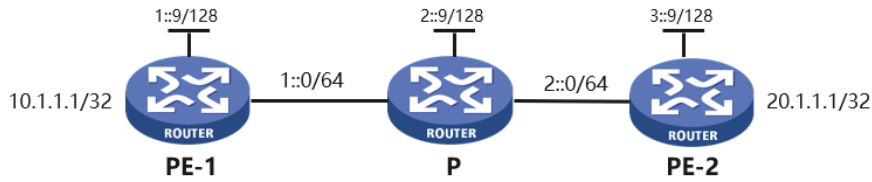


知 IP L3VPN over SRv6 BE配置

BGP MPLS L3VPN 刘嘉福 2024-03-26 发表

组网及说明



配置步骤

- 1、配置IPv4与IPv6地址
- 2、域内通过OSPFv3或ISIS发布接口路由。
- 3、配置segment-routing ipv6，确定locator范围。

#

```
segment-routing ipv6
encapsulation source-address 1::9
locator aa ipv6-prefix 100:1:: 96 static 8
```

#

- 4、IGP路由中引用该locator，发布locator路由。

```
[PE2] isis 1
[PE2-isis-1] address-family ipv6 unicast
[PE2-isis-1-ipv6] segment-routing ipv6 locator aa
[PE2-isis-1-ipv6] quit
```

- 5、配置BGP VPNv4邻居，并分配END.DT4 SID。

以PE-1配置为例：

```
bgp 100
router-id 1.1.1.1
peer 3::9 as-number 100
peer 3::9 connect-interface LoopBack0
#
address-family vpnv4
peer 3::9 enable
peer 3::9 prefix-sid
#
ip vpn-instance vpn1
#
address-family ipv4 unicast
segment-routing ipv6 best-effort \BE转发方式
segment-routing ipv6 locator aa \从该locator分配END.DT4 SID
import-route direct
#
```

邻居建立后，学习到的私网路由存在End.DT4 SID，类似于MPLS私网标签的作用。

```
[RTA]dis bgp routing-table vpnv4 20.1.1.1 32
BGP local router ID: 1.1.1.1
Local AS number: 100
Route distinguisher: 100:1(vpn1)
Total number of routes: 1
Paths: 1 available, 1 best
```

```
BGP routing table information of 20.1.1.1/32:
From      : 3::9 (20.1.1.1)
Rely nexthop  : FE80::9629:2FFF:FED8:92ED
Original nexthop: 3::9
OutLabel    : 3
Ext-Community : <RT: 111:1>
RxPathID    : 0x0
TxPathID    : 0x0
PrefixSID   : End.DT4 SID <100:3::103>
AS-path     : (null)
Origin      : incomplete
```

Attribute value : MED 0, localpref 100, pref-val 0

State : valid, internal, best, remoteredist

实际转发的话，外层封装一个IPv6头即可，目的IPv6地址即为该End.DT4 SID。