Configuración de VPDN sin AAA

Contenido

Introducción

Este documento presenta un ejemplo de configuración en el cual el Virtual Private Dialup Network (VPDN) Layer 2 Tunneling Protocol (L2TP) está configurado para ISDN y llamadas de marcado analógico. No hay servidor de autenticación, autorización o contabilidad (AAA) en esta configuración.

L2TP es un estándar de Internet Engineering Task Force (IETF) que combina las mejores características de dos protocolos de tunelización existentes:

- Reenvío Cisco capa 2 (L2F)
- Protocolo de túnel punto a punto (PPTP) de Microsoft

En esta configuración, se utiliza L2TP agregando el comando protocol L2TP. L2F es el predeterminado.

Cisco recomienda utilizar el comando **vpdn-group**, introducido en Cisco IOS® Software Release 12.0(1)T, para definir los parámetros VPDN tanto en L2TP Access Concentrator (LAC) como en L2TP Network Server (LNS). No obstante, si desea utilizar los comandos vpdn incoming y vpdn outgoing, consulte Configuración de Virtual Private Dialup Networks.

Las principales características de esta configuración son las siguientes:

- El LAC:identifica un cliente VPDN basándose en el nombre de dominio que recibe en la respuesta de autenticación (Protocolo de autenticación de aceptación de la contraseña [CHAP] en esta configuración).Utiliza sus parámetros locales VPDN para activar el túnel y la sesión con el LNS.
- El LNS:utiliza sus parámetros locales VPDN para aceptar el túnel VPDN y la sesión desde el LAC.Autentica el usuario remoto de manera local.asigna al cliente una dirección IP de su

grupo local.

Prerequisites

Componentes Utilizados

Esta configuración fue desarrollada y probada utilizando las versiones de software y hardware indicadas a continuación.

- Línea principal de la versión 12.2 del software del IOS de Cisco. La función IP+ es necesaria para VPDN.
- Un Cisco AS5300 (el LAC) con una tarjeta E1 y una tarjeta Mica. Puede aceptar llamadas ISDN y analógicas.

La información que se presenta en este documento se originó a partir de dispositivos dentro de un ambiente de laboratorio específico. All of the devices used in this document started with a cleared (default) configuration. Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener un comando antes de ejecutarlo.

Convenciones

Consulte Convenciones de Consejos TécnicosCisco para obtener más información sobre las convenciones del documento.
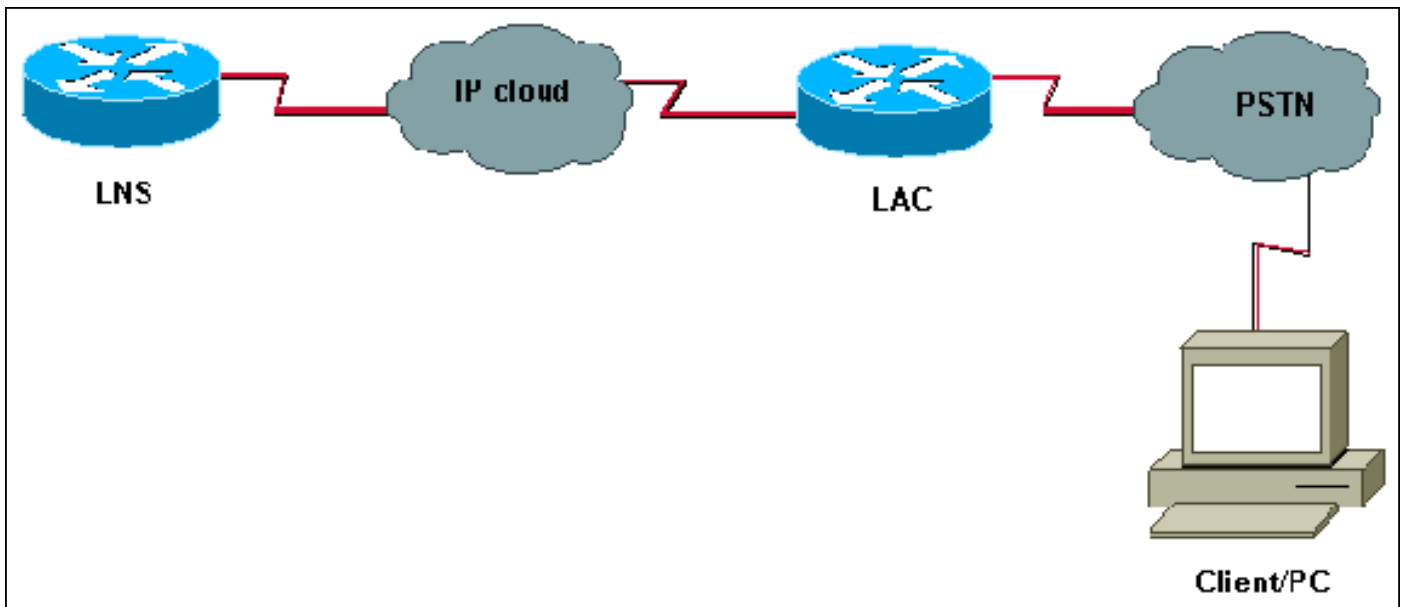
Configurar

En esta sección encontrará la información para configurar las funciones descritas en este documento.

Nota: Use la Command Lookup Tool (sólo clientes registrados) para obtener más información sobre los comandos utilizados en este documento.

Diagrama de la red

En este documento, se utiliza esta configuración de red:

Configuraciones

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-Template1
! -- 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
```

Nota: En las configuraciones anteriores, hemos configurado las interfaces dialer 1 y group-async1 con las opciones mínimas de Point to Point Protocol (PPP).

Para activar más funcionalidades a nivel PPP (multilink ppp, compresión y otras), debe agregarlas en esas interfaces y en la plantilla virtual 1 del LNS.

Importante: La regla es que todas las opciones PPP que defina en las interfaces dialer 1 y group-async1 deben configurarse en la plantilla virtual 1 de LNS.

La plantilla virtual 1 recibe una "copia" de las opciones LCP que se negociaron entre el LAC y el cliente. Si no se configura en la plantilla virtual 1 una opción que fue negociada entre el LAC y el cliente, entonces el LNS borra la sesión VPDN. Sin embargo, para permitir que el LNS renegocie el LCP con el cliente, configure los comandos **lcp renegotiation always** o **lcp renegotiation on-mismatch** en el grupo VPDN.

Nota: De forma predeterminada, el LAC y el LNS utilizan su nombre de host en los paquetes de intercambio L2TP. Para modificar esta conducta, defina el nombre local del comando en el vpdn-group. Veamos un ejemplo de configuración de LNS:

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

Verificación

En esta sección encontrará información que puede utilizar para confirmar que su configuración esté funcionando correctamente.

La herramienta Output Interpreter Tool (clientes registrados solamente) (OIT) soporta ciertos comandos show. Utilice la OIT para ver un análisis del resultado del comando show.

- **show vpdn tunnel** — Muestra información sobre todos los túneles L2F y L2TP activos en formato de estilo de resumen.
- **show caller ip**: muestra un resumen de la información de la persona que llama para la dirección IP proporcionada.

Troubleshoot

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

Comandos para resolución de problemas

Nota: Consulte Información Importante sobre Comandos de Debug antes de usar un comando debug.

En el LAC:

- **debug vpdn event**: muestra los errores L2TP y los eventos que forman parte del establecimiento o cierre normal del túnel para VPDNs.
- **debug vpdn l2x-event**: muestra mensajes acerca de eventos que forman parte del establecimiento o cierre normal de túneles para 12x.
- **debug vpdn l2x-error—Muestra errores de protocolo L2x que impiden el establecimiento de L2x o su funcionamiento normal.**
- **debug ppp negotiation**: hace que el comando debug ppp muestre los paquetes PPP transmitidos durante el inicio PPP, donde se negocian las opciones PPP.
- **debug isdn q931**: muestra información sobre la configuración de llamadas y la desconexión de conexiones de red ISDN (Capa 3) entre el router local (lado del usuario) y la red.
- **debug modem**: muestra la actividad de la línea del módem en un servidor de acceso.

En el LNS:

- **debug vpdn event**
- **debug vpdn l2x-event**
- **debug vpdn l2x-error**
- **debug vtemplate**: muestra información de clonación para una interfaz de acceso virtual desde el momento en que se clona desde una plantilla virtual hasta el momento en que la interfaz de acceso virtual se desactiva cuando finaliza la llamada.
- **debug ppp negotiation**

A continuación se muestra una llamada ISDN del cliente UserISDN@cisco.com.

depurar Comandos en LAC

LAC recibe una llamada ISDN del 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, dsl 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 SCCRP (Start Control Connection Reply). ! -- The response to its own chalenge and another chap chalenge from the LNS ! -- are included in the packet._ `*Feb 1 14:45:09.956: Tnl 2027 L2TP: I SCCRP 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/Cl 2027/18 L2TP: Session FS enabled *Feb 1 14:45:09.956: Tnl/Cl 2027/18 L2TP: Session state change from idle to wait-for-tunnel *Feb 1 14:45:09.960: Se0:6 Tnl/Cl 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/Cl 2027/18 L2TP: O ICRQ to LNS 11514/0 *Feb 1 14:45:09.960: Se0:6 Tnl/Cl 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/Cl 2027/18 L2TP: O ICCN to LNS 11514/6 *Feb 1 14:45:10.008: Se0:6 Tnl/Cl 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#

depurar Comandos en el LNS

El LNS recibe SCCRQ de LAC.

LNS#
*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 encap 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#

show Comandos

```
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 <->
Vi1 UserISDN@cisco.com \
12.12.12.2 214 8101 in
LNS#
```

Información Relacionada

- Soporte de Tecnología de Discado y Acceso
- Soporte Técnico y Documentación - Cisco Systems