

Configuración de la devolución de llamada PPP sobre ISDN con una cadena de devolución de llamadas provista AAA.

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Introducción

Este documento proporciona una configuración de ejemplo para la devolución de llamada PPP entre dos routers Cisco.

Prerequisites

Requirements

No hay requisitos específicos para este documento.

Componentes Utilizados

La información que contiene este documento se basa en las siguientes versiones de software y hardware.

- Cisco IOS® Software Release 12.0(3)T o posterior.

Nota: Para configurar la devolución de llamada PPP con la ayuda de una cadena de devolución de llamada asignada a un servidor AAA, debe utilizar el comando **dialer aaa**, que está disponible en la versión 12.0(3)T o posterior del software del IOS de Cisco. Sin embargo, en Cisco IOS

versiones 12.1(4)T, 12.2(1)T y posteriores, este comando no es necesario para la devolución de llamada PPP con una cadena de devolución de llamada asignada a un servidor AAA.

Nota: El comando `dialer aaa` sólo se soporta con DDR heredado (como se muestra en la [figura 1](#)).

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.

[Convenciones](#)

Para obtener más información sobre las convenciones del documento, consulte [Convenciones de Consejos Técnicos de Cisco](#).

[Antecedentes](#)

El TACACS+ (servidor AAA) se utiliza para proporcionar la cadena de marcado de devolución de llamada al servidor de devolución de llamada. Sin embargo, también puede utilizar RADIUS para suministrar la cadena de devolución de llamada. Para configurar la devolución de llamada PPP con autenticación, autorización y contabilidad (AAA) local, vea [Configuración de la devolución de llamada PPP sobre ISDN](#).

En esta configuración de ejemplo, la devolución de llamada utiliza PPP y las instalaciones especificadas en RFC 1570. La devolución de llamada PPP a través del circuito ISDN se completa en este orden:

1. El cliente de devolución de llamada inicia y activa una conexión ISDN al router del servidor de devolución de llamada.
2. El cliente de devolución de llamada y el servidor de devolución de llamada negocian el protocolo de control de enlaces PPP (LCP). En la negociación LCP, se solicita, negocia y acuerda la devolución de llamada.
3. El cliente de devolución de llamada y el servidor de devolución de llamada se autentican entre sí con el protocolo de autenticación de contraseña PPP (PAP) o el protocolo de autenticación por desafío mutuo (CHAP). Sin embargo, puede configurar el cliente de devolución de llamada para que no autentique el servidor de devolución de llamada, a través del comando [ppp authentication chap callin](#).
4. El servidor de devolución de llamada obtiene los atributos de devolución de llamada necesarios, como la cadena de marcado de devolución de llamada (el número de teléfono del cliente) del servidor AAA.
5. Ambos routers descartan la conexión ISDN.
6. El servidor de devolución de llamada inicia la devolución de llamada al cliente. Cuando la llamada se conecta, los routers se autentican mutuamente y se establece el link.

[Configurar](#)

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

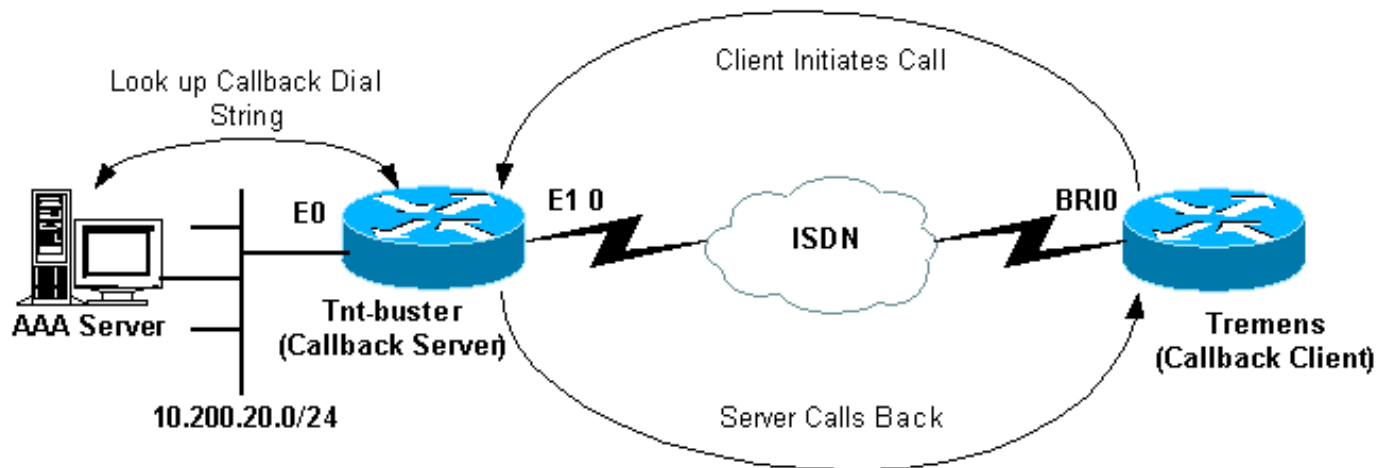
Nota: Para encontrar información adicional sobre los comandos usados en este documento, utilice

la [Command Lookup Tool](#) ([sólo](#) clientes registrados) .

Diagrama de la red

En este documento, se utiliza esta configuración de red:

Figura 1: Diagrama de red



Configuraciones

En este documento, se utilizan estas configuraciones:

- Configuración gratuita de TACACS+
- Configuración RADIUS
- Configuración RADIUS alternativa
- Configuración de Tnt-buster (Callback Server)
- Configuración de Tremens (Callback Client)

Configuración gratuita de TACACS+

```
user = tremens {
  default service = permit
  login = cleartext "cisco"
  chap = cleartext "cisco"
  !--- CHAP password. service = ppp protocol = lcp {
  callback-dialstring = "6083" !--- Number to callback.
  send-secret = "cisco" } }
```

También puede utilizar RADIUS como servidor AAA para suministrar los atributos de devolución de llamada en lugar de TACACS+. Aquí se proporciona un ejemplo de la configuración RADIUS:

Configuración RADIUS

```
tremens          Auth-Type = Local, Password = "cisco"
                 Service-Type = Framed-User,
  !--- Service-Type(6) is Framed User(4). Cisco-AVPair =
"lcp:callback-dialstring=6083", Cisco-AVPair =
"lcp:send-secret=cisco"
```

Nota: En la configuración RADIUS que se muestra arriba, se necesita Cisco AVPair `lcp:send-secret=cisco` en el momento de la autenticación de la devolución de llamada. Si no incluye este AVPair, debe configurar el nombre de usuario CHAP y la contraseña del router remoto localmente en el servidor de devolución de llamada.

Nota: Este documento trata principalmente de TACACS+. Las depuraciones proporcionadas en este documento no muestran una devolución de llamada iniciada por RADIUS.

Nota: Desde la versión 12.1(7) del IOS de Cisco, es posible utilizar el atributo RADIUS 19 del Grupo de Trabajo de Ingeniería de Internet (IETF) para la devolución de llamadas de ISDN y Microsoft analógica. En tal caso, no es necesario utilizar Cisco AVPairs, como se muestra en la configuración anterior. Consulte el ejemplo de configuración RADIUS alternativa que se muestra aquí:

Configuración RADIUS alternativa

```
tremens          Auth-Type = Local, Password = "cisco"
                  Service-Type = callback framed
                  !--- Service-Type (6) is callback
framed (4). !--- Callback framed is also known as !---
Dialback-Framed-User. Callback =6083 !--- IETF RADIUS
Callback attribute (19) with the phone !--- number for
the callback.
```

Nota: Las depuraciones RADIUS mostrarán el atributo RADIUS 19 de IETF devuelto al servidor de devolución de llamada.

Las configuraciones para los dos routers usados en este ejemplo se muestran aquí:

Tnt-buster (servidor de devolución de llamada)

```
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Tnt-buster
!
boot system flash flash:c5300-i-mz.121-4
logging buffered 1000000 debugging
aaa new-model
aaa authentication login none none
aaa authentication ppp default group tacacs+ local
!--- AAA methods for PPP authentication. aaa
authorization network default group tacacs+ !--- AAA
authorization methods for RADIUS implementation. !---
Replace TACACS+ with RADIUS in the statements above. !
spe 1/0 1/23 firmware location
system:/ucode/microcom_firmware ! resource-pool disable
! ip subnet-zero no ip domain-lookup ! isdn switch-type
primary-net5 ! controller E1 0 !--- E1 interface that
accepts the initial call and performs the callback.
clock source line primary pri-group timeslots 1-31 ! !
!--- irrelevant output has been omitted. ! interface
Loopback0 ip address 2.2.2.2 255.255.255.255 ! interface
Ethernet0 ip address 10.200.20.42 255.255.255.0 !
interface Serial0:15 !--- D-channel for controller E1 0.
no ip address encapsulation ppp dialer rotary-group 1 !-
```

```

-- Assign E1 0 to rotary-group 1 (which is necessary for
dialout). !--- Rotary-group properties are defined in
interface Dialer 1. isdn switch-type primary-net5 no cdp
enable ! ! !--- irrelevant output has been omitted. ! !
interface Dialer1 !--- This is the interface for the
dialer rotary-group 1 configuration. ip unnumbered
Loopback0 encapsulation ppp dialer in-band dialer aaa !-
-- This allows AAA to retrieve the callback dial string
via AAA servers. !--- This command is required for
callback attributes to be obtained !--- from the AAA
server. dialer idle-timeout 60 dialer enable-timeout 5
!--- The time (in seconds) between initial call
disconnect and callback !--- initiation. dialer hold-
queue 20 !--- This holds 20 packets destined for the
remote destination until the !--- connection is made.
dialer-group 1 no peer default ip address !--- The peer
is not given an IP address from a pool. !--- IP pool can
be defined if necessary. ppp callback accept !--- Allows
the interface to accept a callback request from a remote
host. ppp authentication chap callin ! ip route 0.0.0.0
0.0.0.0 10.200.20.1 no ip http server ! dialer-list 1
protocol ip permit tacacs-server host 10.200.20.134 key
cisco !--- The IP address and key of the TACACS+ server.
! line con 0 exec-timeout 0 0 length 30 transport input
none line 1 24 line aux 0 line vty 0 4 no exec-banner
exec-timeout 0 0 login authentication none ! end

```

Tremens (cliente de devolución de llamada)

```

version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname tremens
!
username tnt-buster password 0 cisco
!--- Username and shared secret password used for CHAP
authentication. !--- The AAA server must have this
router hostname (tnt-buster) and !--- shared secret
(cisco) configured. ! ip subnet-zero no ip finger no ip
domain-lookup ! isdn switch-type basic-net3 ! interface
Loopback0 ip address 3.3.3.3 255.255.255.255 ! interface
Ethernet0 ip address 10.200.16.54 255.255.255.0 !
interface BRI0 !--- The interface used for dialin and
dialout. no ip address encapsulation ppp dialer pool-
member 1 !--- Assign BRI0 as member of dialer pool 1. !-
-- Dialer pool 1 is specified in interface Dialer 1.
isdn switch-type basic-net3 ppp authentication chap !
interface Dialer1 ip unnumbered Loopback0 encapsulation
ppp dialer pool 1 !--- Defines dialer pool 1. !--- BRI 0
is a member of this pool. dialer idle-timeout 60 dialer
string 8211 !--- The number to dial when dialing out for
the initial call. dialer hold-queue 20 !--- This holds
20 packets destined for the remote destination until the
!--- connection is made. dialer-group 1 no peer default
ip address no fair-queue no cdp enable ppp callback
request !--- Request PPP callback from the server. ppp
authentication chap ! ip route 2.2.2.2 255.255.255.255
Dialer1 !--- IP route for the dialer interface. no ip
http server ! dialer-list 1 protocol ip permit ! line
con 0 exec-timeout 0 0 transport input none line aux 0
line vty 0 4 exec-timeout 0 0 login ! end

```

Verificación

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

La herramienta [Output Interpreter](#) (sólo para clientes registrados) permite utilizar algunos comandos “show” y ver un análisis del resultado de estos comandos.

- **show dialer *interface type number***: muestra información de diagnóstico general para las interfaces configuradas para el ruteo de marcado a pedido (DDR). Las direcciones de origen y destino del paquete que inició el marcado se ven en la línea de motivo del marcado. Este comando también muestra los temporizadores de conexión.
- **show isdn status**: permite asegurarse de que el router se comunica correctamente con el switch ISDN. Verifique en el resultado que el estado de la capa 1 sea ACTIVE (Activo) y que aparezca MULTIPLE_FRAME_ESTABLISHED en la capa 2. Este comando muestra también el número de llamadas activas.

Troubleshoot

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

Consulte [Referencia de Comandos de Debug de Cisco IOS Release 12.0](#) para obtener más información sobre los comandos debug.

Comandos para resolución de problemas (opcional)

La herramienta [Output Interpreter](#) (sólo para clientes registrados) permite utilizar algunos comandos “show” y ver un análisis del resultado de estos comandos.

Nota: Antes de ejecutar un comando **debug**, consulte [Información Importante sobre Comandos Debug](#).

- **debug isdn q931**: muestra la configuración de la llamada y el desmontaje de la conexión de red ISDN (Capa 3).
- **debug dialer [*events* / *packets*]**: muestra información de depuración DDR sobre los paquetes recibidos en una interfaz de marcador.
- **debug aaa authentication**: muestra información sobre la autenticación AAA.
- **debug aaa authorization**: muestra información sobre la autorización AAA.
- **debug tacacs**: muestra información detallada de depuración asociada con TACACS+.
- **debug ppp negotiation**: muestra información sobre el tráfico PPP y los intercambios mientras la negociación de los componentes PPP está en curso, incluidos el protocolo de control de enlaces (LCP), la autenticación y NCP. Una negociación PPP exitosa abrirá primero el estado LCP, luego realizará la autenticación y por último negociará el NCP.
- **debug ppp authentication**: muestra los mensajes del protocolo de autenticación PPP, incluidos los intercambios de paquetes del protocolo de autenticación por desafío mutuo (CHAP) y los intercambios del protocolo de autenticación por contraseña (PAP). Si observa una falla, verifique si el nombre de usuario y la contraseña CHAP están configurados

correctamente.

- **debug callback**: muestra los eventos de devolución de llamada cuando el router utiliza un módem y un script de chat para devolver la llamada en una línea de terminal. Como este comando es para módems y scripts de chat, no se utiliza en esta configuración.

Ejemplo de resultado del comando debug

```
tnt-buster#show debug
General OS:
  TACACS access control debugging is on
  AAA Authentication debugging is on
  AAA Authorization debugging is on
Dial on demand:
  Dial on demand events debugging is on
PPP:
  PPP protocol negotiation debugging is on
ISDN:
  ISDN Q931 packets debugging is on
  ISDN Q931 packets debug DSLs. (On/Off/No DSL:1/0/-)
  DSL 0 --> 7
  1 - - - - -
tnt-buster#
*Oct 16 08:59:26.403: ISDN Se0:15: RX <- SETUP pd = 8 callref = 0x4880
  !--- incoming ISDN call setup message. *Oct 16 08:59:26.403: Sending Complete *Oct 16
08:59:26.403: Bearer Capability i = 0x8890 *Oct 16 08:59:26.403: Channel ID i = 0xA1839A *Oct 16
08:59:26.403: Calling Party Number i = 0xA1, '6083', Plan:ISDN, Type:National !--- Calling Party
Number is configured in the callback string on !--- the AAA server. *Oct 16 08:59:26.403: Called
Party Number i = 0x81, '211', Plan:ISDN, Type:Unknown *Oct 16 08:59:26.407: Locking Shift to
Codeset 6 *Oct 16 08:59:26.407: Codeset 6 IE 0x28 i = 'ISDN-EDU-4' *Oct 16 08:59:26.407: ISDN
Se0:15: TX -> CALL_PROC pd = 8 callref = 0xC880 *Oct 16 08:59:26.411: Channel ID i = 0xA9839A
*Oct 16 08:59:26.415: %LINK-3-UPDOWN: Interface Serial0:25, changed state to up *Oct 16
08:59:26.419: Se0:25 PPP: Treating connection as a callin *Oct 16 08:59:26.419: Se0:25 PPP:
Phase is ESTABLISHING, Passive Open *Oct 16 08:59:26.419: Se0:25 LCP: State is Listen *Oct 16
08:59:26.419: ISDN Se0:15: TX -> CONNECT pd = 8 callref = 0xC880 *Oct 16 08:59:26.419: Channel
ID i = 0xA9839A *Oct 16 08:59:26.459: ISDN Se0:15: RX <- CONNECT_ACK pd = 8 callref = 0x4880
*Oct 16 08:59:26.463: ISDN Se0:15: CALL_PROGRESS: CALL_CONNECTED call id 0x28, bchan 25, dsl 0
*Oct 16 08:59:26.551: Se0:25 LCP: I CONFREQ [Listen] id 126 len 18 !--- PPP LCP negotiation
begins. *Oct 16 08:59:26.555: Se0:25 LCP: AuthProto CHAP (0x0305C22305) *Oct 16 08:59:26.555:
Se0:25 LCP: MagicNumber 0x3E7BCBD2 (0x05063E7BCBD2) *Oct 16 08:59:26.555: Se0:25 LCP: Callback 0
(0x0D0300) *Oct 16 08:59:26.555: Se0:25 AAA/AUTHOR/FSM: (0): LCP succeeds trivially *Oct 16
08:59:26.555: Se0:25 LCP: O CONFREQ [Listen] id 1 len 15 *Oct 16 08:59:26.555: Se0:25 LCP:
AuthProto CHAP (0x0305C22305) *Oct 16 08:59:26.555: Se0:25 LCP: MagicNumber 0xE06953E4
(0x0506E06953E4) *Oct 16 08:59:26.555: Se0:25 LCP: O CONFACK [Listen] id 126 len 18 *Oct 16
08:59:26.555: Se0:25 LCP: AuthProto CHAP (0x0305C22305) *Oct 16 08:59:26.555: Se0:25 LCP:
MagicNumber 0x3E7BCBD2 (0x05063E7BCBD2) *Oct 16 08:59:26.555: Se0:25 LCP: Callback 0 (0x0D0300)
!--- Callback option is acknowledged (CONFACKed). *Oct 16 08:59:26.587: Se0:25 LCP: I CONFACK
[ACKsent] id 1 len 15 *Oct 16 08:59:26.587: Se0:25 LCP: AuthProto CHAP (0x0305C22305) *Oct 16
08:59:26.587: Se0:25 LCP: MagicNumber 0xE06953E4 (0x0506E06953E4) *Oct 16 08:59:26.587: Se0:25
LCP: State is Open *Oct 16 08:59:26.587: Se0:25 PPP: Phase is AUTHENTICATING, by both !--- PPP
Authentication begins. *Oct 16 08:59:26.587: Se0:25 CHAP: O CHALLENGE id 1 len 31 from "tnt-
buster" *Oct 16 08:59:26.611: Se0:25 CHAP: I CHALLENGE id 93 len 28 from "tremens" *Oct 16
08:59:26.611: Se0:25 CHAP: Waiting for peer to authenticate first *Oct 16 08:59:26.623: Se0:25
CHAP: I RESPONSE id 1 len 28 from "tremens" *Oct 16 08:59:26.623: AAA: parse name=Serial0:25 idb
type=13 tty=-1 *Oct 16 08:59:26.623: AAA: name=Serial0:25 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=25 *Oct 16 08:59:26.623: AAA: parse name= idb type=-1 tty=-1 *Oct 16
08:59:26.623: AAA/MEMORY: create_user (0x6126C0AC) user='tremens' ruser='' port='Serial0:25'
rem_addr='6083/211' authen_type=CHAP service=PPP priv=1 *Oct 16 08:59:26.623: AAA/AUTHEN/START
(199889519): port='Serial0:25' list='' action=LOGIN service=PPP *Oct 16 08:59:26.623:
AAA/AUTHEN/START (199889519): using "default" list *Oct 16 08:59:26.623: AAA/AUTHEN/START
(199889519): Method=tacacs+ (tacacs+) !--- Use TACACS+ as AAA method for the default list. *Oct
```

16 08:59:26.623: TAC+: send AUTHEN/START packet ver=193 id=199889519 *Oct 16 08:59:26.623: TAC+: Using default tacacs server-group "tacacs+" list. *Oct 16 08:59:26.623: TAC+: Opening TCP/IP to 10.200.20.134/49 timeout=5 *Oct 16 08:59:26.627: TAC+: Opened TCP/IP handle 0x610C4D40 to 10.200.20.134/49 *Oct 16 08:59:26.627: TAC+: 10.200.20.134 (199889519) AUTHEN/START/LOGIN/CHAP queued *Oct 16 08:59:26.827: TAC+: (199889519) AUTHEN/START/LOGIN/CHAP processed *Oct 16 08:59:26.827: TAC+: ver=193 id=199889519 received AUTHEN status = PASS *Oct 16 08:59:26.827: AAA/AUTHEN (199889519): status = PASS *!--- AAA authentication succeeds.* *Oct 16 08:59:26.827: TAC+: Closing TCP/IP 0x610C4D40 connection to 10.200.20.134/49 *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP: Authorize LCP *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP (4028243213): Port='Serial0:25' list='' service=NET *Oct 16 08:59:26.827: AAA/AUTHOR/LCP: Se0:25 (4028243213) user='tremens' *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP (4028243213): send AV service=ppp *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP (4028243213): send AV protocol=lcp *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP (4028243213): found list "default" *Oct 16 08:59:26.827: Se0:25 AAA/AUTHOR/LCP (4028243213): Method=tacacs+ (tacacs+) *Oct 16 08:59:26.827: AAA/AUTHOR/TAC+: (4028243213): user=tremens *Oct 16 08:59:26.827: AAA/AUTHOR/TAC+: (4028243213): send AV service=ppp *Oct 16 08:59:26.827: AAA/AUTHOR/TAC+: (4028243213): send AV protocol=lcp *Oct 16 08:59:26.827: TAC+: using previously set server 10.200.20.134 from group tacacs+ *Oct 16 08:59:26.827: TAC+: Opening TCP/IP to 10.200.20.134/49 timeout=5 *Oct 16 08:59:26.831: TAC+: Opened TCP/IP handle 0x61269588 to 10.200.20.134/49 *Oct 16 08:59:26.831: TAC+: Opened 10.200.20.134 index=1 *Oct 16 08:59:26.831: TAC+: 10.200.20.134 (4028243213) AUTHOR/START queued *Oct 16 08:59:27.031: TAC+: (4028243213) AUTHOR/START processed *Oct 16 08:59:27.031: TAC+: (4028243213): received author response status = PASS_ADD *Oct 16 08:59:27.031: TAC+: Closing TCP/IP 0x61269588 connection to 10.200.20.134/49 *Oct 16 08:59:27.031: Se0:25 AAA/AUTHOR (4028243213): Post authorization status = PASS_ADD *Oct 16 08:59:27.031: Se0:25 AAA/AUTHOR/LCP: Processing AV service=ppp *Oct 16 08:59:27.031: Se0:25 AAA/AUTHOR/LCP: Processing AV protocol=lcp *Oct 16 08:59:27.031: Se0:25 AAA/AUTHOR/LCP: Processing AV callback-dialstring=6083 *!--- Callback dial string sent from the AAA server.* *Oct 16 08:59:27.031: Se0:25 AAA/AUTHOR/LCP: Processing AV send-secret=cisco *Oct 16 08:59:27.031: Se0:25 CHAP: O SUCCESS id 1 len 4 *Oct 16 08:59:27.031: Se0:25 CHAP: Processing saved Challenge, id 93 *Oct 16 08:59:27.031: Se0:25 DDR: Authenticated host tremens with no matching dialer map *Oct 16 08:59:27.031: AAA: parse name=Serial0:25 idb type=13 tty=-1 *Oct 16 08:59:27.031: AAA: name=Serial0:25 flags=0x51 type=1 shelf=0 slot=0 adapter=0 port=0 channel=25 *Oct 16 08:59:27.031: AAA: parse name= idb type=-1 tty=-1 *Oct 16 08:59:27.031: AAA/MEMORY: create_user (0x610DD96C) user='tremens' ruser='' port='Serial0:25' rem_addr='6083/211' authen_type=CHAP service=PPP priv=1 *Oct 16 08:59:27.035: AAA/AUTHEN/START (4099567767): port='Serial0:25' list='' action=SENDAUTH service=PPP *Oct 16 08:59:27.035: AAA/AUTHEN/START (4099567767): using "default" list *Oct 16 08:59:27.035: AAA/AUTHEN/START (4099567767): Method=tacacs+ (tacacs+) *Oct 16 08:59:27.035: TAC+: Look for cached secret first for sendauth *Oct 16 08:59:27.035: AAA/AUTHEN/SENDAUTH (4099567767): found cached secret for tremens *Oct 16 08:59:27.035: AAA/AUTHEN (4099567767): status = PASS *Oct 16 08:59:27.035: AAA/MEMORY: free_user (0x610DD96C) user='tremens' ruser='' port='Serial0:25' rem_addr='6083/211' authen_type=CHAP service=PPP priv=1 *Oct 16 08:59:27.035: Se0:25 CHAP: O RESPONSE id 93 len 31 from "tnt-buster" *Oct 16 08:59:27.055: Se0:25 CHAP: I SUCCESS id 93 len 4 *!--- CHAP is successful.* *Oct 16 08:59:27.055: FA0: Same state, 0 *Oct 16 08:59:27.055: DSES FA0: Session create *Oct 16 08:59:27.055: AAA/MEMORY: dup_user (0x61069398) user='tremens' ruser='' port='Serial0:25' rem_addr='6083/211' authen_type=CHAP service=PPP priv=1 source='create callback' *Oct 16 08:59:27.055: Se0:25 DDR: PPP callback Callback server starting to tremens 6083 *!--- DDR starts PPP callback procedures.* *Oct 16 08:59:27.055: Se0:25 DDR: disconnecting call *!--- Call is disconnected.* *Oct 16 08:59:27.059: ISDN Se0:15: TX -> DISCONNECT pd = 8 callref = 0xC880 *Oct 16 08:59:27.059: Cause i = 0x8090 - Normal call clearing *Oct 16 08:59:27.071: Se0:25 IPCP: PPP phase is AUTHENTICATING, discarding packet *Oct 16 08:59:27.091: ISDN Se0:15: RX <- RELEASE pd = 8 callref = 0x4880 *Oct 16 08:59:27.091: ISDN Se0:15: TX -> RELEASE_COMP pd = 8 callref = 0xC880 *Oct 16 08:59:27.103: %LINK-3-UPDOWN: Interface Serial0:25, changed state to down *Oct 16 08:59:27.103: Se0:25 PPP: Phase is TERMINATING *Oct 16 08:59:27.103: Se0:25 LCP: State is Closed *Oct 16 08:59:27.103: Se0:25 PPP: Phase is DOWN *Oct 16 08:59:27.103: Se0:25 DDR: disconnecting call *Oct 16 08:59:32.055: DDR: Callback timer expired *!--- Callback timer (5 seconds) expires. !--- This is configured through the dialer enable-timeout 5 command.*

*Oct 16 08:59:32.055: Di1 DDR: beginning callback to tremens 6083

*Oct 16 08:59:32.055: Se0:15 DDR: rotor dialout [priority]

*Oct 16 08:59:32.055: Se0:15 DDR: Dialing cause dialer session 0xFA0

*Oct 16 08:59:32.055: Se0:15 DDR: Attempting to dial 6083

!--- Callback number dialed. *Oct 16 08:59:32.055: ISDN Se0:15: TX -> SETUP pd = 8 callref =

0x0005 *Oct 16 08:59:32.055: Bearer Capability i = 0x8890 *Oct 16 08:59:32.055: Channel ID i =

0xA9839F *Oct 16 08:59:32.055: Called Party Number i = 0x81, '6083', Plan:ISDN, Type:Unknown
*Oct 16 08:59:32.095: ISDN Se0:15: RX <- CALL_PROC pd = 8 callref = 0x8005 *Oct 16 08:59:32.095:
Channel ID i = 0xA9839F *Oct 16 08:59:32.311: ISDN Se0:15: RX <- CONNECT pd = 8 callref = 0x8005
!--- Call is connected. *Oct 16 08:59:32.311: Connected Number i = 0xA136303833 *Oct 16
08:59:32.315: Locking Shift to Codeset 6 *Oct 16 08:59:32.315: Codeset 6 IE 0x28 i = 'ISDN-EDU-
4' *Oct 16 08:59:32.323: %LINK-3-UPDOWN: Interface Serial0:30, changed state to up *Oct 16
08:59:32.323: AAA/MEMORY: dup_user (0x612B7F70) user='tremens' ruser='' port='Serial0:25'
rem_addr='6083/211' authen_type=CHAP service=PPP priv=1 source='callback dialout' *Oct 16
08:59:32.323: DDR: Freeing callback to tremens 6083 *Oct 16 08:59:32.323: DDR: removing
callback, 0 packets unqueued and discarded *Oct 16 08:59:32.323: AAA/MEMORY: free_user
(0x61069398) user='tremens' ruser='' port='Serial0:25' rem_addr='6083/211' authen_type=CHAP
service=PPP priv=1 *Oct 16 08:59:32.323: Se0:30 PPP: Treating connection as a callout *!--- PPP
negotiation begins.* *Oct 16 08:59:32.323: Se0:30 PPP: Phase is ESTABLISHING, Active Open *Oct 16
08:59:32.323: Se0:30 PPP: No remote authentication for callback *Oct 16 08:59:32.327: Se0:30
AAA/AUTHOR/FSM: (0): LCP succeeds trivially *Oct 16 08:59:32.327: Se0:30 LCP: O CONFREQ [Closed]
id 5 len 10 *Oct 16 08:59:32.327: Se0:30 LCP: MagicNumber 0xE0696A6F (0x0506E0696A6F) *Oct 16
08:59:32.327: ISDN Se0:15: TX -> CONNECT_ACK pd = 8 callref = 0x0005 *Oct 16 08:59:32.351:
Se0:30 LCP: I CONFREQ [REQsent] id 127 len 15 *Oct 16 08:59:32.351: Se0:30 LCP: AuthProto CHAP
(0x0305C22305) *Oct 16 08:59:32.351: Se0:30 LCP: MagicNumber 0x3E7BE27C (0x05063E7BE27C) *Oct 16
08:59:32.355: Se0:30 LCP: O CONFACK [REQsent] id 127 len 15 *Oct 16 08:59:32.355: Se0:30 LCP:
AuthProto CHAP (0x0305C22305) *Oct 16 08:59:32.355: Se0:30 LCP: MagicNumber 0x3E7BE27C
(0x05063E7BE27C) *Oct 16 08:59:32.359: Se0:30 LCP: I CONFACK [ACKsent] id 5 len 10 *Oct 16
08:59:32.359: Se0:30 LCP: MagicNumber 0xE0696A6F (0x0506E0696A6F) *Oct 16 08:59:32.359: Se0:30
LCP: State is Open *Oct 16 08:59:32.359: Se0:30 PPP: Phase is AUTHENTICATING, by the peer *!---
Authentication begins.* *Oct 16 08:59:32.359: Se0:30 AAA/AUTHOR/LCP: Authorize LCP *Oct 16
08:59:32.359: Se0:30 AAA/AUTHOR/LCP (190918816): Port='Serial0:25' list='' service=NET *Oct 16
08:59:32.359: AAA/AUTHOR/LCP: Se0:30 (190918816) user='tremens' *Oct 16 08:59:32.359: Se0:30
AAA/AUTHOR/LCP (190918816): send AV service=ppp *Oct 16 08:59:32.359: Se0:30 AAA/AUTHOR/LCP
(190918816): send AV protocol=lcp *Oct 16 08:59:32.359: Se0:30 AAA/AUTHOR/LCP (190918816): found
list "default" *Oct 16 08:59:32.359: Se0:30 AAA/AUTHOR/LCP (190918816): Method=tacacs+ (tacacs+)
*Oct 16 08:59:32.363: AAA/AUTHOR/TAC+: (190918816): user=tremens *Oct 16 08:59:32.363:
AAA/AUTHOR/TAC+: (190918816): send AV service=ppp *Oct 16 08:59:32.363: AAA/AUTHOR/TAC+:
(190918816): send AV protocol=lcp *Oct 16 08:59:32.363: TAC+: using previously set server
10.200.20.134 from group tacacs+ *Oct 16 08:59:32.363: TAC+: Opening TCP/IP to 10.200.20.134/49
timeout=5 *Oct 16 08:59:32.363: TAC+: Opened TCP/IP handle 0x612B6A1C to 10.200.20.134/49 *Oct
16 08:59:32.363: TAC+: Opened 10.200.20.134 index=1 *Oct 16 08:59:32.363: TAC+: 10.200.20.134
(190918816) AUTHOR/START queued *Oct 16 08:59:32.563: TAC+: (190918816) AUTHOR/START processed
*Oct 16 08:59:32.563: TAC+: (190918816): received author response status = PASS_ADD *Oct 16
08:59:32.563: TAC+: Closing TCP/IP 0x612B6A1C connection to 10.200.20.134/49 *Oct 16
08:59:32.563: Se0:30 AAA/AUTHOR (190918816): Post authorization status = PASS_ADD *Oct 16
08:59:32.563: Se0:30 AAA/AUTHOR/LCP: Processing AV service=ppp *Oct 16 08:59:32.563: Se0:30
AAA/AUTHOR/LCP: Processing AV protocol=lcp *Oct 16 08:59:32.563: Se0:30 AAA/AUTHOR/LCP:
Processing AV callback-dialstring= 6083 *Oct 16 08:59:32.563: Se0:30 AAA/AUTHOR/LCP: Processing
AV send-secret=cisco *Oct 16 08:59:32.563: Se0:30 CHAP: I CHALLENGE id 94 len 28 from "tremens"
!--- An incoming CHAP challenge is received. *Oct 16 08:59:32.563: AAA: parse name=Serial0:30
idb type=13 tty=-1 *Oct 16 08:59:32.563: AAA: name=Serial0:30 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=30 *Oct 16 08:59:32.563: AAA: parse name= idb type=-1 tty=-1 *Oct 16
08:59:32.563: AAA/MEMORY: create_user (0x612B8098) user='tremens' ruser='' port='Serial0:30'
rem_addr='6083/6083' authen_type=CHAP service=PPP priv=1 *Oct 16 08:59:32.567: AAA/AUTHEN/START
(763006247): port='Serial0:30' list='' action=SENDAUTH service=PPP *Oct 16 08:59:32.567:
AAA/AUTHEN/START (763006247): using "default" list *Oct 16 08:59:32.567: AAA/AUTHEN/START
(763006247): Method=tacacs+ (tacacs+) *Oct 16 08:59:32.567: TAC+: Look for cached secret first
for sendauth *Oct 16 08:59:32.567: AAA/AUTHEN/SENDAUTH (763006247): found cached secret for
tremens *Oct 16 08:59:32.567: AAA/AUTHEN (763006247): status = PASS *Oct 16 08:59:32.567:
AAA/MEMORY: free_user (0x612B8098) user='tremens' ruser='' port='Serial0:30'
rem_addr='6083/6083' authen_type=CHAP service=PPP priv=1 *Oct 16 08:59:32.567: Se0:30 CHAP: O
RESPONSE id 94 len 31 from "tnt-buster" *Oct 16 08:59:32.587: Se0:30 CHAP: I SUCCESS id 94 len 4
!--- Authentication is successful. *Oct 16 08:59:32.587: Se0:30 PPP: Phase is UP *Oct 16
08:59:32.587: Se0:30 AAA/AUTHOR/FSM: (0): Can we start IPCP? *Oct 16 08:59:32.587: Se0:30
AAA/AUTHOR/FSM (3211893880): Port='Serial0:25' list='' service=NET *Oct 16 08:59:32.587:
AAA/AUTHOR/FSM: Se0:30 (3211893880) user='tremens' *Oct 16 08:59:32.587: Se0:30 AAA/AUTHOR/FSM
(3211893880): send AV service=ppp *Oct 16 08:59:32.587: Se0:30 AAA/AUTHOR/FSM (3211893880): send
AV protocol=ip *Oct 16 08:59:32.587: Se0:30 AAA/AUTHOR/FSM (3211893880): found list "default"
*Oct 16 08:59:32.587: Se0:30 AAA/AUTHOR/FSM (3211893880): Method=tacacs+ (tacacs+) *Oct 16

08:59:32.587: AAA/AUTHOR/TAC+: (3211893880): user=tremens *Oct 16 08:59:32.587: AAA/AUTHOR/TAC+: (3211893880): send AV service=ppp *Oct 16 08:59:32.587: AAA/AUTHOR/TAC+: (3211893880): send AV protocol=ip *Oct 16 08:59:32.587: TAC+: using previously set server 10.200.20.134 from group tacacs+ *Oct 16 08:59:32.587: TAC+: Opening TCP/IP to 10.200.20.134/49 timeout=5 *Oct 16 08:59:32.591: TAC+: Opened TCP/IP handle 0x612B6C80 to 10.200.20.134/49 *Oct 16 08:59:32.591: TAC+: Opened 10.200.20.134 index=1 *Oct 16 08:59:32.591: TAC+: 10.200.20.134 (3211893880) AUTHOR/START queued *Oct 16 08:59:32.791: TAC+: (3211893880) AUTHOR/START processed *Oct 16 08:59:32.791: TAC+: (3211893880): received author response status = PASS_ADD *Oct 16 08:59:32.791: TAC+: Closing TCP/IP 0x612B6C80 connection to 10.200.20.134/49 *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR (3211893880): Post authorization status = PASS_ADD *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/FSM: We can start IPCP *!--- IPCP negotiation begins.* *Oct 16 08:59:32.791: Se0:30 IPCP: O CONFREQ [Closed] id 5 len 10 *Oct 16 08:59:32.791: Se0:30 IPCP: Address 2.2.2.2 (0x030602020202) *Oct 16 08:59:32.791: Se0:30 IPCP: I CONFREQ [REQsent] id 111 len 10 *Oct 16 08:59:32.791: Se0:30 IPCP: Address 3.3.3.3 (0x030603030303) *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC: Start. Her address 3.3.3.3, we want 0.0.0.0 *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): Port='Serial0:25' list='' service=NET *Oct 16 08:59:32.791: AAA/AUTHOR/IPCPC: Se0:30 (3713413027) user='tremens' *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): send AV service=ppp *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): send AV protocol=ip *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): send AV addr*3.3.3.3 *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): found list "default" *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCPC (3713413027): Method=tacacs+ (tacacs+) *Oct 16 08:59:32.795: AAA/AUTHOR/TAC+: (3713413027): user=tremens *Oct 16 08:59:32.795: AAA/AUTHOR/TAC+: (3713413027): send AV service=ppp *Oct 16 08:59:32.795: AAA/AUTHOR/TAC+: (3713413027): send AV protocol=ip *Oct 16 08:59:32.795: AAA/AUTHOR/TAC+: (3713413027): send AV addr*3.3.3.3 *!--- AAA Attribute Value Pairs.* *Oct 16 08:59:32.795: TAC+: using previously set server 10.200.20.134 from group tacacs+ *Oct 16 08:59:32.795: TAC+: Opening TCP/IP to 10.200.20.134/49 timeout=5 *Oct 16 08:59:32.795: TAC+: Opened TCP/IP handle 0x61269588 to 10.200.20.134/49 *Oct 16 08:59:32.795: TAC+: Opened 10.200.20.134 index=1 *Oct 16 08:59:32.795: TAC+: 10.200.20.134 (3713413027) AUTHOR/START queued *Oct 16 08:59:32.995: TAC+: (3713413027) AUTHOR/START processed *Oct 16 08:59:32.995: TAC+: (3713413027): received author response status = PASS_ADD *Oct 16 08:59:32.995: TAC+: Closing TCP/IP 0x61269588 connection to 10.200.20.134/49 *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR (3713413027): Post authorization status = PASS_ADD *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCPC: Processing AV service=ppp *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCPC: Processing AV protocol=ip *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCPC: Processing AV addr*3.3.3.3 *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCPC: Authorization succeeded *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCPC: Done. Her address 3.3.3.3, we want 3.3.3.3 *Oct 16 08:59:32.995: Se0:30 IPCPC: O CONFACK [REQsent] id 111 len 10 *Oct 16 08:59:32.995: Se0:30 IPCPC: Address 3.3.3.3 (0x030603030303) *Oct 16 08:59:32.995: Se0:30 IPCPC: I CONFACK [ACKsent] id 5 len 10 *Oct 16 08:59:32.995: Se0:30 IPCPC: Address 2.2.2.2 (0x030602020202) *Oct 16 08:59:32.995: Se0:30 IPCPC: State is Open *Oct 16 08:59:32.999: Se0:30 DDR: dialer protocol up *Oct 16 08:59:32.999: Se0:30: Call connected, 0 packets unqueued, 0 transmitted, 0 discarded *Oct 16 08:59:32.999: Di1 IPCPC: Install route to 3.3.3.3 *!--- Route is installed to remote device.* *Oct 16 08:59:33.587: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0:30, changed state to up *Oct 16 08:59:38.323: %ISDN-6-CONNECT: Interface Serial0:30 is now connected to 6083 unknown *!--- Call is Connected.*

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