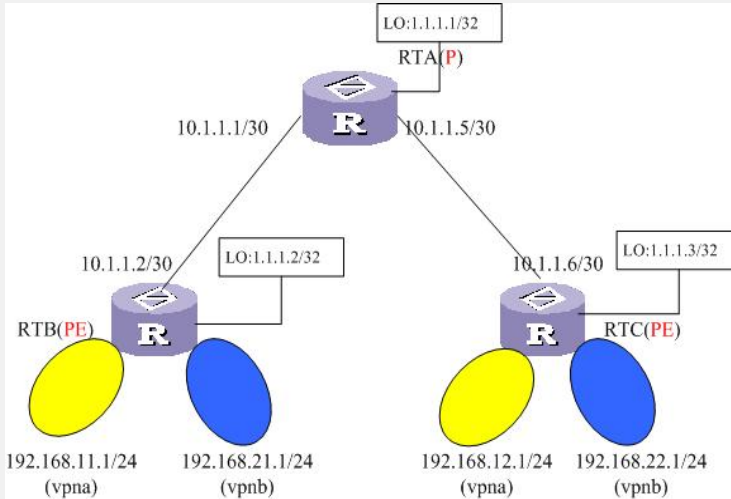


Typical Configuration of MPLS/BGP VPN on AR28/AR46 Series Routers

【Requirements】

1. RTA is a P router; RTB and RTC are PE routers.
2. Host 192.168.11.1/24 and host 192.168.12.1/24 belong to vpna; host 192.168.21.1/24 and host 192.168.22.1/24 belong to vpnb.

【Topology】



【Scripts】

RT-A's scripts

```
#
sysname RTA
#
router id 1.1.1.1           /configure the router id/
#
mpls lsr-id 1.1.1.1        /configure the mpls lsr-id/
#
mpls                       /enable mpls in system view/
#
mpls ldp                   /enable ldp in system view/
#
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.252
mpls                       /enable mpls in interface view/
mpls ldp enable            /enable ldp in interface view/
#
interface Ethernet3/0
ip address 10.1.1.5 255.255.255.252
mpls                       /enable mpls in interface view/
mpls ldp enable            /enable ldp in interface view/
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255 /loopback 0's IP address equals the router id/
#
ospf 1
area 0.0.0.0
network 1.1.1.1 0.0.0.0     /enable ospf in interface loopback 0/
network 10.1.1.0 0.0.0.3   /enable ospf in network 10.1.1.0/
network 10.1.1.4 0.0.0.3   /enable ospf in network 10.1.1.4/
#
return
```

RT-B's scripts

```

#
sysname RTB
#
router id 1.1.1.2          /configure the router id/
#
mpls lsr-id 1.1.1.2       /configure the mpls lsr-id/
#
mpls                      /enable mpls in system view/
#
mpls ldp                  /enable ldp in system view/
#
ip vpn-instance vpna      /create a vpn instance vpna/
 route-distinguisher 100:1 /configure RD=100:1/
 vpn-target 100:1 export-extcommunity /configure RT=100:1 export/
 vpn-target 100:1 import-extcommunity /configure RT=100:1 import/
#
ip vpn-instance vpnb      /create a vpn instance vpnb/
 route-distinguisher 200:1 /configure RD=200:1/
 vpn-target 200:1 export-extcommunity /configure RT=200:1 export/
 vpn-target 200:1 import-extcommunity /configure RT=200:1 import/
#
interface Ethernet0/0
 ip address 10.1.1.2 255.255.255.252
 mpls /enable mpls in interface view/
 mpls ldp enable /enable ldp in interface view/
#
interface LoopBack0
 ip address 1.1.1.2 255.255.255.255 /loopback 0's IP address equals the router id/
#
interface LoopBack11
 ip binding vpn-instance vpna /bind Loopback 11 with vpna/
 ip address 192.168.11.1 255.255.255.0
#
interface LoopBack21
 ip binding vpn-instance vpnb /bind Loopback 21 with vpnb/
 ip address 192.168.21.1 255.255.255.0
#
bgp 100
 undo synchronization /forbid BGP synchronization/
 group inter internal /create an internal group "inter"/
 peer 1.1.1.3 group inter /build iBGP neighbourhood with 1.1.1.3/
 peer 1.1.1.3 connect-interface LoopBack0
 /communicate with 1.1.1.3 using LoopBack0/
#
ipv4-family vpn-instance vpna /bind vpna with MBGP ipv4-family/
 import-route direct /import direct route/
 undo synchronization /forbid BGP synchronization/
#
ipv4-family vpn-instance vpnb /bind vpnb with MBGP ipv4-family/
 import-route direct
 undo synchronization
#
ipv4-family vpnv4
 peer inter enable /enable group "inter" in ipv4-family view/
 peer 1.1.1.3 group inter /enable 1.1.1.3/
#
ospf 1
 area 0.0.0.0
 network 1.1.1.2 0.0.0.0 /enable ospf in interface loopback 0/
 network 10.1.1.0 0.0.0.3 /enable ospf in network 10.1.1.0/
#
return

```

RT-C's scripts

```

#
sysname RTC
#
router id 1.1.1.3           /configure the router id/
#
mpls lsr-id 1.1.1.3       /configure the mpls lsr-id/
#
mpls                       /enable mpls in system view/
#
mpls ldp                   /enable ldp in system view/
#
ip vpn-instance vpna      /create a vpn instance vpna/
 route-distinguisher 100:1 /configure RD=100:1/
 vpn-target 100:1 export-extcommunity /configure RT=100:1 export/
 vpn-target 100:1 import-extcommunity /configure RT=100:1 import/
#
ip vpn-instance vpnb      /create a vpn instance vpnb/
 route-distinguisher 200:1 /configure RD=200:1/
 vpn-target 200:1 export-extcommunity /configure RT=200:1 export/
 vpn-target 200:1 import-extcommunity /configure RT=200:1 import/
#
interface Ethernet2/0
 ip address 10.1.1.6 255.255.255.252
 mpls                       /enable mpls in interface view/
 mpls ldp enable           /enable ldp in interface view/
#
interface LoopBack0
 ip address 1.1.1.3 255.255.255.255 /loopback 0's IP address equals the router id/
#
interface LoopBack12
 ip binding vpn-instance vpna /bind Loopback 12 with vpna/
 ip address 192.168.12.1 255.255.255.0
#
interface LoopBack22
 ip binding vpn-instance vpnb /bind Loopback 22 with vpnb/
 ip address 192.168.22.1 255.255.255.0
#
bgp 100
 undo synchronization      /forbid BGP synchronization/
 group inter internal      /create an internal group "inter"/
 peer 1.1.1.2 group inter  /build iBGP neighbourhood with 1.1.1.2/
 peer 1.1.1.2 connect-interface LoopBack0
 /communicate with 1.1.1.2 using LoopBack0/
#
ipv4-family vpn-instance vpna /bind vpna with MBGP ipv4-family/
 import-route direct       /import direct route/
 undo synchronization     /forbid BGP synchronization/
#
ipv4-family vpn-instance vpnb /bind vpnb with MBGP ipv4-family/
 import-route direct
 undo synchronization
#
ipv4-family vpnv4
 peer inter enable         /enable group "inter" in ipv4-family view/
 peer 1.1.1.2 group inter  /enable 1.1.1.2/
#
ospf 1
 area 0.0.0.0
 network 1.1.1.3 0.0.0.0   /enable ospf in interface loopback 0/
 network 10.1.1.4 0.0.0.3 /enable ospf in network 10.1.1.4/
#
return

```

【Attentions】

- 1、 As a P router, RTA is only in charge of MPLS forwarding. It has nothing to do with specific VPNs.
- 2、 Loopback 0's IP address must have a mask of 32 bits.