

Configurar delegação de prefixo no cenário de VPDN

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Componentes Utilizados](#)

[Configurar](#)

[Diagrama de Rede](#)

[Configurações](#)

[Verificar](#)

[Solucionar problemas no cliente](#)

[Informações Relacionadas](#)

Introduction

Este documento descreve o exemplo de configuração de delegação de prefixo em cenários em que o LNS (Layer 2 Tunneling Protocol Network Server) delega um prefixo IPv6 no túnel VPDN (Client Router over Virtual Private Dialup Network) construído entre o LAC (Layer 2 Tunneling Protocol Access Concentrator) e o LNS.

Prerequisites

Requirements

A Cisco recomenda que você tenha conhecimento da conectividade de Camada 1 de ponta a ponta que é UP

Componentes Utilizados

Este documento não se restringe a versões de software e hardware específicas.

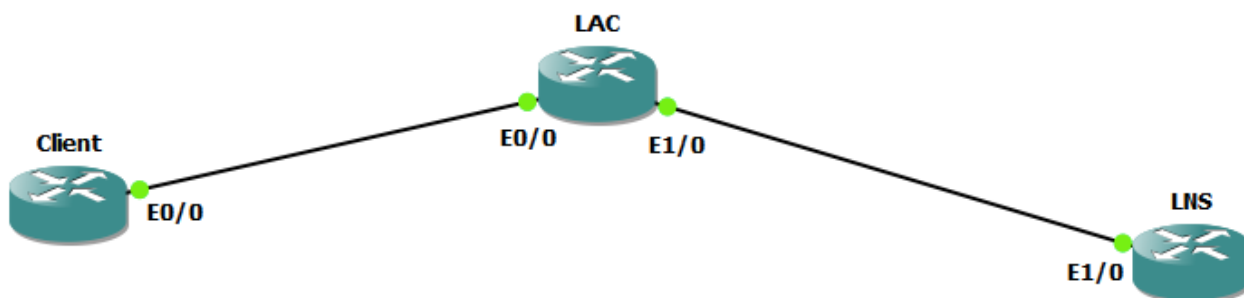
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Configurar

Note: Use a [Command Lookup Tool \(somente clientes registrados\) para obter mais informações sobre os comandos usados nesta seção.](#)

Diagrama de Rede

Este documento utiliza a seguinte configuração de rede:



Configurações

Configuração do Cliente:

Um exemplo da configuração no roteador do cliente é mostrado aqui:

```
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
```

Configuração do LAC:

Um exemplo da configuração no LAC é mostrado aqui:

```
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 !

```

Configuração do LNS:

Um exemplo da configuração no LNS é mostrado aqui:

```

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
!

```

Verificar

```

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

```

Solucionar problemas no cliente

Essas depurações ajudam na depuração do problema:

```
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)
```

Este é um trecho de debug ipv6 dhcp detail no roteador do cliente depois que a negociação do PPP foi concluída e o respectivo acesso virtual está UP.

```
*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
```

Informações Relacionadas

- [Serviço de acesso IPv6: Delegação de prefixo DHCPv6](#)
- [TSuporte técnico e documentação - Cisco Systems](#)