

Rappel entre un routeur Cisco 3640 et un utilisateur distant en mode V.110

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[Introduction](#)

Ce document fournit une configuration d'échantillon pour des utilisateurs distants appelant en utilisant une des méthodes suivantes. Dans chaque cas, le rappel est exécuté utilisant V.110 un appel.

- Utilisateurs connectant 3640 par l'intermédiaire du GSM et demandant le rappel.
- Utilisateurs connectant 3640 par l'intermédiaire d'un modem et demandant le rappel.
- Utilisateurs connectant 3640 par l'intermédiaire du RNIS (données) et demandant le rappel.

Remarque: L'Authentification, autorisation et comptabilité (AAA) est configuré sur le routeur par défaut. Vous devriez également créer un utilisateur pour ouvrir une session.

Dans cet exemple, nous avons également de point de consigne pour diriger l'authentification de Protocol (PPP) pour le callin et la légende. Nous avons changé le script pour configurer le modem pour V.110 tout le temps, et pour permettre à des utilisateurs pour choisir leur méthode (modem ou GSM). Selon la méthode choisie, les utilisateurs devraient :

- utilisation ZDTxxx dans le numéro de rappel (pour le modem).
- utilisation DLxxxx dans le numéro de rappel (pour le GSM).

[Conditions préalables](#)

Conditions requises

Aucune spécification déterminée n'est requise pour ce document.

Composants utilisés

Les informations contenues dans ce document sont basées sur les versions de matériel et de logiciel suivantes :

- V.110 la caractéristique de rappel est disponible sur l'IOS de Rosa ?? Version de logiciel 12.2(5.2)T et ultérieures.
- Version de logiciel 2.7.3.0 de modem.

Les informations contenues dans ce document ont été créées à partir des périphériques d'un environnement de laboratoire spécifique. Tous les périphériques utilisés dans ce document ont démarré avec une configuration effacée (par défaut). Si votre réseau est opérationnel, assurez-vous que vous comprenez l'effet potentiel de toute commande.

Conventions

Pour plus d'informations sur les conventions utilisées dans ce document, reportez-vous aux [Conventions relatives aux conseils techniques Cisco](#).

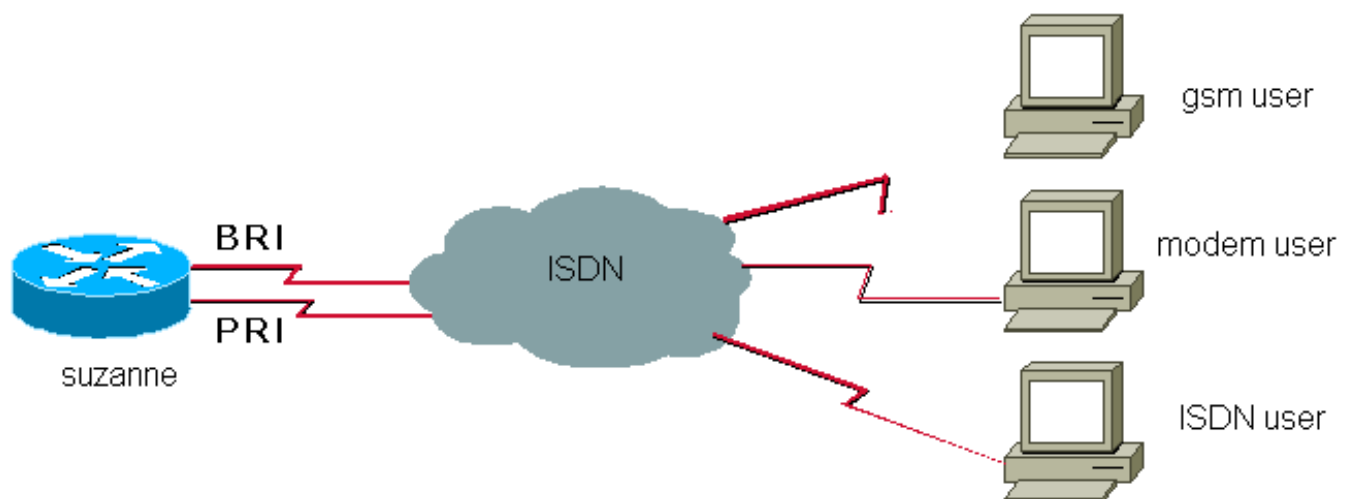
Configurez

Cette section vous fournit des informations pour configurer les fonctionnalités décrites dans ce document.

Remarque: Pour obtenir des informations supplémentaires sur les commandes utilisées dans ce document, utilisez l'[Outil de recherche de commande](#) ([clients enregistrés](#) seulement).

Diagramme du réseau

Ce document utilise la configuration réseau indiquée dans le diagramme suivant.



Configurations

Ce document utilise la configuration suivante :

- Suzanne

Suzanne

```
suzanne#show running-config
!
version 12.2
service internal
!
hostname suzanne
!
aaa new-model
!
aaa authentication login default local
aaa authentication ppp default local
aaa authorization network default local
aaa session-id common
!
username ww password 0
username alainisdn password 0
username alaingsm callback-dialstring "" password 0
username alainmod callback-dialstring "" password 0
!
modem country mica belgium
!
isdn switch-type primary-net5
isdn voice-call-failure 0
chat-script offhook "" "ATH1" OK
chat-script callback ABORT ERROR ABORT BUSY "" "AT&F"
OK "ATX3DT \T" TIMEOUT 90 \c
chat-script callbacklanalog ABORT ERROR ABORT BUSY ""
"AT&F"
OK "ATDT \T" TIMEOUT 90 CONNECT \c
chat-script callback2gsm ABORT ERROR ABORT BUSY ""
"AT&F"
OK "ATS29=8" OK "AT \T" TIMEOUT 90 CONNECT \c
!
controller E1 1/0
pri-group timeslots 1-31
!
interface Ethernet0/0
ip address 172.17.243.105 255.255.255.0
!
interface Serial1/0:15
description E1 0451/39920
no ip address
encapsulation ppp
dialer rotary-group 1
isdn switch-type primary-net5
isdn incoming-voice modem
isdn outgoing-voice info-transfer-capability 3.1kHz-
audio
no cdp enable
ppp authentication chap callin
!
interface BRI3/1
description belgacom 027202094
no ip address
encapsulation ppp
isdn switch-type basic-net3
isdn incoming-voice modem
no cdp enable
```

```

!
interface Group-Async1
ip unnumbered Dialer1
encapsulation ppp
dialer in-band
dialer callback-secure
dialer-group 1
async dynamic routing
async mode interactive
peer default ip address pool pool
ppp callback accept
ppp authentication pap
group-range 65 94
!
interface Dialer1
description Dial-In User
ip address 172.31.1.1 255.255.0.0
ip helper-address 90.100.48.38
ip helper-address 90.100.60.202
encapsulation ppp
dialer in-band
dialer callback-secure
dialer map ip 172.31.1.2 name alainisdn class callback
6136
peer default ip address pool pool
no cdp enable
ppp callback accept
ppp authentication chap callin
!
map-class dialer callback
dialer callback-server username
dialer-list 1 protocol ip permit
!
line con 0
exec-timeout 0 0
password
line 65 94
script dialer callback2gsm
script callback callback2gsm
modem InOut
transport input telnet
transport output pad v120 lapb-ta telnet rlogin udptn
autoselect during-login
autoselect ppp
stopbits 1
flowcontrol hardware
line aux 0
password
line vty 0 4
exec-timeout 0 0
password
!
end

```

Vérifiez

Cette section présente des informations que vous pouvez utiliser pour vous assurer que votre configuration fonctionne correctement.

Certaines commandes **show** sont prises en charge par l'[Output Interpreter Tool](#) ([clients enregistrés](#) uniquement), qui vous permet de voir une analyse de la sortie de la commande show.

- **show ip route** ? ? ? affiche le contenu de la table de Routage IP

Dépannez

Cette section fournit des informations que vous pouvez utiliser pour dépanner votre configuration.

Remarque: Avant que vous émettiez les commandes de **débogage**, référez-vous aux [informations importantes sur des commandes de debug](#).

- **debug modem** — pour observer l'activité de ligne du modem sur un serveur d'accès.
- **debug dialer events** — les informations de débogage d'affichages au sujet des paquets reçus sur une interface de numérotation.
- **debug ppp authentication** — messages du protocole d'authentification d'affichages, y compris des échanges de paquet de Protocol d'authentification de défi (CHAP) et des échanges de Password Authentication Protocol (PAP).
- **cbcp de debug ppp** — les erreurs de protocole et les statistiques d'affichages ont associé avec des négociations de connexion PPP utilisant le Control Protocol de rappel de service Microsoft (MSCB).
- **debug isdn q931** — affiche des informations au sujet de l'établissement d'appel et du démontage de la connexion réseau RNIS (couche 3) entre le routeur local (côté utilisateur) et le réseau.
- **mettez au point la conversation** — vérifie que le script de conversation fonctionne correctement.
- **debug callback** — événements de rappel d'affichages quand le routeur emploie un modem et un script de conversation pour faire appel de retour à une ligne de terminal.

Exemple de sortie de débogage

Rappel GSM utilisant V.110

```
suzanne#
01:03:00: ISDN BR3/1: RX <- SETUP pd = 8 callref = 0x2F
01:03:00: Sending Complete
01:03:00: Bearer Capability i = 0x9090A3
01:03:00: Channel ID i = 0x89
01:03:00: Calling Party Number i = 0x21, 0x83, '478681006', Plan:ISDN,
Type:National
01:03:00: Called Party Number i = 0xA1, '27202094', Plan:ISDN, Type:National
01:03:00: ISDN BR3/1: Event: Received a VOICE call from 478681006 on B1 at 64 Kb/s
01:03:00: ISDN BR3/1: Event: Accepting the call id 0x19
01:03:00: %ISDN-6-LAYER2UP: Layer 2 for Interface BR3/1, TEI 70 changed to up
01:03:00: ISDN BR3/1: TX -> CALL_PROC pd = 8 callref = 0xAF
01:03:00: Channel ID i = 0x89
01:03:00: ISDN BR3/1: TX -> ALERTING pd = 8 callref = 0xAF
01:03:00: ISDN BR3/1: TX -> CONNECT pd = 8 callref = 0xAF
01:03:01: ISDN BR3/1: RX <- CONNECT_ACK pd = 8 callref = 0x2F
01:03:01: 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_SETUP
01:03:02: Modem 2/12 Mica: in modem state CONNECT
01:03:06: Modem 2/12 Mica: in modem state LINK
01:03:07: %ISDN-6-CONNECT: Interface BRI3/1:1 is now connected to 478681006
01:03:15: Modem 2/12 Mica: in modem state TRAINUP
```

01:03:17: Modem 2/12 Mica: in modem state EC_NEGOTIATING
01:03:18: Modem 2/12 Mica: in modem state STEADY
01:03:18: Modem 2/12 Mica: CONNECT at 31200/31200 (Tx/Rx), V34+, LAPM, None
01:03:19: TTY77: DSR came up
01:03:19: tty77: Modem: IDLE->(unknown)
01:03:19: TTY77: EXEC creation
01:03:19: TTY77: set timer type 10, 30 seconds
01:03:19: TTY77: Autoselect(2) sample 7E
01:03:19: TTY77: Autoselect(2) sample 7EFF
01:03:19: TTY77: Autoselect(2) sample 7EFF7D
01:03:19: TTY77: Autoselect(2) sample 7EFF7D23
01:03:19: TTY77 Autoselect cmd: ppp negotiate
01:03:19: TTY77: EXEC creation
01:03:19: TTY77: create timer type 1, 600 seconds
01:03:19: TTY77: destroy timer type 1
01:03:19: TTY77: no timer type 0 to destroy
01:03:19: As77 DDR: Dialer received incoming call from <unknown>
01:03:21: %LINK-3-UPDOWN: Interface Async77, changed state to up
01:03:21: As77 DDR: Dialer statechange to up
01:03:21: As77 DDR: Dialer received incoming call from <unknown>
01:03:21: As77 PPP: Treating connection as a callin
01:03:21: As77 PPP: Authorization required
01:03:22: Modem 2/12 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0
01:03:22: As77 PPP: Authorization required
01:03:27: Modem 2/12 Mica: PPP escape_map: Tx map = A0000, Rx map = 0
01:03:27: As77 MCB: Initialize
01:03:27: MCB: Flush
01:03:27: Modem 2/12 Mica: Bad RX Frame: control = 0xE007, length = 0xD,
buffer = 0x3BC6E54
01:03:30: As77 PAP: I AUTH-REQ id 2 len 16 from "alaingsm"
01:03:30: As77 PAP: Authenticating peer alaingsm
01:03:30: As77 PPP: Sent PAP LOGIN Request to AAA
01:03:30: As77 PPP: Received LOGIN Response from AAA = PASS
01:03:30: As77 DDR: Remote name for alaingsm
01:03:30: As77 DDR: Authenticated host alaingsm with no matching dialer map
01:03:30: As77 PAP: O AUTH-ACK id 2 len 5
01:03:30: As77 MCB: Start
01:03:30: As77 MCB: User alaingsm Callback Number - Client ANY
01:03:30: As77 MCB: Newstate 0-INIT -> 2-WAIT_RESPONSE
01:03:30: As77 MCB: O Request Id 1 Callback Type Client-Num delay 0
01:03:32: As77 MCB: Timeout in state WAIT_RESPONSE sending new Request 2
01:03:32: As77 MCB: O Request Id 2 Callback Type Client-Num delay 0
01:03:34: As77 MCB: Timeout in state WAIT_RESPONSE sending new Request 3
01:03:34: As77 MCB: O Request Id 3 Callback Type Client-Num delay 0
01:03:35: Async77 PPP: I MCB Response(2) id 1 len 22
01:03:35: 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 response
01:03:35: As77 MCB: Resp ignored. ID Expected 3, got id 1
01:03:36: As77 MCB: Timeout in state WAIT_RESPONSE sending new Request 4
01:03:36: As77 MCB: O Request Id 4 Callback Type Client-Num delay 0
01:03:36: Async77 PPP: I MCB Response(2) id 4 len 22
01:03:36: 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-DI00478681006 01:03:36: As77 MCB: O Ack Id 5 Callback
Type Client-Num delay 15 01:03:36: As77 MCB: Negotiated MCB with peer 01:03:36: As77 MCB:
Newstate 2-WAIT_RESPONSE -> 3-WAIT_TERMINATE 01:03:37: As77 MCB: Peer terminating the link
01:03:37: As77 MCB: Newstate 3-WAIT_TERMINATE -> 5-WAIT_LINKDOWN 01:03:37: As77 MCB: Link
terminated by peer, Callback Needed 01:03:37: As77 MCB: Newstate 5-WAIT_LINKDOWN -> 6-CALLING
01:03:37: As77 MCB: Initiate Callback for ^->o`iB@ at DI00478681006 using Async DDR 01:03:37:
As77 DDR: PPP callback Callback server starting to alaingsm DI00478681006 01:03:37: As77 MCB:

Dialer callback started *!--- Call is disconnected.* 01:03:38: Modem 2/12 Mica: in modem state SS_RETRAINING 01:03:38: ISDN BR3/1: RX <- DISCONNECT pd = 8 callref = 0x2F 01:03:38: Cause i = 0x8090 - Normal call clearing 01:03:38: 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 seconds 01:03:38: ISDN BR3/1: TX -> RELEASE pd = 8 callref = 0xAF 01:03:38: Cause i = 0x8090 - Normal call clearing 01:03:38: Modem 2/12 Mica: in modem state TERMINATING 01:03:38: ISDN BR3/1: RX <- RELEASE_COMP pd = 8 callref = 0x2F 01:03:39: TTY77: Async Int reset: Dropping DTR 01:03:39: Modem 2/12 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0 01:03:39: As77 PPP: Authorization required 01:03:40: Modem 2/12 Mica: in modem state IDLE 01:03:40: Modem 2/12 Mica: DISCONNECT after 00:00:38, due to reason (0xDF00) Host Disconnect. 01:03:40: TTY77: DSR was dropped 01:03:40: tty77: Modem: READY->(unknown) 01:03:41: TTY77: dropping DTR, hanging up 01:03:41: tty77: Modem: HANGUP->(unknown) 01:03:41: %LINK-5-CHANGED: Interface Async77, changed state to reset 01:03:42: TTY77: cleanup pending. Delaying DTR 01:03:43: TTY77: cleanup pending. Delaying DTR 01:03:44: TTY77: cleanup pending. Delaying DTR 01:03:44: TTY77: no timer type 0 to destroy 01:03:44: TTY77: no timer type 1 to destroy 01:03:44: TTY77: no timer type 3 to destroy 01:03:44: TTY77: no timer type 4 to destroy 01:03:44: TTY77: no timer type 2 to destroy 01:03:44: Async77: allowing modem_process to continue hangup 01:03:45: TTY77: restoring DTR 01:03:46: %LINK-3-UPDOWN: Interface Async77, changed state to down 01:03:53: %ISDN-6-LAYER2DOWN: Layer 2 for Interface BR3/1, TEI 70 changed to down *!--- Callback is started.* 01:03:56: As77 DDR: re-enable timeout 01:03:56: DDR: callback triggered by dialer_timers 01:03:56: As77 DDR: beginning callback to alaingsm DI00478681006 01:03:56: As77 DDR: Attempting to dial DI00478681006 01:03:56: CHAT77: Attempting async line dialer script 01:03:56: CHAT77: Dialing using Modem script: callback2gsm & System script: none 01:03:56: CHAT77: process started 01:03:56: CHAT77: Asserting DTR 01:03:56: CHAT77: Chat script callback2gsm started 01:03:56: CHAT77: Sending string: AT&F 01:03:56: CHAT77: Expecting string: OK 01:03:56: CHAT77: Completed match for expect: OK 01:03:56: CHAT77: Sending string: AT529=8 01:03:56: 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: CONNECT 01:03:56: Modem 2/12 Mica: configured for Originate mode, with Null signaling, 0x1 tone detection. 01:03:56: Modem 2/12 Mica: received dialstring 00478681006 01:03:56: ISDN Se1/0:15: TX -> SETUP pd = 8 callref = 0x000E 01:03:56: Bearer Capability i = 0x8890214846BB 01:03:56: Channel ID i = 0xA9839F 01:03:56: Called Party Number i = 0x81, '00478681006', Plan:ISDN, Type:Unknown 01:03:56: Low Layer Compat i = 0x8890214846BB 01:03:56: ISDN Se1/0:15: RX <- CALL_PROC pd = 8 callref = 0x800E 01:03:56: Channel ID i = 0xA9839F 01:03:56: Modem 2/12 Mica: in modem state CALL_SETUP 01:04:02: ISDN Se1/0:15: RX <- ALERTING pd = 8 callref = 0x800E 01:04:03: ISDN Se1/0:15: RX <- CONNECT pd = 8 callref = 0x800E 01:04:03: ISDN Se1/0:15: TX -> CONNECT_ACK pd = 8 callref = 0x000E 01:04:03: Modem 2/12 Mica: in modem state CONNECT 01:04:03: Modem 2/12 Mica: in modem state LINK 01:04:03: Modem 2/12 Mica: in modem state TRAINUP 01:04:03: Modem 2/12 Mica: in modem state EC_NEGOTIATING 01:04:03: Modem 2/12 Mica: in modem state STEADY 01:04:03: CHAT77: Completed match for expect: CONNECT 01:04:03: CHAT77: Sending string: \c 01:04:03: CHAT77: Chat script callback2gsm finished, status = Success 01:04:03: TTY77: no timer type 1 to destroy 01:04:03: TTY77: no timer type 0 to destroy 01:04:03: Modem 2/12 Mica: CONNECT at 9600/9600 (Tx/Rx), V110, V.110, None 01:04:04: As77 PPP: Treating connection as a callout 01:04:04: Modem 2/12 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0 01:04:04: As77 PPP: Authorization required 01:04:04: %LINK-3-UPDOWN: Interface Async77, changed state to up 01:04:04: As77 DDR: Dialer statechange to up 01:04:04: As77 DDR: Copying MS callback dialstring DI00478681006 to ddb 01:04:04: DDR: Freeing callback to alaingsm DI00478681006 01:04:04: As77 DDR: Dialer call has been placed 01:04:08: Modem 2/12 Mica: PPP escape_map: Tx map = A0000, Rx map = 0 01:04:08: As77 MCB: Initialize 01:04:08: Modem 2/12 Mica: Bad RX Frame: control = 0xE007, length = 0xD, buffer = 0x3BC6E54 01:04:09: %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 alaingsm 01:04:11: As77 PPP: Sent PAP LOGIN Request to AAA 01:04:11: As77 PPP: Received LOGIN Response from AAA = PASS 01:04:11: As77 DDR: Remote name for alaingsm 01:04:11: As77 DDR: Authenticated host alaingsm with no matching dialer map 01:04:11: As77 PAP: O AUTH-ACK id 2 len 5 01:04:13: As77 DDR: dialer protocol up **suzanne#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 172.17.243.1 to network 0.0.0.0

```
172.17.0.0/24 is subnetted, 1 subnets
C 172.17.243.0 is directly connected, Ethernet0/0
172.31.0.0/16 is variably subnetted, 2 subnets, 2 masks
C 172.31.1.28/32 is directly connected, Async77
C 172.31.0.0/16 is directly connected, Dialer1
S* 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 = 0x800E
01:04:49: Cause i = 0x8090 - Normal call clearing
01:04:49: %ISDN-6-DISCONNECT: Interface Serial1/0:30 disconnected from
00478681006, call lasted 46 seconds
01:04:49: ISDN Se1/0:15: TX -> RELEASE pd = 8 callref = 0x000E
01:04:49: Modem 2/12 Mica: in modem state TERMINATING
01:04:49: ISDN Se1/0:15: RX <- RELEASE_COMP pd = 8 callref = 0x800E
01:04:49: Modem 2/12 Mica: in modem state IDLE
01:04:49: Modem 2/12 Mica: DISCONNECT after 00:00:46,
due to reason (0xDF00) Host Disconnect.
01:04:50: TTY77: DSR was dropped
01:04:50: tty77: Modem: READY->(unknown)
01:04:51: TTY77: Async Int reset: Dropping DTR
01:04:51: Modem 2/12 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0
01:04:51: As77 PPP: Authorization required
01:04:51: TTY77: dropping DTR, hanging up
01:04:51: tty77: Modem: HANGUP->(unknown)
01:04:52: TTY77: cleanup pending. Delaying DTR
01:04:53: %LINK-5-CHANGED: Interface Async77, changed state to reset
01:04:53: TTY77: cleanup pending. Delaying DTR
01:04:54: TTY77: cleanup pending. Delaying DTR
01:04:55: TTY77: cleanup pending. Delaying DTR
01:04:56: TTY77: no timer type 0 to destroy
01:04:56: TTY77: no timer type 1 to destroy
01:04:56: TTY77: no timer type 3 to destroy
01:04:56: TTY77: no timer type 4 to destroy
01:04:56: TTY77: no timer type 2 to destroy
01:04:56: Async77: allowing modem_process to continue hangup
01:04:56: TTY77: restoring DTR
01:04:58: %LINK-3-UPDOWN: Interface Async77, changed state to down
01:05:08: As77 DDR: re-enable timeout
```

Rappel de modem utilisant 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 = 0x6D73 01:06:21: Sending Complete 01:06:21: Bearer
Capability i = 0x9090A3 01:06:21: Channel ID i = 0xA18387 01:06:21: Progress Ind i = 0x8183 -
Origination address is non-ISDN 01:06:21: Calling Party Number i = 0xA1, '6020', Plan:ISDN,
Type:National 01:06:21: Called Party Number i = 0x81, '214', Plan:ISDN, Type:Unknown 01:06:21:
ISDN Se1/0:15: TX -> CALL_PROC pd = 8 callref = 0xED73 01:06:21: Channel ID i = 0xA98387
01:06:21: ISDN Se1/0:15: TX -> ALERTING pd = 8 callref = 0xED73 01:06:21: ISDN Se1/0:15: TX ->
CONNECT pd = 8 callref = 0xED73 01:06:21: ISDN Se1/0:15: RX <- CONNECT_ACK pd = 8 callref =
0x6D73 01:06:21: ISDN Se1/0:15: CALL_PROGRESS: CALL_CONNECTED call id 0x1A, bchan 6, dsl 0
01:06:21: 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_SETUP 01:06:22: Modem 2/13 Mica: in modem state
```


CONNECT 01:06:26: Modem 2/13 Mica: in modem state LINK 01:06:27: %ISDN-6-CONNECT: Interface Serial1/0:6 is now connected to 6020 01:06:34: Modem 2/13 Mica: in modem state TRAINUP 01:06:36: Modem 2/13 Mica: in modem state EC_NEGOTIATING 01:06:36: Modem 2/13 Mica: in modem state STEADY 01:06:36: Modem 2/13 Mica: CONNECT at 9600/9600 (Tx/Rx), V34+, LAPM, None 01:06:37: TTY78: DSR came up 01:06:37: tty78: Modem: IDLE->(unknown) 01:06:37: TTY78: EXEC creation 01:06:37: TTY78: set timer type 10, 30 seconds 01:06:40: TTY78: Autoselect(2) sample 7E 01:06:40: TTY78: Autoselect(2) sample 7EFF 01:06:40: TTY78: Autoselect(2) sample 7EFF7D 01:06:40: TTY78: Autoselect(2) sample 7EFF7D23 01:06:40: TTY78 Autoselect cmd: ppp negotiate 01:06:40: TTY78: EXEC creation 01:06:40: TTY78: create timer type 1, 600 seconds 01:06:40: TTY78: destroy timer type 1 01:06:40: TTY78: no timer type 0 to destroy 01:06:40: As78 DDR: Dialer received incoming call from <unknown> 01:06:42: %LINK-3-UPDOWN: Interface Async78, changed state to up 01:06:42: As78 DDR: Dialer statechange to up 01:06:42: As78 DDR: Dialer received incoming call from <unknown> 01:06:42: As78 PPP: Treating connection as a callin 01:06:42: As78 PPP: Authorization required 01:06:43: Modem 2/13 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0 01:06:43: As78 PPP: Authorization required 01:06:47: Modem 2/13 Mica: PPP escape_map: Tx map = A0000, Rx map = 0 01:06:47: As78 MCB: Initialize 01:06:47: MCB: Flush 01:06:47: Modem 2/13 Mica: Bad RX Frame: control = 0xE007, length = 0xE, buffer = 0x3BC9014 01:06:50: As78 PAP: I AUTH-REQ id 2 len 16 from "alainmod" 01:06:50: As78 PAP: Authenticating peer alainmod 01:06:50: As78 PPP: Sent PAP LOGIN Request to AAA 01:06:50: As78 PPP: Received LOGIN Response from AAA = PASS 01:06:50: As78 DDR: Remote name for alainmod 01:06:50: As78 DDR: Authenticated host alainmod with no matching dialer map 01:06:50: As78 PAP: O AUTH-ACK id 2 len 5 01:06:50: As78 MCB: Start 01:06:50: As78 MCB: User alainmod Callback Number - Client ANY 01:06:50: As78 MCB: Newstate 0-INIT -> 2-WAIT_RESPONSE 01:06:50: As78 MCB: O Request Id 1 Callback Type Client-Num delay 0 01:06:52: As78 MCB: Timeout in state WAIT_RESPONSE sending new Request 2 01:06:52: As78 MCB: O Request Id 2 Callback Type Client-Num delay 0 01:06:54: As78 MCB: Timeout in state WAIT_RESPONSE sending new Request 3 01:06:54: As78 MCB: O Request Id 3 Callback Type Client-Num delay 0 01:06:54: Async78 PPP: I MCB Response(2) id 1 len 17 01:06:54: 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 response 01:06:54: As78 MCB: Resp ignored. ID Expected 3, got id 1 01:06:56: As78 MCB: Timeout in state WAIT_RESPONSE sending new Request 4 01:06:56: As78 MCB: O Request Id 4 Callback Type Client-Num delay 0 01:06:56: Async78 PPP: I MCB Response(2) id 4 len 17 01:06:56: 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 response 01:06:56: As78 MCB: Response CBK-Client-Num 2 13 15, addr 1-ZDT 6020 01:06:56: As78 MCB: O Ack Id 5 Callback Type Client-Num delay 15 01:06:56: As78 MCB: Negotiated MCB with peer 01:06:56: As78 MCB: Newstate 2-WAIT_RESPONSE -> 3-WAIT_TERMINATE 01:06:56: As78 MCB: Peer terminating the link 01:06:56: As78 MCB: Newstate 3-WAIT_TERMINATE -> 5-WAIT_LINKDOWN 01:06:56: As78 MCB: Link terminated by peer, Callback Needed 01:06:56: As78 MCB: Newstate 5-WAIT_LINKDOWN -> 6-CALLING 01:06:56: As78 MCB: Initiate Callback for ^->o`iB@ at ZDT 6020 using Async DDR 01:06:56: As78 DDR: PPP callback Callback server starting to alainmod ZDT 6020 01:06:56: As78 MCB: Dialer callback started 01:06:57: Modem 2/13 Mica: in modem state TERMINATING 01:06:57: Modem 2/13 Mica: in modem state IDLE 01:06:57: %ISDN-6-DISCONNECT: Interface Serial1/0:6 disconnected from 6020, call lasted 36 seconds 01:06:57: ISDN Sel/0:15: TX -> DISCONNECT pd = 8 callref = 0xED73 01:06:57: Cause i = 0x8090 - Normal call clearing 01:06:57: Modem 2/13 Mica: DISCONNECT after 00:00:35, due to reason (0x8220) EC rcvd DISC frame. 01:06:57: TTY78: DSR was dropped 01:06:57: tty78: Modem: READY->(unknown) 01:06:57: ISDN Sel/0:15: RX <- RELEASE pd = 8 callref = 0x6D73 01:06:57: ISDN Sel/0:15: TX -> RELEASE_COMP pd = 8 callref = 0xED73 01:06:58: TTY78: dropping DTR, hanging up 01:06:58: TTY78: Async Int reset: Dropping DTR 01:06:58: tty78: Modem: HANGUP->(unknown) 01:06:59: TTY78: cleanup pending. Delaying DTR 01:06:59: Modem 2/13 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0 01:06:59: As78 PPP: Authorization required 01:07:00: %LINK-5-CHANGED: Interface Async78, changed state to reset 01:07:00: TTY78: cleanup pending. Delaying DTR 01:07:01: TTY78: cleanup pending. Delaying DTR 01:07:02: TTY78: cleanup pending. Delaying DTR 01:07:03: TTY78: no timer type 0 to destroy 01:07:03: TTY78: no timer type 1 to destroy 01:07:03: TTY78: no timer type 3 to destroy 01:07:03: TTY78: no timer type 4 to destroy 01:07:03: TTY78: no timer type 2 to destroy 01:07:03: Async78: allowing modem_process to continue hangup 01:07:03: TTY78: restoring DTR 01:07:05: %LINK-3-UPDOWN: Interface Async78, changed state to down 01:07:15: As78 DDR: re-enable timeout !--- Callback start. 01:07:15: DDR: callback triggered by dialer_timers 01:07:15: As78 DDR: beginning callback to alainmod ZDT 6020 01:07:15: As78 DDR: Attempting to dial ZDT 6020 01:07:15: CHAT78: Attempting async line dialer script 01:07:15: CHAT78: Dialing using Modem script: callback2gsm & System script: none 01:07:15: CHAT78: process started 01:07:15: CHAT78: Asserting DTR 01:07:15: CHAT78: Chat script callback2gsm started 01:07:15: CHAT78: Sending string: AT&F 01:07:15: CHAT78: Expecting string: OK 01:07:15: CHAT78: Completed match for expect: OK 01:07:15: CHAT78: Sending string: AT\$29=8 01:07:15: CHAT78: Expecting string: OK 01:07:15: 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: CONNECT 01:07:15: Modem 2/13 Mica: configured for Originate

mode, with Null signaling, 0x1 tone detection. 01:07:15: Modem 2/13 Mica: received dialstring 6020 01:07:15: ISDN Se1/0:15: TX -> SETUP pd = 8 callref = 0x000F 01:07:15: Bearer Capability i = 0x9090A3 01:07:15: Channel ID i = 0xA9839F 01:07:15: Called Party Number i = 0x81, '6020', Plan:ISDN, Type:Unknown 01:07:15: ISDN Se1/0:15: RX <- CALL_PROC pd = 8 callref = 0x800F 01:07:15: Channel ID i = 0xA9839F 01:07:15: ISDN Se1/0:15: RX <- ALERTING pd = 8 callref = 0x800F 01:07:15: Modem 2/13 Mica: in modem state CALL_SETUP 01:07:16: Modem 2/13 Mica: Detected Dial tone 01:07:17: ISDN Se1/0:15: RX <- CONNECT pd = 8 callref = 0x800F 01:07:17: Progress Ind i = 0x8182 - Destination address is non-ISDN 01:07:17: Connected Number i = 0xA136303230 01:07:17: ISDN Se1/0:15: TX -> CONNECT_ACK pd = 8 callref = 0x000F 01:07:17: Modem 2/13 Mica: in modem state CONNECT 01:07:19: Modem 2/13 Mica: in modem state LINK 01:07:23: %ISDN-6-CONNECT: Interface Serial1/0:30 is now connected to 6020 01:07:26: Modem 2/13 Mica: in modem state TRAINUP 01:07:28: Modem 2/13 Mica: in modem state EC_NEGOTIATING 01:07:28: Modem 2/13 Mica: in modem state STEADY 01:07:28: CHAT78: Completed match for expect: CONNECT 01:07:28: CHAT78: Sending string: \c 01:07:28: CHAT78: Chat script callback2gsm finished, status = Success 01:07:28: TTY78: no timer type 1 to destroy 01:07:28: TTY78: no timer type 0 to destroy 01:07:28: Modem 2/13 Mica: CONNECT at 33600/31200 (Tx/Rx), V34+, LAPM, None 01:07:28: As78 PPP: Treating connection as a callout 01:07:28: Modem 2/13 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0 01:07:28: As78 PPP: Authorization required 01:07:28: %LINK-3-UPDOWN: Interface Async78, changed state to up 01:07:28: As78 DDR: Dialer statechange to up 01:07:28: As78 DDR: Copying MS callback dialstring ZDT 6020 to ddb 01:07:28: DDR: Freeing callback to alainmod ZDT 6020 01:07:28: As78 DDR: Dialer call has been placed 01:07:29: Modem 2/13 Mica: PPP escape_map: Tx map = A0000, Rx map = 0 01:07:29: As78 MCB: Initialize 01:07:29: As78 PAP: I AUTH-REQ id 1 len 16 from "alainmod" 01:07:29: As78 PAP: Authenticating peer alainmod 01:07:29: As78 PPP: Sent PAP LOGIN Request to AAA 01:07:29: As78 PPP: Received LOGIN Response from AAA = PASS 01:07:29: As78 DDR: Remote name for alainmod 01:07:29: As78 DDR: Authenticated host alainmod with no matching dialer map 01:07:29: As78 PAP: O AUTH-ACK id 1 len 5 01:07:29: As78 DDR: dialer protocol up 01:07:29: %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 - 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 172.17.243.1 to network 0.0.0.0
172.17.0.0/24 is subnetted, 1 subnets
C 172.17.243.0 is directly connected, Ethernet0/0
172.31.0.0/16 is variably subnetted, 2 subnets, 2 masks
C 172.31.1.19/32 is directly connected, Async78
C 172.31.0.0/16 is directly connected, Dialer1
S* 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 TERMINATING

01:08:08: Modem 2/13 Mica: in modem state IDLE

01:08:08: 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 seconds

01:08:08: ISDN Se1/0:15: TX -> DISCONNECT pd = 8 callref = 0x000F

01:08:08: Cause i = 0x8090 - Normal call clearing

01:08:08: ISDN Se1/0:15: RX <- RELEASE pd = 8 callref = 0x800F

01:08:08: ISDN Se1/0:15: TX -> RELEASE_COMP pd = 8 callref = 0x000F

01:08:09: TTY78: DSR was dropped

01:08:09: tty78: Modem: READY->(unknown)

01:08:09: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async78,

changed state to down
01:08:10: TTY78: dropping DTR, hanging up
01:08:10: TTY78: Async Int reset: Dropping DTR
01:08:10: tty78: Modem: HANGUP->(unknown)
01:08:10: Modem 2/13 Mica: PPP escape_map: Tx map = FFFFFFFF, Rx map = 0
01:08:10: As78 PPP: Authorization required
01:08:11: TTY78: cleanup pending. Delaying DTR
01:08:12: %LINK-5-CHANGED: Interface Async78, changed state to reset
01:08:12: TTY78: cleanup pending. Delaying DTR
01:08:13: TTY78: cleanup pending. Delaying DTR
01:08:14: TTY78: cleanup pending. Delaying DTR
01:08:15: TTY78: no timer type 0 to destroy
01:08:15: TTY78: no timer type 1 to destroy
01:08:15: TTY78: no timer type 3 to destroy
01:08:15: TTY78: no timer type 4 to destroy
01:08:15: TTY78: no timer type 2 to destroy
01:08:15: Async78: allowing modem_process to continue hangup
01:08:15: TTY78: restoring DTR
01:08:17: %LINK-3-UPDOWN: Interface Async78, changed state to down
01:08:27: As78 DDR: re-enable timeout

Rappel RNIS utilisant V.110

```
!--- Receive call. suzanne# 01:09:00: ISDN Sel/0:15: RX <- SETUP pd = 8 callref = 0x6F28
01:09:00: Sending Complete 01:09:00: Bearer Capability i = 0x8890 01:09:00: Channel ID i =
0xA18388 01:09:00: Calling Party Number i = 0xA1, '6136', Plan:ISDN, Type:National 01:09:00:
Called Party Number i = 0x81, '214', Plan:ISDN, Type:Unknown 01:09:00: %LINK-3-UPDOWN: Interface
Serial1/0:7, changed state to up 01:09:00: ISDN Sel/0:15: TX -> CALL_PROC pd = 8 callref =
0xEF28 01:09:00: Channel ID i = 0xA98388 01:09:00: ISDN Sel/0:15: TX -> CONNECT pd = 8 callref =
0xEF28 01:09:00: Channel ID i = 0xA98388 01:09:00: Sel/0:7 PPP: Treating connection as a callin
01:09:00: Sel/0:7 PPP: Authorization required 01:09:00: ISDN Sel/0:15: RX <- CONNECT_ACK pd = 8
callref = 0x6F28 01:09:00: ISDN Sel/0:15: CALL_PROGRESS: CALL_CONNECTED call id 0x1B, bchan 7,
dsl 0 01:09:01: Sel/0:7 PPP: Authorization required 01:09:01: Sel/0:7 MCB: Initialize 01:09:01:
Sel/0:7 CHAP: O CHALLENGE id 1 len 28 from "suzanne" 01:09:01: Sel/0:7 CHAP: I RESPONSE id 1 len
30 from "alainisdn" 01:09:01: Sel/0:7 PPP: Sent CHAP LOGIN Request to AAA 01:09:01: Sel/0:7 PPP:
Received LOGIN Response from AAA = PASS 01:09:01: Sel/0:7 DDR: Remote name for alainisdn
01:09:01: Sel/0:7 CHAP: O SUCCESS id 1 len 4 01:09:01: Sel/0:7 DDR: PPP callback Callback server
starting to alainisdn 6136 01:09:01: Sel/0:7 DDR: disconnecting call 01:09:01: %ISDN-6-CONNECT:
Interface Serial1/0:7 is now connected to 6136 alainisdn 01:09:01: ISDN Sel/0:15: TX ->
DISCONNECT pd = 8 callref = 0xEF28 01:09:01: Cause i = 0x8090 - Normal call clearing 01:09:01:
ISDN Sel/0:15: RX <- RELEASE pd = 8 callref = 0x6F28 01:09:01: %LINK-3-UPDOWN: Interface
Serial1/0:7, changed state to down 01:09:01: ISDN Sel/0:15: TX -> RELEASE_COMP pd = 8 callref =
0xEF28 01:09:01: Sel/0:7 DDR: disconnecting call 01:09:02: ISDN Sel/0:15: RX <- SETUP pd = 8
callref = 0x70DF 01:09:02: Sending Complete 01:09:02: Bearer Capability i = 0x8890 01:09:02:
Channel ID i = 0xA18389 01:09:02: Calling Party Number i = 0xA1, '6136', Plan:ISDN,
Type:National 01:09:02: Called Party Number i = 0x81, '214', Plan:ISDN, Type:Unknown 01:09:02:
%LINK-3-UPDOWN: Interface Serial1/0:8, changed state to up 01:09:02: ISDN Sel/0:15: TX ->
CALL_PROC pd = 8 callref = 0xF0DF 01:09:02: Channel ID i = 0xA98389 01:09:02: ISDN Sel/0:15: TX
-> CONNECT pd = 8 callref = 0xF0DF 01:09:02: Channel ID i = 0xA98389 01:09:02: Sel/0:8 PPP:
Treating connection as a callin 01:09:02: Sel/0:8 PPP: Authorization required 01:09:02: ISDN
Sel/0:15: RX <- CONNECT_ACK pd = 8 callref = 0x70DF 01:09:02: ISDN Sel/0:15: CALL_PROGRESS:
CALL_CONNECTED call id 0x1C, bchan 8, dsl 0 01:09:02: Sel/0:8 PPP: Authorization required
01:09:03: Sel/0:8 MCB: Initialize 01:09:03: Sel/0:8 CHAP: O CHALLENGE id 1 len 28 from "suzanne"
01:09:03: Sel/0:8 CHAP: I RESPONSE id 1 len 30 from "alainisdn" 01:09:03: Sel/0:8 PPP: Sent CHAP
LOGIN Request to AAA 01:09:03: Sel/0:8 PPP: Received LOGIN Response from AAA = PASS 01:09:03:
Sel/0:8 DDR: Remote name for alainisdn 01:09:03: Sel/0:8 CHAP: O SUCCESS id 1 len 4 01:09:03:
Sel/0:8 DDR: callback to alainisdn already started 01:09:03: Sel/0:8 DDR: disconnecting call
01:09:03: %ISDN-6-CONNECT: Interface Serial1/0:8 is now connected to 6136 alainisdn 01:09:03:
ISDN Sel/0:15: TX -> DISCONNECT pd = 8 callref = 0xF0DF 01:09:03: Cause i = 0x8090 - Normal call
clearing 01:09:03: ISDN Sel/0:15: RX <- RELEASE pd = 8 callref = 0x70DF 01:09:03: %LINK-3-
UPDOWN: Interface Serial1/0:8, changed state to down 01:09:03: ISDN Sel/0:15: TX -> RELEASE_COMP
pd = 8 callref = 0xF0DF 01:09:03: Sel/0:8 DDR: disconnecting call !--- Callback Start 01:09:16:
DDR: Callback timer expired 01:09:16: Dil DDR: beginning callback to alainisdn 6136 01:09:16:
```

```
Sel/0:15 DDR: rotor dialout [priority] 01:09:16: Sel/0:15 DDR: Attempting to dial 6136 01:09:16:
ISDN Sel/0:15: TX -> SETUP pd = 8 callref = 0x0010 01:09:16: Bearer Capability i = 0x8890
01:09:16: Channel ID i = 0xA9839F 01:09:16: Called Party Number i = 0x81, '6136', Plan:ISDN,
Type:Unknown 01:09:16: ISDN Sel/0:15: RX <- CALL_PROC pd = 8 callref = 0x8010 01:09:16: Channel
ID i = 0xA9839F 01:09:16: ISDN Sel/0:15: RX <- ALERTING pd = 8 callref = 0x8010 01:09:16: ISDN
Sel/0:15: RX <- CONNECT pd = 8 callref = 0x8010 01:09:16: Connected Number i = 0xA136313336
01:09:16: %LINK-3-UPDOWN: Interface Serial1/0:30, changed state to up 01:09:16: DDR: Freeing
callback to alainisdn 6136 01:09:16: ISDN Sel/0:15: TX -> CONNECT_ACK pd = 8 callref = 0x0010
01:09:16: Sel/0:30 PPP: Treating connection as a callout 01:09:16: Sel/0:30 PPP: Authorization
required 01:09:16: Sel/0:30 MCB: Initialize 01:09:16: Sel/0:30 CHAP: I CHALLENGE id 7 len 30
from "alainisdn" 01:09:16: Sel/0:30 PPP: Sent CHAP SENDAUTH Request to AAA 01:09:16: Sel/0:30
PPP: Received SENDAUTH Response from AAA = PASS 01:09:16: Sel/0:30 CHAP: O RESPONSE id 7 len 28
from "suzanne" 01:09:16: Sel/0:30 CHAP: I SUCCESS id 7 len 4 01:09:16: Sel/0:30 PPP: Sent LCP
AUTHOR Request to AAA 01:09:16: Sel/0:30 PPP: Sent IPCP AUTHOR Request to AAA 01:09:16: Sel/0:30
LCP: Received AAA AUTHOR Response = PASS 01:09:16: Sel/0:30 IPCP: Received AAA AUTHOR Response =
PASS 01:09:16: Sel/0:30 DDR: dialer protocol up 01:09:17: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Serial1/0:30, changed state to up 01:09:22: %ISDN-6-CONNECT: Interface Serial1/0:30 is
now connected to 6136 alainisdn suzanne# suzanne#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 172.17.243.1 to network 0.0.0.0
```

```
172.17.0.0/24 is subnetted, 1 subnets
C 172.17.243.0 is directly connected, Ethernet0/0
172.31.0.0/16 is variably subnetted, 2 subnets, 2 masks
C 172.31.1.2/32 is directly connected, Dialer1
C 172.31.0.0/16 is directly connected, Dialer1
S* 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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