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## [Introdução](#)

Este documento fornece um exemplo de configuração para usuários remotos fazendo chamadas usando um dos métodos a seguir. Em cada caso, a chamada é executada com o uso de uma chamada V.110.

- Usuários conectando o 3640 via GSM e requisitando retorno da chamada.
- Os usuários conectando o 3640 por meio de um modem e solicitando retorno de chamada.
- Usuários se conectando ao 3640 via ISDN (dados) e solicitando um retorno de chamada.

**Nota:** O Authentication, Authorization, and Accounting (AAA) é configurado no roteador à revelia. Você deve igualmente criar um usuário para entrar.

Neste exemplo, nós igualmente ajustamos a autenticação do Point-to-Point Protocol (PPP) para a chamada e o callout. Nós mudamos o script para configurar todo o tempo o modem para V.110, e para permitir que os usuários escolham seu método (modem ou GS). Segundo o método escolhido, os usuários devem:

- use ZDTxxx no número de chamada de volta (para o modem).
- use DIxxxx no número de chamada (para GSM).

## [Pré-requisitos](#)

### [Requisitos](#)

Não existem requisitos específicos para este documento.

## Componentes Utilizados

As informações neste documento são baseadas nestas versões de software e hardware:

- Os recursos de chamada de volta de V.110 estão disponíveis em Rosa IO?? Software Release 12.2(5.2)T e Mais Recente.
- Modem Software Versão 2.7.3.0.

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

## Convenções

Para obter mais informações sobre convenções de documento, consulte as [Convenções de dicas técnicas Cisco](#).

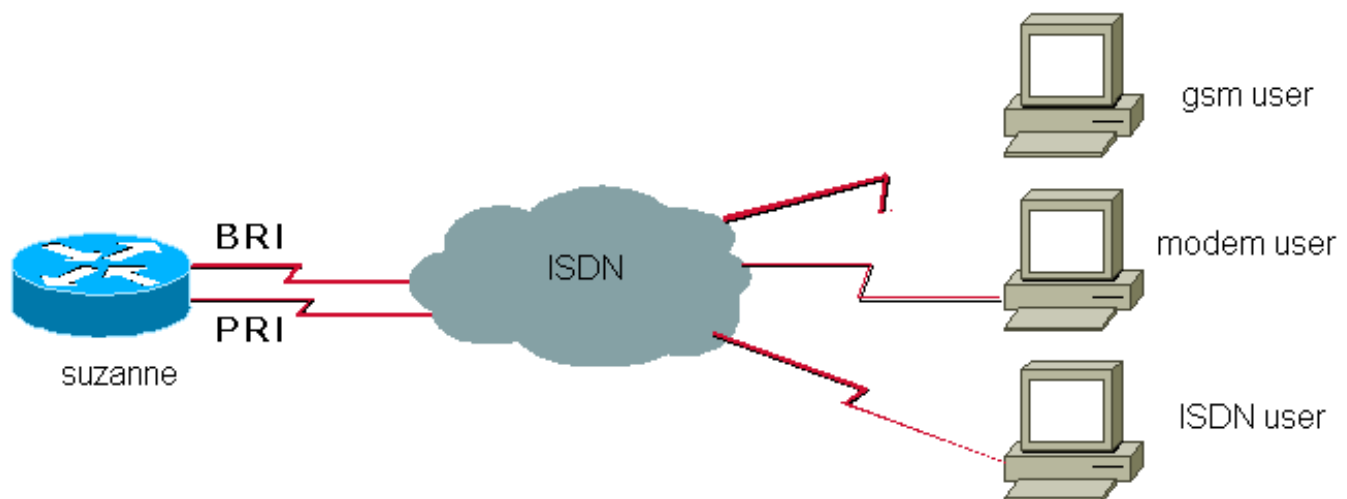
## Configurar

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

**Nota:** Para localizar informações adicionais sobre os comandos usados neste documento, utilize a Ferramenta Command Lookup (somente clientes [registrados](#)).

## Diagrama de Rede

Este documento utiliza a configuração de rede mostrada neste diagrama.



## Configurações

Este documento utiliza esta configuração:

- Suzanne

Suzanne
---------

```

suzanne#show running-config! version 12.2 service
internal!hostname suzanne!aaa new-model!aaa
authentication login default localaaa authentication ppp
default localaaa authorization network default local aaa
session-id common !username ww password 0 username
alainisdn password 0 username alaingsm callback-
dialstring "" password 0username alainmod callback-
dialstring "" password 0 !modem country mica belgium !
isdn switch-type primary-net5isdn voice-call-failure
0chat-script offhook "" "ATH1" OKchat-script callback
ABORT ERROR ABORT BUSY "" "AT&F" OK "ATX3DT \T" TIMEOUT
90 \cchat-script callback1analog ABORT ERROR ABORT BUSY
"" "AT&F" OK "ATDT \T" TIMEOUT 90 CONNECT \cchat-script
callback2gsm ABORT ERROR ABORT BUSY "" "AT&F" OK
"ATS29=8" OK "AT \T" TIMEOUT 90 CONNECT \c!controller E1
1/0pri-group timeslots 1-31!interface Ethernet0/0ip
address 172.17.243.105 255.255.255.0!interface
Serial1/0:15description E1 0451/39920no ip
addressencapsulation pppdialer rotary-group 1isdn
switch-type primary-net5isdn incoming-voice modemisdn
outgoing-voice info-transfer-capability 3.1kHz-audio
cdp enableppp authentication chap callin !interface
BRI3/1description belgacom 027202094no ip
addressencapsulation pppisdn switch-type basic-net3isdn
incoming-voice modemno cdp enable! interface Group-
Async1ip unnumbered Dialer1encapsulation pppdialer in-
banddialer callback-securedialer-group 1async dynamic
routingasync mode interactivepeer default ip address
pool poolppp callback acceptppp authentication papgroup-
range 65 94!interface Dialer1description Dial-In Userip
address 172.31.1.1 255.255.0.0ip helper-address
90.100.48.38ip helper-address 90.100.60.202encapsulation
pppdialer in-banddialer callback-securedialer map ip
172.31.1.2 name alainisdn class callback 6136peer
default ip address pool poolno cdp enableppp callback
acceptppp authentication chap callin !map-class dialer
callbackdialer callback-server usernamedialer-list 1
protocol ip permit!line con 0exec-timeout 0
0passwordline 65 94script dialer callback2gsmscript
callback callback2gsmmodem InOuttransport input
telnettransport output pad v120 lapb-ta telnet rlogin
udptnautoselect during-loginautoselect pppstopbits
1flowcontrol hardwareline aux 0passwordline vty 0 4exec-
timeout 0 0password !end

```

## Verificar

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

A [Output Interpreter Tool \(somente clientes registrados\)](#) oferece suporte a determinados comandos show, o que permite exibir uma análise da saída do comando show.

- **mostre a rota IP???** indica os índices da tabela de IP Routing

## Troubleshooting

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

configuração.

**Nota:** Antes que você emita os **comandos debug**, refira a [informação importante em comandos Debug](#).

- **debugar o modem?** para observar a atividade de linha de modem em um servidor de acesso.
- **eventos do debug dialer?** indica a informação sobre debugging sobre os pacotes recebidos em uma interface do discador.
- **debugar a autenticação de PPP?** indica mensagens do protocolo de autenticação, incluindo intercâmbios de pacotes do protocolo challenge authentication (RACHADURA) e trocas do protocolo password authentication (PAP).
- **debug ppp cbcp?** os erros de protocolo e as estatísticas dos indicadores associaram com as negociações da conexão PPP usando o protocolo microsoft callback control (MSCB).
- **debugar o Q931 DE ISDN?** informação dos indicadores sobre a configuração de chamada e desconexão das conexões de rede ISDN (camada 3) entre o roteador local (lado do usuário) e a rede.
- **debugar o bate-papo?** verifica que chat script está funcionando corretamente.
- **debug callback?** indica eventos de chamada de volta quando o roteador está usando um modem e um a chat script ao retorno de chamada em uma linha terminal.

## [Exemplo de debug](#)

### [Rechamada de GSM usando V.110](#)

```
suzanne#01:03:00: ISDN BR3/1: RX <- SETUP pd = 8 callref = 0x2F01:03:00: Sending
Complete01:03:00: Bearer Capability i = 0x9090A301:03:00: Channel ID i = 0x8901:03:00: Calling
Party Number i = 0x21, 0x83, '478681006', Plan:ISDN, Type:National01:03:00: Called Party Number
i = 0xA1, '27202094', Plan:ISDN, Type:National01:03:00: ISDN BR3/1: Event: Received a VOICE call
from 478681006 on B1 at 64 Kb/s01:03:00: ISDN BR3/1: Event: Accepting the call id 0x1901:03:00:
%ISDN-6-LAYER2UP: Layer 2 for Interface BR3/1, TEI 70 changed to up01:03:00: ISDN BR3/1: TX ->
CALL_PROC pd = 8 callref = 0xAF01:03:00: Channel ID i = 0x8901:03:00: ISDN BR3/1: TX -> ALERTING
pd = 8 callref = 0xAF01:03:00: ISDN BR3/1: TX -> CONNECT pd = 8 callref = 0xAF01:03:01: ISDN
BR3/1: RX <- CONNECT_ACK pd = 8 callref = 0x2F01:03:01: Modem 2/12 Mica: configured for Answer
mode, with Null signaling,0x0 tone detection.01:03:01: Modem 2/12 Mica: in modem state
CALL_SETUP01:03:02: Modem 2/12 Mica: in modem state CONNECT01:03:06: Modem 2/12 Mica: in modem
state LINK01:03:07: %ISDN-6-CONNECT: Interface BRI3/1:1 is now connected to 478681006
01:03:15: Modem 2/12 Mica: in modem state TRAINUP01:03:17: Modem 2/12 Mica: in modem state
EC_NEGOTIATING01:03:18: Modem 2/12 Mica: in modem state STEADY01:03:18: Modem 2/12 Mica: CONNECT
at 31200/31200 (Tx/Rx), V34+, LAPM, None01:03:19: TTY77: DSR came up01:03:19: tty77: Modem:
IDLE->(unknown)01:03:19: TTY77: EXEC creation01:03:19: TTY77: set timer type 10, 30
seconds01:03:19: TTY77: Autoselect(2) sample 7E01:03:19: TTY77: Autoselect(2) sample
7EFF01:03:19: TTY77: Autoselect(2) sample 7EFF7D01:03:19: TTY77: Autoselect(2) sample
7EFF7D2301:03:19: TTY77 Autoselect cmd: ppp negotiate01:03:19: TTY77: EXEC creation01:03:19:
TTY77: create timer type 1, 600 seconds01:03:19: TTY77: destroy timer type 101:03:19: TTY77: no
timer type 0 to destroy01:03:19: As77 DDR: Dialer received incoming call from <unknown>01:03:21:
%LINK-3-UPDOWN: Interface Async77, changed state to up01:03:21: As77 DDR: Dialer statechange to
up01:03:21: As77 DDR: Dialer received incoming call from <unknown>01:03:21: As77 PPP: Treating
connection as a callin01:03:21: As77 PPP: Authorization required01:03:22: Modem 2/12 Mica: PPP
escape_map: Tx map = FFFFFFFF, Rx map = 001:03:22: As77 PPP: Authorization required01:03:27:
Modem 2/12 Mica: PPP escape_map: Tx map = A0000, Rx map = 001:03:27: As77 MCB:
Initialize01:03:27: MCB: Flush01:03:27: Modem 2/12 Mica: Bad RX Frame: control = 0xE007, length
= 0xD, buffer = 0x3BC6E5401:03:30: As77 PAP: I AUTH-REQ id 2 len 16 from "alaingsm"01:03:30:
As77 PAP: Authenticating peer alaingsm01:03:30: As77 PPP: Sent PAP LOGIN Request to AAA01:03:30:
As77 PPP: Received LOGIN Response from AAA = PASS01:03:30: As77 DDR: Remote name for
alaingsm01:03:30: As77 DDR: Authenticated host alaingsm with no matching dialer map01:03:30:
```

As77 PAP: O AUTH-ACK id 2 len 501:03:30: As77 MCB: Start01:03:30: As77 MCB: User alaingsm  
Callback Number - Client ANY01:03:30: As77 MCB: Newstate 0-INIT -> 2-WAIT\_RESPONSE01:03:30: As77  
MCB: O Request Id 1 Callback Type Client-Num delay 001:03:32: As77 MCB: Timeout in state  
WAIT\_RESPONSE sending new Request 201:03:32: As77 MCB: O Request Id 2 Callback Type Client-Num  
delay 001:03:34: As77 MCB: Timeout in state WAIT\_RESPONSE sending new Request 301:03:34: As77  
MCB: O Request Id 3 Callback Type Client-Num delay 001:03:35: Async77 PPP: I MCB Response(2) id  
1 len 2201:03:35: Async77 MCB: I 2 1 0 16 2 12 F 1 44 49 30 30 34 37 38 36 38 31 30 30 36 0  
01:03:35: As77 MCB: Received response01:03:35: As77 MCB: Resp ignored. ID Expected 3, got id  
101:03:36: As77 MCB: Timeout in state WAIT\_RESPONSE sending new Request 401:03:36: As77 MCB: O  
Request Id 4 Callback Type Client-Num delay 001:03:36: Async77 PPP: I MCB Response(2) id 4 len  
2201:03:36: Async77 MCB: I 2 4 0 16 2 12 F 1 44 49 30 30 34 37 38 36 38 31 30 30 36 0 01:03:36:  
As77 MCB: Received response *!---* You can see here that "DI00478681006" was entered at the user  
PC. 01:03:36: As77 MCB: Response CBK-Client-Num 2 18 15, addr 1-DI0047868100601:03:36: As77 MCB:  
O Ack Id 5 Callback Type Client-Num delay 1501:03:36: As77 MCB: Negotiated MCB with  
peer01:03:36: As77 MCB: Newstate 2-WAIT\_RESPONSE -> 3-WAIT\_TERMINATE01:03:37: As77 MCB: Peer  
terminating the link01:03:37: As77 MCB: Newstate 3-WAIT\_TERMINATE -> 5-WAIT\_LINKDOWN01:03:37:  
As77 MCB: Link terminated by peer, Callback Needed01:03:37: As77 MCB: Newstate 5-WAIT\_LINKDOWN -  
> 6-CALLING01:03:37: As77 MCB: Initiate Callback for ^->o`iB@ at DI00478681006 using Async  
DDR01:03:37: As77 DDR: PPP callback Callback server starting to alaingsm DI0047868100601:03:37:  
As77 MCB: Dialer callback started *!---* Call is disconnected.01:03:38: Modem 2/12 Mica: in modem  
state SS\_RETRAINING01:03:38: ISDN BR3/1: RX <- DISCONNECT pd = 8 callref = 0x2F01:03:38: Cause i  
= 0x8090 - Normal call clearing01:03:38: Progress Ind i = 0x8088 - In-band info or appropriate  
now available 01:03:38: %ISDN-6-DISCONNECT: Interface BRI3/1:1 disconnected from 478681006, call  
lasted 37 seconds01:03:38: ISDN BR3/1: TX -> RELEASE pd = 8 callref = 0xAF01:03:38: Cause i =  
0x8090 - Normal call clearing01:03:38: Modem 2/12 Mica: in modem state TERMINATING01:03:38: ISDN  
BR3/1: RX <- RELEASE\_COMP pd = 8 callref = 0x2F01:03:39: TTY77: Async Int reset: Dropping  
DTR01:03:39: Modem 2/12 Mica: PPP escape\_map: Tx map = FFFFFFFF, Rx map = 001:03:39: As77 PPP:  
Authorization required01:03:40: Modem 2/12 Mica: in modem state IDLE01:03:40: Modem 2/12 Mica:  
DISCONNECT after 00:00:38, due to reason (0xDF00) Host Disconnect.01:03:40: TTY77: DSR was  
dropped01:03:40: tty77: Modem: READY->(unknown)01:03:41: TTY77: dropping DTR, hanging  
up01:03:41: tty77: Modem: HANGUP->(unknown)01:03:41: %LINK-5-CHANGED: Interface Async77, changed  
state to reset01:03:42: TTY77: cleanup pending. Delaying DTR01:03:43: TTY77: cleanup pending.  
Delaying DTR01:03:44: TTY77: cleanup pending. Delaying DTR01:03:44: TTY77: no timer type 0 to  
destroy01:03:44: TTY77: no timer type 1 to destroy01:03:44: TTY77: no timer type 3 to  
destroy01:03:44: TTY77: no timer type 4 to destroy01:03:44: TTY77: no timer type 2 to  
destroy01:03:44: Async77: allowing modem\_process to continue hangup01:03:45: TTY77: restoring  
DTR01:03:46: %LINK-3-UPDOWN: Interface Async77, changed state to down01:03:53: %ISDN-6-  
LAYER2DOWN: Layer 2 for Interface BR3/1, TEI 70 changed to down*!---* Callback is  
started.01:03:56: As77 DDR: re-enable timeout01:03:56: DDR: callback triggered by  
dialer\_timers01:03:56: As77 DDR: beginning callback to alaingsm DI0047868100601:03:56: As77 DDR:  
Attempting to dial DI0047868100601:03:56: CHAT77: Attempting async line dialer script01:03:56:  
CHAT77: Dialing using Modem script: callback2gsm & System script: none01:03:56: CHAT77: process  
started01:03:56: CHAT77: Asserting DTR01:03:56: CHAT77: Chat script callback2gsm  
started01:03:56: CHAT77: Sending string: AT&F01:03:56: CHAT77: Expecting string: OK01:03:56:  
CHAT77: Completed match for expect: OK01:03:56: CHAT77: Sending string: ATS29=801:03:56: CHAT77:  
Expecting string: OK 01:03:56: CHAT77: Completed match for expect: OK*!---* We send  
DI0047868100601:03:56: CHAT77: Sending string: AT \T<DI00478681006>01:03:56: CHAT77: Expecting  
string: CONNECT01:03:56: Modem 2/12 Mica: configured for Originate mode, with Null signaling,  
0x1 tone detection.01:03:56: Modem 2/12 Mica: received dialstring 0047868100601:03:56: ISDN  
Se1/0:15: TX -> SETUP pd = 8 callref = 0x000E01:03:56: Bearer Capability i =  
0x8890214846BB01:03:56: Channel ID i = 0xA9839F01:03:56: Called Party Number i = 0x81,  
'00478681006', Plan:ISDN, Type:Unknown01:03:56: Low Layer Compat i = 0x8890214846BB01:03:56:  
ISDN Se1/0:15: RX <- CALL\_PROC pd = 8 callref = 0x800E01:03:56: Channel ID i = 0xA9839F01:03:56:  
Modem 2/12 Mica: in modem state CALL\_SETUP01:04:02: ISDN Se1/0:15: RX <- ALERTING pd = 8 callref  
= 0x800E01:04:03: ISDN Se1/0:15: RX <- CONNECT pd = 8 callref = 0x800E01:04:03: ISDN Se1/0:15:  
TX -> CONNECT\_ACK pd = 8 callref = 0x000E01:04:03: Modem 2/12 Mica: in modem state  
CONNECT01:04:03: Modem 2/12 Mica: in modem state LINK01:04:03: Modem 2/12 Mica: in modem state  
TRAINUP01:04:03: Modem 2/12 Mica: in modem state EC\_NEGOTIATING01:04:03: Modem 2/12 Mica: in  
modem state STEADY01:04:03: CHAT77: Completed match for expect: CONNECT01:04:03: CHAT77: Sending  
string: \c01:04:03: CHAT77: Chat script callback2gsm finished, status = Success01:04:03: TTY77:  
no timer type 1 to destroy01:04:03: TTY77: no timer type 0 to destroy01:04:03: Modem 2/12 Mica:  
CONNECT at 9600/9600 (Tx/Rx), V110, V.110, None01:04:04: As77 PPP: Treating connection as a  
callout01:04:04: Modem 2/12 Mica: PPP escape\_map: Tx map = FFFFFFFF, Rx map = 001:04:04: As77  
PPP: Authorization required01:04:04: %LINK-3-UPDOWN: Interface Async77, changed state to

up01:04:04: As77 DDR: Dialer statechange to up01:04:04: As77 DDR: Copying MS callback dialstring DI00478681006 to ddb01:04:04: DDR: Freeing callback to alaingsm DI0047868100601:04:04: As77 DDR: Dialer call has been placed01:04:08: Modem 2/12 Mica: PPP escape\_map: Tx map = A0000, Rx map = 001:04:08: As77 MCB: Initialize01:04:08: Modem 2/12 Mica: Bad RX Frame: control = 0xE007, length = 0xD, buffer = 0x3BC6E5401:04:09: %ISDN-6-CONNECT: Interface Serial1/0:30 is now connected to 00478681006 01:04:11: As77 PAP: I AUTH-REQ id 2 len 16 from "alaingsm"01:04:11: As77 PAP: Authenticating peer alaingsm01:04:11: As77 PPP: Sent PAP LOGIN Request to AAA01:04:11: As77 PPP: Received LOGIN Response from AAA = PASS01:04:11: As77 DDR: Remote name for alaingsm01:04:11: As77 DDR: Authenticated host alaingsm with no matching dialer map01:04:11: As77 PAP: O AUTH-ACK id 2 len 501:04:13: As77 DDR: dialer protocol up suzanne#**show ip route**Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGPD - 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 - EGPi - 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 - ODRP - periodic downloaded static route Gateway of last resort is 172.17.243.1 to network 0.0.0.0172.17.0.0/24 is subnetted, 1 subnetsC 172.17.243.0 is directly connected, Ethernet0/0172.31.0.0/16 is variably subnetted, 2 subnets, 2 masksC 172.31.1.28/32 is directly connected, Async77C 172.31.0.0/16 is directly connected, Dialer1S\* 0.0.0.0/0 [1/0] via 172.17.243.1 suzanne#**ping 172.31.1.28**Type escape sequence to abort.Sending 5, 100-byte ICMP Echos to 172.31.1.28, timeout is 2 seconds:!!!!Success rate is 100 percent (5/5), round-trip min/avg/max = 784/858/880 ms suzanne#01:04:49: ISDN Se1/0:15: RX <- DISCONNECT pd = 8 callref = 0x800E01:04:49: Cause i = 0x8090 - Normal call clearing01:04:49: %ISDN-6-DISCONNECT: Interface Serial1/0:30 disconnected from 00478681006, call lasted 46 seconds01:04:49: ISDN Se1/0:15: TX -> RELEASE pd = 8 callref = 0x000E01:04:49: Modem 2/12 Mica: in modem state TERMINATING01:04:49: ISDN Se1/0:15: RX <- RELEASE\_COMP pd = 8 callref = 0x800E01:04:49: Modem 2/12 Mica: in modem state IDLE01:04:49: Modem 2/12 Mica: DISCONNECT after 00:00:46, due to reason (0xDF00) Host Disconnect.01:04:50: TTY77: DSR was dropped01:04:50: tty77: Modem: READY->(unknown)01:04:51: TTY77: Async Int reset: Dropping DTR01:04:51: Modem 2/12 Mica: PPP escape\_map: Tx map = FFFFFFFF, Rx map = 001:04:51: As77 PPP: Authorization required01:04:51: TTY77: dropping DTR, hanging up01:04:51: tty77: Modem: HANGUP->(unknown)01:04:52: TTY77: cleanup pending. Delaying DTR01:04:53: %LINK-5-CHANGED: Interface Async77, changed state to reset01:04:53: TTY77: cleanup pending. Delaying DTR01:04:54: TTY77: cleanup pending. Delaying DTR01:04:55: TTY77: cleanup pending. Delaying DTR01:04:56: TTY77: no timer type 0 to destroy01:04:56: TTY77: no timer type 1 to destroy01:04:56: TTY77: no timer type 3 to destroy01:04:56: TTY77: no timer type 4 to destroy01:04:56: TTY77: no timer type 2 to destroy01:04:56: Async77: allowing modem\_process to continue hangup01:04:56: TTY77: restoring DTR01:04:58: %LINK-3-UPDOWN: Interface Async77, changed state to down01:05:08: As77 DDR: re-enable timeout

## [Rechamada de modem utilizando V.110](#)

*!--- Modem callback using default of MICA (modem dialing US robotics).*suzanne#01:06:21: ISDN Se1/0:15: RX <- SETUP pd = 8 callref = 0x6D7301:06:21: Sending Complete01:06:21: Bearer Capability i = 0x9090A301:06:21: Channel ID i = 0xA1838701:06:21: Progress Ind i = 0x8183 - Origination address is non-ISDN 01:06:21: Calling Party Number i = 0xA1, '6020', Plan:ISDN, Type:National01:06:21: Called Party Number i = 0x81, '214', Plan:ISDN, Type:Unknown01:06:21: ISDN Se1/0:15: TX -> CALL\_PROC pd = 8 callref = 0xED7301:06:21: Channel ID i = 0xA9838701:06:21: ISDN Se1/0:15: TX -> ALERTING pd = 8 callref = 0xED7301:06:21: ISDN Se1/0:15: TX -> CONNECT pd = 8 callref = 0xED7301:06:21: ISDN Se1/0:15: RX <- CONNECT\_ACK pd = 8 callref = 0x6D7301:06:21: ISDN Se1/0:15: CALL\_PROGRESS: CALL\_CONNECTED call id 0x1A, bchan 6, dsl 001:06:21: Modem 2/13 Mica: configured for Answer mode, with Null signaling, 0x0 tone detection.01:06:21: Modem 2/13 Mica: in modem state CALL\_SETUP01:06:22: Modem 2/13 Mica: in modem state CONNECT01:06:26: Modem 2/13 Mica: in modem state LINK01:06:27: %ISDN-6-CONNECT: Interface Serial1/0:6 is now connected to 6020 01:06:34: Modem 2/13 Mica: in modem state TRAINUP01:06:36: Modem 2/13 Mica: in modem state EC\_NEGOTIATING01:06:36: Modem 2/13 Mica: in modem state STEADY01:06:36: Modem 2/13 Mica: CONNECT at 9600/9600 (Tx/Rx), V34+, LAPM, None01:06:37: TTY78: DSR came up01:06:37: tty78: Modem: IDLE->(unknown)01:06:37: TTY78: EXEC creation01:06:37: TTY78: set timer type 10, 30 seconds01:06:40: TTY78: Autoselect(2) sample 7E01:06:40: TTY78: Autoselect(2) sample 7EFF01:06:40: TTY78: Autoselect(2) sample 7EFF7D01:06:40: TTY78: Autoselect(2) sample 7EFF7D2301:06:40: TTY78 Autoselect cmd: ppp negotiate01:06:40: TTY78: EXEC creation01:06:40: TTY78: create timer type 1, 600 seconds01:06:40: TTY78: destroy timer type 101:06:40: TTY78: no timer type 0 to destroy01:06:40: As78 DDR: Dialer received incoming call from <unknown>01:06:42: %LINK-3-UPDOWN: Interface Async78, changed state to up01:06:42: As78 DDR: Dialer statechange to up01:06:42: As78 DDR: Dialer received incoming call from <unknown>01:06:42: As78 PPP: Treating connection as a callin01:06:42: As78 PPP: Authorization required01:06:43: Modem 2/13 Mica: PPP

escape\_map: Tx map = FFFFFFFF, Rx map = 001:06:43: As78 PPP: Authorization required01:06:47:  
Modem 2/13 Mica: PPP escape\_map: Tx map = A0000, Rx map = 001:06:47: As78 MCB: Initialize  
01:06:47: MCB: Flush01:06:47: Modem 2/13 Mica: Bad RX Frame: control = 0xE007, length = 0xE,  
buffer = 0x3BC901401:06:50: As78 PAP: I AUTH-REQ id 2 len 16 from "alainmod"01:06:50: As78 PAP:  
Authenticating peer alainmod01:06:50: As78 PPP: Sent PAP LOGIN Request to AAA01:06:50: As78 PPP:  
Received LOGIN Response from AAA = PASS01:06:50: As78 DDR: Remote name for alainmod01:06:50:  
As78 DDR: Authenticated host alainmod with no matching dialer map01:06:50: As78 PAP: O AUTH-ACK  
id 2 len 501:06:50: As78 MCB: Start01:06:50: As78 MCB: User alainmod Callback Number - Client  
ANY01:06:50: As78 MCB: Newstate 0-INIT -> 2-WAIT\_RESPONSE01:06:50: As78 MCB: O Request Id 1  
Callback Type Client-Num delay 001:06:52: As78 MCB: Timeout in state WAIT\_RESPONSE sending new  
Request 201:06:52: As78 MCB: O Request Id 2 Callback Type Client-Num delay 001:06:54: As78 MCB:  
Timeout in state WAIT\_RESPONSE sending new Request 301:06:54: As78 MCB: O Request Id 3 Callback  
Type Client-Num delay 001:06:54: Async78 PPP: I MCB Response(2) id 1 len 1701:06:54: Async78  
MCB: I 2 1 0 11 2 D F 1 5A 44 54 20 36 30 32 30 0 01:06:54: As78 MCB: Received response01:06:54:  
As78 MCB: Resp ignored. ID Expected 3, got id 101:06:56: As78 MCB: Timeout in state  
WAIT\_RESPONSE sending new Request 401:06:56: As78 MCB: O Request Id 4 Callback Type Client-Num  
delay 001:06:56: Async78 PPP: I MCB Response(2) id 4 len 1701:06:56: Async78 MCB: I 2 4 0 11 2 D  
F 1 5A 44 54 20 36 30 32 30 0 01:06:56: As78 MCB: Received response01:06:56: As78 MCB: Response  
CBK-Client-Num 2 13 15, addr 1-ZDT 602001:06:56: As78 MCB: O Ack Id 5 Callback Type Client-Num  
delay 1501:06:56: As78 MCB: Negotiated MCB with peer01:06:56: As78 MCB: Newstate 2-WAIT\_RESPONSE  
-> 3-WAIT\_TERMINATE01:06:56: As78 MCB: Peer terminating the link01:06:56: As78 MCB: Newstate 3-  
WAIT\_TERMINATE -> 5-WAIT\_LINKDOWN01:06:56: As78 MCB: Link terminated by peer, Callback  
Needed01:06:56: As78 MCB: Newstate 5-WAIT\_LINKDOWN -> 6-CALLING01:06:56: As78 MCB: Initiate  
Callback for ^->`iB@ at ZDT 6020 using Async DDR01:06:56: As78 DDR: PPP callback Callback  
server starting to alainmod ZDT 602001:06:56: As78 MCB: Dialer callback started01:06:57: Modem  
2/13 Mica: in modem state TERMINATING01:06:57: Modem 2/13 Mica: in modem state IDLE01:06:57:  
%ISDN-6-DISCONNECT: Interface Serial1/0:6 disconnected from 6020, call lasted 36  
seconds01:06:57: ISDN Se1/0:15: TX -> DISCONNECT pd = 8 callref = 0xED7301:06:57: Cause i =  
0x8090 - Normal call clearing01:06:57: Modem 2/13 Mica: DISCONNECT after 00:00:35, due to reason  
(0x8220) EC rcvd DISC frame. 01:06:57: TTY78: DSR was dropped01:06:57: tty78: Modem: READY-  
>(unknown)01:06:57: ISDN Se1/0:15: RX <- RELEASE pd = 8 callref = 0x6D7301:06:57: ISDN Se1/0:15:  
TX -> RELEASE\_COMP pd = 8 callref = 0xED7301:06:58: TTY78: dropping DTR, hanging up01:06:58:  
TTY78: Async Int reset: Dropping DTR01:06:58: tty78: Modem: HANGUP->(unknown)01:06:59: TTY78:  
cleanup pending. Delaying DTR01:06:59: Modem 2/13 Mica: PPP escape\_map: Tx map = FFFFFFFF, Rx  
map = 001:06:59: As78 PPP: Authorization required01:07:00: %LINK-5-CHANGED: Interface Async78,  
changed state to reset01:07:00: TTY78: cleanup pending. Delaying DTR01:07:01: TTY78: cleanup  
pending. Delaying DTR01:07:02: TTY78: cleanup pending. Delaying DTR01:07:03: TTY78: no timer  
type 0 to destroy01:07:03: TTY78: no timer type 1 to destroy01:07:03: TTY78: no timer type 3 to  
destroy01:07:03: TTY78: no timer type 4 to destroy01:07:03: TTY78: no timer type 2 to  
destroy01:07:03: Async78: allowing modem\_process to continue hangup01:07:03: TTY78: restoring  
DTR01:07:05: %LINK-3-UPDOWN: Interface Async78, changed state to down01:07:15: As78 DDR: re-  
enable timeout!--- Callback start.01:07:15: DDR: callback triggered by dialer\_timers01:07:15:  
As78 DDR: beginning callback to alainmod ZDT 602001:07:15: As78 DDR: Attempting to dial ZDT  
602001:07:15: CHAT78: Attempting async line dialer script01:07:15: CHAT78: Dialing using Modem  
script: callback2gsm & System script: none01:07:15: CHAT78: process started01:07:15: CHAT78:  
Asserting DTR01:07:15: CHAT78: Chat script callback2gsm started01:07:15: CHAT78: Sending string:  
AT&F01:07:15: CHAT78: Expecting string: OK01:07:15: CHAT78: Completed match for expect:  
OK01:07:15: CHAT78: Sending string: AT529=801:07:15: CHAT78: Expecting string: OK01:07:15:  
CHAT78: Completed match for expect: OK !--- The user entered "ZDT 6020". This is what we  
send:01:07:15: CHAT78: Sending string: AT \T<ZDT 6020> 01:07:15: CHAT78: Expecting string:  
CONNECT01:07:15: Modem 2/13 Mica: configured for Originate mode, with Null signaling, 0x1 tone  
detection.01:07:15: Modem 2/13 Mica: received dialstring 602001:07:15: ISDN Se1/0:15: TX ->  
SETUP pd = 8 callref = 0x000F01:07:15: Bearer Capability i = 0x9090A301:07:15: Channel ID i =  
0xA9839F01:07:15: Called Party Number i = 0x81, '6020', Plan:ISDN, Type:Unknown01:07:15: ISDN  
Se1/0:15: RX <- CALL\_PROC pd = 8 callref = 0x800F01:07:15: Channel ID i = 0xA9839F01:07:15: ISDN  
Se1/0:15: RX <- ALERTING pd = 8 callref = 0x800F01:07:15: Modem 2/13 Mica: in modem state  
CALL\_SETUP01:07:16: Modem 2/13 Mica: Detected Dial tone01:07:17: ISDN Se1/0:15: RX <- CONNECT pd  
= 8 callref = 0x800F01:07:17: Progress Ind i = 0x8182 - Destination address is non-ISDN  
01:07:17: Connected Number i = 0xA13630323001:07:17: ISDN Se1/0:15: TX -> CONNECT\_ACK pd = 8  
callref = 0x000F01:07:17: Modem 2/13 Mica: in modem state CONNECT01:07:19: Modem 2/13 Mica: in  
modem state LINK01:07:23: %ISDN-6-CONNECT: Interface Serial1/0:30 is now connected to 6020  
01:07:26: Modem 2/13 Mica: in modem state TRAINUP01:07:28: Modem 2/13 Mica: in modem state  
EC\_NEGOTIATING01:07:28: Modem 2/13 Mica: in modem state STEADY01:07:28: CHAT78: Completed match  
for expect: CONNECT01:07:28: CHAT78: Sending string: \c01:07:28: CHAT78: Chat script

callback2gsm finished, status = Success01:07:28: TTY78: no timer type 1 to destroy01:07:28:  
TTY78: no timer type 0 to destroy01:07:28: Modem 2/13 Mica: CONNECT at 33600/31200 (Tx/Rx),  
V34+, LAPM, None01:07:28: As78 PPP: Treating connection as a callout01:07:28: Modem 2/13 Mica:  
PPP escape\_map: Tx map = FFFFFFFF, Rx map = 001:07:28: As78 PPP: Authorization required01:07:28:  
%LINK-3-UPDOWN: Interface Async78, changed state to up01:07:28: As78 DDR: Dialer statechange to  
up01:07:28: As78 DDR: Copying MS callback dialstring ZDT 6020 to ddb01:07:28: DDR: Freeing  
callback to alainmod ZDT 602001:07:28: As78 DDR: Dialer call has been placed01:07:29: Modem 2/13  
Mica: PPP escape\_map: Tx map = A0000, Rx map = 001:07:29: As78 MCB: Initialize01:07:29: As78  
PAP: I AUTH-REQ id 1 len 16 from "alainmod"01:07:29: As78 PAP: Authenticating peer  
alainmod01:07:29: As78 PPP: Sent PAP LOGIN Request to AAA01:07:29: As78 PPP: Received LOGIN  
Response from AAA = PASS01:07:29: As78 DDR: Remote name for alainmod01:07:29: As78 DDR:  
Authenticated host alainmod with no matching dialer map01:07:29: As78 PAP: O AUTH-ACK id 1 len  
501:07:29: As78 DDR: dialer protocol up01:07:29: %LINEPROTO-5-UPDOWN: Line protocol on Interface  
Async78, changed state to up suzanne#**show ip route**Codes: C - connected, S - static, I - IGRP, R  
- RIP, M - mobile, B - BGPD - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area N1 -  
OSPF NSSA external type 1, N2 - OSPF NSSA external type 2E1 - OSPF external type 1, E2 - OSPF  
external type 2, E - EGPi - 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 - ODRP - periodic downloaded static  
routeGateway of last resort is 172.17.243.1 to network 0.0.0.0172.17.0.0/24 is subnetted, 1  
subnetsC 172.17.243.0 is directly connected, Ethernet0/0172.31.0.0/16 is variably subnetted, 2  
subnets, 2 masksC 172.31.1.19/32 is directly connected, Async78C 172.31.0.0/16 is directly  
connected, Dialer1S\* 0.0.0.0/0 [1/0] via 172.17.243.1 suzanne#**ping 172.31.1.19**Type escape  
sequence to abort.Sending 5, 100-byte ICMP Echos to 172.31.1.19, timeout is 2  
seconds:!!!!Success rate is 100 percent (5/5), round-trip min/avg/max = 356/372/396 ms  
suzanne#01:08:08: Modem 2/13 Mica: in modem state TERMINATING01:08:08: Modem 2/13 Mica: in modem  
state IDLE01:08:08: Modem 2/13 Mica: DISCONNECT after 00:00:51, due to reason (0x8220) EC rcvd  
DISC frame.01:08:08: %ISDN-6-DISCONNECT: Interface Serial1/0:30 disconnected from 6020, call  
lasted 51 seconds01:08:08: ISDN Se1/0:15: TX -> DISCONNECT pd = 8 callref = 0x000F01:08:08:  
Cause i = 0x8090 - Normal call clearing01:08:08: ISDN Se1/0:15: RX <- RELEASE pd = 8 callref =  
0x800F01:08:08: ISDN Se1/0:15: TX -> RELEASE\_COMP pd = 8 callref = 0x000F01:08:09: TTY78: DSR  
was dropped01:08:09: tty78: Modem: READY->(unknown)01:08:09: %LINEPROTO-5-UPDOWN: Line protocol  
on Interface Async78, changed state to down01:08:10: TTY78: dropping DTR, hanging up01:08:10:  
TTY78: Async Int reset: Dropping DTR01:08:10: tty78: Modem: HANGUP->(unknown)01:08:10: Modem  
2/13 Mica: PPP escape\_map: Tx map = FFFFFFFF, Rx map = 001:08:10: As78 PPP: Authorization  
required01:08:11: TTY78: cleanup pending. Delaying DTR01:08:12: %LINK-5-CHANGED: Interface  
Async78, changed state to reset01:08:12: TTY78: cleanup pending. Delaying DTR01:08:13: TTY78:  
cleanup pending. Delaying DTR01:08:14: TTY78: cleanup pending. Delaying DTR01:08:15: TTY78: no  
timer type 0 to destroy01:08:15: TTY78: no timer type 1 to destroy01:08:15: TTY78: no timer type  
3 to destroy01:08:15: TTY78: no timer type 4 to destroy01:08:15: TTY78: no timer type 2 to  
destroy01:08:15: Async78: allowing modem\_process to continue hangup01:08:15: TTY78: restoring  
DTR01:08:17: %LINK-3-UPDOWN: Interface Async78, changed state to down01:08:27: As78 DDR: re-  
enable timeout

## [Rechamada de ISDN usando V.110](#)

!--- Receive call.suzanne#01:09:00: ISDN Se1/0:15: RX <- SETUP pd = 8 callref = 0x6F2801:09:00:  
Sending Complete01:09:00: Bearer Capability i = 0x889001:09:00: Channel ID i = 0xA1838801:09:00:  
Calling Party Number i = 0xA1, '6136', Plan:ISDN, Type:National01:09:00: Called Party Number i =  
0x81, '214', Plan:ISDN, Type:Unknown01:09:00: %LINK-3-UPDOWN: Interface Serial1/0:7, changed  
state to up01:09:00: ISDN Se1/0:15: TX -> CALL\_PROC pd = 8 callref = 0xEF2801:09:00: Channel ID  
i = 0xA9838801:09:00: ISDN Se1/0:15: TX -> CONNECT pd = 8 callref = 0xEF2801:09:00: Channel ID i  
= 0xA9838801:09:00: Se1/0:7 PPP: Treating connection as a callin01:09:00: Se1/0:7 PPP:  
Authorization required01:09:00: ISDN Se1/0:15: RX <- CONNECT\_ACK pd = 8 callref =  
0x6F2801:09:00: ISDN Se1/0:15: CALL\_PROGRESS: CALL\_CONNECTED call id 0x1B, bchan 7, dsl  
001:09:01: Se1/0:7 PPP: Authorization required01:09:01: Se1/0:7 MCB: Initialize01:09:01: Se1/0:7  
CHAP: O CHALLENGE id 1 len 28 from "suzanne"01:09:01: Se1/0:7 CHAP: I RESPONSE id 1 len 30 from  
"alainisdn"01:09:01: Se1/0:7 PPP: Sent CHAP LOGIN Request to AAA01:09:01: Se1/0:7 PPP: Received  
LOGIN Response from AAA = PASS01:09:01: Se1/0:7 DDR: Remote name for alainisdn01:09:01: Se1/0:7  
CHAP: O SUCCESS id 1 len 401:09:01: Se1/0:7 DDR: PPP callback Callback server starting to  
alainisdn 613601:09:01: Se1/0:7 DDR: disconnecting call01:09:01: %ISDN-6-CONNECT: Interface  
Serial1/0:7 is now connected to 6136 alainisdn01:09:01: ISDN Se1/0:15: TX -> DISCONNECT pd = 8  
callref = 0xEF2801:09:01: Cause i = 0x8090 - Normal call clearing01:09:01: ISDN Se1/0:15: RX <-  
RELEASE pd = 8 callref = 0x6F2801:09:01: %LINK-3-UPDOWN: Interface Serial1/0:7, changed state to  
down01:09:01: ISDN Se1/0:15: TX -> RELEASE\_COMP pd = 8 callref = 0xEF2801:09:01: Se1/0:7 DDR:



```
disconnecting call01:09:02: ISDN Se1/0:15: RX <- SETUP pd = 8 callref = 0x70DF01:09:02: Sending
Complete01:09:02: Bearer Capability i = 0x889001:09:02: Channel ID i = 0xA1838901:09:02: Calling
Party Number i = 0xA1, '6136', Plan:ISDN, Type:National01:09:02: Called Party Number i = 0x81,
'214', Plan:ISDN, Type:Unknown01:09:02: %LINK-3-UPDOWN: Interface Serial1/0:8, changed state to
up01:09:02: ISDN Se1/0:15: TX -> CALL_PROC pd = 8 callref = 0xF0DF01:09:02: Channel ID i =
0xA9838901:09:02: ISDN Se1/0:15: TX -> CONNECT pd = 8 callref = 0xF0DF01:09:02: Channel ID i =
0xA9838901:09:02: Se1/0:8 PPP: Treating connection as a callin01:09:02: Se1/0:8 PPP:
Authorization required01:09:02: ISDN Se1/0:15: RX <- CONNECT_ACK pd = 8 callref =
0x70DF01:09:02: ISDN Se1/0:15: CALL_PROGRESS: CALL_CONNECTED call id 0x1C, bchan 8, ds1
001:09:02: Se1/0:8 PPP: Authorization required01:09:03: Se1/0:8 MCB: Initialize01:09:03: Se1/0:8
CHAP: O CHALLENGE id 1 len 28 from "suzanne"01:09:03: Se1/0:8 CHAP: I RESPONSE id 1 len 30 from
"alainisdn"01:09:03: Se1/0:8 PPP: Sent CHAP LOGIN Request to AAA01:09:03: Se1/0:8 PPP: Received
LOGIN Response from AAA = PASS01:09:03: Se1/0:8 DDR: Remote name for alainisdn01:09:03: Se1/0:8
CHAP: O SUCCESS id 1 len 401:09:03: Se1/0:8 DDR: callback to alainisdn already started01:09:03:
Se1/0:8 DDR: disconnecting call01:09:03: %ISDN-6-CONNECT: Interface Serial1/0:8 is now connected
to 6136 alainisdn01:09:03: ISDN Se1/0:15: TX -> DISCONNECT pd = 8 callref = 0xF0DF01:09:03:
Cause i = 0x8090 - Normal call clearing01:09:03: ISDN Se1/0:15: RX <- RELEASE pd = 8 callref =
0x70DF01:09:03: %LINK-3-UPDOWN: Interface Serial1/0:8, changed state to down01:09:03: ISDN
Se1/0:15: TX -> RELEASE_COMP pd = 8 callref = 0xF0DF01:09:03: Se1/0:8 DDR: disconnecting call!--
- Callback Start 01:09:16: DDR: Callback timer expired01:09:16: Di1 DDR: beginning callback to
alainisdn 613601:09:16: Se1/0:15 DDR: rotor dialout [priority]01:09:16: Se1/0:15 DDR: Attempting
to dial 613601:09:16: ISDN Se1/0:15: TX -> SETUP pd = 8 callref = 0x001001:09:16: Bearer
Capability i = 0x889001:09:16: Channel ID i = 0xA9839F01:09:16: Called Party Number i = 0x81,
'6136', Plan:ISDN, Type:Unknown01:09:16: ISDN Se1/0:15: RX <- CALL_PROC pd = 8 callref =
0x801001:09:16: Channel ID i = 0xA9839F01:09:16: ISDN Se1/0:15: RX <- ALERTING pd = 8 callref =
0x801001:09:16: ISDN Se1/0:15: RX <- CONNECT pd = 8 callref = 0x801001:09:16: Connected Number i
= 0xA13631333601:09:16: %LINK-3-UPDOWN: Interface Serial1/0:30, changed state to up01:09:16:
DDR: Freeing callback to alainisdn 613601:09:16: ISDN Se1/0:15: TX -> CONNECT_ACK pd = 8 callref
= 0x001001:09:16: Se1/0:30 PPP: Treating connection as a callout01:09:16: Se1/0:30 PPP:
Authorization required01:09:16: Se1/0:30 MCB: Initialize01:09:16: Se1/0:30 CHAP: I CHALLENGE id
7 len 30 from "alainisdn"01:09:16: Se1/0:30 PPP: Sent CHAP SENDAUTH Request to AAA01:09:16:
Se1/0:30 PPP: Received SENDAUTH Response from AAA = PASS01:09:16: Se1/0:30 CHAP: O RESPONSE id 7
len 28 from "suzanne"01:09:16: Se1/0:30 CHAP: I SUCCESS id 7 len 401:09:16: Se1/0:30 PPP: Sent
LCP AUTHOR Request to AAA01:09:16: Se1/0:30 PPP: Sent IPCP AUTHOR Request to AAA01:09:16:
Se1/0:30 LCP: Received AAA AUTHOR Response = PASS01:09:16: Se1/0:30 IPCP: Received AAA AUTHOR
Response = PASS01:09:16: Se1/0:30 DDR: dialer protocol up01:09:17: %LINEPROTO-5-UPDOWN: Line
protocol on Interface Serial1/0:30, changed state to up01:09:22: %ISDN-6-CONNECT: Interface
Serial1/0:30 is now connected to 6136 alainisdnsuzanne# suzanne#show ip routeCodes: C -
connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGPD - EIGRP, EX - EIGRP external, O -
OSPF, IA - OSPF inter area N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2E1 -
OSPF external type 1, E2 - OSPF external type 2, E - EGPi - 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 - ODRP -
periodic downloaded static routeGateway of last resort is 172.17.243.1 to network 0.0.0.0
172.17.0.0/24 is subnetted, 1 subnetsC 172.17.243.0 is directly connected, Ethernet0/0
172.31.0.0/16 is variably subnetted, 2 subnets, 2 masksC 172.31.1.2/32 is directly connected,
Dialer1C 172.31.0.0/16 is directly connected, Dialer1S* 0.0.0.0/0 [1/0] via 172.17.243.1
suzanne#ping 172.31.1.2 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to
172.31.1.2, timeout is 2 seconds: !!!!! Success rate is 100 percent (5/5), round-trip
min/avg/max = 32/34/36 ms suzanne#
```

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