

MSR路由器 MPLS L3VPN CE-nPE功能配置

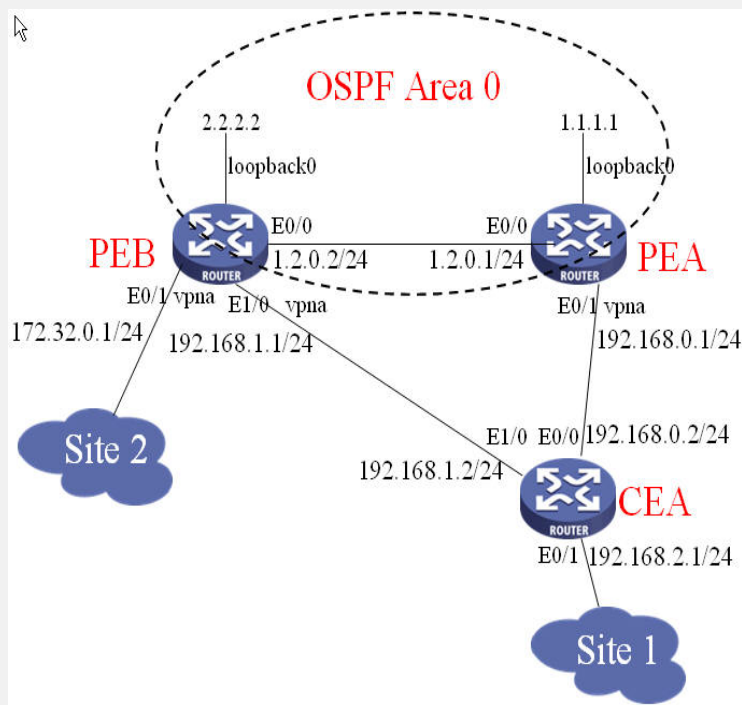
关键词: MSR;MPLS;L3VPN;CE-nPE;OSPF多实例

一、组网需求:

vpna有2个站点: 站点1和站点2, 站点1的出口路由器CEA与PEA、PEB相连; 站点2只挂在PEB上。CEA与PEA通过BGP学习vpna路由, CEA和PEB通过OSPF多实例学习路由

设备清单: MSR路由器3台

二、组网图:



三、配置步骤:

适用设备和版本: MSR、Version 5.20, Beta 1105后所有版本。

CEA配置:

```
interface Ethernet0/0
port link-mode route
ip address 192.168.0.2 255.255.255.0
#
interface Ethernet0/1
port link-mode route
ip address 192.168.2.1 255.255.255.0
#
interface Ethernet1/0
port link-mode route
ip address 192.168.1.2 255.255.255.0
#
bgp 3
network 192.168.2.0
undo synchronization
peer 192.168.0.1 as-number 1
#
ospf 1
area 0.0.0.0
network 192.168.1.0 0.0.0.255
network 192.168.2.0 0.0.0.255
```

```
#
PEA配置:
router id 1.1.1.1
#
ip vpn-instance vpna
route-distinguisher 1:1
vpn-target 1:1 export-extcommunity
vpn-target 1:1 import-extcommunity
#
mpls lsr-id 1.1.1.1
#
mpls
#
mpls ldp
#
interface Ethernet0/0
port link-mode route
ip address 1.2.0.1 255.255.255.0
mpls
mpls ldp
#
interface Ethernet0/1
port link-mode route
ip binding vpn-instance vpna
ip address 192.168.0.1 255.255.255.0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
bgp 1
undo synchronization
group 1 internal
peer 1 connect-interface LoopBack0
peer 2.2.2.2 group 1
#
ipv4-family vpv4
peer 1 enable
peer 2.2.2.2 enable
peer 2.2.2.2 group 1
#
ipv4-family vpn-instance vpna
peer 192.168.0.2 as-number 3
network 192.168.0.0
#
ospf 1
area 0.0.0.0
network 1.1.1.1 0.0.0.0
network 1.2.0.0 0.0.0.255
#
PEB配置:
#
router id 2.2.2.2
#
ip vpn-instance vpna
route-distinguisher 2:1
vpn-target 1:1 export-extcommunity
vpn-target 1:1 import-extcommunity
#
mpls lsr-id 2.2.2.2
#
mpls
#
mpls ldp
#
```

```
interface Ethernet0/0
port link-mode route
ip address 1.2.0.2 255.255.255.0
mpls
mpls ldp
#
interface Ethernet0/1
port link-mode route
ip binding vpn-instance vpna
ip address 172.32.0.1 255.255.255.0
#
interface Ethernet1/0
port link-mode route
ip binding vpn-instance vpna
ip address 192.168.1.1 255.255.255.0
#
interface LoopBack0
ip address 2.2.2.2 255.255.255.255
#
bgp 1
undo synchronization
peer 1.1.1.1 as-number 1
peer 1.1.1.1 connect-interface LoopBack0
#
ipv4-family vpv4
peer 1.1.1.1 enable
#
ipv4-family vpn-instance vpna
import-route direct
import-route ospf 2
#
ospf 1
area 0.0.0.0
network 2.2.2.2 0.0.0.0
network 1.2.0.0 0.0.0.255
#
ospf 2 router-id 192.168.1.1 vpn-instance vpna
import-route bgp
area 0.0.0.0
network 172.32.0.0 0.0.0.255
network 192.168.1.0 0.0.0.255
#
```

四、配置关键点：

1. CEA上需要配置BGP和OSPF；
2. PEA上需要配置CEA的EBGP连接，注意配置到bgp的vpn实例视图下；
3. PEB上需要配置OSPF多实例。