

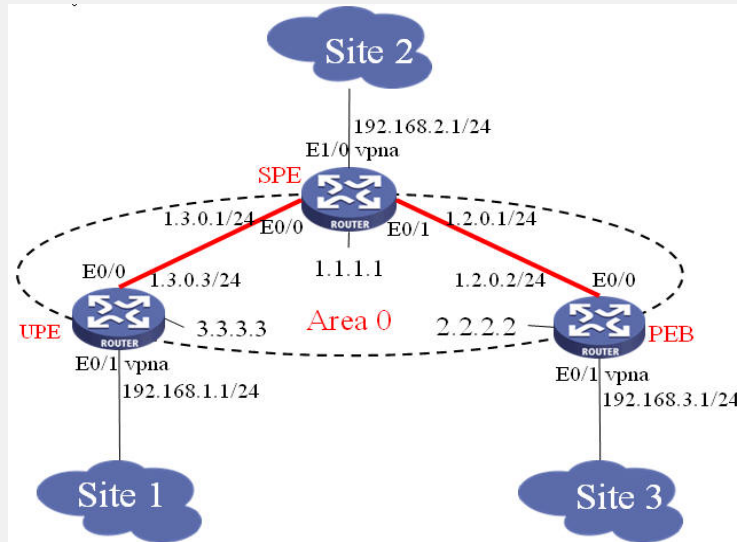
### MSR路由器 MPLS HoVPN功能配置

关键词：MSR;MPLS;BGP;HoVPN

#### 一、组网需求：

UPE、SPE和PEB是VPN站点接入路由器。UPE、PEB和SPE建立MP-IBGP连接。  
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。

##### UPE配置

```
#
router id 3.3.3.3
#
ip vpn-instance vpna
route-distinguisher 3:1
vpn-target 1:1 export-extcommunity
vpn-target 1:1 import-extcommunity
#
mpls lsr-id 3.3.3.3
#
mpls
#
mpls ldp
#
interface Ethernet0/0
port link-mode route
ip address 1.3.0.3 255.255.255.0
mpls
mpls ldp
#
interface Ethernet0/1
port link-mode route
ip binding vpn-instance vpna
ip address 192.168.1.1 255.255.255.0
#
interface LoopBack0
ip address 3.3.3.3 255.255.255.255
#
bgp 1
```

```
undo synchronization
peer 1.1.1.1 as-number 1
peer 1.1.1.1 connect-interface LoopBack0
#
ipv4-family vpnv4
peer 1.1.1.1 enable
#
ipv4-family vpn-instance vpna
import-route direct
#
ospf 1
area 0.0.0.0
network 3.3.3.3 0.0.0.0
network 1.3.0.0 0.0.0.255
#
SPE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 1.3.0.1 255.255.255.0
mpls
mpls ldp
#
interface Ethernet0/1
port link-mode route
ip address 1.2.0.1 255.255.255.0
mpls
mpls ldp
#
interface Ethernet1/0
port link-mode route
ip binding vpn-instance vpna
ip address 192.168.2.1 255.255.255.0
#
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
peer 3.3.3.3 group 1
#
ipv4-family vpnv4
peer 1 enable
peer 2.2.2.2 enable
peer 2.2.2.2 group 1
peer 3.3.3.3 enable
peer 3.3.3.3 group 1
peer 3.3.3.3 upe //指定3.3.3.3为upe
```

```
peer 3.3.3.3 default-route-advertise vpn-instance vpna //发布vpna默认路由
```

```
#  
ipv4-family vpn-instance vpna  
network 192.168.2.0 255.255.255.0  
#  
ospf 1  
area 0.0.0.0  
network 1.1.1.1 0.0.0.0  
network 1.3.0.0 0.0.0.255  
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 192.168.3.1 255.255.255.0  
#  
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  
network 2.1.1.1 255.255.255.255  
#  
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  
#
```

#### **四、配置关键点：**

在MPLS L3VPN基本配置**正确**的基础上，配置主要在SPE上指定upe和发布默认路由

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