

在 ISDN 上配置 PPP 回呼（使用 AAA 提供的回呼字符串）

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简介

本文档提供两个Cisco路由器之间PPP回叫的示例配置。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- Cisco IOS®软件版本12.0(3)T或更高版本。

注意：要借助AAA服务器分配的回叫字符串配置PPP回叫，您需要使用**dialer aaa**命令，该命令在Cisco IOS软件版本12.0(3)T或更高版本中可用。但是，在Cisco IOS版本12.1(4)T、12.2(1)T及更高版本中，使用AAA服务器分配的回叫字符串进行PPP回叫时不需要此命令。

注意：仅传统DDR支持dialer aaa命令(如图1所示)。

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

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

背景信息

TACACS+（AAA服务器）用于向回叫服务器提供回叫拨号字符串。但是，您也可以使用RADIUS提供回叫字符串。要使用本地身份验证、授权和记帐(AAA)配置PPP回叫，请参阅[配置PPP ISDN回叫](#)。

在此示例配置中，回叫使用PPP和RFC 1570中指定的设施。ISDN电路上的PPP回叫按以下顺序完成：

1. 回叫客户端启动并启动到回叫服务器路由器的ISDN连接。
2. 回叫客户端和回叫服务器协商PPP链路控制协议(LCP)。在LCP协商中，回叫请求、协商和同意。
3. 回叫客户端和回叫服务器使用PPP密码身份验证协议(PAP)或质询握手身份验证协议(CHAP)相互进行身份验证。但是，您可以通过ppp authentication chap callin命令配置回叫客户端，使其不对回叫服务器进行身份验证。
4. 回叫服务器从AAA服务器获取必要的回叫属性，例如回叫拨号字符串（客户端的电话号码）。
5. 两台路由器都会断开ISDN连接。
6. 回叫服务器向客户端发起回叫。当呼叫连接时，路由器会相互验证，并建立链路。

配置

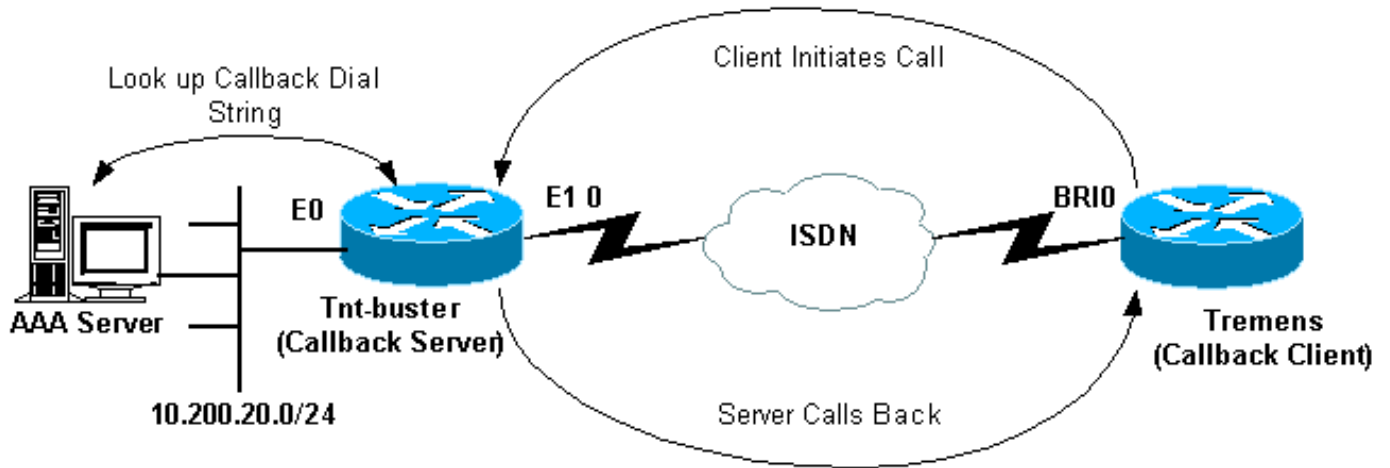
本部分提供有关如何配置本文档所述功能的信息。

注：要查找有关本文档中使用的命令的其他信息，请使用命令查找工具(仅注册客户)。

网络图

本文档使用以下网络设置：

图1 – 网络图



配置

本文档使用以下配置：

- 免费软件TACACS+配置
- RADIUS 配置
- 备用RADIUS配置
- Tnt-buster (回叫服务器) 配置
- Tremans (回叫客户端) 配置

免费软件TACACS+配置

```

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" } }

```

您还可以使用RADIUS作为AAA服务器来提供回调属性，而不是TACACS+。RADIUS配置示例如下：

RADIUS 配置

```

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"

```

注意：在上面显示的RADIUS配置中，在对回叫进行身份验证时需要Cisco AVPair lcp:send-secret=cisco。如果不包含此AVPair，则必须在回叫服务器上本地配置远程路由器的CHAP用户名和密码。

注意：本文档主要处理TACACS+。本文档中提供的调试不显示RADIUS启动的回调。

注意：从Cisco IOS版本12.1(7)，可以使用互联网工程任务组(IETF)RADIUS属性19进行ISDN和模拟Microsoft回叫。在这种情况下，无需使用Cisco AVPair，如前面的配置所示。请参阅此处显示的

备用RADIUS配置示例：

备用RADIUS配置

```
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.
```

注意：RADIUS调试将显示返回回调服务器的IETF RADIUS属性19。

本示例中使用的两台路由器的配置如下所示：

Tnt-buster (回叫服务器)

```
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 (回叫客户端)

```
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
```

验证

本部分所提供的信息可用于确认您的配置是否正常工作。

[命令输出解释程序工具 \(仅限注册用户 \) 支持某些 show 命令](#)，使用此工具可以查看对 show 命令输出的分析。

- **show dialer interface type number** — 显示为按需拨号路由(DDR)配置的接口的常规诊断信息。启动拨号的数据包的源地址和目标地址显示在 dial reason line 中。此命令还显示连接计时器。
- **show isdn status** — 使您能够确保路由器与ISDN交换机正确通信。在输出中，验证第1层状态

是否为活跃状态，是否第2层状态=MULTIPLE_FRAME_ESTABLISHED出现。此指令也显示活动的呼叫的数量。

故障排除

本部分提供的信息可用于对配置进行故障排除。

有关debug命令的详细信息，请参阅《Cisco IOS 12.0版调试命令参考》。

故障排除命令 (可选)

[命令输出解释程序工具 \(仅限注册用户 \) 支持某些 show 命令](#)，使用此工具可以查看对 show 命令输出的分析。

注意：在发出debug命令之前，请参阅[有关Debug命令的重要信息](#)。

- **debug isdn q931** — 显示ISDN网络连接 (第3层) 的呼叫建立和断开。
- **debug dialer [events / packets]** — 显示有关拨号程序接口上收到的数据包的数据包的DDR调试信息。
- **debug aaa authentication** - 显示有关 AAA 身份验证的信息。
- **debug aaa authorization** - 显示有关 AAA 授权的信息。
- **debug tacacs** — 显示与TACACS+关联的详细调试信息。
- **debug ppp negotiation** — 显示PPP组件协商过程中有关PPP流量和交换的信息，包括链路控制协议(LCP)、身份验证和NCP。成功的PPP协商将首先开放LCP状态，然后进行验证，最后进行NCP协商。
- **debug ppp authentication** — 显示PPP身份验证协议消息，包括质询身份验证协议(CHAP)数据包交换和密码身份验证协议(PAP)交换。如果观察到故障，请验证CHAP用户名和密码是否配置正确。
- **debug callback** — 当路由器使用调制解调器和聊天脚本在终端线路上回叫时，显示回叫事件。由于此命令用于调制解调器和聊天脚本，因此此配置中不使用此命令。

调试输出示例

```
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/IPCP: Start. Her address 3.3.3.3, we want 0.0.0.0 *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (3713413027): Port='Serial0:25' list='' service=NET *Oct 16 08:59:32.791: AAA/AUTHOR/IPCP: Se0:30 (3713413027) user='tremens' *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (3713413027): send AV service=ppp *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (3713413027): send AV protocol=ip *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (3713413027): send AV addr*3.3.3.3 *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (3713413027): found list "default" *Oct 16 08:59:32.791: Se0:30 AAA/AUTHOR/IPCP (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

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08:59:32.995: Se0:30 AAA/AUTHOR (3713413027): Post authorization status = PASS_ADD *Oct 16
08:59:32.995: Se0:30 AAA/AUTHOR/IPCP: Processing AV service=ppp *Oct 16 08:59:32.995: Se0:30
AAA/AUTHOR/IPCP: Processing AV protocol=ip *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCP:
Processing AV addr*3.3.3.3 *Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCP: Authorization succeeded
*Oct 16 08:59:32.995: Se0:30 AAA/AUTHOR/IPCP: Done. Her address 3.3.3.3, we want 3.3.3.3 *Oct 16
08:59:32.995: Se0:30 IPCP: O CONFACK [REQsent] id 111 len 10 *Oct 16 08:59:32.995: Se0:30 IPCP:
Address 3.3.3.3 (0x030603030303) *Oct 16 08:59:32.995: Se0:30 IPCP: I CONFACK [ACKsent] id 5 len
10 *Oct 16 08:59:32.995: Se0:30 IPCP: Address 2.2.2.2 (0x030602020202) *Oct 16 08:59:32.995:
Se0:30 IPCP: 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 IPCP: 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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