

基于VPDN的MLPPP配置示例

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简介

本文介绍客户端、第2层隧道协议访问集中器(LAC)和第2层隧道协议网络服务器(LNS)的配置，这些配置有助于在虚拟专用拨号网络(VPDN)隧道上构建的客户端和LNS之间建立多链路点对点协议(MLPPP)会话。

先决条件

要求

思科建议您在尝试此配置之前满足以下要求：

- 端到端第1层连接处于UP状态

使用的组件

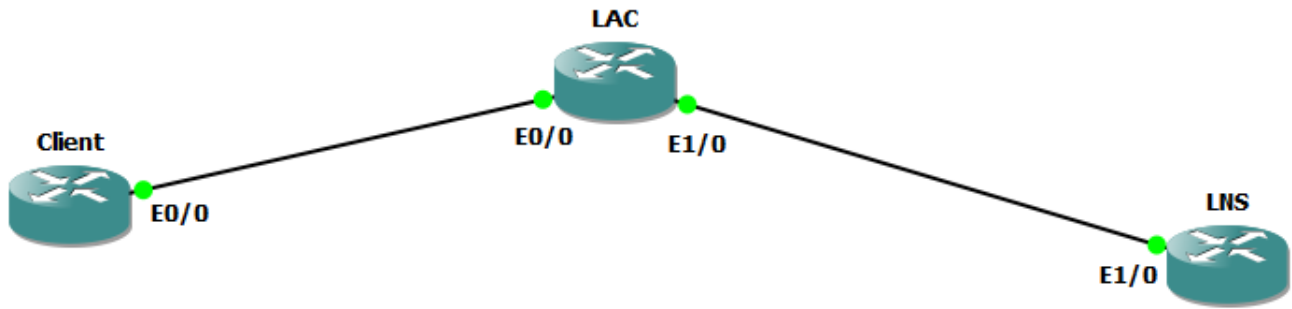
本文档不限于特定的软件和硬件版本。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

配置

注意：使用[命令查找工具（仅限注册用户）](#)可获取有关本部分所使用命令的详细信息。

网络图



配置

注意：在PPP或多链路PPP会话启动时间期间进行PPP控制数据包交换时，多链路PPP会话在CPE和LNS之间协商，而不是与LAC协商。LAC不了解多链路PPP会话。因此，当CPE启动PPP-LCP会话时，如果LAC尚未与LNS建立连接（通常情况下），则作为LCP协商一部分的包含多链路（最大接收重构单元[MRRU]）协商可能会失败。当LAC和LNS之间建立IP可达性时，LNS可以与CPE重新协商多链路(MRRU)LCP选项，然后两台对等设备可以建立端到端多链路PPP会话。

客户端配置:

客户端路由器上的配置示例如下所示：

```
interface Ethernet0/0

no ip address

pppoe enable group global

pppoe-client dial-pool-number 1

interface dialer1

bandwidth 64

IP

encapsulation ppp

dialer pool 1

dialer idle-timeout 0

keepalive 30

ppp max-failure 30

ppp chap hostname user@cisco.com

ppp chap password cisco

PPP
```

```
no cdp enable
```

LAC 配置:

LAC路由器上的配置示例如下所示：

```
LAC
!
vpdn enable
!
vpdn-group 1

l2tp
cisco.com
initiate-to ip 192.168.1.2
no l2tp tunnel authentication
!
BBAPPPOE
virtual-template 1
!
interface Ethernet0/0
no ip address
pppoe enable group global
Ethernet1/0
ip address 192.168.1.1 255.255.255.0
interface Virtual-Template1
no ip address
ppp authentication chap
PPP
```

LNS 配置:

LNS路由器上的配置示例如下所示：

```
vpdn enable

!

vpdn-group 1

accept-dialin

l2tp

virtual-template 1

terminate-from hostname LAC

lcp renegotiation on-mismatch

no l2tp tunnel authentication

!

user@cisco.comcisco

int loopback0

ip address 10.10.10.10 255.255.255.0

Ethernet1/0

ip address 192.168.1.2 255.255.255.0

interface Virtual-Template1

mtu 1492

ip unnumbered loopback0

peer default ip address pool

ppp authentication chap

PPP

!

ip local pool cisco 10.10.10.11 10.10.10.24
```

验证

在客户端、LAC和LNS上启用以下调试：

- debug ppp negotiation
- 调试pppoe事件
- 调试ppp multilink事件
- 调试vpdn事件
- 调试vpdn呼叫事件

客户端日志:

```

*Jan 14 11:01:12.744:PADI:=0/0
*Jan 14 11:01:12.744:PPPoE 0:I PADO R:aabb.cc02.bd00 L:aabb.cc02.bc00
Et0/0
*Jan 14 11:01:14.824:PPPOE:padopado
*Jan 14 11:01:14.824:PPPoEPADR
*Jan 14 11:01:14.825:PPPoE 9:I PADS R:aabb.cc02.bd00 L:aabb.cc02.bc00
Et0/0
*Jan 14 11:01:14.825:PPPoEPAD
*Jan 14 11:01:14.825:%DIALER-6-BIND:Vi3Di1
*Jan 14 11:01:14.825:PPPoE:
*Jan 14 11:01:14.825:PPPoE:Encap
*Jan 14 11:01:14.825:[0]PPPoE 9:PPPoE
*Jan 14 11:01:14.834:%LINK-3-UPDOWN:Virtual-Access3up
*Jan 14 11:01:14.834:Vi3 PPP:UP
*Jan 14 11:01:14.834:Vi3 PPP:CstateUp
*Jan 14 11:01:14.834: PPP:[2A970D92E8]
*Jan 14 11:01:14.834:ppp14 PPP:
*Jan 14 11:01:14.834:Vi3 PPP:
*Jan 14 11:01:14.834:Vi3 PPP:Treating connection as a callout
*Jan 14 11:01:14.834:Vi3 PPP:[C2000013]ID[14]
*Jan 14 11:01:14.834:Vi3 LCP:[] []
*Jan 14 11:01:14.834:Vi3 PPP:
*Jan 14 11:01:14.834:Vi3 LCP:O CONFREQ [] id 1 len 30
*Jan 14 11:01:14.834:Vi3 LCP: MagicNumber 0xBC220EF6(0x0506BC220EF6)
*Jan 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.835:Vi3 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.835:Vi3 LCP:[UP][REQsent]
*Jan 14 11:01:14.835:Vi3 LCP:I CONFREQ [REQsent] id 1 len 29
*Jan 14 11:01:14.835:Vi3 LCP: MRU 1492(0x010405D4)
*Jan 14 11:01:14.835:Vi3 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.835:Vi3 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)
*Jan 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.835:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*Jan 14 11:01:14.835:Vi3 LCP:O CONFNAK [REQsent] id 1 len 8
*Jan 14 11:01:14.835:Vi3 LCP: MRU 1500(0x010405DC)
*Jan 14 11:01:14.835:Vi3 LCP:Event[Receive ConfReq-] State[REQsent to
REQsent]
*Jan 14 11:01:14.835:Vi3 LCP:I CONFACK [REQsent] id 1 len 30
*Jan 14 11:01:14.835:Vi3 LCP: MagicNumber 0xBC220EF6(0x0506BC220EF6)
*Jan 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.835:Vi3 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.835:Vi3 LCP:Event[Receive ConfAck] State[REQsent to
ACKrcvd]

```

```
*Jan 14 11:01:14.836:Vi3 LCP:I CONFREQ [ACKrcvd] id 2 len 29
*Jan 14 11:01:14.836:Vi3 LCP: MRU 1500(0x010405DC)
*Jan 14 11:01:14.836:Vi3 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.836:Vi3 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)
*Jan 14 11:01:14.836:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.836:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*Jan 14 11:01:14.836:Vi3 LCP:O CONFACK [ACKrcvd] id 2 len 29
*Jan 14 11:01:14.836:Vi3 LCP: MRU 1500(0x010405DC)
*Jan 14 11:01:14.836:Vi3 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.836:Vi3 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)
*Jan 14 11:01:14.836:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.836:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*Jan 14 11:01:14.836:Vi3 LCP:Event[Receive ConfReq+] State[ACKrcvd to
Open]
*Jan 14 11:01:14.854:Vi3 PPP:Phase is AUTHENTICATING, by the peer
*Jan 14 11:01:14.854:Vi3 LCP:State is Open
*Jan 14 11:01:14.856:Vi3 CHAP:I CHALLENGE id 1 len 24 from "LAC"
*Jan 14 11:01:14.856:Vi3 CHAP:CHAP
*Jan 14 11:01:14.856:Vi3 CHAP:CHAP
*Jan 14 11:01:14.856:Vi3 CHAP:OID 1 len 34 from "user@cisco.com"
*Jan 14 11:01:14.861:Vi3 LCP:I CONFREQ [] id 1 len 39
*Jan 14 11:01:14.861:Vi3 LCP: MRU 1492(0x010405D4)
*Jan 14 11:01:14.861:Vi3 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.861:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*Jan 14 11:01:14.861:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.861:Vi3 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.861:Vi3 PPPPPP
*Jan 14 11:01:14.861:Vi3 PPP:NET STOPAAA
*Jan 14 11:01:14.861:Vi3 LCP:Event[LCP Reneg][]
*Jan 14 11:01:14.861:Vi3 LCP:[][]
*Jan 14 11:01:14.861:Vi3 PPP:DOWN
*Jan 14 11:01:14.861:Vi3 PPP:[2A970D9898]
*Jan 14 11:01:14.861:Vi3 PPP:ppp14 PPP:
*Jan 14 11:01:14.861:Vi3 PPP:
*Jan 14 11:01:14.861:Vi3 PPP:Treating connection as a callout
*Jan 14 11:01:14.861:Vi3 PPP:[2B000014]ID[14]
*Jan 14 11:01:14.861:Vi3 LCP:[][]
*Jan 14 11:01:14.861:Vi3 PPP:
*Jan 14 11:01:14.861:Vi3 LCP:O CONFREQ [] id 1 len 30
*Jan 14 11:01:14.861:Vi3 LCP: MagicNumber 0xBC220F12(0x0506BC220F12)
*Jan 14 11:01:14.861:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.861:Vi3 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.862:Vi3 LCP:[UP][REQsent]
*Jan 14 11:01:14.862:Vi3 LCP:I CONFREQ [REQsent] id 1 len 39
*Jan 14 11:01:14.862:Vi3 LCP: MRU 1492(0x010405D4)
*Jan 14 11:01:14.862:Vi3 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.862:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*Jan 14 11:01:14.862:Vi3 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.862:Vi3 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.862:Vi3 PPP:user@cisco.com
```



```

*Jan 14 11:01:14.897:Vi4 MLP:Di1
*Jan 14 11:01:14.897:Vi4 MLP:Vi3
*Jan 14 11:01:14.897:Vi4 MLP:6464
*Jan 14 11:01:14.897:Vi3 MLP:InitEnabled1
*Jan 14 11:01:14.897:Vi4 MLP:
*Jan 14 11:01:14.897:Vi4 MLP:Vi3LNS
*Jan 14 11:01:14.897:Vi4 MLP:1001524
*Jan 14 11:01:14.898:Vi3 MLP:SSSPPP[0x6F000015]
*Jan 14 11:01:14.898:%LINEPROTO-5-UPDOWN:Virtual-Access3up
*Jan 14 11:01:14.898:Vi4 MLP:
*Jan 14 11:01:14.914:%LINK-3-UPDOWN:Virtual-Access4up
*Jan 14 11:01:14.914:Vi4 PPP:MLPLCP
*Jan 14 11:01:14.914:Vi4 PPP:Phase is UP
*Jan 14 11:01:14.914:Vi4 IPCP:CP[]
*Jan 14 11:01:14.914:Vi4 IPCP:[][]
*Jan 14 11:01:14.914:Vi4 IPCP:O CONFREQ [] id 1 len 10
*Jan 14 11:01:14.914:Vi4 IPCP: 0.0.0.0(0x030600000000)
*Jan 14 11:01:14.914:Vi4 IPCP:[UP][REQsent]
*Jan 14 11:01:14.915:Vi4 IPCP:I CONFREQ [REQsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060a0a0a0a)
*Jan 14 11:01:14.915:Vi4 IPCP:O CONFACK [REQsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060a0a0a0a)
*Jan 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfReq+] State[REQsent to
ACKsent]
*Jan 14 11:01:14.915:%LINEPROTO-5-UPDOWN:Virtual-Access4up
*Jan 14 11:01:14.915:Vi4 IPCP:I CONFNAK [ACKsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.915:Vi4 IPCP:O CONFREQ [ACKsent] id 2 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfNak/Rej] State[ACKsent
to ACKsent]
*Jan 14 11:01:14.936:Vi4 IPCP:I CONFACK [ACKsent] id 2 len 10
*Jan 14 11:01:14.936:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.936:Vi4 IPCP:Event[Receive ConfAck] State[ACKsent to
Open]
*Jan 14 11:01:14.954:Vi4 IPCP:State is Open
*Jan 14 11:01:14.954:Di1 IPCP:IP10.10.10.18
*Jan 14 11:01:14.954:Di1AVLtopoid 010.10.10.10
*Jan 14 11:01:14.954:Di1 IPCP:Install route to 10.10.10.10

```

```
#show ppp all
```

```
/ID OPEN+ Nego*
```

```
--
```

```
Vi4 IPCP+ LocalT 10.10.10.10 LNS
```

```
Vi3 LCP+ LocalT 10.10.10.10 LNS
```

```
#show ppp multilink
```


LNS

LNS

[1] user@cisco.com

user@cisco.com

[1] user@cisco.com

00:00:17641/255

121921524

1

0/0/

00

0/0/0

0x30x0

1255

Vi300:00:17

LAC

*Jan 14 11:01:12.744:PPPoE 0:IP PADI R:aabb.cc02.bc00 L:ffff.ffff.ffff
Et0/0

*Jan 14 11:01:12.744:

*Jan 14 11:01:12.744:PPPoE 0:O PADOR:aabb.cc02.bd00 L:aabb.cc02.bc00
Et0/0

*Jan 14 11:01:12.744:

*Jan 14 11:01:14.824:PPPoE 0:I PADR R:aabb.cc02.bc00 L:aabb.cc02.bd00
Et0/0

*Jan 14 11:01:14.824:

*Jan 14 11:01:14.824:PPPoE:Encap

*Jan 14 11:01:14.824:[9]PPPoE 9:IE

*Jan 14 11:01:14.824:[9]PPPoE 9:AAID 17

*Jan 14 11:01:14.824:[9]PPPoE 9:AAA

*Jan 14 11:01:14.824:[9]PPPoE 9:SSS

*Jan 14 11:01:14.824:[9]PPPoE 9:R:aabb.cc02.bd00 L:aabb.cc02.bc00 Et0/0

*Jan 14 11:01:14.825:[9]PPPoE 9:NAS_PORT_POLICY_INQUIRYSSS

*Jan 14 11:01:14.825: PPP:[2A970D9898]

*Jan 14 11:01:14.825:ppp9 PPP:

*Jan 14 11:01:14.825:[9]PPPoE 9:PPP

*Jan 14 11:01:14.825:[9]PPPoE 9:SSS

*Jan 14 11:01:14.825:[9]PPPoE 9:PROVISION_PPPSSM

*Jan 14 11:01:14.825:[9]PPPoE 9:O PADS R:aabb.cc02.bc00 L:aabb.cc02.bd00 Et0/0

*Jan 14 11:01:14.825:ppp9 PPP:VPN

*Jan 14 11:01:14.825:ppp9 PPP:

*Jan 14 11:01:14.825:ppp9 PPP:[B4000009]ID[9]

*Jan 14 11:01:14.825:ppp9 LCP:[] []

*Jan 14 11:01:14.825:ppp9 PPP LCP:[]

*Jan 14 11:01:14.835:ppp9 LCP:I CONFREQ [] id 1 len 30

*Jan 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC220EF6(0x0506BC220EF6)

*Jan 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.835:ppp9 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.835:ppp9 LCP:O CONFREQ [] id 1 len 29

*Jan 14 11:01:14.835:ppp9 LCP: MRU 1492(0x010405D4)

*Jan 14 11:01:14.835:ppp9 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)

*Jan 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.835:ppp9 LCP: EndpointDisc 1 LAC(0x1306014C4143)

*Jan 14 11:01:14.835:ppp9 LCP:O CONFACK [] id 1 len 30

*Jan 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC220EF6(0x0506BC220EF6)

*Jan 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.835:ppp9 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.835:ppp9 LCP:Event[Receive ConfReq+] State[Stopped to
ACKsent]

*Jan 14 11:01:14.836:ppp9 LCP:I CONFNAK [ACKsent] id 1 len 8

*Jan 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.836:ppp9 LCP:O CONFREQ [ACKsent] id 2 len 29

*Jan 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.836:ppp9 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.836:ppp9 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)

*Jan 14 11:01:14.836:ppp9 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.836:ppp9 LCP: EndpointDisc 1 LAC(0x1306014C4143)

*Jan 14 11:01:14.836:ppp9 LCP:Event[Receive ConfNak/Rej] State[ACKsent
to ACKsent]

*Jan 14 11:01:14.836:ppp9 LCP:I CONFACK [ACKsent] id 2 len 29

*Jan 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.836:ppp9 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.836:ppp9 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)

*Jan 14 11:01:14.836:ppp9 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.836:ppp9 LCP: EndpointDisc 1 LAC(0x1306014C4143)

*Jan 14 11:01:14.836:ppp9 LCP:Event[Receive ConfAck] State[ACKsent to
Open]

*Jan 14 11:01:14.856:ppp9 PPP:Phase is AUTHENTICATING, by this end

*Jan 14 11:01:14.856:ppp9 CHAP:O"LAC"CHALLENGE ID 1 len 24

*Jan 14 11:01:14.856:ppp9 LCP:State is Open

*Jan 14 11:01:14.856:ppp9 CHAP:I RESPONSE ID 1 len 34 from
"user@cisco.com"

*Jan 14 11:01:14.856:ppp9 PPP:Phase is FORWARDING, Attempting Forward
*Jan 14 11:01:14.856:VPDN[uid:9]:
*Jan 14 11:01:14.856:VPDN[uid:9]:
*Jan 14 11:01:14.857:[9]PPPoE 9:IE NAS
*Jan 14 11:01:14.857:VPDN uid:9TX(10000000)RX(10000000)
*Jan 14 11:01:14.857:VPDN uid:9TX(10000000)RX(10000000)
*Jan 14 11:01:14.857:VPDN uid:9 L2TUNF600000C
*Jan 14 11:01:14.857:VPDN uid:9L2-L2idb
*Jan 14 11:01:14.857:VPDN[uid:9]:192.168.1.2
*Jan 14 11:01:14.857:[9]PPPoE 9:LCP_NEGOTIATIONPPP
*Jan 14 11:01:14.857:[9]PPPoE 9:SSS
*Jan 14 11:01:14.857:[9]PPPoE 9:SSS
*Jan 14 11:01:14.859:VPDNL2TUN
*Jan 14 11:01:14.859:VPDN uid:9swidb
*Jan 14 11:01:14.859:[9]PPPoE 9:SSS
*Jan 14 11:01:14.859:[9]PPPoE 9:SSS
*Jan 14 11:01:14.859:VPDNL2TUN
*Jan 14 11:01:14.859:VPDN[uid:9]:user@cisco.com
*Jan 14 11:01:14.859:VPDN uid:9 VPDN
*Jan 14 11:01:14.859:VPDN[uid:9]:
*Jan 14 11:01:14.860:ppp9 PPP:
*Jan 14 11:01:14.860:[9]PPPoE 9:LCP_NEGOTIATIONPPP
*Jan 14 11:01:14.860:[9]PPPoE 9:

LAC#show ppp all

/ID OPEN+ Nego*

--

0xB4000009 LCP+ CHAP* Fwded 0.0.0.0 user@cisco.com

LAC#show ppp multilink

LNS

```
*Jan 14 11:01:14.858:VPDNL2TUN
*Jan 14 11:01:14.859:VPDN uid:13 L2TUN
*Jan 14 11:01:14.859:VPDN uid:13L2-L2idb
*Jan 14 11:01:14.860:VPDNL2TUN
*Jan 14 11:01:14.860:VPDN uid:13 VPDN
*Jan 14 11:01:14.860: PPP:[2A970D95C0]
*Jan 14 11:01:14.860:ppp13 PPP:
*Jan 14 11:01:14.860:ppp13 LCP:[] []
*Jan 14 11:01:14.860:ppp13 LCP:I FORCED rcvd CONFACK29
*Jan 14 11:01:14.861:ppp13 LCP: MRU 1500(0x010405DC)
*Jan 14 11:01:14.861:ppp13 LCP: AuthProto CHAP (0x0305C22305)
*Jan 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC21F6F0(0x0506BC21F6F0)
*Jan 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.861:ppp13 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*Jan 14 11:01:14.861:ppp13 PPP:LCPrcv CONFACK
*Jan 14 11:01:14.861:ppp13 LCP:CONFACK len 30
*Jan 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC220EF6(0x0506BC220EF6)
*Jan 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)
*Jan 14 11:01:14.861:ppp13 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)
*Jan 14 11:01:14.861:ppp13 LCP:[DOWN] []
*Jan 14 11:01:14.861:ppp13 LCP:[] []
*Jan 14 11:01:14.861:ppp13 LCP:[] []
```

*Jan 14 11:01:14.861:ppp13 LCP:O CONFREQ [] id 1 len 39

*Jan 14 11:01:14.861:ppp13 LCP: MRU 1492(0x010405D4)

*Jan 14 11:01:14.861:ppp13 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)

*Jan 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.861:ppp13 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.861:ppp13 LCP:[UP][REQsent]

*Jan 14 11:01:14.862:ppp13 LCP:I CONFREQ [REQsent] id 1 len 30

*Jan 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC220F12(0x0506BC220F12)

*Jan 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.862:ppp13 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.862:ppp13 PPP:user@cisco.com

*Jan 14 11:01:14.862:ppp13 LCP:O CONFACK [REQsent] id 1 len 30

*Jan 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC220F12(0x0506BC220F12)

*Jan 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.862:ppp13 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.862:ppp13 LCP:Event[Receive ConfReq+] State[REQsent to
ACKsent]

*Jan 14 11:01:14.862:ppp13 LCP:I CONFNAK [ACKsent] id 1 len 8

*Jan 14 11:01:14.862:ppp13 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.862:ppp13 LCP:O CONFREQ [ACKsent] id 2 len 39

*Jan 14 11:01:14.862:ppp13 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.862:ppp13 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)

*Jan 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.862:ppp13 LCP: EndpointDisc 1

user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.862:ppp13 LCP:Event[Receive ConfNak/Rej] State[ACKsent to ACKsent]

*Jan 14 11:01:14.863:ppp13 LCP:I CONFACK [ACKsent] id 2 len 39

*Jan 14 11:01:14.863:ppp13 LCP: MRU 1500(0x010405DC)

*Jan 14 11:01:14.863:ppp13 LCP: AuthProto CHAP (0x0305C22305)

*Jan 14 11:01:14.863:ppp13 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)

*Jan 14 11:01:14.863:ppp13 LCP: MRRU 1524(0x110405F4)

*Jan 14 11:01:14.863:ppp13 LCP: EndpointDisc 1
user@cisco.com(0x1310017573657240737572662E6F7267)

*Jan 14 11:01:14.863:ppp13 LCP:Event[Receive ConfAck] State[ACKsent to Open]

*Jan 14 11:01:14.895:ppp13 PPP:Phase is AUTHENTICATING, by this end

*Jan 14 11:01:14.895:ppp13 CHAP:O"LNS"ID 2 len 27

*Jan 14 11:01:14.895:ppp13 LCP:State is Open

*Jan 14 11:01:14.895:ppp13 CHAP:I RESPONSE ID 2 len 34 from
"user@cisco.com"

*Jan 14 11:01:14.895:ppp13 PPP:Phase is FORWARDING, Attempting Forward

*Jan 14 11:01:14.895:ppp13 PPP:AUTHENTICATING

*Jan 14 11:01:14.895:ppp13 PPP:Phase is FORWARDING, Attempting Forward

*Jan 14 11:01:14.896:VPDN uid:13user@cisco.com10000 Kbps

*Jan 14 11:01:14.896:user@cisco.comVPDN Vi310000 Kbps

L2X_ADJ:Vi3ctx1

*Jan 14 11:01:14.896:VPDNL2TUNUP

*Jan 14 11:01:14.896:Vi3 PPP:AUTHENTICATING

*Jan 14 11:01:14.896:Vi3 CHAP:O SUCCESS id 2 len 4

*Jan 14 11:01:14.896:Vi3 MLP:

*Jan 14 11:01:14.896:Vi3 PPP:

*Jan 14 11:01:14.896:Vi3 MLP:

*Jan 14 11:01:14.896:Vi3 MLP:
*Jan 14 11:01:14.896:Vi3 MLP:SSS
*Jan 14 11:01:14.896:Vi3 MLP:1
*Jan 14 11:01:14.897:Vi3 MLP:SSS
*Jan 14 11:01:14.897:Vi3 MLP:1
*Jan 14 11:01:14.897:%LINK-3-UPDOWN:Virtual-Access3up
*Jan 14 11:01:14.897:Vi3 MLP:SSSVi4
*Jan 14 11:01:14.897: PPP:[2A970D9898]
*Jan 14 11:01:14.897:ppp14 PPP:
*Jan 14 11:01:14.897:Vi4 MLP:10000010000
*Jan 14 11:01:14.897:Vi4 MLP:Vi3
*Jan 14 11:01:14.897:Vi3 MLP:37492MTU1488
*Jan 14 11:01:14.897:Vi4 MLP:1000010000
*Jan 14 11:01:14.897:Vi3 MLP:InitEnabled1
*Jan 14 11:01:14.897:Vi4 MLP:Vi3user@cisco.com
*Jan 14 11:01:14.898:Vi3 MLP:SSSPPP[0x5900000E]
*Jan 14 11:01:14.898:%LINEPROTO-5-UPDOWN:Virtual-Access3up
*Jan 14 11:01:14.898:Vi4 MLP:
*Jan 14 11:01:14.915:%LINK-3-UPDOWN:Virtual-Access4up
*Jan 14 11:01:14.915:Vi4 PPP:MLPLCP
*Jan 14 11:01:14.915:Vi3 PPP:IPCP[1] id[1]
*Jan 14 11:01:14.915:Vi4 PPP:Phase is UP
*Jan 14 11:01:14.915:Vi4 IPCP:CP[]
*Jan 14 11:01:14.915:Vi4 IPCP:[][]
*Jan 14 11:01:14.915:Vi4 IPCP:O CONFREQ [] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060a0a0a0a)
*Jan 14 11:01:14.915:Vi4 IPCP:[UP][REQsent]

*Jan 14 11:01:14.915:Vi3 PPP:Process pending ncp packets
*Jan 14 11:01:14.915:Vi3 IPCP:Vi4
*Jan 14 11:01:14.915:Vi4 IPCP:I CONFREQ [REQsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 0.0.0.0(0x030600000000)
*Jan 14 11:01:14.915:Vi4 IPCP0.0.0.00.0.0.0
*Jan 14 11:01:14.915:Vi4 IPCP:10.10.10.18
*Jan 14 11:01:14.915:Vi4 IPCP:O CONFNAK [REQsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfReq-] State[REQsent to REQsent]
*Jan 14 11:01:14.915:Vi4 IPCP:I CONFACK [REQsent] id 1 len 10
*Jan 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060a0a0a0a)
*Jan 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfAck] State[REQsent to ACKrcvd]
*Jan 14 11:01:14.916:%LINEPROTO-5-UPDOWN:Virtual-Access4up
*Jan 14 11:01:14.936:Vi4 IPCP:I CONFREQ [ACKrcvd] id 2 len 10
*Jan 14 11:01:14.936:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.936:Vi4 IPCP:O CONFACK [ACKrcvd] id 2 len 10
*Jan 14 11:01:14.936:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*Jan 14 11:01:14.936:Vi4 IPCP:Event[Receive ConfReq+] State[ACKrcvd to Open]
*Jan 14 11:01:14.965:Vi4 IPCP:State is Open
*Jan 14 11:01:14.965:Vi4AVLtopoid 010.10.10.18
*Jan 14 11:01:14.965:Vi4 IPCP:Install route to 10.10.10.18

LNS#show ppp all

/ID OPEN+ Nego*

--

Vi4 IPCP+ LocalT 10.10.10.18 user@cisco.com

```
Vi3 LCP+ CHAP+ LocalT 10.10.10.18 user@cisco.com
```

```
LNS#show ppp multilink
```

```
4
```

```
user@cisco.com
```

```
user@cisco.com
```

```
[1] user@cisco.com
```

```
LNS
```

```
[1] user@cisco.com
```

```
00:00:10100001/255
```

```
1219215
```

```
0/0/
```

```
00
```

```
0/0/0
```

```
0x00x3
```

```
1255
```

```
LAC:Vi3(192.168.1.1)00:00:10375001488
```

相关信息

- [配置客户端启动的拨入VPDN隧道](#)
- [T技术支持和文档 — Cisco Systems](#)