

在VPDN案例中設定首碼委派

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簡介

本檔案將說明第2層通道通訊協定網路伺服器(LNS)透過虛擬專用撥接網路(VPDN)將一個IPv6首碼委派給在第2層通道通訊協定存取集中器(LAC)和LNS之間建立的使用者端路由器的情況下的首碼委派組態範例。

必要條件

需求

思科建議您瞭解UP的端到端第1層連線

採用元件

本文件所述內容不限於特定軟體和硬體版本。

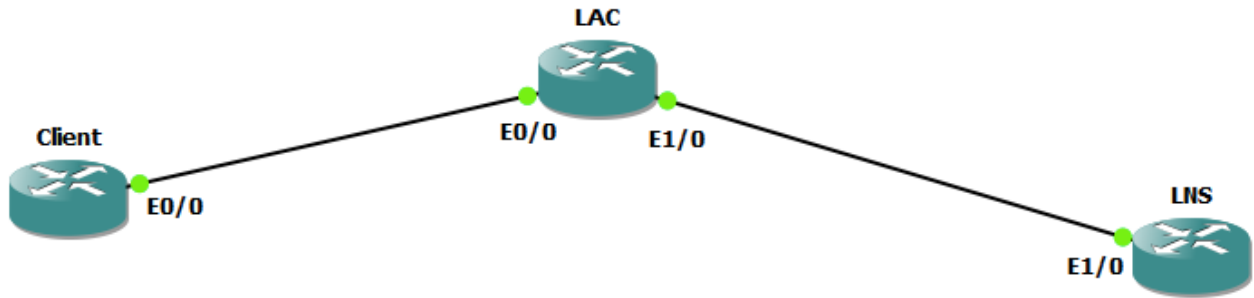
本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除 (預設) 的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

設定

附註：使用[命令查詢工具](#)(僅供[已註冊](#)客戶使用)可獲取本節中使用的命令的更多資訊。

網路圖表

本檔案會使用以下網路設定：



組態

客戶端配置：

下面是客戶端路由器上的配置示例：

```

ipv6 unicast-routing
!
interface Ethernet0/0
  no ip address
  pppoe enable group global
  pppoe-client dial-pool-number 1
end

interface Dialer1
  ip address negotiated
  encapsulation ppp
  dialer pool 1
  ipv6 address FE80::1234 link-local
  ipv6 address autoconfig
  ipv6 enable
  no ipv6 nd ra suppress
  ipv6 dhcp client pd my-prefix1
  no keepalive
  ppp chap hostname test@cisco.com
  ppp chap password 0 cisco
  no cdp enable
end ! interface FastEthernet0/2 description - This interface is connected to the LAN segment
  no ip address
  ipv6 address my-prefix1 ::1/64
  ipv6 enable

```

LAC配置：

LAC上的配置示例如下所示：

```

hostname LAC
!
vpdn enable
!
vpdn-group 1
  request-dialin
  protocol l2tp
  domain cisco.com
  initiate-to ip 192.168.1.2
  source-ip 192.168.1.1

```

```
no l2tp tunnel authentication
! bba-group pppoe global virtual-template 1 ! interface Ethernet0/0 no ip address pppoe enable
group global ! interface Ethernet1/0 ip address 192.168.1.1 255.255.255.0 ! interface Virtual-
Templatel no ip address ppp authentication chap !
```

LNS配置：

LNS上的配置示例如下所示：

```
ipv6 unicast-routing

!
vpdn enable
!
vpdn-group 1
accept-dialin
protocol l2tp
virtual-template 1
terminate-from hostname LAC
vpn vrf test
lcp renegotiation on-mismatch
no l2tp tunnel authentication
!
username test@cisco.com password cisco
interface Ethernet1/0
 ip vrf forwarding test
 ip address 192.168.1.2 255.255.255.0
 negotiation auto
 cdp enable
end interface Virtual-Templatel ip address 10.1.1.1 255.255.255.0 ipv6 enable
 ipv6 dhcp server AAA
 peer default ip address pool local
 peer default ipv6 pool PPPOE_POOL6
 no keepalive
 ppp authentication chap ! ipv6 dhcp pool AAA
 prefix-delegation pool DHCPv6Pool
!
ipv6 local pool PPPOE_POOL6 2001:DB8:5AB:10::/60 64
!
ip local pool local 10.1.1.2 10.1.1.100
!
ipv6 local pool DHCPv6Pool 2A02:838F:F880::/42 56
!
```

驗證

```
Client#show ipv6 interface brief FastEthernet0/2
FastEthernet0/2 [up/up]
 FE80::205:FF:FE77:2C1B
 2A02:838F:F880::1
```

```
Client#show ipv6 interface brief dialer1
Dialer1 [up/up]
 FE80::1234
 2001:DB8:5AB:10::1234
```

使用者端疑難排解

這些調試有助於調試問題：

```
debug ppp negotiation
debug ipv6 dhcp detail
```

```
Client#show debug
```

```
PPP:
```

```
PPP protocol negotiation debugging is on
```

```
IPv6 DHCP:
```

```
IPv6 DHCP debugging is on (detailed)
```

這是在PPP協商完成並且相應的虛擬訪問為UP之後，在客戶端路由器上調試ipv6 dhcp詳細資訊的片段。

```
*Jun 27 15:08:53.019: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access2, changed
state to up
*Jun 27 15:09:03.711: IPv6 DHCP: detailed packet contents
*Jun 27 15:09:03.711:   src FE80::1234
*Jun 27 15:09:03.711:   dst FF02::1:2 (Dialer1)
*Jun 27 15:09:03.711:   type REQUEST(3), xid 1849347
*Jun 27 15:09:03.711:   option ELAPSED-TIME(8), len 2
*Jun 27 15:09:03.711:     elapsed-time 3202
*Jun 27 15:09:03.711:   option CLIENTID(1), len 10
*Jun 27 15:09:03.711:     00030001000500772C1B
*Jun 27 15:09:03.711:   option ORO(6), len 6
*Jun 27 15:09:03.711:     IA-PD,DNS-SERVERS,DOMAIN-LIST
*Jun 27 15:09:03.711:   option SERVERID(2), len 10
*Jun 27 15:09:03.711:     000300017CAD74F9EB00
*Jun 27 15:09:03.711:   option IA-PD(25), len 41
*Jun 27 15:09:03.711:     IAID 0x000B0001, T1 0, T2 0
*Jun 27 15:09:03.711:   option IAPREFIX(26), len 25
*Jun 27 15:09:03.711:     preferred 0, valid 0, prefix 2A02:838F:F880::/56
*Jun 27 15:09:03.711: IPv6 DHCP: Sending REQUEST to FF02::1:2 on Dialer1
*Jun 27 15:09:03.711: IPv6 DHCP: Received REPLY from FE80::7EAD:74FF:FEF9:EB00 on Dialer1
*Jun 27 15:09:03.711: IPv6 DHCP: detailed packet contents
*Jun 27 15:09:03.711:   src FE80::7EAD:74FF:FEF9:EB00 (Dialer1)
*Jun 27 15:09:03.711:   dst FE80::1234 (Dialer1)
*Jun 27 15:09:03.711:   type REPLY(7), xid 1849347
*Jun 27 15:09:03.711:   option SERVERID(2), len 10
*Jun 27 15:09:03.711:     000300017CAD74F9EB00
*Jun 27 15:09:03.711:   option CLIENTID(1), len 10
*Jun 27 15:09:03.711:     00030001000500772C1B
*Jun 27 15:09:03.711:   option IA-PD(25), len 41
*Jun 27 15:09:03.711:     IAID 0x000B0001, T1 302400, T2 483840
*Jun 27 15:09:03.711:   option IAPREFIX(26), len 25
*Jun 27 15:09:03.711:     preferred 604800, valid 2592000, prefix 2A02:838F:F880::/56
*Jun 27 15:09:03.711: IPv6 DHCP: Processing options
*Jun 27 15:09:03.711: IPv6 DHCP: Adding prefix 2A02:838F:F880::/56 to my-prefix1
*Jun 27 15:09:03.711: IPv6 DHCP: T1 set to expire in 302400 seconds
*Jun 27 15:09:03.711: IPv6 DHCP: T2 set to expire in 483840 seconds
*Jun 27 15:09:03.711: IPv6 DHCP: DHCPv6 changes state from REQUEST to OPEN (REPLY_RECEIVED) on
Dialer1
```

相關資訊

- [IPv6訪問服務：DHCPv6首碼委派](#)
- [T技術支援與檔案 — Cisco Systems](#)