1
 port link-mode route
 ip address 10.0.4.1 255.255.255.0
 igmp enable
 igmp version 3
#
//set C-BSR and C-RP
pim
 c-bsr Serial 0/1
 c-rp  Serial 0/1 group-policy 2005
#
ospf 1
 area 0.0.0.0
  network 10.0.4.0 0.0.0.255
  network 192.168.1.0 0.0.0.255
  network 192.168.2.0 0.0.0.255
#
```

IV Key notes in the configuration

1) Make sure every router reachable each other based on OSPF;
2) Enable multicast globally;
3) Configuration C-BSR and C-RP;
4) Enable IGMP on the interface which connect to PC;