MSR路由器MPLS 反射VPN功能配置

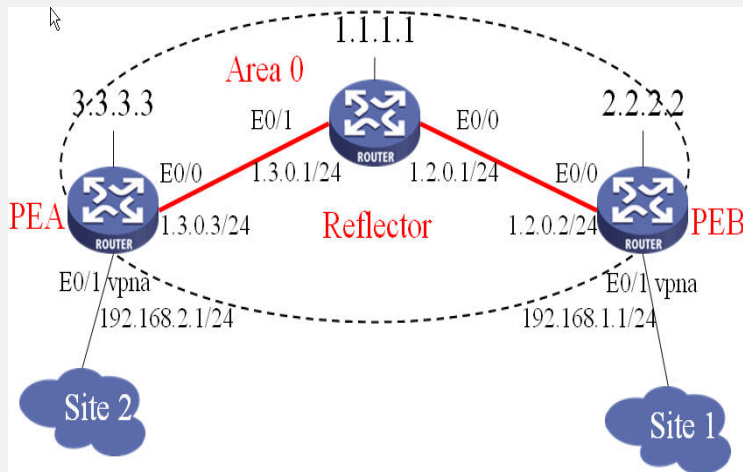丘子隽　2006-08-31 发表

MSR路由器
MPLS 反射VPN功能的配置

关键词：MSR;MPLS;L3VPN;BGP;路由反射

一、组网需求：
PEA和PEB是VPN站点接入路由器。PEA、PEB和Reflector建立MP-IBGP连接，vpn路由都由Reflector反射传播。
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。

PEA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 192.168.2.1 255.255.255.0
#
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
#
```

Reflector配置：

```
#
router id 1.1.1.1
#
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 address 1.3.0.1 255.255.255.0
mpls
mpls ldp
#
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
undo policy vpn-target      //接收所有vpn路由
peer 1 enable
peer 1 reflect-client        //配置反射组
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
#
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 192.168.1.1 255.255.255.0
#
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 vpnv4
peer 1.1.1.1 enable
#
ipv4-family vpn-instance vpna
network 192.168.1.0
#
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Reflector上，Reflector不需配置vpn实例，注意其BGP配置。