

# AR28/AR46系列路由器多角色主机典型配置

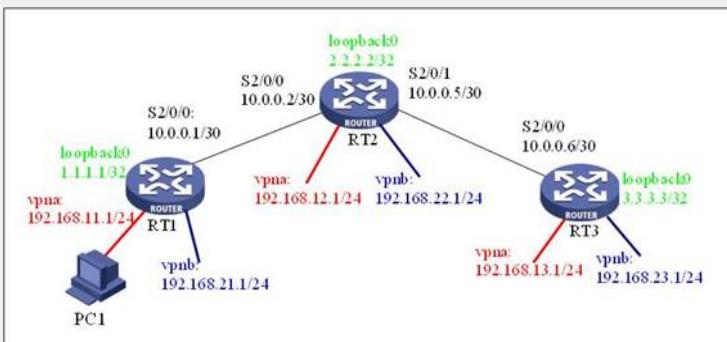
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## AR28/AR46系列路由器多角色主机典型配置

### 【需求】

属于vpna的PC1 (192.168.11.2) 既可以访问vpna又可以访问vpnb。

### 【组网图】



### 【配置脚本】

RT1配置脚本

```

#
sysname RT1
#
router id 1.1.1.1
#
mpls lsr-id 1.1.1.1
#
radius scheme system
#
mpls
#
mpls ldp
#
ip vpn-instance vpna
route-distinguisher 100:1
vpn-target 100:1 export-extcommunity
vpn-target 100:1 import-extcommunity
#
ip vpn-instance vpnb
route-distinguisher 200:1
vpn-target 200:1 export-extcommunity
vpn-target 200:1 import-extcommunity
#
domain system
#
acl number 3000      /指定多角色主机的地址，用于策略路由中使用/
rule 0 permit ip vpn-instance vpna source 192.168.11.2 0
#
interface Ethernet1/0/0
ip binding vpn-instance vpna
ip address 192.168.11.1 255.255.255.0
ip policy route-policy multi-role
/在接口上应用策略路由，实现多角色主机功能/
#
interface Serial2/0/0
link-protocol ppp
ip address 10.0.0.1 255.255.255.252
mpls
mpls ldp enable
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
interface LoopBack21
ip binding vpn-instance vpnb
ip address 192.168.21.1 255.255.255.0
#
bgp 100
undo synchronization
group inter internal
peer 2.2.2.2 group inter
peer 2.2.2.2 connect-interface LoopBack0
#
ipv4-family vpn-instance vpna
import-route direct
undo synchronization
#
ipv4-family vpn-instance vpnb
import-route direct
import-route static      /在vpnb中引入静态路由/
undo synchronization
#
ipv4-family vpng4
peer inter enable
peer 2.2.2.2 group inter
#
ospf 1
area 0.0.0.0
network 1.1.1.1 0.0.0.0
network 10.0.0.0 0.0.0.3
#
route-policy multi-role permit node 10
/定义策略路由，实现多角色主机在vpnb中查找路由/
if-match acl 3000      /引用ACL 3000/
apply access-vpn vpn-instance vpnb      /实现多角色主机在vpnb中查找路由/
#
ip route-static vpn-instance vpnb 192.168.11.2 255.255.255.255 vpn-instance
vpna 192.168.11.2 preference 60
/在vpnb中添加一条访问PC1的静态路由，保证vpnb的返回报文可以转发给PC1/
#
user-interface con 0
user-interface vty 0 4
#
return

```

```
#  
sysname RT2  
#  
router id 2.2.2.2  
#  
mpls lsr-id 2.2.2.2  
#  
radius scheme system  
#  
mpls  
#  
mpls ldp  
#  
ip vpn-instance vpna  
route-distinguisher 100:1  
vpn-target 100:1 export-extcommunity  
vpn-target 100:1 import-extcommunity  
#  
ip vpn-instance vpnb  
route-distinguisher 200:1  
vpn-target 200:1 export-extcommunity  
vpn-target 200:1 import-extcommunity  
#  
domain system  
#  
interface Serial2/0/0  
link-protocol ppp  
ip address 10.0.0.2 255.255.255.252  
mpls  
mpls ldp enable  
#  
interface Serial2/0/1  
link-protocol ppp  
ip address 10.0.0.5 255.255.255.252  
mpls  
mpls ldp enable  
#  
interface NULL0  
#  
interface LoopBack0  
ip address 2.2.2.2 255.255.255.255  
#  
interface LoopBack12  
ip binding vpn-instance vpna  
ip address 192.168.12.1 255.255.255.0  
#  
interface LoopBack22  
ip binding vpn-instance vpnb  
ip address 192.168.22.1 255.255.255.0  
#  
bgp 100  
undo synchronization  
group inter internal  
peer inter reflect-client  
peer 1.1.1.1 group inter  
peer 1.1.1.1 connect-interface LoopBack0  
peer 3.3.3.3 group inter  
peer 3.3.3.3 connect-interface LoopBack0  
#  
ipv4-family vpn-instance vpna  
import-route direct  
undo synchronization  
#  
ipv4-family vpn-instance vpnb  
import-route direct  
undo synchronization  
#  
ipv4-family vpng4  
peer inter enable  
peer inter reflect-client  
peer 1.1.1.1 group inter  
peer 3.3.3.3 group inter  
#  
ospf 1  
area 0.0.0.0  
network 2.2.2.2 0.0.0.0  
network 10.0.0.0 0.0.0.3  
network 10.0.0.4 0.0.0.3  
#  
user-interface con 0  
user-interface vty 0 4  
#  
return
```

```

#
sysname RT3
#
router id 3.3.3.3
#
mpls lsr-id 3.3.3.3
#
radius scheme system
#
mpls
#
mpls ldp
#
ip vpn-instance vpna
route-distinguisher 100:1
vpn-target 100:1 export-extcommunity
vpn-target 100:1 import-extcommunity
#
ip vpn-instance vpnb
route-distinguisher 200:1
vpn-target 200:1 export-extcommunity
vpn-target 200:1 import-extcommunity
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 10.0.0.6 255.255.255.252
mpls
mpls ldp enable
#
interface NULL0
#
interface LoopBack0
ip address 3.3.3.3 255.255.255.255
#
interface LoopBack13
ip binding vpn-instance vpna
ip address 192.168.13.1 255.255.255.0
#
interface LoopBack23
ip binding vpn-instance vpnb
ip address 192.168.23.1 255.255.255.0
#
bgp 100
undo synchronization
group inter internal
peer 2.2.2.2 group inter
peer 2.2.2.2 connect-interface LoopBack0
#
ipv4-family vpn-instance vpna
import-route direct
undo synchronization
#
ipv4-family vpn-instance vpnb
import-route direct
undo synchronization
#
ipv4-family vpng4
peer inter enable
peer 2.2.2.2 group inter
#
ospf 1
area 0.0.0.0
network 3.3.3.3 0.0.0.0
network 10.0.0.4 0.0.0.3
#
user-interface con 0
user-interface vty 0 4
#
return

```

### 【验证】

RT1上vpnb的私网路由表：

```

disp ip rout vpn vpnb
vpnb  Route Information
Routing Table: vpnb  Route-Distinguisher: 200:1
Destination/Mask Protocol Pre Cost    Nexthop      Interface
192.168.11.2/32 STATIC  60 0        192.168.11.2  Ethernet1/0/0
192.168.21.0/24 DIRECT   0 0        192.168.21.1  LoopBack21
192.168.21.1/32 DIRECT   0 0        127.0.0.1    InLoopBack0
192.168.22.0/24 BGP     256 0       2.2.2.2      InLoopBack0
192.168.23.0/24 BGP     256 0       3.3.3.3      InLoopBack0

```

RT3上vpnb的私网路由表：

```
disp ip rout vpn vpnb
vpnb Route Information
Routing Table: vpnb Route-Distinguisher: 200:1
Destination/Mask Protocol Pre Cost    Nexthop      Interface
192.168.11.2/32   BGP    256 0        1.1.1.1    InLoopBack0
192.168.21.0/24   BGP    256 0        1.1.1.1    InLoopBack0
192.168.22.0/24   BGP    256 0        2.2.2.2    InLoopBack0
192.168.23.0/24   DIRECT 0 0        192.168.23.1 LoopBack23
192.168.23.1/32   DIRECT 0 0        127.0.0.1   InLoopBack0
```

**【提示】**

- 1、多角色主机的配置都在和该主机相连的PE上完成。
- 2、当存在多个VPN时，可以使用apply access-vpn vpn-instance指定多个VPN，但是最多可以指定6个VPN。
- 3、通过配置静态路由和路由策略，使PC1访问不同VPN的报文在不同的VPN-instance中查找路由。