

Configuração de VPDN sem AAA

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Introdução

Este documento apresenta um exemplo de configuração no qual o tunelamento de protocolo da camada 2 (L2TP) da VPDN (Rede Virtual Privada de Dialup) é configurado para chamadas de discagem ISDN e analógicas. Não há servidor de autenticação, autorização e contabilidade (AAA) envolvido nessa configuração.

O L2TP é um padrão do Internet Engineering Task Force (IETF) que combine as melhores características de dois protocolos de tunelamento existentes:

- Cisco Layer 2 Forwarding (L2F)
- Protocolo microsoft point-to-point tunneling (PPTP)

Nesta configuração, usamos L2TP adicionando o protocolo de comando L2TP. L2F é o padrão.

Cisco recomenda que você use o comando `vpdn-group`, introduzido na liberação 12.0(1)T do Cisco IOS ® Software, definir os parâmetros VDPN no L2TP Access Concentrator (LAC) e no L2TP Network Server (LNS). No entanto, se deseja usar os comandos `vpdn incoming` e `vpdn outgoing`, consulte [Configuring Virtual Private Dialup Networks \(Configurando Redes de Discagem Privada Virtual\)](#).

As características principal desta instalação são como segue:

- O LAC: identifica um cliente VPDN com base no nome de domínio recebido na resposta de autenticação (nesta instalação, Challenge Handshake Authentication Protocol [CHAP]). utiliza seus parâmetros de VPDN local para ativar o túnel e a sessão com o LNS.
- O LNS: Use seus parâmetros VPDN locais para aceitar a sessão e o túnel VPDN do LAC. autentica o usuário remoto localmente. atribui um endereço IP de Um ou Mais Servidores Cisco ICM NT de seu conjunto local ao cliente.

Pré-requisitos

Componentes Utilizados

Esta configuração foi desenvolvida e testada utilizando as versões de software e hardware abaixo.

- Linha principal do Cisco IOS Software Release 12.2. A característica IP+ é exigida para o VPDN.
- Um Cisco AS5300 (o LAC) com um cartão E1 e uma placa mica. Pode aceitar o ISDN e as chamadas analógicas.

As informações neste documento foram criadas a partir de dispositivos em um ambiente de laboratório específico. Todos os dispositivos utilizados neste documento foram iniciados com uma configuração (padrão) inicial. Se você estiver trabalhando em uma rede ativa, certifique-se de que entende o impacto potencial de qualquer comando antes de utilizá-lo.

Convenções

Consulte as [Convenções de Dicas Técnicas da Cisco](#) para obter mais informações sobre convenções de documentos.

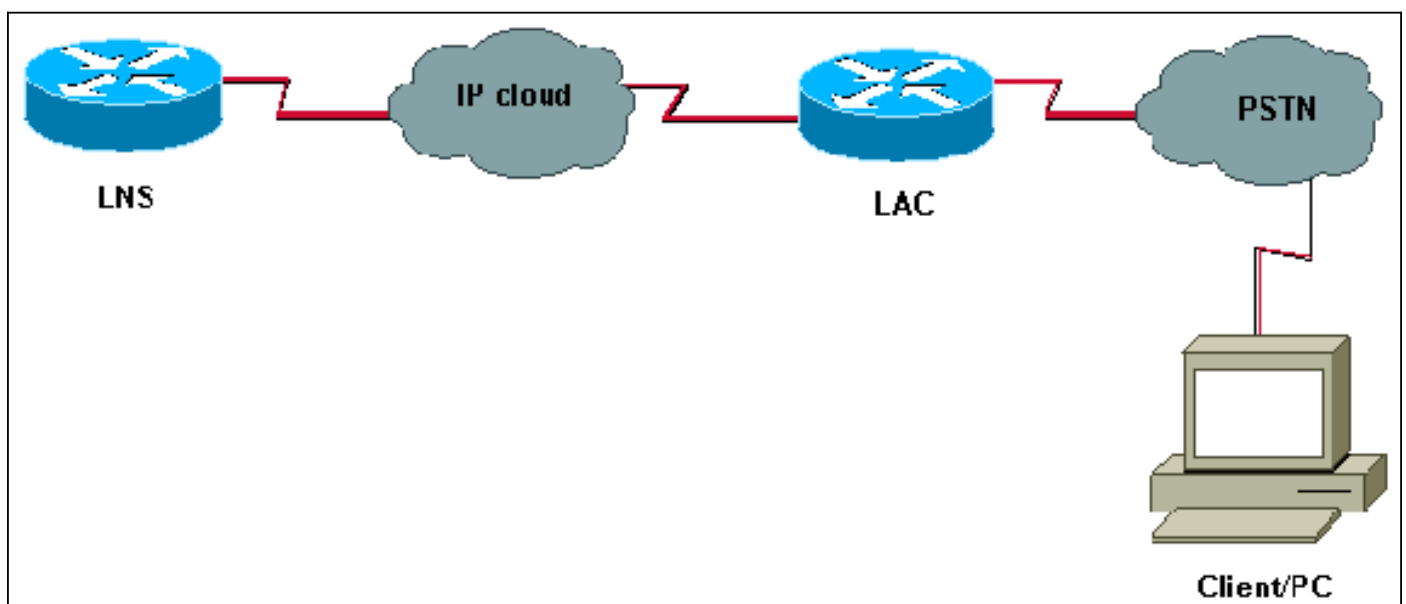
Configurar

Nesta seção, você encontrará informações para configurar os recursos descritos neste documento.

Note: Use a ferramenta [Command Lookup Tool](#) ([apenas para clientes registrados](#)) para obter mais informações sobre os comandos usados neste documento.

Diagrama de Rede

Este documento utiliza a seguinte configuração de rede:



Configurações

LAC

```
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname LAC
! spe 2/0 2/9
firmware location system:/ucode/mica_port_firmware
!
!
modem country mica belgium
!
vpdn enable
! -- Enables VPDN. ! vpdn search-order domain ! -- VPDN
tunnel authorization is based on the domain name ! --
(the default is DNIS). ! vpdn-group GroupCisco request-
dialin protocol l2tp ! -- L2TP is used instead of the
default (L2F). domain cisco.com ! -- The domain name
cisco.com is used to identify a VPDN user when ! --
receiving the CHAP response from the user. initiate-to
ip 10.48.74.35 ! -- The tunnel and session are
initialized to the ethernet ip address of the ! -- LNS
10.48.74.35. l2tp tunnel password cisco ! -- for tunnel
authentication ! isdn switch-type primary-net5 !
controller E1 0 clock source line primary pri-group
timeslots 1-31 ! interface Ethernet0 ip address
10.48.75.7 255.255.254.0 ! interface Serial0:15 no ip
address encapsulation ppp dialer rotary-group 1 isdn
switch-type primary-net5 isdn incoming-voice modem !
interface Group-Async1 no ip address encapsulation ppp
async mode dedicated ppp authentication chap pap group-
range 1 120 ! interface Dialer1 no ip address
encapsulation ppp ppp authentication chap pap ! ip
classless ip route 0.0.0.0 0.0.0.0 10.48.74.1 ! line con
0 exec-timeout 0 0 line 1 120 modem InOut transport
input all line aux 0 line vty 0 4 exec-timeout 0 0
password cisco login !
```

LNS

```
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname LNS
!
username UserISDN@cisco.com password 0 cisco
username UserAnalog@cisco.com password 0 cisco
! -- The LNS authenticates the remote users locally. !
vpdn enable ! -- Enables VPDN. ! vpdn-group VPDN accept-
dialin ! -- Enables the LNS to accept VPDN request.
protocol l2tp !-- L2TP is used instead of the L2F
(default). virtual-template 1 ! -- For each user, the
virtual-template 1 is used to terminate the PPP session.
terminate-from hostname LAC ! -- The LNS accepts VPDN
request from router LAC. l2tp tunnel password cisco ! --
for tunnel authentication ! ! ! interface Loopback1 ip
address 12.12.12.1 255.255.255.255 no ip route-cache no
ip mroute-cache ! interface Ethernet0 ip address
```

```
10.48.74.35 255.255.254.0 no ip route-cache no ip
mroute-cache no cdp enable ! interface Virtual-Templat1
! -- The PPP session is terminated in the virtual-access
cloned from this ! -- virtual-template ip unnumbered
Loopback1 peer default ip address pool GroupCisco ppp
authentication chap pap ! ip local pool GroupCisco
12.12.12.2 12.12.12.50 ! -- The LNS assigns an ip
address to the remote user ip classless ip route 0.0.0.0
0.0.0.0 10.48.74.1
```

Note: Nas configurações acima, nós configuramos o discador 1 e relações do grupo assíncrono1 com as opções mínimas do protocolo ponto-a-ponto (PPP).

Para permitir mais funcionalidades em PPP (ppp multilink, compressão, etc.), você precisa adicionar estas funcionalidades nessas interfaces e no modelo virtual 1 do LNS.

Importante: A regra é que todas as opções de PPP que você define no discador 1 e relações do grupo assíncrono1 tem que ser configurado no virtual-template 1 do LNS.

O molde virtual 1 recebe uma "cópia" de opções LCP negociadas entre o LAC e o cliente. Se uma opção que foi negociada entre o LAC e o cliente não estiver configurada no molde virtual 1, o LNS limpará a sessão VPDN. Contudo, para permitir que o LNS renegocie o LCP com o cliente, ajuste os comandos lcp renegotiation always ou o **on-mismatch da negociação nova do lcp** no grupo de VPDN.

Note: Por padrão, o LAC e o LNS usam o nome do host nos pacotes de troca L2TP. Para modificar esse comportamento, defina o nome local do comando no grupo vpdn. Vamos ver um exemplo de uma configuração de LNS:

```
vpdn-group VPDN
accept-dialin
protocol l2tp
virtual-template 1
terminate-from hostname LAC
local name LNS-cental
```

Verificar

Esta seção fornece informações que você pode usar para confirmar se sua configuração está funcionando adequadamente.

A [Output Interpreter Tool \(apenas para clientes registrados\)](#) (OIT) suporta determinados comandos show. Use a OIT para exibir uma análise da saída do comando show.

- show vpdn tunnel - Exibe informações sobre todos os túneis L2F e L2TP ativos no formato em estilo de resumo.
- show caller ip Exibe um resumo de informações de chamadores para o endereço IP fornecido.

Troubleshooting

Esta seção fornece informações que podem ser usadas para o troubleshooting da sua configuração.

Comandos para Troubleshooting

Note: Consulte [Informações Importantes sobre Comandos de Depuração](#) antes de usar comandos **debug**.

No LAC:

- **debug vpdn event** - Exibe mensagens sobre eventos e erros de L2TP que fazem parte do estabelecimento ou encerramento normal de VPDNs.
- **debug vpdn l2x- event** - Exibe mensagens sobre eventos que fazem parte do estabelecimento ou encerramento normal de túneis para o l2x.
- **debug vpdn l2x-error** — Indica os erros de protocolo l2x que impedem o estabelecimento l2x ou impedem sua operação normal.
- **debug ppp negotiation** — faz o comando **debug ppp** exibir pacotes PPP transmitidos durante a inicialização PPP, em que as opções PPP são negociadas.
- **debug isdn q931** — exibe informações sobre configuração de chamada e subdivisão de conexões de rede ISDN (Camada 3) entre o roteador local (lado do usuário) e a rede.
- **debug modem**—Exibe a atividade da linha do modem em um servidor de acesso.

No LNS:

- **debug vpdn event**
- **debug vpdn l2x-event**
- **debug vpdn l2x-error**
- **debug vtemplate** — exibe informações sobre clonagem de uma interface de acesso virtual do momento do clone a partir de um modelo virtual até o momento em que a interface de acesso virtual é desativada quando a chamada termina.
- **negociação de debug ppp**

Está abaixo uma chamada ISDN do cliente UserISDN@cisco.com.

Comandos debug no LAC

O LAC recebe uma chamada ISDN do número 8101.

```
LAC#
*Feb 1 14:45:09.684: ISDN Se0:15: RX <- SETUP pd = 8 callref = 0x3D03
*Feb 1 14:45:09.688: Sending Complete
*Feb 1 14:45:09.688: Bearer Capability i = 0x8890
*Feb 1 14:45:09.688: Channel ID i = 0xA18387
*Feb 1 14:45:09.688: Calling Party Number i = 0xA1, '8101', Plan:ISDN,
Type:National
*Feb 1 14:45:09.688: Called Party Number i = 0x81, '214', Plan:ISDN,
Type:Unknown
*Feb 1 14:45:09.692: %LINK-3-UPDOWN: Interface Serial0:6,
changed state to up
*Feb 1 14:45:09.692: Se0:6 PPP: Treating connection as a callin
*Feb 1 14:45:09.692: Se0:6 PPP: Phase is ESTABLISHING, Passive Open
[0 sess, 0 load]
*Feb 1 14:45:09.692: Se0:6 LCP: State is Listen
*Feb 1 14:45:09.696: ISDN Se0:15: TX -> CALL_PROC pd = 8 callref = 0xBD03
*Feb 1 14:45:09.696: Channel ID i = 0xA98387
*Feb 1 14:45:09.696: ISDN Se0:15: TX -> CONNECT pd = 8 callref = 0xBD03
*Feb 1 14:45:09.696: Channel ID i = 0xA98387
! -- The ISDN phase is finished and the B channel is up ! -- as soon as the LAC receives RX <-
```

```

CONNECT_ACK. *Feb 1 14:45:09.752: ISDN Se0:15: RX <- CONNECT_ACK pd = 8 callref = 0x3D03 *Feb 1
14:45:09.752: ISDN Se0:15: CALL_PROGRESS: CALL_CONNECTED call id 0x90, bchan 6, ds1 0 ! -- PPP
starts with LCP phase : authentication protocol and other LCP ! -- options (compression,
multilink, and so on) are negotiated. ! -- In the debug below, only chap is negotiated. *Feb 1
14:45:09.844: Se0:6 LCP: I CONFREQ [Listen] id 179 len 10 *Feb 1 14:45:09.844: Se0:6 LCP:
MagicNumber 0x5B90B785 (0x05065B90B785) *Feb 1 14:45:09.844: Se0:6 LCP: O CONFREQ [Listen] id 1
len 15 *Feb 1 14:45:09.844: Se0:6 LCP: AuthProto CHAP (0x0305C22305) *Feb 1 14:45:09.844: Se0:6
LCP: MagicNumber 0x1A9DC8A5 (0x05061A9DC8A5) *Feb 1 14:45:09.844: Se0:6 LCP: O CONFACK [Listen]
id 179 len 10 *Feb 1 14:45:09.844: Se0:6 LCP: MagicNumber 0x5B90B785 (0x05065B90B785) *Feb 1
14:45:09.876: Se0:6 LCP: I CONFACK [ACKsent] id 1 len 15 *Feb 1 14:45:09.876: Se0:6 LCP:
AuthProto CHAP (0x0305C22305) *Feb 1 14:45:09.876: Se0:6 LCP: MagicNumber 0x1A9DC8A5
(0x05061A9DC8A5) *Feb 1 14:45:09.876: Se0:6 LCP: State is Open *Feb 1 14:45:09.876: Se0:6 PPP:
Phase is AUTHENTICATING, by this end [0 sess, 0 load] ! -- The LAC sends the client a CHAP
challenge. *Feb 1 14:45:09.876: Se0:6 CHAP: O CHALLENGE id 1 len 24 from "LAC". ! -- The LAC
receives the CHAP response from the client with username ! -- UserISDN@cisco.com. *Feb 1
14:45:09.924: Se0:6 CHAP: I RESPONSE id 1 len 39 from "UserISDN@cisco.com" ! -- The LAC checks
out if UserISDN@cisco.com is a VPDN client or not. ! -- Because the domain cisco.com is
configured in the vpdn-group ! -- GroupCisco, UserISDN@cisco.com is a VPDN client. The LAC takes
! -- the VPDN parameters in the vpdn-group where the domain name ! -- cisco.com is located. *Feb
1 14:45:09.924: Se0:6 PPP: Phase is FORWARDING [0 sess, 0 load] *Feb 1 14:45:09.924: Se0:6 VPDN:
Got DNIS string 214 *Feb 1 14:45:09.924: Se0:6 VPDN: Looking for tunnel -- cisco.com -- *Feb 1
14:45:09.928: Se0:6 VPDN/RPMS/GroupCisco: Got tunnel info for cisco.com *Feb 1 14:45:09.928:
Se0:6 VPDN/RPMS/GroupCisco: LAC *Feb 1 14:45:09.928: Se0:6 VPDN/RPMS/GroupCisco: l2tp-busy-
disconnect yes *Feb 1 14:45:09.928: Se0:6 VPDN/RPMS/GroupCisco: IP 10.48.74.35 *Feb 1
14:45:09.928: Se0:6 VPDN/GroupCisco: curlvl 1 Address 0: 10.48.74.35, priority 1 *Feb 1
14:45:09.928: Se0:6 VPDN/GroupCisco: Select non-active address 10.48.74.35, priority 1 *Feb 1
14:45:09.928: Se0:6 VPDN: Find LNS process created *Feb 1 14:45:09.928: Tnl 2027 L2TP: SM State
idle ! -- In order to bring up the tunnel, the LAC sends SCCRQ (Start Control ! -- Connection
Request) to the LNS. ! -- A CHAP challenge is included in the packet. *Feb 1 14:45:09.928: Tnl
2027 L2TP: O SCCRQ *Feb 1 14:45:09.928: Tnl 2027 L2TP: Tunnel state change from idle to wait-
ctl-reply *Feb 1 14:45:09.928: Tnl 2027 L2TP: SM State wait-ctl-reply *Feb 1 14:45:09.928: Se0:6
VPDN: Forward to address 10.48.74.35 *Feb 1 14:45:09.928: Se0:6 VPDN: Pending *Feb 1
14:45:09.932: Se0:6 VPDN: Process created ! -- The LAC receives from the LNS SCCRQ (Start
Control Connection Reply). ! -- The response to its own challenge and another chap challenge from
the LNS ! -- are included in the packet. *Feb 1 14:45:09.956: Tnl 2027 L2TP: I SCCRQ from LNS
*Feb 1 14:45:09.956: Tnl 2027 L2TP: Got a challenge from remote peer, LNS *Feb 1 14:45:09.956:
Tnl 2027 L2TP: Got a response from remote peer, LNS *Feb 1 14:45:09.956: Tnl 2027 L2TP: Tunnel
Authentication success *Feb 1 14:45:09.956: Tnl 2027 L2TP: Tunnel state change from wait-ctl-
reply to established ! -- The LAC sends to the LNS SCCCN (Start Control Connection Connected). !
-- The response to LNS's challenge is included in the packet. *Feb 1 14:45:09.956: Tnl 2027
L2TP: O SCCCN to LNS tnlid 11514 *Feb 1 14:45:09.956: Tnl 2027 L2TP: SM State established *Feb 1
14:45:09.956: Se0:6 VPDN: Forwarding... *Feb 1 14:45:09.956: Se0:6 VPDN: Bind interface
direction=1 *Feb 1 14:45:09.956: Tnl/C1 2027/18 L2TP: Session FS enabled *Feb 1 14:45:09.956:
Tnl/C1 2027/18 L2TP: Session state change from idle to wait-for-tunnel *Feb 1 14:45:09.960:
Se0:6 Tnl/C1 2027/18 L2TP: Create session *Feb 1 14:45:09.960: Tnl 2027 L2TP: SM State
established ! -- The Tunnel is up. The LAC brings up the session for the user ! --
UserISDN@cisco.com. For that, it sends ICRQ (Incoming Call ReQuest). *Feb 1 14:45:09.960: Se0:6
Tnl/C1 2027/18 L2TP: O ICRQ to LNS 11514/0 *Feb 1 14:45:09.960: Se0:6 Tnl/C1 2027/18 L2TP:
Session state change from wait-for-tunnel to wait-reply *Feb 1 14:45:09.960: Se0:6 VPDN:
UserISDN@cisco.com is forwarded ! -- After receiving ICRP (Incoming Call Reply, we don't see it
in the debug) ! -- the LAC sends ICCN Incoming Call Connected. The VPDN session is up . ! --
Then the LAC forwards to the LNS what it has negotiated with the client ! -- (LCP options) along
with the username and chap password of the client. *Feb 1 14:45:10.008: Se0:6 Tnl/C1 2027/18
L2TP: O ICCN to LNS 11514/6 *Feb 1 14:45:10.008: Se0:6 Tnl/C1 2027/18 L2TP: Session state change
from wait-reply to established *Feb 1 14:45:10.960: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Serial0:6, changed state to up *Feb 1 14:45:15.692: %ISDN-6-CONNECT: Interface
Serial0:6 is now connected to 8101 UserISDN@cisco.com LAC#

```

Comandos debug no LNS

O LNS recebe SCCRQ de LAC.

```

*Mar 1 02:13:06.499: L2TP: I SCCRQ from LAC tnl 2027
*Mar 1 02:13:06.507: Tnl 11514 L2TP: Got a challenge in SCCRQ, LAC
*Mar 1 02:13:06.511: Tnl 11514 L2TP: New tunnel created for remote LAC, address
10.48.75.7
! -- The LNS replies with SCCRP which includes the CHAP response to LAC's ! -- challenge and a
CHAP challenge. *Mar 1 02:13:06.515: Tnl 11514 L2TP: O SCCRP to LAC tnlid 2027 *Mar 1
02:13:06.523: Tnl 11514 L2TP: Tunnel state change from idle to wait-ctl-reply ! -- The LNS
receives SCCCN. *Mar 1 02:13:06.535: Tnl 11514 L2TP: I SCCCN from LAC tnl 2027 *Mar 1
02:13:06.539: Tnl 11514 L2TP: Got a Challenge Response in SCCCN from LAC *Mar 1 02:13:06.543:
Tnl 11514 L2TP: Tunnel Authentication success *Mar 1 02:13:06.543: Tnl 11514 L2TP: Tunnel state
change from wait-ctl-reply to established *Mar 1 02:13:06.547: Tnl 11514 L2TP: SM State
established ! -- The tunnel is up. The LNS receives ICRQ to bring up the session. *Mar 1
02:13:06.555: Tnl 11514 L2TP: I ICRQ from LAC tnl 2027 *Mar 1 02:13:06.559: Tnl/Cl 11514/6 L2TP:
Session FS enabled *Mar 1 02:13:06.563: Tnl/Cl 11514/6 L2TP: Session state change from idle to
wait-connect *Mar 1 02:13:06.567: Tnl/Cl 11514/6 L2TP: New session created ! -- The LNS replies
with ICRP (Incoming Call Reply). *Mar 1 02:13:06.567: Tnl/Cl 11514/6 L2TP: O ICRP to LAC 2027/18
! -- The LNS receives ICCN (Incoming Call coNnected). The VPDN sesion is up, ! -- then the LNS
receives the LCP layer along with the username ! -- and chap password of the client. ! -- A
virtual-access is cloned from the virtual-template 1. *Mar 1 02:13:06.583: Tnl/Cl 11514/6 L2TP:
I ICCN from LAC tnl 2027, cl 18 *Mar 1 02:13:06.591: Tnl/Cl 11514/6 L2TP: Session state change
from wait-connect to established *Mar 1 02:13:06.591: Vt1 VTEMPLATE: Unable to create and clone
vaccess *Mar 1 02:13:06.595: Vi1 VTEMPLATE: Reuse Vi1, recycle queue size 1 *Mar 1 02:13:06.595:
Vi1 VTEMPLATE: Hardware address 0000.0c4a.4314 *Mar 1 02:13:06.599: Vi1 VPDN: Virtual interface
created for UserISDN@cisco.com *Mar 1 02:13:06.603: Vi1 PPP: Phase is DOWN, Setup [0 sess, 0
load] *Mar 1 02:13:06.603: Vi1 VPDN: Clone from Vtemplate 1 filterPPP=0 blocking *Mar 1
02:13:06.607: Vi1 VTEMPLATE: Has a new cloneblk vtemplate, now it has vtemplate *Mar 1
02:13:06.611: Vi1 VTEMPLATE: ***** CLONE VACCESS1 ***** *Mar 1 02:13:06.615:
Vi1 VTEMPLATE: Clone from Virtual-Template1 interface Virtual-Access1 default ip address no ip
address encaps ppp ip unnumbered Loopback1 end *Mar 1 02:13:07.095: %LINK-3-UPDOWN: Interface
Virtual-Access1, changed state to up *Mar 1 02:13:07.099: Vi1 PPP: Using set call direction *Mar
1 02:13:07.103: Vi1 PPP: Treating connection as a callin *Mar 1 02:13:07.103: Vi1 PPP: Phase is
ESTABLISHING, Passive Open [0 sess, 0 load] *Mar 1 02:13:07.107: Vi1 LCP: State is Listen *Mar 1
02:13:07.111: Vi1 VPDN: Bind interface direction=2 *Mar 1 02:13:07.111: Vi1 LCP: I FORCED
CONFREQ len 11 *Mar 1 02:13:07.115: Vi1 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 02:13:07.119:
Vi1 LCP: MagicNumber 0x1A9DC8A5 (0x05061A9DC8A5) *Mar 1 02:13:07.119: Vi1 VPDN: PPP LCP accepted
rcv CONFACK *Mar 1 02:13:07.123: Vi1 LCP: I FORCED CONFACK len 6 *Mar 1 02:13:07.127: Vi1 LCP:
MagicNumber 0x5B90B785 (0x05065B90B785) *Mar 1 02:13:07.131: Vi1 VPDN: PPP LCP accepted sent
CONFACK ! -- The LNS authenticates the user. It doesn't send a new CHAP challenge ! -- (the
debug may be confusing) since it has received the CHAP challenge ! -- and response from the LAC.
*Mar 1 02:13:07.131: Vi1 PPP: Phase is AUTHENTICATING, by this end [0 sess, 0 load] *Mar 1
02:13:07.135: Vi1 CHAP: O CHALLENGE id 2 len 24 from "LNS" *Mar 1 02:13:07.143: Vi1 CHAP: I
RESPONSE id 1 len 39 from "UserISDN@cisco.com" *Mar 1 02:13:07.151: Vi1 CHAP: O SUCCESS id 1 len
4 *Mar 1 02:13:07.155: Vi1 PPP: Phase is UP [0 sess, 0 load] ! -- The IPCP phase starts. ! --
The IP address 12.12.12.2 is assigned to the client. *Mar 1 02:13:07.159: Vi1 IPCP: O CONFREQ
[Closed] id 1 len 10 *Mar 1 02:13:07.163: Vi1 IPCP: Address 12.12.12.1 (0x03060C0C0C01) *Mar 1
02:13:07.215: Vi1 IPCP: I CONFREQ [REQsent] id 34 len 10 *Mar 1 02:13:07.219: Vi1 IPCP: Address
0.0.0.0 (0x030600000000) *Mar 1 02:13:07.223: Vi1 IPCP: Pool returned 12.12.12.2 *Mar 1
02:13:07.227: Vi1 IPCP: O CONFNAK [REQsent] id 34 len 10 *Mar 1 02:13:07.231: Vi1 IPCP: Address
12.12.12.2 (0x03060C0C0C02) *Mar 1 02:13:07.235: Vi1 IPCP: I CONFACK [REQsent] id 1 len 10 *Mar
1 02:13:07.239: Vi1 IPCP: Address 12.12.12.1 (0x03060C0C0C01) *Mar 1 02:13:07.271: Vi1 IPCP: I
CONFREQ [ACKrcvd] id 35 len 10 *Mar 1 02:13:07.275: Vi1 IPCP: Address 12.12.12.2
(0x03060C0C0C02) *Mar 1 02:13:07.279: Vi1 IPCP: O CONFACK [ACKrcvd] id 35 len 10 *Mar 1
02:13:07.283: Vi1 IPCP: Address 12.12.12.2 (0x03060C0C0C02) *Mar 1 02:13:07.287: Vi1 IPCP: State
is Open *Mar 1 02:13:07.295: Vi1 IPCP: Install route to 12.12.12.2 ! -- The virtual-access is
up. *Mar 1 02:13:08.159: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1,
changed state to up LNS#

```

comandos show

LAC#**show vpdn tunnel**

```

L2TP Tunnel Information Total tunnels 1 sessions 1
LocID RemID Remote Name State Remote Address Port Sessions
 36556 45655 LNS est 10.48.74.35 1701 1

```



```
%No active L2F tunnels
%No active PPTP tunnels
%No active PPPoE tunnels
LAC#
```

```
LNS#show vpdn tunnel
```

```
L2TP Tunnel Information Total tunnels 1 sessions 1
LocID RemID Remote Name State Remote Address Port Sessions
 45655 36556 LAC est 10.48.75.7 1701 1
%No active L2F tunnels
%No active PPTP tunnels
%No active
```

```
LNS#show caller ip
```

```
Line User IP Address Local Number Remote Number <->
Vil UserISDN@cisco.com \
12.12.12.2 214 8101 in
LNS#
```

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