

AR28/AR48系列路由器L2VPN-CCC方式典型配置

【需求】

CE-A的S2/0/0和CE-B的S2/0/0之间建立一条本地的CCC连接，CE-A的S2/0/1和CE-C的S2/0/0

建立一条远程的CCC连接。

【组网图】

□

【配置脚本】

CE-A配置脚本

```
#
sysname CE-A
#
radius scheme system
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 192.168.11.1 255.255.255.0
#
interface Serial2/0/1
link-protocol ppp
ip address 192.168.21.1 255.255.255.0
#
interface NULL0
#
user-interface con 0
user-interface vty 0 4
#
return
```

CE-B配置脚本

```
#
sysname CE-B
#
radius scheme system
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 192.168.11.2 255.255.255.0
#
interface NULL0
#
user-interface con 0
user-interface vty 0 4
#
return
```

PE-A配置脚本

```
#
sysname PE-A
#
router id 1.1.1.1
#
mpls lsr-id 1.1.1.1
#
mpls l2vpn /启用MPLS L2VPN/
#
radius scheme system
#
mpls
static-lsp ingress PEA-PEB l2vpn outgoing-interface Serial2/0/3 out-label 100
/配置用于l2vpn的静态LSP/
static-lsp egress PEB-PEA l2vpn incoming-interface Serial2/0/3 in-label 201
/配置用于l2vpn的静态LSP/
#
domain system
#
interface Serial2/0/0
link-protocol ppp
#
interface Serial2/0/1
link-protocol ppp
#
interface Serial2/0/2
link-protocol ppp
#
interface Serial2/0/3
link-protocol ppp
ip address 10.0.0.1 255.255.255.252
mpls
#
interface NULL0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
ccc local-to-CEB interface Serial2/0/0 out-interface Serial2/0/2
/创建CCC本地连接/
ccc remote-to-CEC interface Serial2/0/1 transmit-lsp PEA-PEB receive-lsp PE
B-PEA
/创建CCC远程连接/
#
user-interface con 0
user-interface vty 0 4
#
return
```

P配置脚本

```

#
sysname P
#
router id 2.2.2.2
#
mpls lsr-id 2.2.2.2
#
mpls l2vpn /启用MPLS L2VPN/
#
radius scheme system
#
mpls
static-lsp transit PEA-PEB l2vpn incoming-interface Serial2/0/0 in-label 100 o
utgoing-interface Serial2/0/1 out-label 101
/配置用于l2vpn的静态LSP/
static-lsp transit PEB-PEA l2vpn incoming-interface Serial2/0/1 in-label 200 o
utgoing-interface Serial2/0/0 out-label 201
/配置用于l2vpn的静态LSP/
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 10.0.0.2 255.255.255.252
mpls
#
interface Serial2/0/1
link-protocol ppp
ip address 10.0.0.5 255.255.255.252
mpls
#
interface NULL0
#
interface LoopBack0
ip address 2.2.2.2 255.255.255.255
#
user-interface con 0
user-interface vty 0 4
#
return

```

PE-B配置脚本

```

#
sysname PE-B
#
router id 3.3.3.3
#
mpls lsr-id 3.3.3.3
#
mpls l2vpn /启用MPLS L2VPN/
#
#
radius scheme system
#
mpls
static-lsp ingress PEB-PEA l2vpn outgoing-interface Serial2/0/0 out-label 200
/配置用于l2vpn的静态LSP/
static-lsp egress PEA-PEB l2vpn incoming-interface Serial2/0/0 in-label 101
/配置用于l2vpn的静态LSP/
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 10.0.0.6 255.255.255.252
mpls
#
interface Serial2/0/1
link-protocol ppp
#
interface NULL0
#
interface LoopBack0
ip address 3.3.3.3 255.255.255.255
#
ccc remote-to-CEA interface Serial2/0/1 transmit-lsp PEB-PEA receive-lsp PE
A-PEB
/创建CCC远程连接/
#
user-interface con 0
user-interface vty 0 4
#
return

```

CE-C配置脚本

```

#
sysname CE-C
#
radius scheme system
#
domain system
#
interface Serial2/0/0
link-protocol ppp
ip address 192.168.21.2 255.255.255.0
#
interface NULL0
#
user-interface con 0
user-interface vty 0 4
#
return

```

【验证】

查看PE-A的CCC连接状态

```

<PE-A>disp ccc
total connections : 2
local connections : 1, 1 up
remote connections : 1, 1 up

name: local-to-CEB, type: local, state: up,
intf1: Serial2/0/0 (up), intf2: Serial2/0/2 (up)

name: remote-to-CEC, type: remote, state: up,
intf: Serial2/0/1 (up), tran-lsp: PEA-PEB (up), rcv-lsp: PEB-PEA (up)

```

查看PE-A的静态LSP

```

<PE-A>disp mpls lsp

-----
LSP Information: Static Lsp
-----

TOTAL: 2 Record(s) Found.

NO  FEC          NEXTHOP      I/O-LABEL  OUT-INTERFACE
1   0.0.0.0/0    -----     -----/100  S2/0/3
2   -----/--   -----     201/-----

```

查看P的静态LSP

```

<P>disp mpls lsp

-----
LSP Information: Static Lsp
-----

TOTAL: 2 Record(s) Found.

NO  FEC          NEXTHOP      I/O-LABEL  OUT-INTERFACE
1   -----/--   -----     100/101    S2/0/1
2   -----/--   -----     200/201    S2/0/0

```

查看PE-B的静态LSP

```

<PE-B>disp mpls lsp

-----
LSP Information: Static Lsp
-----

TOTAL: 2 Record(s) Found.

NO  FEC          NEXTHOP      I/O-LABEL  OUT-INTERFACE
1   0.0.0.0/0    -----     -----/200  S2/0/0

```

【提示】

- 1、CCC是Circuit Cross Connect (电路交叉连接) 的缩写, 是通过配置静态LSP来实现MPLS L2VPN的一种方式。
- 2、必须逐一在每个节点上 (包括PE、P) 单独为每一个CCC连接手工配置两条LSP (两个方向各一条), 这两条LSP将只能用于传递这个CCC连接的数据, 不能用于其他MPLS L2VPN连接, 也不能用于BGP/MPLS VPN或承载普通的IP报文。
- 3、CCC方式只有一层标签