

Marcación AS5300 con ISDN/Asíncrona (DDR saliente)

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[Introducción](#)

Esta configuración tiene un AS5300 con cuatro interfaces de la velocidad primaria (PRI) y el soporte para 96 llamadas del módem o un gran número de llamadas ISDN. Se configura con cuatro PRI para permitir el async y las conexiones salientes ISDN. Los Mapas de marcado estáticos se configuran en el lado de marcación para cada conexión ISDN/Async. Las Static IP rutas se utilizan en los ambos extremos de la conexión para evitar la tara innecesaria de un Dynamic Routing Protocol. Agregar un lugar remoto requeriría la adición de un mapa de marcado, de nombre de usuario, y de una Static ruta para el nuevo destino en el lado de marcación. Todos los nodos remotos tienen IP Address fijos.

[Antes de comenzar](#)

[Convenciones](#)

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

[prerrequisitos](#)

Paso 1 - Configure y verifique a los Clientes de marcado de salida se ponen correctamente.

Configuraciones del marcado de salida - Dispositivo al cual este AS5300 marca hacia fuera:

- PRI: Configurando un servidor de acceso con los PRI para el async y las llamadas ISDN salientes - utilice la configuración del router de las AS5300 Series del sitio central (nombre de host AS5300) proporcionada en el documento.
- BRI para recibir la llamada entrante del AS5300: Configurando el Dial-on-Demand Routing (DDR) ISDN con los Perfiles de marcado - Utilice la configuración del Cisco 2503 Router del sitio del cliente (nombre de host remoteISDN01) proporcionada en el documento.
- Async para recibir la llamada entrante del AS5300: Configurando el grupo async de la interfaz con los Perfiles de marcado - Utilice la configuración del Cisco 2511 Router del sitio del cliente (nombre de host remoteAsync01) proporcionada en el documento

Paso 2: verifique que los circuitos Telco funcionen correctamente. Usted puede utilizar el **comando show isdn status** de verificar que está funcionando el circuito BRI o PRI correctamente. Para obtener más información, consulte el documento [Utilizar el comando show isdn status para la resolución de problemas de BRI](#). También debe habilitar el circuito PRI T1/E1 para llamadas salientes. Comuníquese con su compañía telefónica para corroborar esta información.

Componentes Utilizados

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

- Cisco AS5300, Cisco 2511 y Cisco 2503
- Versión 12.2(10b) del software del IOS® de Cisco
- Un módem asíncrono externo

La información que se presenta en este documento se originó a partir de dispositivos dentro de un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener un comando antes de ejecutarlo.

Teoría Precedente

En algunas situaciones, puede ser necesario utilizar el T1/E1 circuito PRI para conexiones por marcado externo. Esto ayuda a asegurar al cliente o la sucursal a la cual el circuito T1/E1 PRI marca hacia fuera es una identificación asegurada, en vez de un usuario desconocido que marca adentro con el nombre de usuario y contraseña duplicado a la red.

Productos Relacionados

Esta configuración puede utilizarse con cualquier router que tenga las tarjetas T1 o PRI. Por lo tanto, todo router serie AS5xxx con tarjeta T1 o PRI puede utilizar esta configuración. Los Cisco 2600 y 3600 Series Router pueden también ser configurados para marcar hacia fuera las llamadas ISDN con un tarjeta de interfaz WAN T1/PRI (WIC) o el módulo de red.

Esta configuración también puede ser modificada para ser utilizada con los puertos E1 o PRI. Configure el controlador E1 con la codificación de línea, la alineación de trama y otras características físicas provistas por la compañía de telecomunicaciones. La configuración del

canal D (interfaz serial x:15 para E1) es similar a la que se muestra aquí.

Configurar

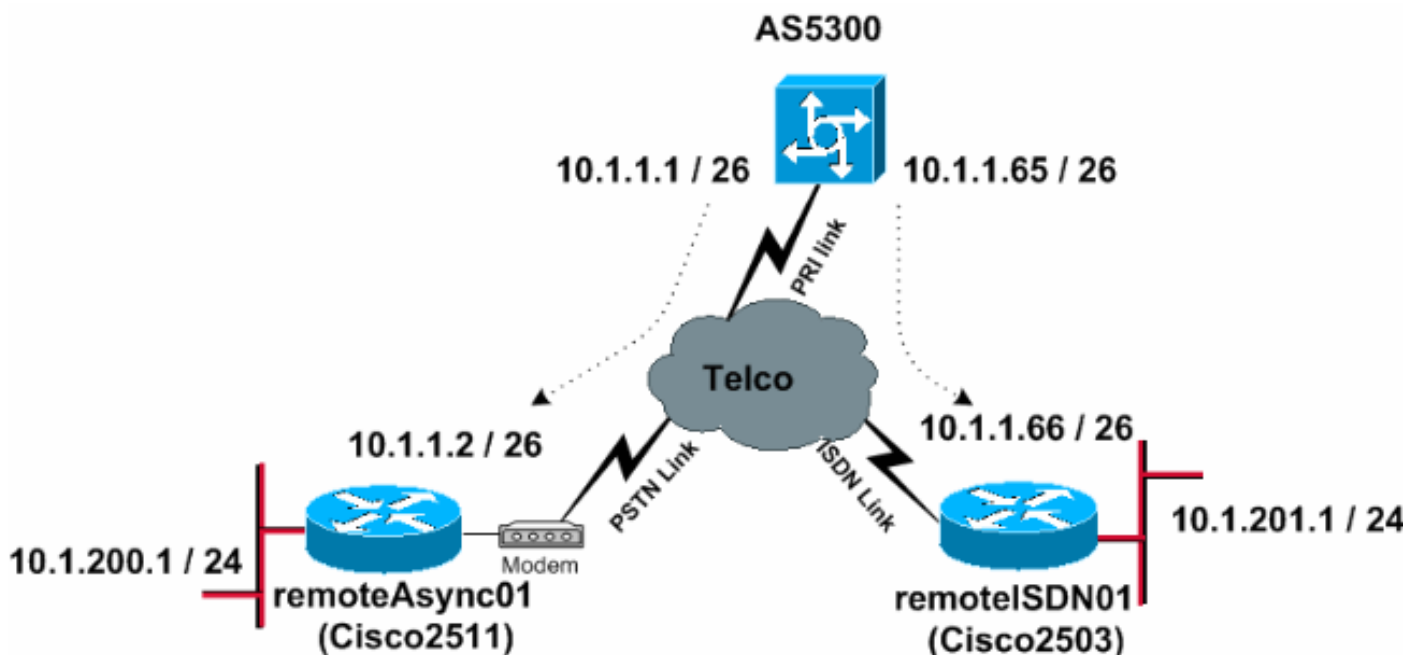
En esta sección encontrará la información para configurar las funciones descritas en este documento. Para esta red, usted necesita el siguiente:

- El tipo de switch PRI, entramado y codificación de líneas.
- Los Nombres de usuario y las contraseñas de todos los nodos remotos que usted marcará en. Incluso si usted va a agregar el TACACS+ o el RADIUS más adelante, agregue algunos nombres al router para probar las líneas.
- El esquema de IP Addressing.

Nota: Para obtener información adicional sobre los comandos que se utilizan en este documento, use la Command Lookup Tool (solo para clientes [registrados](#)).

Diagrama de la red

Este documento utiliza la instalación de red que se muestra en el siguiente diagrama.



Configuraciones

Este documento usa las configuraciones detalladas a continuación.

- [AS5300](#)
- [remoteAsync01](#)
- [remoteISDN01](#)

AS5300

```
!  
version 12.2  
service timestamps debug datetime msec  
service timestamps log datetime msec
```

```

!
hostname AS5300
!
!
username remoteISDN01 password 0 xxxx
username remoteAsync01 password 0 xxxx
!--- Usernames for local authentication of the call. !--
- The client presents the username/password !--- and the
AS5300 authenticates the peer. !--- This local database
of usernames and passwords are !--- compared when chap
PPP authentication is negotiated !--- between the AS5300
and remoteISDN01, remoteAsync01 routers. ! isdn switch-
type primary-5ess !--- Switch-type for this AS5300.
Obtain this information from the Telco. chat-script
kelly "" "atdt\T" TIMEOUT 60 CONNECT \c !--- A chat
script is a string of text that defines the handshaking
!--- that occurs between the router and the modem to
sucessfully !--- handshake with the destination. !--- In
this chat-script, "kelly" is the chat-script name. !---
The expect string "" is the null from the destination.
!--- And the send string "ATDT\T" is to instruct the
modem !--- to dial the telephone number in the dialer
string command, !--- which is 9996200 in the Interface
dialer 1 !--- TIMEOUT 60 CONNECT \C - waits up to 60
seconds for the input string "CONNECT", !--- and \C is
an escape sequence to end the chat-script. !--- Refer to
the Modem-Router Connection Guide and Chat-script for
more information. ! controller T1 0 !--- T1 PRI physical
controller configuration. framing esf !--- Framing for
this T1 is Extended Super Frame (ESF). !--- Obtain this
information from the Telco. clock source line primary !-
-- T1 0 is the primary clock source for this AS5300. !--
- Clock source must be specified for the timing !--- and
synchronization of the T1 carrier. linecode b8zs !---
Linecoding for this T1. Obtain this information from the
Telco. pri-group timeslots 1-24 !--- For T1 PRI
scenarios, all 24 T1 timeslots are assigned !--- as ISDN
PRI channels. The router will now automatically create
the !--- corresponding D-channel: interface Serial 0:23.
! controller T1 1 framing esf clock source line
secondary 1 linecode b8zs pri-group timeslots 1-24 !
controller T1 2 framing esf clock source line secondary
linecode b8zs pri-group timeslots 1-24 ! controller T1 3
framing esf clock source line secondary linecode b8zs
pri-group timeslots 1-24 ! interface Ethernet0 ip
address 171.68.186.54 255.255.255.240 no ip directed-
broadcast ! interface Serial0:23 !--- D-channel
configuration for T1 0. no ip address no ip directed-
broadcast encapsulation ppp dialer rotary-group 2 !---
T1 0 is a member of rotary group 2. !--- The rotary
group configuration is in interface Dialer2. !--- This
rotary group command enables the Dialin and Dialout for
ISDN calls. isdn switch-type primary-5ess isdn incoming-
voice modem !--- All incoming ISDN analog modem calls
that come in !--- on an ISDN PRI receive signaling
information !--- from the ISDN D channel. The D channel
is used for !--- circuit-switched data calls and analog
modem calls. !--- This enables all incoming ISDN voice
calls to access the call !--- switch module and
integrated modems. !--- Calls are passed to the modem
and the call negotiates the !--- appropriate connection
with the far-end modem. no cdp enable ! interface
Serial1:23 no ip address no ip directed-broadcast

```

```

encapsulation ppp dialer rotary-group 2 isdn switch-type
primary-5ess isdn incoming-voice modem no cdp enable !
interface Serial2:23 no ip address no ip directed-
broadcast encapsulation ppp dialer rotary-group 2 isdn
switch-type primary-5ess isdn incoming-voice modem no
cdp enable ! interface Serial3:23 no ip address no ip
directed-broadcast encapsulation ppp dialer rotary-group
2 isdn switch-type primary-5ess isdn incoming-voice
modem no cdp enable ! interface FastEthernet0 no ip
address no ip directed-broadcast shutdown ! interface
Group-Async1 !--- This interface is configured for Async
Dialin and Dialout in the T1 PRI. !--- Without this
interface, Async calls cannot be made. no ip address no
ip directed-broadcast async mode interactive dialer in-
band dialer rotary-group 1 !--- Group-Async 1 is a
member of the rotary group. !--- The rotary group
configuration is in interface Dialer 1. no cdp enable
group-range 1 96 !--- Group-range indicates the
asynchronous interfaces !--- which come under the Group-
Async interface. ! interface Dialer1 ip address 10.1.1.1
255.255.255.192 no ip directed-broadcast encapsulation
ppp dialer in-band dialer idle-timeout 600 !--- Set an
idle-timeout to hold the ISDN line. !--- Idle timeout
for outgoing calls is 600 seconds (10 minutes). !--- If
the ISDN link is idle for more than 600 seconds, it will
be dropped. dialer map ip 10.1.1.2 name remoteAsync01
modem-script kelly broadcast 9996200 !--- Dialer map
statements for the remote router remoteAsync01. !--- The
name must match the one used by the remote router to
identify itself. !--- Use the modem chat script "kelly"
for this connection. dialer-group 1 !--- Apply
interesting traffic definition from the dialer-list 1.
ppp authentication chap ! interface Dialer2 !--- The
dialer rotary-group 2 command in Int s0:23 activates the
interface !--- Dialer2 for inbound and outbound ISDN
calls. ip address 10.1.1.65 255.255.255.192 no ip
directed-broadcast encapsulation ppp dialer in-band
dialer idle-timeout 600 dialer map ip 10.1.1.66 name
remoteISDN01 broadcast 9996100 dialer-group 1 ppp
authentication chap ! no ip http server ip classless ip
route 10.1.200.0 255.255.255.0 10.1.1.2 !--- Static
route for the 10.1.200.0/24 network. !--- Interesting
Traffic for that network !--- will be sent to interface
Dialer1 and the router !--- will initiate the outbound
call for Asynchronous connectivity. ip route 10.1.201.0
255.255.255.0 10.1.1.66 !--- Static route for the
10.1.201.0/24 network. !--- Interesting traffic for that
network !--- will be sent to interface Dialer2 and the
router !--- will initiate the outbound call for ISDN BRI
connectivity. ! dialer-list 1 protocol ip permit !---
Interesting traffic is defined by the Protocol IP. !---
This is applied to interface Dialer1 and Dialer2 using
the dialer-group 1 command. !--- The specified dialer-
list number must be the same !--- as the dialer-group
number; in this example, defined to be "1." ! line con 0
transport input none line 1 96 script dialer kelly !---
Enables the chat script kelly configured globally. modem
InOut transport preferred none transport output none
line aux 0 line vty 0 4 login ! end

```

remoteAsync01

```

!
version 12.2
service timestamps debug datetime msec

```

```

service timestamps log datetime msec
!
hostname remoteAsync01
!
!
username AS5300 password 0 xxxx
!
modemcap entry default
!--- A modemcap named "default" will be applied !--- to
lines one through eight of Async interfaces. ! interface
Ethernet0 ip address 10.1.200.1 255.255.255.0 no ip
directed-broadcast ! interface Serial0 no ip address no
ip directed-broadcast shutdown ! interface Serial1 no ip
address no ip directed-broadcast shutdown ! interface
Async1 ip address 10.1.1.2 255.255.255.192 no ip
directed-broadcast encapsulation ppp dialer idle-timeout
600 async mode interactive !--- Enables the slip and ppp
EXEC commands. ppp authentication chap ! no ip http
server ip classless ip route 0.0.0.0 0.0.0.0 10.1.1.1 !-
-- Default static route for the outgoing packets. ! line
con 0 transport input none line 1 8 login local modem
InOut modem autoconfigure type default !--- Apply the
modemcap "default" (configured globally) to initialize
the modem. !--- Refer to the Modem-Router Connection
Guide for more information. transport input all
autoselect during-login autoselect ppp speed 38400
flowcontrol hardware line aux 0 line vty 0 4 ! end

```

remoteISDN01

```

!
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname remoteISDN01
!
!
username AS5300 password 0 xxxx
!--- Usernames for local authentication of the call. !--
- The client presents the username/password !--- and the
AS5300 authenticates the peer. !--- This local database
of usernames and passwords are !--- compared when chap
PPP authentication is negotiated !--- between the AS5300
and remoteISDN01 routers. ! isdn switch-type basic-5ess
!--- Switch-type for this 2503. Obtain this information
from the Telco. . ! interface Ethernet0 ip address
10.1.201.1 255.255.255.0 no ip directed-broadcast !
interface Serial0 no ip address no ip directed-broadcast
shutdown ! interface Serial1 no ip address no ip
directed-broadcast shutdown ! interface BRI0 ip address
10.1.1.66 255.255.255.192 no ip directed-broadcast
encapsulation ppp dialer idle-timeout 600 dialer-group 1
isdn switch-type basic-5ess ppp authentication chap ! no
ip http server ip classless ip route 0.0.0.0 0.0.0.0
10.1.1.65 !--- Default static route for the outgoing
packets. ! dialer-list 1 protocol ip permit ! line con 0
transport input none line aux 0 line vty 0 4 ! 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 isdn status** - Asegura que el router se comunique adecuadamente 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.
- **show ppp multilink** – Muestra información en agrupamientos de enlaces múltiples que se encuentran activos. Este comando debería utilizarse para verificar la conexión de links múltiples.
- **show dialer [número de tipo de la interfaz]** – Muestra información general de diagnóstico para interfaces configuradas para DDR. Si el marcador apareció correctamente debe aparecer un mensaje que diga: Estado del marcador: capa del link de datos en funcionamiento. Si la capa física que está funcionando aparece, el protocolo de línea ha sido añadido, pero no así el Protocolo de control de red (NCP) Las direcciones de origen y destino del paquete que inició el marcado se ven en la línea de motivo del marcado. Este comando show también muestra la configuración del temporizador y el tiempo antes de que se termine el tiempo de espera de la conexión
- **show caller user username detail** – Muestra parámetros específicos para un usuario en particular, como la dirección de IP asignada, los parámetros PPP y de agrupamiento PPP, etc. Si su versión del Cisco IOS Software no soporta este comando, utilice el comando show user.
- **show dialer map** – Muestra mapas de marcado configurados, dinámicos y estáticos. Puede usar este comando para ver si el mapa del marcador dinámico ha sido creado. Sin un asignador de marcado no puede rutear paquetes.
- **muestre el servicio isdn** - Para marcar el estatus de los canales B. (Este comando está solamente para el Access Servers que soporta los reguladores PRI/T1.)
- **usuario de la demostración** - Para visualizar el async/a los usuarios de sincronización conectados actualmente.

A continuación, se ofrecen algunas salidas del comando show en llamadas exitosas. Preste atención a las secciones en negrita y a los comentarios proporcionados en los resultados. Compare el resultado obtenido con el resultado a continuación.

El producto siguiente se obtiene antes de establecer la conexión con el Routers remotelSDN01 y remoteAsync01.

```
AS5300#show ip route Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP D
- EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2
- OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP i -
IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area * - candidate default, U -
per-user static route, o - ODR P - periodic downloaded static route Gateway of last resort is
not set 171.68.0.0/28 is subnetted, 1 subnets C 171.68.186.48 is directly connected, Ethernet0
10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks C 10.1.1.0/26 is directly connected,
Dialer1 C 10.1.1.64/26 is directly connected, Dialer2 S 10.1.201.0/24 [1/0] via 10.1.1.66 S
10.1.200.0/24 [1/0] via 10.1.1.2
```

El producto siguiente se obtiene después de establecer la conexión con el Routers remotelSDN01 y remoteAsync01.

```

AS5300#show ip route Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP D
- EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2
- OSPF NSSA external type 2 E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP i
- IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area * - candidate default, U -
per-user static route, o - ODR P - periodic downloaded static route Gateway of last resort is
not set 171.68.0.0/28 is subnetted, 1 subnets C 171.68.186.48 is directly connected, Ethernet0
10.0.0.0/8 is variably subnetted, 6 subnets, 3 masks C 10.1.1.2/32 is directly connected,
Dialer1 C 10.1.1.0/26 is directly connected, Dialer1 C 10.1.1.66/32 is directly connected,
Dialer2 C 10.1.1.64/26 is directly connected, Dialer2 S 10.1.201.0/24 [1/0] via 10.1.1.66 S
10.1.200.0/24 [1/0] via 10.1.1.2 AS5300#show ip route connected 171.68.0.0/28 is subnetted, 1
subnets C 171.68.186.48 is directly connected, Ethernet0 10.0.0.0/8 is variably subnetted, 6
subnets, 3 masks C 10.1.1.2/32 is directly connected, Dialer1 C 10.1.1.0/26 is directly
connected, Dialer1 C 10.1.1.66/32 is directly connected, Dialer2 C 10.1.1.64/26 is directly
connected, Dialer2 AS5300#show controllers tl 0 Tl 0 is up. Applique type is Channelized T1
Cablelength is long gain36 0db No alarms detected. alarm-trigger is not set Version info of slot
0: HW: 4, PLD Rev: 0 Manufacture Cookie Info: EEPROM Type 0x0001, EEPROM Version 0x01, Board ID
0x42, Board Hardware Version 1.32, Item Number 800-2540-02, Board Revision A0, Serial Number
11493161, PLD/ISP Version 0.0, Manufacture Date 12-Dec-1998. Framing is ESF, Line Code is B8ZS,
Clock Source is Line Primary. Data in current interval (197 seconds elapsed): 0 Line Code
Violations, 0 Path Code Violations 0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs !--- Output suppressed.
AS5300#show int s0:23 Serial0:23 is up, line protocol is up (spoofing) Hardware is DSX1 MTU 1500
bytes, BW 64 Kbit, DLY 20000 usec, reliability 255/255, txload 1/255, rxload 1/255 Encapsulation
PPP, loopback not set DTR is pulsed for 1 seconds on reset Last input 00:00:06, output 00:00:06,
output hang never Last clearing of "show interface" counters 11:43:21 Input queue: 0/75/0/0
(size/max/drops/flushes); Total output drops: 0 Queueing strategy: weighted fair Output queue:
0/1000/64/0 (size/max total/threshold/drops) Conversations 0/1/16 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated) Available Bandwidth 48 kilobits/sec 5
minute input rate 0 bits/sec, 0 packets/sec 5 minute output rate 0 bits/sec, 0 packets/sec 5075
packets input, 25767 bytes, 0 no buffer Received 0 broadcasts, 0 runts, 0 giants, 0 throttles 2
input errors, 0 CRC, 1 frame, 0 overrun, 0 ignored, 1 abort 5073 packets output, 25904 bytes, 0
underruns 0 output errors, 0 collisions, 13 interface resets 0 output buffer failures, 0 output
buffers swapped out 2 carrier transitions Timeslot(s) Used:24, Transmitter delay is 0 flags
AS5300#show users Line User Host(s) Idle Location * 0 con 0 idle 00:00:00 11 tty 11 remoteAsync
Async interface 00:05:40 PPP: 10.1.1.2 Interface User Mode Idle Peer Address Se0:21 remoteISDN
Sync PPP 00:06:12 PPP: 10.1.1.66 remoteAsync01#show users Line User Host(s) Idle Location * 0
con 0 idle 00:00:00 1 tty 1 AS5300 Async interface 00:07:27 PPP: 10.1.1.1 2 tty 2 Modem
Autoconfigure 00:00:00 3 tty 3 Modem Autoconfigure 00:00:00 4 tty 4 Modem Autoconfigure 00:00:01
5 tty 5 Modem Autoconfigure 00:00:00 6 tty 6 Modem Autoconfigure 00:00:00 7 tty 7 Modem
Autoconfigure 00:00:00 Interface User Mode Idle Peer Address remoteISDN01#show users Line User
Host(s) Idle Location * 0 con 0 idle 00:00:00 Interface User Mode Idle Peer Address BR0:1 AS5300
Sync PPP 00:09:09 PPP: 10.1.1.65 AS5300#show isdn history -----
----- ISDN CALL HISTORY -----
----- Call History contains all active calls, and a
maximum of 100 inactive calls. Inactive call data will be retained for a maximum of 15 minutes.
----- Call Calling
Called Remote Seconds Seconds Seconds Charges Type Number Number Name Used Left Idle
Units/Currency -----
Out ---N/A--- 9996200 +oteAsync01 187 0 Out ---N/A--- 9996200 +oteAsync01 56 0 Out ---N/A---
9996200 +oteAsync01 469 305 294 0 Out ---N/A--- 9996100 +moteISDN01 105 509 90 0 -----
----- AS5300#show isdn active -----
----- ISDN ACTIVE CALLS -----
----- Call Calling
Called Remote Seconds Seconds Seconds Charges Type Number Number Name Used Left Idle
Units/Currency -----
Out ---N/A--- 9996100 +moteISDN01 152 449 150 0 Out ---N/A--- 9996200 +oteAsync01 133 491 108 0
----- AS5300#show
isdn status Global ISDN Switchtype = primary-5ess ISDN Serial0:23 interface dsl 0, interface
ISDN Switchtype = primary-5ess Layer 1 Status: ACTIVE Layer 2 Status: TEI = 0, Ces = 1, SAPI =
0, State = MULTIPLE_FRAME_ESTABLISHED Layer 3 Status: 2 Active Layer 3 Call(s) CCB:callid=809E,
sapi=0, ces=0, B-chan=23, calltype=VOICE CCB:callid=809F, sapi=0, ces=0, B-chan=22,
calltype=DATA Active dsl 0 CCBs = 2 The Free Channel Mask: 0x801FFFFFF Number of L2 Discards = 1,
L2 Session ID = 10 !--- Output suppressed. AS5300#Ping 10.1.201.1 Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.201.1, timeout is 2 seconds: !!!!! Success rate is 100

```



```

percent (5/5), round-trip min/avg/max = 32/33/36 ms AS5300#Ping 10.1.200.1 Type escape sequence
to abort. Sending 5, 100-byte ICMP Echos to 10.1.200.1, timeout is 2 seconds: !!!!! Success rate
is 100 percent (5/5), round-trip min/avg/max = 128/141/148 ms AS5300#show isdn service PRI
Channel Statistics: ISDN Se0:23, Channel [1-24] Configured Isdn Interface (dsl) 0 Channel State
(0=Idle 1=Proposed 2=Busy 3=Reserved 4=Restart 5=Maint_Pend) Channel : 1 2 3 4 5 6 7 8 9 0 1 2 3
4 5 6 7 8 9 0 1 2 3 4 State : 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 2 3 Service State
(0=Inservice 1=Maint 2=Outofservice) Channel : 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4
State : 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 2 !--- Output suppressed. AS5300#show
modem Codes: * - Modem has an active call C - Call in setup T - Back-to-Back test in progress R
- Modem is being Reset p - Download request is pending and modem cannot be used for taking calls
D - Download in progress B - Modem is marked bad and cannot be used for taking calls b - Modem
is either busied out or shut-down d - DSP software download is required for achieving K56flex
connections ! - Upgrade request is pending Avg Hold Inc calls Out calls Busied Failed No Succ
Mdm Time Succ Fail Succ Fail Out Dial Answer Pct. 1/0 00:00:00 0 0 0 0 0 0 0 0 0% 1/1 00:00:00 0 0
0 0 0 0 0 0% 1/2 00:00:00 0 0 0 0 0 0 0 0% 1/3 00:00:00 0 0 0 0 0 0 0 0% 1/4 00:00:00 0 0 0 0 0
0 0 0 0% 1/5 00:00:00 0 0 0 0 0 0 0 0% 1/6 00:00:00 0 0 0 0 0 0 0 0% 1/7 00:00:00 0 0 0 0 0 0 0
0% 1/8 00:00:00 0 0 0 0 0 0 0 0% 1/9 00:00:00 0 0 0 0 0 0 0 0% * 1/10 00:02:21 0 0 5 5 0 0 0 50%
1/11 00:03:11 0 0 23 6 0 0 0 79% 1/12 00:00:00 0 0 0 0 0 0 0 0% 1/13 00:00:00 0 0 0 0 0 0 0 0%
1/14 00:00:00 0 0 0 0 0 0 0 0% !--- Output suppressed.

```

[Troubleshooting](#)

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

[Recursos de resolución de problemas](#)

- [Troubleshooting de la llamada ISDN entrante](#) - Utilice para la falla de llamada ISDN troubleshooting.
- [Pri isdn callin](#) - Contiene la información adicional en las fallas de llamada ISDN del troubleshooting.
- [Diagrama Troubleshooting en T1 - Utilice este diagrama de flujo si sospecha que el circuito T1 no funciona correctamente.](#)
- [Troubleshooting de T1 PRI](#) - Procedimiento de Troubleshooting para los circuitos ISDN PRI
- [Pruebas de Loopback para las líneas T1/56K](#) - Uso para verificar que esté funcionando el puerto T1 en el router correctamente.
- [Uso del comando show isdn status para solucionar problemas de BRI](#) - Use este documento para solucionar los problemas de BRI.
- [Resolviendo problemas el ISDN BRI acode 3 usando el comando debug isdn q931](#) - utilice este documento para el troubleshooting de la capa ISDN 3.

[Comandos para resolución de problemas](#)

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 dialer** - Cuando el DDR se habilita en la interfaz, esta información de las visualizaciones del comando referente a la causa de cualquier llamada (llamada la causa de marcación).
- **debug ISDN q931** - Para marcar se inician las conexiones ISDN como llamadas de salida.

- **negociación ppp del debug** - Para ver si un cliente está pasando la negociación PPP. Un número alto de negociaciones PPP simultáneas puede abrumar CPU del router.
- **debug ppp authentication** – Para ver si un cliente se autentica correctamente. Si usted está utilizando una versión antes del Cisco IOS Release 11.2, utilice el comando `debug ppp chap` en lugar de otro.
- **debug ppp error** - Para visualizar los errores del protocolo y la estadística de error se asoció a la negociación y a la operación de la conexión PPP.

Comandos de Troubleshooting del módem

- **charla del debug** - Para ver la ejecución del chat script cuando se inicia una llamada.
- **módem del debug** - Para ver si el router está recibiendo las señales correctas del módem.
- **debug modem csm** - Para habilitar el Modem Management Call Switching Module (CS) haga el debug del modo.

Solución de problemas de salida

A continuación se encuentran las salidas de depuración para una llamada saliente satisfactoria. Preste atención a las secciones en negrita y a los comentarios proporcionados en los resultados. Compare el resultado obtenido con el resultado a continuación.

Hacer el debug de la conexión de marcado de salida del T1 PRI AS5300 al router remoteAsync01

```
AS5300#debug isdn q931 ISDN Q931 packets debugging is on AS5300#debug chat Chat scripts activity
debugging is on AS5300#debug dialer events Dial on demand events debugging is on AS5300#show
debug 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 1 1 1 - - - - Chat Scripts: Chat scripts activity debugging is on
AS5300#ping 10.1.200.1 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to
10.1.200.1, timeout is 2 seconds: Dec 30 17:59:16.675: As12 DDR: rotor dialout [priority] Dec 30
17:59:16.675: As12 DDR: Dialing cause ip (s=10.1.1.1, d=10.1.200.1) !--- The dialing cause is a
ping for 10.1.200.1. !--- ICMP is tagged as interesting. Dec 30 17:59:16.675: As12 DDR:
Attempting to dial 9996200 Dec 30 17:59:16.675: CHAT12: Attempting async line dialer script Dec
30 17:59:16.675: CHAT12: Dialing using Modem script: kelly & System script: none !--- Uses the
Chat script kelly to Dialout. Dec 30 17:59:16.675: CHAT12: process started Dec 30 17:59:16.675:
CHAT12: Asserting DTR Dec 30 17:59:16.675: CHAT12: Chat script kelly started Dec 30
17:59:16.675: CHAT12: Sending string: atdt\T<9996200> !--- The Chat script kelly uses the
Telephone no in Interface Dialer 1 to Dialout. Dec 30 17:59:16.675: CHAT12: Expecting string:
CONNECT Dec 30 17:59:16.755: ISDN Se0:23: TX -> SETUP pd = 8 callref = 0x00B1 !--- Outgoing ISDN
Q.931 SETUP message. Dec 30 17:59:16.755: Bearer Capability i = 0x8090A2 Dec 30 17:59:16.755:
Channel ID i = 0xA98397 Dec 30 17:59:16.759: Called Party Number i = 0xA1, '9996200', Plan:ISDN,
Type:National Dec 30 17:59:16.823: ISDN Se0:23: RX <- CALL_PROC pd = 8 callref = 0x80B1 Dec 30
17:59:16.823: Channel ID i = 0xA98397 Dec 30 17:59:17.023: ISDN Se0:23: RX <- ALERTING pd = 8
callref = 0x80B1..... Success rate is 0 percent (0/5) AS5300# Dec 30 17:59:26.115: ISDN Se0:23:
RX <- CONNECT pd = 8 callref = 0x80B1 !--- Received Q.931 CONNECT message. Dec 30 17:59:26.119:
ISDN Se0:23: TX -> CONNECT_ACK pd = 8 callref = 0x00B1 Dec 30 17:59:32.119: %ISDN-6-CONNECT:
Interface Serial0:22 is now connected to 9996200 Dec 30 17:59:49.347: CHAT12: Completed match
for expect: CONNECT Dec 30 17:59:49.347: CHAT12: Sending string: \c Dec 30 17:59:49.347: CHAT12:
Chat script kelly finished, status = Success Dec 30 17:59:49.351: Dil IPCP: Install route to
10.1.1.2 !--- A route to the peer is installed. Dec 30 17:59:51.351: %LINK-3-UPDOWN: Interface
Async12, changed state to up Dec 30 17:59:51.351: As12 DDR: Dialer statechange to up Dec 30
17:59:51.351: As12 DDR: Dialer call has been placed Dec 30 17:59:51.351: As12 PPP: Treating
connection as a callout Dec 30 17:59:51.351: As12 PPP: Phase is ESTABLISHING, Active Open [0
sess, 1 load] Dec 30 17:59:51.351: As12 LCP: O CONFREQ [Closed] id 149 len 25 Dec 30
17:59:51.351: As12 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:59:51.351: As12 LCP:
AuthProto CHAP (0x0305C22305) Dec 30 17:59:51.351: As12 LCP: MagicNumber 0x4A997A3A
```

(0x05064A997A3A) Dec 30 17:59:51.351: As12 LCP: PFC (0x0702) Dec 30 17:59:51.351: As12 LCP: ACFC (0x0802) Dec 30 17:59:53.351: As12 LCP: TIMEOUT: State REQsent Dec 30 17:59:53.351: As12 LCP: O CONFREQ [REQsent] id 150 len 25 Dec 30 17:59:53.351: As12 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:59:53.351: As12 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:59:53.351: As12 LCP: MagicNumber 0x4A997A3A (0x05064A997A3A) Dec 30 17:59:53.351: As12 LCP: PFC (0x0702) Dec 30 17:59:53.351: As12 LCP: ACFC (0x0802) Dec 30 17:59:53.511: As12 LCP: I CONFREQ [REQsent] id 53 len 25 Dec 30 17:59:53.511: As12 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:59:53.511: As12 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:59:53.511: As12 LCP: MagicNumber 0x67B12AE8 (0x050667B12AE8) Dec 30 17:59:53.511: As12 LCP: PFC (0x0702) Dec 30 17:59:53.511: As12 LCP: ACFC (0x0802) Dec 30 17:59:53.511: As12 LCP: O CONFACK [REQsent] id 53 len 25 Dec 30 17:59:53.511: As12 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:59:53.511: As12 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:59:53.511: As12 LCP: MagicNumber 0x67B12AE8 (0x050667B12AE8) Dec 30 17:59:53.511: As12 LCP: PFC (0x0702) Dec 30 17:59:53.511: As12 LCP: ACFC (0x0802) Dec 30 17:59:53.543: As12 LCP: I CONFACK [ACKsent] id 150 len 25 Dec 30 17:59:53.543: As12 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:59:53.543: As12 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:59:53.543: As12 LCP: MagicNumber 0x4A997A3A (0x05064A997A3A) Dec 30 17:59:53.543: As12 LCP: PFC (0x0702) Dec 30 17:59:53.543: As12 LCP: ACFC (0x0802) Dec 30 17:59:53.543: As12 LCP: State is Open *!--- LCP negotiation is complete.* Dec 30 17:59:53.543: As12 PPP: Phase is AUTHENTICATING, by both [0 sess, 1 load] Dec 30 17:59:53.543: As12 CHAP: O CHALLENGE id 25 len 27 from "AS5300" Dec 30 17:59:53.655: As12 CHAP: I CHALLENGE id 27 len 34 from "remoteAsync01" Dec 30 17:59:53.655: As12 CHAP: O RESPONSE id 27 len 27 from "AS5300" Dec 30 17:59:53.671: As12 CHAP: I RESPONSE id 25 len 34 from "remoteAsync01" Dec 30 17:59:53.671: As12 CHAP: O SUCCESS id 25 len 4 Dec 30 17:59:53.783: As12 CHAP: I SUCCESS id 27 len 4 *!--- Two-way CHAP authentication is successful.* Dec 30 17:59:53.783: As12 PPP: Phase is UP [0 sess, 1 load] Dec 30 17:59:53.783: As12 IPCP: O CONFREQ [Closed] id 25 len 10 Dec 30 17:59:53.783: As12 IPCP: Address 10.1.1.1 (0x03060A010101) Dec 30 17:59:53.783: As12 CDPCP: O CONFREQ [Closed] id 25 len 4 Dec 30 17:59:53.783: As12 IPCP: I CONFREQ [REQsent] id 27 len 10 Dec 30 17:59:53.783: As12 IPCP: Address 10.1.1.2 (0x03060A010102) Dec 30 17:59:53.783: As12 IPCP: O CONFACK [REQsent] id 27 len 10 Dec 30 17:59:53.783: As12 IPCP: Address 10.1.1.2 (0x03060A010102) Dec 30 17:59:53.911: As12 IPCP: I CONFACK [ACKsent] id 25 len 10 Dec 30 17:59:53.911: As12 IPCP: Address 10.1.1.1 (0x03060A010101) Dec 30 17:59:53.911: As12 IPCP: State is Open Dec 30 17:59:53.911: As12 DDR: dialer protocol up Dec 30 17:59:53.927: As12 LCP: I PROTREJ [Open] id 54 len 10 protocol CDPCP (0x820701190004) Dec 30 17:59:53.927: As12 CDPCP: State is Closed Dec 30 17:59:54.783: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async12, changed state to up Dec 30 17:59:54.783: As12 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 17:59:54.783: As12 CDPCP: State is Closed Dec 30 17:59:54.783: As12 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 17:59:54.783: As12 CDPCP: State is Closed Dec 30 17:59:54.783: As12 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 17:59:54.783: As12 CDPCP: State is Closed Dec 30 17:59:54.787: As12 CDPCP: TIMEOUT: State Closed Dec 30 17:59:54.787: As12 CDPCP: State is Listen remoteAsync01#**debug ppp negotiation** PPP protocol negotiation debugging is on remoteAsync01# Dec 30 17:58:54: As1 LCP: I CONFREQ [Closed] id 150 len 25 Dec 30 17:58:54: As1 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:58:54: As1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:58:54: As1 LCP: MagicNumber 0x4A997A3A (0x05064A997A3A) Dec 30 17:58:54: As1 LCP: PFC (0x0702) Dec 30 17:58:54: As1 LCP: ACFC (0x0802) Dec 30 17:58:54: As1 LCP: Lower layer not up, Fast Starting Dec 30 17:58:54: As1 PPP: Treating connection as a dedicated line Dec 30 17:58:54: As1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load] Dec 30 17:58:54: As1 LCP: O CONFREQ [Closed] id 53 len 25 Dec 30 17:58:54: As1 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:58:54: As1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:58:54: As1 LCP: MagicNumber 0x67B12AE8 (0x050667B12AE8) Dec 30 17:58:54: As1 LCP: PFC (0x0702) Dec 30 17:58:54: As1 LCP: ACFC (0x0802) Dec 30 17:58:54: As1 LCP: O CONFACK [REQsent] id 150 len 25 Dec 30 17:58:54: As1 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:58:54: As1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:58:54: As1 LCP: MagicNumber 0x4A997A3A (0x05064A997A3A) Dec 30 17:58:54: As1 LCP: PFC (0x0702) Dec 30 17:58:54: As1 LCP: ACFC (0x0802) Dec 30 17:58:54: %LINK-3-UPDOWN: Interface Async1, changed state to up Dec 30 17:58:55: As1 LCP: I CONFACK [ACKsent] id 53 len 25 Dec 30 17:58:55: As1 LCP: ACCM 0x000A0000 (0x0206000A0000) Dec 30 17:58:55: As1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 17:58:55: As1 LCP: MagicNumber 0x67B12AE8 (0x050667B12AE8) Dec 30 17:58:55: As1 LCP: PFC (0x0702) Dec 30 17:58:55: As1 LCP: ACFC (0x0802) Dec 30 17:58:55: As1 LCP: State is Open *!--- LCP negotiation is complete.* Dec 30 17:58:55: As1 PPP: Phase is AUTHENTICATING, by both [0 sess, 0 load] Dec 30 17:58:55: As1 CHAP: O CHALLENGE id 27 len 34 from "remoteAsync01" Dec 30 17:58:55: As1 CHAP: I CHALLENGE id 25 len 27 from "AS5300" Dec 30 17:58:55: As1 CHAP: O RESPONSE id 25 len 34 from "remoteAsync01" Dec 30 17:58:55: As1 CHAP: I RESPONSE id 27 len 27 from "AS5300" Dec 30 17:58:55: As1 CHAP: I SUCCESS id 25 len 4 Dec 30 17:58:55: As1 CHAP: O SUCCESS id 27 len 4 *!--- Two-way CHAP authentication is successful.* Dec 30 17:58:55: As1 PPP: Phase is

```
UP [0 sess, 1 load] Dec 30 17:58:55: As1 IPCP: O CONFREQ [Closed] id 27 len 10 Dec 30 17:58:55:
As1 IPCP: Address 10.1.1.2 (0x03060A010102) Dec 30 17:58:55: As1 IPCP: I CONFREQ [REQsent] id 25
len 10 Dec 30 17:58:55: As1 IPCP: Address 10.1.1.1 (0x03060A010101) Dec 30 17:58:55: As1 IPCP: O
CONFACK [REQsent] id 25 len 10 Dec 30 17:58:55: As1 IPCP: Address 10.1.1.1 (0x03060A010101) Dec
30 17:58:55: As1 CDP: I CONFREQ [Not negotiated] id 25 len 4 Dec 30 17:58:55: As1 LCP: O
PROTREQ [Open] id 54 len 10 protocol CDP (0x820701190004) Dec 30 17:58:55: As1 IPCP: I CONFACK
[ACKsent] id 27 len 10 Dec 30 17:58:55: As1 IPCP: Address 10.1.1.2 (0x03060A010102) Dec 30
17:58:55: As1 IPCP: State is Open Dec 30 17:58:55: As1 IPCP: Install route to 10.1.1.1 !--- A
route to the peer is installed. Dec 30 17:58:56: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Asyncl, changedstate to up
```

[Hacer el debug del dialout del AS5300 al router remoteISDN01](#)

```
AS5300#show debug 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 1 1 1 - - - - Chat Scripts: Chat scripts activity
debugging is on AS5300#ping 10.1.201.1 Type escape sequence to abort. Sending 5, 100-byte ICMP
Echos to 10.1.201.1, timeout is 2 seconds: Dec 30 18:12:42.811: Se0:23 DDR: rotor dialout
[priority] Dec 30 18:12:42.815: Se0:23 DDR: Dialing cause ip (s=10.1.1.65, d=10.1.201.1) !---
The dialing cause is a ping for 10.1.201.1. !--- ICMP is tagged as interesting. Dec 30
18:12:42.815: Se0:23 DDR: Attempting to dial 9996100 Dec 30 18:12:42.815: ISDN Se0:23: TX -
>SETUP pd = 8 callref = 0x00B2 !--- Outgoing ISDN Q.931 SETUP message. Dec 30 18:12:42.815:
Bearer Capability i = 0x8890 Dec 30 18:12:42.815: Channel ID i = 0xA98396 Dec 30 18:12:42.819:
Called Party Number i = 0xA1, '9996100', Plan:ISDN, Type:National Dec 30 18:12:42.867: ISDN
Se0:23: RX <- CALL_PROC pd = 8 callref = 0x80B2 Dec 30 18:12:42.867: Channel ID i = 0xA98396 Dec
30 18:12:43.127: ISDN Se0:23: RX <- CONNECT pd = 8 callref = 0x80B2 !--- Received Q.931 CONNECT
message. Dec 30 18:12:43.135: %LINK-3-UPDOWN: Interface Serial0:21, changed state to up Dec 30
18:12:43.135: Se0:21 PPP: Treating connection as a callout Dec 30 18:12:43.135: Se0:21 PPP:
Phase is ESTABLISHING, Active Open [0 sess, 1 load] Dec 30 18:12:43.135: Se0:21 LCP: O CONFREQ
[Closed] id 25 len 15 Dec 30 18:12:43.139: Se0:21 LCP: AuthProto CHAP (0x0305C22305) Dec 30
18:12:43.139: Se0:21 LCP: MagicNumber 0x4AA54104 (0x05064AA54104) Dec 30 18:12:43.139: ISDN
Se0:23: TX -> CONNECT_ACK pd = 8 callref = 0x00B2 Dec 30 18:12:43.167: Se0:21 LCP: I CONFREQ
[REQsent] id 55 len 15 Dec 30 18:12:43.167: Se0:21 LCP: AuthProto CHAP (0x0305C22305) Dec 30
18:12:43.167: Se0:21 LCP: MagicNumber 0x575DC27D (0x0506575DC27D) Dec 30 18:12:43.167: Se0:21
LCP: O CONFACK [REQsent] id 55 len 15 Dec 30 18:12:43.167: Se0:21 LCP: AuthProto CHAP
(0x0305C22305) Dec 30 18:12:43.167: Se0:21 LCP: MagicNumber 0x575DC27D (0x0506575DC27D) Dec 30
18:12:43.175: Se0:21 LCP: I CONFACK [ACKsent] id 25 len 15 Dec 30 18:12:43.175: Se0:21 LCP:
AuthProto CHAP (0x0305C22305) Dec 30 18:12:43.175: Se0:21 LCP: MagicNumber 0x4AA54104
(0x05064AA54104) Dec 30 18:12:43.179: Se0:21 LCP: State is Open !--- LCP negotiation is complete.
Dec 30 18:12:43.179: Se0:21 PPP: Phase is AUTHENTICATING, by both [0 sess, 1!!!! Success rate
is 80 percent (4/5), round-trip min/avg/max = 32/33/36 msAS5300# load] Dec 30 18:12:43.179:
Se0:21 CHAP: O CHALLENGE id 13 len 27 from "AS5300" Dec 30 18:12:43.227: Se0:21 CHAP: I
CHALLENGE id 36 len 33 from "remoteISDN01" Dec 30 18:12:43.227: Se0:21 CHAP: O RESPONSE id 36
len 27 from "AS5300" Dec 30 18:12:43.251: Se0:21 CHAP: I SUCCESS id 36 len 4 Dec 30
18:12:43.263: Se0:21 CHAP: I RESPONSE id 13 len 33 from "remoteISDN01" Dec 30 18:12:43.263:
Se0:21 CHAP: O SUCCESS id 13 len 4 !--- Two-way CHAP authentication is successful. Dec 30
18:12:43.263: Se0:21 PPP: Phase is UP [0 sess, 1 load] Dec 30 18:12:43.263: Se0:21 IPCP: O
CONFREQ [Closed] id 13 len 10 Dec 30 18:12:43.267: Se0:21 IPCP: Address 10.1.1.65
(0x03060A010141) Dec 30 18:12:43.287: Se0:21 IPCP: I CONFREQ [REQsent] id 36 len 10 Dec 30
18:12:43.287: Se0:21 IPCP: Address 10.1.1.66 (0x03060A010142) Dec 30 18:12:43.287: Se0:21 IPCP:
O CONFACK [REQsent] id 36 len 10 Dec 30 18:12:43.287: Se0:21 IPCP: Address 10.1.1.66
(0x03060A010142) Dec 30 18:12:43.287: Se0:21 CDP: I CONFREQ [Not negotiated] id 36 len 4 Dec
30 18:12:43.291: Se0:21 LCP: O PROTREQ [Open] id 26 len 10 protocol CDP (0x820701240004) Dec
30 18:12:43.307: Se0:21 IPCP: I CONFACK [ACKsent] id 13 len 10 Dec 30 18:12:43.307: Se0:21 IPCP:
Address 10.1.1.65 (0x03060A010141) Dec 30 18:12:43.307: Se0:21 IPCP: State is Open Dec 30
18:12:43.307: Se0:21 DDR: dialer protocol up Dec 30 18:12:43.307: Di2 IPCP: Install route to
10.1.1.66 !--- A route to the peer is installed. Dec 30 18:12:44.263: %LINEPROTO-5-UPDOWN: Line
protocol on Interface Serial0:21, changed state to up Dec 30 18:12:49.135: %ISDN-6-CONNECT:
Interface Serial0:21 is now connected to 9996100 remoteISDN01 remoteISDN01#debug ppp negotiation
PPP protocol negotiation debugging is on remoteISDN01#debug isdn q931 ISDN Q931 packets
debugging is on remoteISDN01#show debug PPP: PPP protocol negotiation debugging is on ISDN: ISDN
Q931 packets debugging is on remoteISDN01# Dec 30 18:13:04: ISDN BR0: RX <- SETUP pd = 8 callref
= 0x1B Dec 30 18:13:04: Bearer Capability i = 0x8890 Dec 30 18:13:04: Channel ID i = 0x89 Dec 30
18:13:04: Signal i = 0x40 - Alerting on - pattern 0 Dec 30 18:13:04: Called Party Number i =
```

0xA1, '2019996100', Plan:ISDN, Type:National Dec 30 18:13:04: ISDN BR0: Event: Received a DATA call from <unknown> on B1 at 64 Kb/s Dec 30 18:13:04: ISDN BR0: Event: Accepting the call id 0x2D Dec 30 18:13:04: %LINK-3-UPDOWN: Interface BRI0:1, changed state to up Dec 30 18:13:04: BR0:1 PPP: Treating connection as a callin Dec 30 18:13:04: BR0:1 PPP: Phase is ESTABLISHING, Passive Open [0 sess, 1 load] Dec 30 18:13:04: BR0:1 LCP: State is Listen Dec 30 18:13:04: **ISDN BR0: TX -> CALL_PROC pd = 8 callref = 0x9B !---** *Outgoing ISDN Q.931 SETUP message.* Dec 30 18:13:04: Channel ID i = 0x89 Dec 30 18:13:04: ISDN BR0: TX -> CONNECT pd = 8 callref = 0x9B Dec 30 18:13:05: BR0:1 LCP: I CONFREQ [Listen] id 25 len 15 Dec 30 18:13:05: BR0:1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 18:13:05: BR0:1 LCP: MagicNumber 0x4AA54104 (0x05064AA54104) Dec 30 18:13:05: BR0:1 LCP: O CONFREQ [Listen] id 55 len 15 Dec 30 18:13:05: BR0:1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 18:13:05: BR0:1 LCP: MagicNumber 0x575DC27D (0x0506575DC27D) Dec 30 18:13:05: BR0:1 LCP: O CONFACK [Listen] id 25 len 15 Dec 30 18:13:05: BR0:1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 18:13:05: BR0:1 LCP: MagicNumber 0x4AA54104 (0x05064AA54104) Dec 30 18:13:05: ISDN BR0: RX <- CONNECT_ACK pd = 8 callref = 0x1B **!---** *Received Q.931 CONNECT message.* Dec 30 18:13:05: Signal i = 0x4F - Alerting off Dec 30 18:13:05: BR0:1 LCP: I CONFACK [ACKsent] id 55 len 15 Dec 30 18:13:05: BR0:1 LCP: AuthProto CHAP (0x0305C22305) Dec 30 18:13:05: BR0:1 LCP: MagicNumber 0x575DC27D (0x0506575DC27D) Dec 30 18:13:05: BR0:1 LCP: State is Open Dec 30 18:13:05: BR0:1 PPP: Phase is AUTHENTICATING, by both [0 sess, 1 load] Dec 30 18:13:05: BR0:1 CHAP: O CHALLENGE id 36 len 33 from "remoteISDN01" Dec 30 18:13:05: BR0:1 CHAP: I CHALLENGE id 13 len 27 from "AS5300" Dec 30 18:13:05: BR0:1 CHAP: Waiting for peer to authenticate first Dec 30 18:13:05: BR0:1 CHAP: I RESPONSE id 36 len 27 from "AS5300" Dec 30 18:13:05: BR0:1 CHAP: O SUCCESS id 36 len 4 Dec 30 18:13:05: BR0:1 CHAP: Processing saved Challenge, id 13 Dec 30 18:13:05: BR0:1 CHAP: O RESPONSE id 13 len 33 from "remoteISDN01" Dec 30 18:13:05: BR0:1 CHAP: I SUCCESS id 13 len 4 **!---** *Two-way CHAP authentication is successful.* Dec 30 18:13:05: BR0:1 PPP: Phase is UP [0 sess, 0 load] Dec 30 18:13:05: BR0:1 IPCP: O CONFREQ [Closed] id 36 len 10 Dec 30 18:13:05: BR0:1 IPCP: Address 10.1.1.66 (0x03060A010142) Dec 30 18:13:05: BR0:1 CDPCP: O CONFREQ [Closed] id 36 len 4 Dec 30 18:13:05: BR0:1 IPCP: I CONFREQ [REQsent] id 13 len 10 Dec 30 18:13:05: BR0:1 IPCP: Address 10.1.1.65 (0x03060A010141) Dec 30 18:13:05: BR0:1 IPCP: O CONFACK [REQsent] id 13 len 10 Dec 30 18:13:05: BR0:1 IPCP: Address 10.1.1.65 (0x03060A010141) Dec 30 18:13:05: BR0:1 IPCP: I CONFACK [ACKsent] id 36 len 10 Dec 30 18:13:05: BR0:1 IPCP: Address 10.1.1.66 (0x03060A010142) Dec 30 18:13:05: BR0:1 IPCP: State is Open Dec 30 18:13:05: BR0:1 LCP: I PROTREJ [Open] id 26 len 10 protocol CDPCP (0x8207 01240004) Dec 30 18:13:05: BR0:1 CDPCP: State is Closed Dec 30 18:13:05: BR0:1 **IPCP: Install route to 10.1.1.65 !---** *A route to the peer is installed.* Dec 30 18:13:06: %LINEPROTO-5-UPDOWN: **Line protocol on Interface BRI0:1, changed state to up** Dec 30 18:13:06: BR0:1 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 18:13:06: BR0:1 CDPCP: State is Closed Dec 30 18:13:06: BR0:1 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 18:13:06: BR0:1 CDPCP: State is Closed Dec 30 18:13:06: BR0:1 PPP: Outbound cdp packet dropped, CDPCP is Closed [starting negotiations] Dec 30 18:13:06: BR0:1 CDPCP: State is Closed Dec 30 18:13:06: BR0:1 CDPCP: TIMEOUT: State Closed Dec 30 18:13:06: BR0:1 CDPCP: State is Listen Dec 30 18:13:10: %ISDN-6-CONNECT: **Interface BRI0:1 is now connected to AS5300**

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- [Configuración del servidor de acceso con PRI para las llamadas ISDN y asíncronas entrantes](#)
- [Configuración de la marcación de entrada y de salida en los mismos circuitos T1/E1 PRI](#)
- [Configurar el NAS para el Acceso por marcación básica](#)
- [Guía de configuración de las soluciones del dial](#)
- [Introducción de los códigos de desconexión del comando debug isdn q931](#)
- [Tecnología de marcación manual: Técnicas de resolución de problemas](#)
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