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## 概要

この文書では、リモート ユーザが次の方法のいずれかを使用してコールを行うための設定例を示します。いずれの場合も、コールバックは V.110 コールを使用して行います。

- ユーザが GSM 経由で 3640 に接続し、コールバックを要求する。
- ユーザがモデム経由で 3640 に接続し、コールバックを要求する。
- ユーザが ISDN ( データ ) 経由で 3640 に接続し、コールバックを要求する。

注認証、許可、およびアカウントリング ( AAA ) は、デフォルトではルータで設定されます。 ログインするユーザも作成する必要があります。

この例では、コールインおよびコールアウト用に PPP 認証も設定しています。ここでは常にスクリプトを変更して V.110 用にモデムを設定し、ユーザが方式 ( モデムまたは GSM ) を選択できるようにしています。選択した方式に応じてユーザが行う必要がある処理は次のとおりです。

- コールバック番号に ZDTxxx を使用する ( モデムの場合 ) 。
- コールバック番号に DIxxxx を使用する ( GSM の場合 ) 。

## 前提条件

### 要件

このドキュメントに関する固有の要件はありません。

### 使用するコンポーネント

このドキュメントの情報は、次のソフトウェアとハードウェアのバージョンに基づくものです。

- V.110 コールバック機能はローザ IOS で利用できますか。か。 ソフトウェアリリース 12.2(5.2)T およびそれ以上。
- モデム ソフトウェア バージョン 2.7.3.0。

このドキュメントの情報は、特定のラボ環境にあるデバイスに基づいて作成されたものです。このドキュメントで使用するすべてのデバイスは、クリアな (デフォルト) 設定で作業を開始しています。ネットワークが稼働中の場合は、コマンドが及ぼす潜在的な影響を十分に理解しておく必要があります。

## 表記法

ドキュメント表記の詳細は、『[シスコ テクニカル ティップスの表記法](#)』を参照してください。

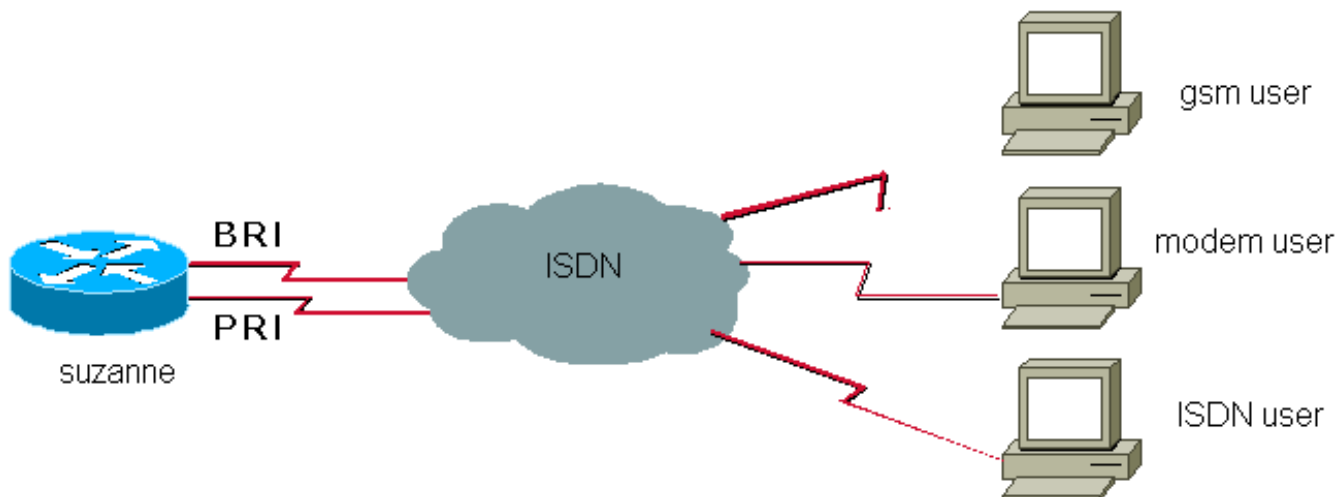
## 設定

この項では、このドキュメントで説明する機能の設定に必要な情報を提供します。

注このドキュメントで使用されているコマンドの詳細を調べるには、[Command Lookup Tool](#) ( [登録ユーザ専用](#) ) を使用してください。

## ネットワーク図

このドキュメントでは、次の図で示されるネットワーク構成を使用しています。



## 設定

このドキュメントでは次の設定を使用しています。

- スザンヌ

### スザンヌ

```
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 1asyn dynamic
routingasyn 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
```

## 確認

このセクションでは、設定が正常に動作しているかどうかを確認する際に役立つ情報を提供しています。

特定の **show** コマンドは、[Output Interpreter Tool](#) ( [登録ユーザ専用](#) ) によってサポートされています。このツールを使用すると、**show** コマンド出力の分析を表示できます。

- **show ip route** が。か。か。IPルーティングテーブルのコンテンツを表示する

## トラブルシューティング

ここでは、設定のトラブルシューティングに役立つ情報について説明します。

注発行する前に、[Debug コマンドの重要な情報](#)を参照して下さい。

- **debug modem** が。アクセス サーバのモデム回線の アクティビティを観察するため。

- **debug dialer events** か。ダイヤラーインターフェイスで受信されるパケットについてのデバッグ情報を表示する。
- **debug ppp authentication** か。Challenge Authentication Protocol ( CHAP ) パケット交換および Password Authentication Protocol ( PAP ) 交換を含む認証プロトコルメッセージを、表示する。
- **debug ppp cbcp** か。ディスプレイプロトコルエラーおよび統計情報は Microsoft Callback Control Protocol ( MSCB ) を使用して PPP 接続ネゴシエーションと関連付けました。
- **debug isdn q931** か。ISDNネットワーク接続 ( ローカルルータ ( ユーザサイド ) とネットワークのコール セットアップ および 中断についての情報を間の 3 ) 層 表示する。
- **debug chat** か。チャット スクリプトが適切に機能していることを確認します。
- **debug callback** か。ルータがモデムおよびチャット スクリプトをターミナルラインで呼出すのに使用しているときコールバックイベントを表示する。

## デバッグの出力例

### V.110 を使用したGSM コールバック

```
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 DI00478681006*01:03:56: 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 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 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 172.31.1.28Type 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
```

## [V.110 を使用したモデムコールバック](#)

```
!--- 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
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```

Callback Type Client-Num delay 001:06:52: As78 MCB: Timeout in state WAIT\_RESPONSE sending new Request 201:06:52: As78 MCB: 0 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: 0 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: 0 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: 0 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 ^->o`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

## [V.110 を使用した ISDN コールバック](#)

!--- 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, dsl



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 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 0.0.0.0  
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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