

MLPPP over VPDN 컨피그레이션 예

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소개

이 문서에서는 VPDN(Virtual Private Dial-up Network) 터널을 통해 구축된 클라이언트와 LNS 간의 MLPPP(Multilink Point-to-Point Protocol) 세션을 설정하는 데 도움이 되는 클라이언트, 레이어 2 LAC(Tunneling Protocol Access Concentrator) 및 레이어 2 LNS(Tunneling Protocol Network Server)의 컨피그레이션에 대해 설명합니다.

사전 요구 사항

요구 사항

이 구성을 시도하기 전에 다음 요구 사항을 충족하는 것이 좋습니다.

- 엔드 투 엔드 레이어 1 연결이 UP임

사용되는 구성 요소

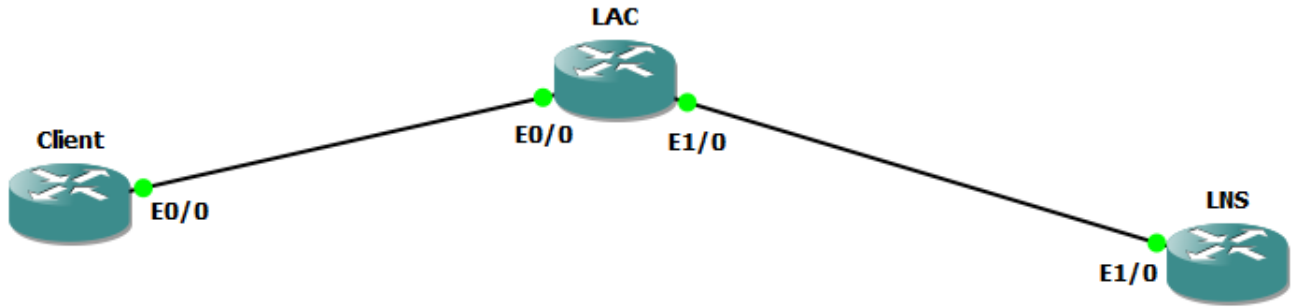
이 문서는 특정 소프트웨어 및 하드웨어 버전으로 한정되지 않습니다.

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 현재 네트워크가 작동 중인 경우, 모든 명령어의 잠재적인 영향을 미리 숙지하시기 바랍니다.

구성

참고: 이 [섹션](#)에 사용된 명령에 대한 자세한 내용을 보려면 [Command Lookup Tool](#)([등록된](#) 고객만 해당)을 사용합니다.

네트워크 다이어그램



구성

참고: PPP 또는 Multilink PPP 세션 시작 시간 동안 PPP 제어 패킷 교환의 경우 Multilink PPP 세션은 LAC가 아니라 CPE와 LNS 간에 협상됩니다. LAC에는 Multilink PPP 세션에 대한 지식이 없습니다. 따라서 CPE가 PPP-LCP 세션을 시작할 때 LCP 협상의 일부로 포함된 Multilink(MRRU[Maximum Receive Recruted Unit]) 협상은 LAC가 LNS와의 연결을 아직 설정하지 않은 경우 실패할 수 있습니다(일반적으로 예:). LAC와 LNS 간의 IP 연결이 설정되면 LNS는 MRRU(Multilink) LCP 옵션을 CPE와 재협상할 수 있으며, 두 피어 디바이스는 엔드 투 엔드 멀티링크 PPP 세션을 설정할 수 있습니다.

클라이언트 구성:

클라이언트 라우터의 컨피그레이션 예는 다음과 같습니다.

```

Ethernet0/0

ip

pppoe

pppoe-client dial-pool-number 1

1

64

ip

ppp

1

0

keepalive 30

ppp max-failure 30

ppp chap user@cisco.com

ppp chap cisco
  
```

ppp

cdp

LAC 구성:

LAC 라우터의 컨피그레이션 예는 다음과 같습니다.

```
LAC
!
vpdn
!
vpdn-group 1

l2tp
cisco.com
ip 192.168.1.2
l2tp
!
bba pppoe
1
!
Ethernet0/0
ip
pppoe
1/0
ip 192.168.1.1 255.255.255.0
Virtual-Template1
ip
ppp chap
ppp
```

LNS 구성:

LNS 라우터의 컨피그레이션 예는 다음과 같습니다.

```
vpdn
!
vpdn-group 1

l2tp
 1
  LAC

lcp on mismatch

l2tp
!
  user@cisco.com cisco

int 0

ip 10.10.10.10 255.255.255.0

 1/0

ip 192.168.1.2 255.255.255.0

  Virtual-Template1

mtu 1492

ip 0

  ip cisco

ppp chap

ppp

!

ip cisco 10.10.10.11 10.10.10.24
```

다음을 확인합니다.

클라이언트, LAC 및 LNS에서 다음 디버그를 사용할 수 있습니다.

- 디버그 PPP 협상
- 디버그 pppoe 이벤트
- 디버그 ppp 멀티링크 이벤트
- vpdn 이벤트 디버그
- vpdn 호출 이벤트 디버그

클라이언트 로그:

```
*1 14 11:01:12.744: PDI: = Ethernet0/0
*1 14 11:01:12.744:PPPoE 0:I PADO R:aabb.cc02.bd00 L:aabb.cc02.bc00
Et0/0
*1 14 11:01:14.824:PPPOE:pado
*1 14 11:01:14.824:PPPoE OUT PADR
*1 14 11:01:14.825:PPPoE 9:i PAD R:aabb.cc02.bd00 L:aabb.cc02.bc00 Et0/0
*1 14 11:01:14.825:PPPoE IN PAD
*1 14 11:01:14.825:%DIALER-6-BIND: Di1 Vi3
*1 14 11:01:14.825:PPPoE: .
*1 14 11:01:14.825:PPPoE:encap
*1 14 11:01:14.825:[0]PPPoE 9:PPPoE
*1 14 11:01:14.834:%LINK-3-:Interface Virtual-Access3, up
*1 14 11:01:14.834:Vi3 PPP:CSTATE UP
*1 14 11:01:14.834:Vi3 PPP:CstateUp
*1 14 11:01:14.834:PPP: [2A970D92E8]
*1 14 11:01:14.834:ppp14 PPP:
*1 14 11:01:14.834:Vi3 PPP:
*1 14 11:01:14.834:Vi3 PPP:
*1 14 11:01:14.834:Vi3 PPP: [C2000013] ID[14]
*1 14 11:01:14.834:Vi3 LCP:[OPEN] [ ]
*1 14 11:01:14.834:Vi3 PPP:
*1 14 11:01:14.834:Vi3 LCP:O CONFREQ [ ] id 1 len 30
*1 14 11:01:14.834:Vi3 LCP: MagicNumber 0xBC220EF6 (0x0506BC220EF6)
*1 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.835:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.835:Vi3 LCP:Event[UP] State[REQsent ]
*1 14 11:01:14.835:Vi3 LCP:I CONFREQ [REQsent] id 1 len 29
*1 14 11:01:14.835:Vi3 LCP: MRU 1492(0x010405D4)
*1 14 11:01:14.835:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.835:Vi3 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)
*1 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.835:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*1 14 11:01:14.835:Vi3 LCP:o CONNACK [REQsent] id 1 len 8
*1 14 11:01:14.835:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.835:Vi3 LCP:[Receive ConfReq-] [REQsent to REQsent]
*1 14 11:01:14.835:Vi3 LCP:I CONFACK [REQsent] id 1 len 30
*1 14 11:01:14.835:Vi3 LCP: MagicNumber 0xBC220EF6 (0x0506BC220EF6)
*1 14 11:01:14.835:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.835:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.835:Vi3 LCP:Event[Receive ConfAck] State[REQsent to
ACKrcvd]
```

```

*1 14 11:01:14.836:Vi3 LCP:I CONFREQ [ACKrcvd] id 2 len 29
*1 14 11:01:14.836:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.836:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.836:Vi3 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)
*1 14 11:01:14.836:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.836:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*1 14 11:01:14.836:Vi3 LCP:O CONFACK [ACKrcvd] id 2 len 29
*1 14 11:01:14.836:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.836:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.836:Vi3 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)
*1 14 11:01:14.836:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.836:Vi3 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*1 14 11:01:14.836:Vi3 LCP:[ConfReq+ ] [ACKrcvd to Open]
*1 14 11:01:14.854:Vi3 PPP: .
*1 14 11:01:14.854:Vi3 LCP:
*1 14 11:01:14.856:Vi3 CHAP:"LAC" ID 1 len 24
*1 14 11:01:14.856:Vi3 CHAP: CHAP
*1 14 11:01:14.856:Vi3 CHAP: CHAP
*1 14 11:01:14.856:Vi3 CHAP:O ID 1 len 34("user@cisco.com")
*1 14 11:01:14.861:Vi3 LCP:I CONFREQ [Open] id 1 len 39
*1 14 11:01:14.861:Vi3 LCP: MRU 1492(0x010405D4)
*1 14 11:01:14.861:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.861:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.861:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.861:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.861:Vi3 PPP :PPP
*1 14 11:01:14.861:Vi3 PPP:NET STOP AAA .
*1 14 11:01:14.861:Vi3 LCP:[LCP ] []
*1 14 11:01:14.861:Vi3 LCP:[DOWN] [ - ]
*1 14 11:01:14.861:Vi3 PPP:
*1 14 11:01:14.861:Vi3 PPP: [2A970D9898]
*1 14 11:01:14.861:Vi3 PPP:ppp14 PPP:
*1 14 11:01:14.861:Vi3 PPP:
*1 14 11:01:14.861:Vi3 PPP:
*1 14 11:01:14.861:Vi3 PPP: [2B000014] ID[14]
*1 14 11:01:14.861:Vi3 LCP:[OPEN] [ ]
*1 14 11:01:14.861:Vi3 PPP:
*1 14 11:01:14.861:Vi3 LCP:O CONFREQ [] id 1 len 30
*1 14 11:01:14.861:Vi3 LCP: MagicNumber 0xBC220F12 (0x0506BC220F12)
*1 14 11:01:14.861:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.861:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:Vi3 LCP:Event[UP] State[REQsent ]
*1 14 11:01:14.862:Vi3 LCP:I CONFREQ [REQsent] id 1 len 39
*1 14 11:01:14.862:Vi3 LCP: MRU 1492(0x010405D4)
*1 14 11:01:14.862:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.862:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.862:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:Vi3 PPP: user@cisco.com() . .
*1 14 11:01:14.862:Vi3 LCP:o CONNAK [REQsent] id 1 len 8

```

```
*1 14 11:01:14.862:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.862:Vi3 LCP:[Receive ConfReq-] [REQsent to REQsent]
*1 14 11:01:14.862:Vi3 LCP:I CONFACK [REQsent] id 1 len 30
*1 14 11:01:14.862:Vi3 LCP: MagicNumber 0xBC220F12 (0x0506BC220F12)
*1 14 11:01:14.862:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:Vi3 LCP:Event[Receive ConfAck] State[REQsent to
ACKrcvd]
*1 14 11:01:14.862:Vi3 LCP:I CONFREQ [ACKrcvd] id 2 len 39
*1 14 11:01:14.862:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.862:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.862:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.862:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:Vi3 PPP: user@cisco.com() . .
*1 14 11:01:14.862:Vi3 LCP:O CONFACK [ACKrcvd] id 2 len 39
*1 14 11:01:14.862:Vi3 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.862:Vi3 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.862:Vi3 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.862:Vi3 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:Vi3 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:Vi3 LCP:[ConfReq+ ] [ACKrcvd to Open]
*1 14 11:01:14.884:Vi3 PPP: .
*1 14 11:01:14.884:Vi3 LCP:
*1 14 11:01:14.895:Vi3 CHAP:"LNS" I CHALLENGE id 2 len 27
*1 14 11:01:14.895:Vi3 CHAP: CHAP
*1 14 11:01:14.895:Vi3 CHAP: CHAP
*1 14 11:01:14.895:Vi3 CHAP:O ID 2 len 34("user@cisco.com")
*1 14 11:01:14.896:Vi3 CHAP:I ID 2 len 4
*1 14 11:01:14.896:Vi3 PPP: FORWARDING. .
*1 14 11:01:14.897:Vi3 PPP: ESTABLISH, LCP
*1 14 11:01:14.897:Vi3 MLP:
*1 14 11:01:14.897:Vi3 PPP:
*1 14 11:01:14.897:Vi3 MLP:
*1 14 11:01:14.897:Vi3 MLP: vaccess
*1 14 11:01:14.897:Vi3 MLP:SSS
*1 14 11:01:14.897:Vi3 MLP: Di1
*1 14 11:01:14.897:Vi3 MLP:SSS
*1 14 11:01:14.897:Vi3 MLP: Di1
*1 14 11:01:14.897:Vi3 MLP:SSS , Vi4
*1 14 11:01:14.897:PPP: [2A970D95C0]
*1 14 11:01:14.897:ppp15 PPP:
*1 14 11:01:14.897:Vi4 MLP:100000 64
*1 14 11:01:14.897:Vi4 MLP: ,
*1 14 11:01:14.897:Vi4 MLP: (100ms 1524ms)
*1 14 11:01:14.897:Vi4 MLP: (100ms 1524ms)
*1 14 11:01:14.897:%DIALER-6-BIND: Vi4 Di1
*1 14 11:01:14.897:Vi4 MLP: Di1
*1 14 11:01:14.897:Vi4 MLP: Vi3
*1 14 11:01:14.897:Vi4 MLP: 64 set 64
```

```
*1 14 11:01:14.897:Vi3 MLP: Init Enabled 1 .
*1 14 11:01:14.897:Vi4 MLP: ,
*1 14 11:01:14.897:Vi4 MLP: LNS Vi3 .
*1 14 11:01:14.897:Vi4 MLP: (100ms 1524ms)
*1 14 11:01:14.898:Vi3 MLP:SSS PPP [0x6F000015]
*1 14 11:01:14.898:%LINEPROTO-5-:Interface Virtual-Access3 up
*1 14 11:01:14.898:Vi4 MLP:
*1 14 11:01:14.914:%LINK-3-:Interface Virtual-Access4, up
*1 14 11:01:14.914:Vi4 PPP:MLP LCP
*1 14 11:01:14.914:Vi4 PPP: UP
*1 14 11:01:14.914:Vi4 IPCP: , CP []
*1 14 11:01:14.914:Vi4 IPCP:[OPEN] [ ]
*1 14 11:01:14.914:Vi4 IPCP:O CONFREQ [] id 1 len 10
*1 14 11:01:14.914:Vi4 IPCP: 0.0.0.0(0x030600000000)
*1 14 11:01:14.914:Vi4 IPCP:Event[UP] State[REQsent ]
*1 14 11:01:14.915:Vi4 IPCP:I CONFREQ [REQsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060A0A0A0A)
*1 14 11:01:14.915:Vi4 IPCP:o CONFACK [REQsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060A0A0A0A)
*1 14 11:01:14.915:Vi4 IPCP:[ConfReq+] [REQsent ]
*1 14 11:01:14.915:%LINEPROTO-5-:Interface Virtual-Access4 , up
*1 14 11:01:14.915:Vi4 IPCP:I CONNACK [ACKsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.915:Vi4 IPCP:O CONFREQ [ACKsent] id 2 len 10
*1 14 11:01:14.915:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfNak/Rej] State[ACKsent to
ACKsent]
*1 14 11:01:14.936:Vi4 IPCP:I CONFACK [ACKsent] id 2 len 10
*1 14 11:01:14.936:Vi4 IPCP: 10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.936:Vi4 IPCP:Event[Receive ConfAck] State[ACKsent to
Open]
*1 14 11:01:14.954:Vi4 IPCP:
*1 14 11:01:14.954:Di1 IPCP: IP 10.10.10.18
*1 14 11:01:14.954: AVL Di1 :tooid 0, 10.10.10.10
*1 14 11:01:14.954:Di1 IPCP:10.10.10.10
```

PPP

/ID OPEN+ Nego* Fail-Stage

— — — — —

Vi4 IPCP+ LocalT 10.10.10.10 LNS

Vi3 LCP+ LocalT 10.10.10.10 LNS

PPP

4

:LNS

:LNS

: [1] user@cisco.com

: user@cisco.com

: [1] user@cisco.com

00:00:17, 64, 1/255

12192, 1524ms

1.

0/0 /

0 , 0

0/0 /, 0

0x3 , 0x0

:1(255,)

Vi3, 00:00:17

LAC :

*1 14 11:01:12.744:PPPoE 0:I PADI R:aabb.cc02.bc00 L:ffff.ffff.ffff
Et0/0

*1 14 11:01:12.744: :NULL

*1 14 11:01:12.744:PPPoE 0:O PADO, R:aabb.cc02.bd00 L:aabb.cc02.bc00
Et0/0

*1 14 11:01:12.744: :NULL

*1 14 11:01:14.824:PPPoE 0:I PADR R:aabb.cc02.bc00 L:aabb.cc02.bd00
Et0/0

*1 14 11:01:14.824: :NULL

*1 14 11:01:14.824:PPPoE:encap

*1 14 11:01:14.824:[9]PPPoE 9: IE

*1 14 11:01:14.824:[9]PPPoE 9:AAA ID 17

*1 14 11:01:14.824:[9]PPPoE 9:AAA

*1 14 11:01:14.824:[9]PPPoE 9:SSS

*1 14 11:01:14.824:[9]PPPoE 9:, : R:aabb.cc02.bd00 L:aabb.cc02.bc00 Et0/0

*1 14 11:01:14.825:[9]PPPoE 9: NAS_PORT_POLICY_INQUIRY SSS

*1 14 11:01:14.825:PPP: [2A970D9898]

*1 14 11:01:14.825:ppp9 PPP:

*1 14 11:01:14.825:[9]PPPoE 9:PPP

*1 14 11:01:14.825:[9]PPPoE 9:(SSS):

*1 14 11:01:14.825:[9]PPPoE 9: PROVISION_PPP SSM

*1 14 11:01:14.825:[9]PPPoE 9:o R:aabb.cc02.bc00 L:aabb.cc02.bd00 Et0/0

*1 14 11:01:14.825:ppp9 PPP:vpn set

*1 14 11:01:14.825:ppp9 PPP:

*1 14 11:01:14.825:ppp9 PPP: [B4000009] ID[9]

*1 14 11:01:14.825:ppp9 LCP:[OPEN] []

*1 14 11:01:14.825:ppp9 PPP LCP: . state[Stopped]

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

*1 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC220EF6 (0x0506BC220EF6)

*1 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

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

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

*1 14 11:01:14.835:ppp9 LCP: MRU 1492(0x010405D4)

*1 14 11:01:14.835:ppp9 LCP: AuthProto CHAP(0x0305C22305)

*1 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)

*1 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

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

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

*1 14 11:01:14.835:ppp9 LCP: MagicNumber 0xBC220EF6 (0x0506BC220EF6)

*1 14 11:01:14.835:ppp9 LCP: MRRU 1524(0x110405F4)

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

*1 14 11:01:14.835:ppp9 LCP:Event[Receive ConfReq+] State[Stopped to
ACKsent] ([ConfReq+ )

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

*1 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*1 14 11:01:14.836:ppp9 LCP:O CONFREQ [ACKsent] id 2 len 29

*1 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*1 14 11:01:14.836:ppp9 LCP: AuthProto CHAP(0x0305C22305)

*1 14 11:01:14.836:ppp9 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)

*1 14 11:01:14.836:ppp9 LCP: MRRU 1524(0x110405F4)

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

*1 14 11:01:14.836:ppp9 LCP:Event[Receive ConfNak/Rej] State[ACKsent to
ACKsent]

*1 14 11:01:14.836:ppp9 LCP:I CONFACK [ACKsent] id 2 len 29

*1 14 11:01:14.836:ppp9 LCP: MRU 1500(0x010405DC)

*1 14 11:01:14.836:ppp9 LCP: AuthProto CHAP(0x0305C22305)

*1 14 11:01:14.836:ppp9 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)

*1 14 11:01:14.836:ppp9 LCP: MRRU 1524(0x110405F4)

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

*1 14 11:01:14.836:ppp9 LCP:Event[Receive ConfAck] State[ACKsent to
Open]

*1 14 11:01:14.856:ppp9 PPP: AUTHENTICATING( ),

*1 14 11:01:14.856:ppp9 CHAP:o "LAC" CHALLENGE id 1 len 24

*1 14 11:01:14.856:ppp9 LCP:

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

*1 14 11:01:14.856:ppp9 PPP: FORWARDING.

*1 14 11:01:14.856:VPDN [uid:9]:
```

```
*1 14 11:01:14.856:VPDN [uid:9]:
*1 14 11:01:14.857:[9]PPPoE 9:Access IE nas
*1 14 11:01:14.857:VPDN uid:9 TX(10000000) RX(10000000).
*1 14 11:01:14.857:VPDN uid:9 TX(10000000) RX(10000000).
*1 14 11:01:14.857:VPDN uid:9 L2TUN F60000C
*1 14 11:01:14.857:VPDN uid:9 L2-L2 , idb
*1 14 11:01:14.857:VPDN MGR [uid:9]:192.168.1.2
*1 14 11:01:14.857:[9]PPPoE 9: LCP_NEGOTIATION PPP
*1 14 11:01:14.857:[9]PPPoE 9:(SSS ):
*1 14 11:01:14.857:[9]PPPoE 9:SSS
*1 14 11:01:14.859:VPDN L2TUN
*1 14 11:01:14.859:VPDN uid:9 swidb .
*1 14 11:01:14.859:[9]PPPoE 9:(SSS ):
*1 14 11:01:14.859:[9]PPPoE 9:SSS
*1 14 11:01:14.859:VPDN L2TUN .
*1 14 11:01:14.859:VPDN MGR [uid:9]:user@cisco.com .
*1 14 11:01:14.859:VPDN uid:9 VPDN up
*1 14 11:01:14.859:VPDN [uid:9]:
*1 14 11:01:14.860:ppp9 PPP: ,
*1 14 11:01:14.860:[9]PPPoE 9: LCP_NEGOTIATION PPP FORWARDED
*1 14 11:01:14.860:[9]PPPoE 9:
```

LAC#show ppp all

```
/ID OPEN+ Nego* Fail-Stage
```

```
— — — — —
```

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

LAC#show ppp multilink

LNS :

```
*1 14 11:01:14.858:VPDN L2TUN
*1 14 11:01:14.859:VPDN uid:13 L2TUN
*1 14 11:01:14.859:VPDN uid:13 L2-L2      , idb
*1 14 11:01:14.860:VPDN L2TUN      .
*1 14 11:01:14.860:VPDN uid:13 VPDN up
*1 14 11:01:14.860:PPP: [2A970D95C0]
*1 14 11:01:14.860:ppp13 PPP:
*1 14 11:01:14.860:ppp13 LCP:[Jam Start] [Initial to Closed]
*1 14 11:01:14.860:ppp13 LCP: CONFACK len 29
*1 14 11:01:14.861:ppp13 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.861:ppp13 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC21F6F0 (0x0506BC21F6F0)
*1 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.861:ppp13 LCP: EndpointDisc 1 LAC(0x1306014C4143)
*1 14 11:01:14.861:ppp13 PPP:LCP rcv CONFACK
*1 14 11:01:14.861:ppp13 LCP:CONFACK Len . 30
*1 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC220EF6 (0x0506BC220EF6)
*1 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.861:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.861:ppp13 LCP:[DOWN] [ ]
*1 14 11:01:14.861:ppp13 LCP:[CLOSE] [ - ]
*1 14 11:01:14.861:ppp13 LCP:[OPEN] [ ]
*1 14 11:01:14.861:ppp13 LCP:O CONFREQ [] id 1 len 39
*1 14 11:01:14.861:ppp13 LCP: MRU 1492(0x010405D4)
```

```
*1 14 11:01:14.861:ppp13 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.861:ppp13 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.861:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.861:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.861:ppp13 LCP:Event[UP] State[REQsent ]
*1 14 11:01:14.862:ppp13 LCP:I CONFREQ [REQsent] id 1 len 30
*1 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC220F12 (0x0506BC220F12)
*1 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:ppp13 PPP: user@cisco.com() . .
*1 14 11:01:14.862:ppp13 LCP:o CONFACK [REQsent] id 1 len 30
*1 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC220F12 (0x0506BC220F12)
*1 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:ppp13 LCP:[ConfReq+] [REQsent ]
*1 14 11:01:14.862:ppp13 LCP:I CONNAK [ACKsent] id 1 len 8
*1 14 11:01:14.862:ppp13 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.862:ppp13 LCP:O CONFREQ [ACKsent] id 2 len 39
*1 14 11:01:14.862:ppp13 LCP: MRU 1500(0x010405DC)
*1 14 11:01:14.862:ppp13 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.862:ppp13 LCP: MagicNumber 0xBC21E526(0x0506BC21E526)
*1 14 11:01:14.862:ppp13 LCP: MRRU 1524(0x110405F4)
*1 14 11:01:14.862:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.862:ppp13 LCP:Event[Receive ConfNak/Rej] State[ACKsent to
ACKsent]
```

```
*1 14 11:01:14.863:ppp13 LCP:I CONFACK [ACKsent] id 2 len 39
*1 14 11:01:14.863:ppp13 LCP: MRU 1500 (0x010405DC)
*1 14 11:01:14.863:ppp13 LCP: AuthProto CHAP(0x0305C22305)
*1 14 11:01:14.863:ppp13 LCP: MagicNumber 0xBC21E526 (0x0506BC21E526)
*1 14 11:01:14.863:ppp13 LCP: MRRU 1524 (0x110405F4)
*1 14 11:01:14.863:ppp13 LCP: Disc 1 user@cisco.com
(0x1310017573657240737572662E6F7267)
*1 14 11:01:14.863:ppp13 LCP:Event[Receive ConfAck] State[ACKsent to
Open]
*1 14 11:01:14.895:ppp13 PPP: AUTHENTICATING( ),
*1 14 11:01:14.895:ppp13 CHAP:o CHALLENGE id 2 len 27("LNS")
*1 14 11:01:14.895:ppp13 LCP:
*1 14 11:01:14.895:ppp13 CHAP:I RESPONSE id 2 len 34 from
"user@cisco.com"
*1 14 11:01:14.895:ppp13 PPP: FORWARDING. .
*1 14 11:01:14.895:ppp13 PPP:
*1 14 11:01:14.895:ppp13 PPP: FORWARDING. .
*1 14 11:01:14.896:VPDN uid:13 user@cisco.com 10000Kbps
*1 14 11:01:14.896:user@cisco.com VPDN Vi3 , 10000Kbps
L2X_ADJ:Vi3: ctx, 1
*1 14 11:01:14.896:VPDN L2TUN UP .
*1 14 11:01:14.896:Vi3 PPP:
*1 14 11:01:14.896:Vi3 CHAP:O ID 2 len 4
*1 14 11:01:14.896:Vi3 MLP:
*1 14 11:01:14.896:Vi3 PPP:
*1 14 11:01:14.896:Vi3 MLP:
*1 14 11:01:14.896:Vi3 MLP: vaccess
*1 14 11:01:14.896:Vi3 MLP:SSS
```

```
*1 14 11:01:14.896:Vi3 MLP: , 1
*1 14 11:01:14.897:Vi3 MLP:SSS
*1 14 11:01:14.897:Vi3 MLP: , 1
*1 14 11:01:14.897:%LINK-3-:Interface Virtual-Access3, up
*1 14 11:01:14.897:Vi3 MLP:SSS , Vi4
*1 14 11:01:14.897:PPP: [2A970D9898]
*1 14 11:01:14.897:ppp14 PPP:
*1 14 11:01:14.897:Vi4 MLP:100000 10000
*1 14 11:01:14.897:Vi4 MLP: Vi3
*1 14 11:01:14.897:Vi3 MLP: 37492 MTU 1488 .
*1 14 11:01:14.897:Vi4 MLP: 10000 10000
*1 14 11:01:14.897:Vi3 MLP: Init Enabled 1 .
*1 14 11:01:14.897:Vi4 MLP: user@cisco.com Vi3 .
*1 14 11:01:14.898:Vi3 MLP:SSS PPP [0x5900000E]
*1 14 11:01:14.898:%LINEPROTO-5-:Interface Virtual-Access3 up
*1 14 11:01:14.898:Vi4 MLP:
*1 14 11:01:14.915:%LINK-3-:Interface Virtual-Access4, up
*1 14 11:01:14.915:Vi4 PPP:MLP LCP
*1 14 11:01:14.915:Vi3 PPP: IPCP [1] id[1]
*1 14 11:01:14.915:Vi4 PPP: UP
*1 14 11:01:14.915:Vi4 IPCP: , CP []
*1 14 11:01:14.915:Vi4 IPCP:[OPEN] [ ]
*1 14 11:01:14.915:Vi4 IPCP:O CONFREQ [] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP: 10.10.10.10(0x03060A0A0A0A)
*1 14 11:01:14.915:Vi4 IPCP:Event[UP] State[REQsent ]
*1 14 11:01:14.915:Vi3 PPP: ncp
*1 14 11:01:14.915:Vi3 IPCP: Vi4
```



```

*1 14 11:01:14.915:Vi4 IPCP:I CONFREQ [REQsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP:      0.0.0.0(0x030600000000)
*1 14 11:01:14.915:Vi4 IPCP : 0.0.0.0, 0.0.0.0
*1 14 11:01:14.915:Vi4 IPCP:  10.10.10.18
*1 14 11:01:14.915:Vi4 IPCP:o CONNAK [REQsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP:      10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.915:Vi4 IPCP:[Receive ConfReq-] [REQsent to REQsent]
*1 14 11:01:14.915:Vi4 IPCP:I CONFACK [REQsent] id 1 len 10
*1 14 11:01:14.915:Vi4 IPCP:      10.10.10.10(0x03060A0A0A0A)
*1 14 11:01:14.915:Vi4 IPCP:Event[Receive ConfAck] State[REQsent to
ACKrcvd]
*1 14 11:01:14.916:%LINEPROTO-5--:Interface Virtual-Access4 , up
*1 14 11:01:14.936:Vi4 IPCP:I CONFREQ [ACKrcvd] id 2 len 10
*1 14 11:01:14.936:Vi4 IPCP:      10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.936:Vi4 IPCP:o CONFACK [ACKrcvd] id 2 len 10
*1 14 11:01:14.936:Vi4 IPCP:      10.10.10.18(0x03060A0A0A12)
*1 14 11:01:14.936:Vi4 IPCP:[ConfReq+ ] [ACKrcvd to Open]
*1 14 11:01:14.965:Vi4 IPCP:
*1 14 11:01:14.965:  AVL  Vi4 :tooid 0,  10.10.10.18
*1 14 11:01:14.965:Vi4 IPCP:10.10.10.18

```

LNS#show ppp all

```

/ID OPEN+ Nego* Fail-Stage

```

```

- - - - -

```

```

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

```
:user@cisco.com

:user@cisco.com

:[1] user@cisco.com

:LNS

:[1] user@cisco.com

00:00:10 , 10000, 1/255

12192, 15ms

0/0 /

0 , 0

0/0 /, 0

0x0 , 0x3

:1( 255, )

LAC:Vi3(192.168.1.1), 00:00:10, 37500 , 1488 frg ,
```

관련 정보

- [클라이언트에서 시작한 Dial-In VPDN 터널링 구성](#)
- [T기술 지원 및 문서 - Cisco Systems](#)