

Configuration Cisco AS5350 ou AS5400 pour les appels RNIS et les appels de modem sortants

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Introduction

Cette configuration a Cisco AS5400 avec un accès primaire (PRI) et soutien de 23 appels par modem ou d'appels RNIS, selon l'hôte composant ou dedans. Il est configuré avec quatre PRIs pour permettre async et le RNIS les connexions sortantes. Nous avons configuré les Cartes de composeur statiques du côté appelant pour le chaque RNIS ou connexion async. Nous utilisons les artères statiques IP aux deux extrémités de la connexion pour éviter le temps système inutile d'un protocole de routage dynamique. Ajouter un site distant exigerait l'ajout d'une carte de numéroteur, du nom d'utilisateur, et d'une artère statique pour la nouvelle destination du côté appelant. Tous les Noeuds distants ont des adresses IP fixes.

Remarque: Ce document ne couvre pas le modem entrant et le RNIS fait appel aux Routeurs de gamme AS5350 ou AS5400. Pour plus d'informations sur ceci, référez-vous à [configurer un AS5350/AS5400 pour l'asynchrone entrant et les appels RNIS](#).

Conditions préalables

Conditions requises

Avant de tenter cette configuration, assurez-vous que vous répondez à ces exigences :

- Veuillez s'assurer que les circuits de PRI RNIS provisionnés par la compagnie de téléphone

pour le dialout-sync et async.

Composants utilisés

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

- Version de logiciel 12.2(6) courante du Cisco IOS® AS5400
- Un T1 PRI d'active
- Modems Nextport exécutant le portware 0.6.108.0

Puisque cette configuration est seulement pour l'analogie de base et le dialin RNIS, n'importe quelle version de logiciel de Cisco IOS l'a pris en charge sur l'AS5350 et l'AS5400 est suffisante. Pour exécuter des fonctionnalités supplémentaires, référez-vous à l'outil Software Advisor pour sélectionner la version IOS et l'ensemble de caractéristiques appropriés pour vos besoins.

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.

Produits connexes

Cette configuration peut également être appliquée au serveur d'accès AS5350 ou AS5400.

Cette configuration peut être modifiée pour l'usage avec des ports PRI d'E1. Configurez le contrôleur d'E1 avec le codage de ligne, le tramage et d'autres caractéristiques physiques fournis par la compagnie de téléphone. Le configuration du canal D (interface x:15 séquentiel pour E1) est semblable à celui affiché ici.

Cette configuration est très semblable à une configuration AS5200 ou AS5300 pour l'accès de dialout. Référez-vous au document [AS5300 composant pour sortir avec ISDN/Async \(DDR sortant\)](#). Le seul changement majeur entre les deux est le **dial-tdm-clock priority number t1_slot/port de** commande utilisé pour assigner la priorité d'horloge de t1 dans l'AS5350 ou l'AS5400.

Cette configuration peut également être modifiée pour prendre en charge les deux appels entrant et sortants. Référez-vous au document [configurant Dialin et Dialout sur le même](#) pour en savoir plus de [circuits PRI T1/E1](#)

Conventions

Pour plus d'informations sur les conventions de documents, reportez-vous à [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 suivante :

Configurations

Ce document utilise les configurations suivantes :

5400

```
!  
version 12.2  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname 5400  
!  
no boot startup-test  
!  
username remoteISDN01 password open4u  
username remoteAsync01 password open4u  
!--- Usernames for remote routers and shared secret !---  
(used for CHAP authentication). !--- These usernames are  
for local authentication of the call. !--- The client  
presents the username/password and the NAS !---  
authenticates the peer. !! resource-pool disable ! ip  
subnet-zero ip cef no ip domain-lookup ! isdn switch-  
type primary-5ess ! fax interface-type fax-mail mta  
receive maximum-recipients 0 ! controller T1 7/0 !--- T1  
Physical interface controller configuration. !---  
Interfaces are addressed as controller slot/port.  
framing esf !--- Framing for this T1 is Extended Super  
Frame (ESF). !--- Obtain this information from the  
Telco. linecode b8zs !--- Linecoding for this T1. Obtain  
this information from the Telco. pri-group timeslots 1-  
24 !--- PRI T1 with 24 DSOs provided by the Telco. !---  
The PRI signaling is configured in global configuration  
or the !--- the serial 7/X:23 interface (d-channel). The  
signaling defined !--- under the d-channel takes  
precedence over the PRI signaling !--- defined in global  
configuration. ! !--- Unused T1 configuration omitted!  
interface FastEthernet0/0 ip address 172.68.186.54  
255.255.255.240 duplex auto speed auto ! interface  
FastEthernet0/1 no ip address shutdown duplex auto speed  
auto ! interface Serial0/0 no ip address shutdown  
clockrate 2000000 ! interface Serial0/1 no ip address  
shutdown clockrate 2000000 ! interface Serial7/0:23 no  
ip address encapsulation ppp dialer rotary-group 2 !---  
The D-channel is added to rotary-group 2. Interface  
Dialer 2 !--- provides the logical configuration for  
this interface. dialer-group 1 isdn switch-type primary-  
5ess isdn incoming-voice modem !--- This allows the PRI  
circuits to accept and place async modem calls. !  
interface Group-Async1 !--- This group-async interface  
is the configuration template for all modems. !---  
Individual async interface do not have to be configured  
since they !--- can be cloned from one managed copy. no  
ip address dialer in-band dialer rotary-group 1 !---
```

```
This command links this interface to logical interface
Dialer interface 1. !--- The Dialer 1 interface serves
as template for this interface. group-range 1/00 6/107
!--- Modems 1/00 through 6/107 belong to this group-
async interface. !--- Make sure you configure line 1/00
through 6/107 as well. !--- This command links all the
modem ranges listed to this interface. ! interface
Dialer1 !--- This interface is used for the modem DDR
dialout. !--- This dialer controls rotary-group 1
(configured under Group-Async 1). ! -- Remember that
this is a rotary and not a Dialer Profile ip address
10.1.1.1 255.255.255.192 encapsulation ppp dialer in-
band !--- Makes this interface DDR capable. !--- If you
do not configure a dialer idle-timeout, the default will
be 120 !--- seconds. dialer idle-timeout 600 !--- Sets
Idle timer to 600 seconds (10 minutes). dialer map ip
10.1.1.2 name remoteAsync01 broadcast 4724125 !---
Dialer map for the peer. !--- Note the ip address
matches the one configure on the peer. !--- The name
must also exactly match the one used to authenticate the
peer. dialer-group 1 !--- Apply interesting traffic
definition from dialer-list 1. !--- Note: The specified
dialer-group number must be the same as !--- the dialer-
list number; in this example, defined as "1". !---
Interesting traffic specifies the packets that should
reset the idle timer. ppp authentication chap !
interface Dialer2 !--- This interface will be used for
the ISDN DDR outbound calls. !--- This dialer controls
rotary-group 2 (configured under Serial 7/0:23). ! --
Remember that this is a rotary and not a Dialer Profile
ip address 10.1.1.65 255.255.255.192 encapsulation ppp
dialer in-band !--- If you do not configure a dialer
idle-timeout, the default will be 120 !--- seconds.
dialer idle-timeout 600 !--- Sets Idle timer to 600
seconds (10 minutes). dialer map ip 10.1.1.66 name
remoteISDN01 broadcast 6665800 dialer-group 1 !--- Apply
interesting traffic definition from dialer-list 1. !---
Note: The specified dialer-group number must be the same
as !--- the dialer-list number; in this example, defined
to be "1". !--- Interesting traffic specifies the
packets that should reset the idle timer. ppp
authentication chap ! ip classless ip route 10.1.200.0
255.255.255.0 10.1.1.2 !--- Static route for the
10.1.200.0/24 network. !--- Note the next hop IP address
is the peer router. !--- This also matches the ip
address in the dialer map !--- statement under int
Dialer 1. ip route 10.1.201.0 255.255.255.0 10.1.1.66 !-
-- Static route for the 10.1.201.0/24 network. !--- Note
the next hop IP address is the peer router. !--- This
also matches the ip address in the dialer map !---
statement under interface Dialer 2 no ip http server. !
dialer-list 1 protocol ip permit !--- Specifies all IP
traffic as interesting. Interesting traffic !---
specifies the packets that should reset the idle timer.
!--- This is applied to interface Group-Async 1 using
dialer-group 1. !--- Note: The specified dialer-list
number must be the same as the !--- dialer-group number;
in this example, defined to be "1". ! ! call rsvp-sync !
voice-port 7/0:D ! voice-port 7/1:D ! voice-port 7/2:D !
voice-port 7/3:D ! ! mgcp profile default ! ! line con 0
line aux 0 line vty 0 4 login line 1/00 1/107 !--- These
lines are linked to the modems. Note that this range
includes !--- the group-range configured under group-
async 1. modem InOut !--- Permit incoming and outgoing
```

```
calls on the modem. transport input all line 6/00 6/107
!--- These lines are linked to the modems. Note that
this line range is !--- included in the group-range
configured under group-async 1. modem InOut transport
input all ! scheduler allocate 10000 400 end
```

remoteAsync01

```
remoteAsync01
!
version 12.0
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname remoteAsync01
!
enable password <deleted>
!
username 5400 password open4u
!--- Username and password for the 5400. !--- The
shared secret password must be identical on both sides.
ip subnet-zero no ip domain-lookup ! interface Ethernet0
ip address 10.1.200.1 255.255.255.0 no ip directed-
broadcast ! interface Serial0 no ip address no ip
directed-broadcast shutdown ! interface Serial1 no ip
address no ip directed-broadcast shutdown ! interface
Async1 !--- Async interface for the incoming modem call.
ip address 10.1.1.2 255.255.255.192 !--- IP address for
this interface. !--- Note: this ip address is the same
as the one configured in the !--- dialer map on the 5400
Dialer 1. no ip directed-broadcast encapsulation ppp ppp
authentication chap ! no ip http server ip classless ip
route 0.0.0.0 0.0.0.0 10.1.1.1 !--- Default router with
next hop being the 5400's dialer 1 ip address. ! line
con 0 transport input none line 1 8 !--- Line number
range includes line 1(corresponding to interface
async1). modem InOut transport input all speed 38400
flowcontrol hardware line aux 0 line vty 0 4 ! end
```

remoteISDN01

```
!
version 12.0
service timestamps debug datetime msec
service timestamps log datetime msec
!
hostname remoteISDN01
!
enable secret <deleted>
!
username 5400 password open4u
!--- Username and password for the 5400 router. !---
The shared secret password must be identical on both
sides. ip subnet-zero no ip domain-lookup ! isdn switch-
type basic-5ess ! interface Ethernet0 ip address
10.1.201.1 255.255.255.0 no ip directed-broadcast !
interface Serial0 no ip address no ip directed-broadcast
shutdown ! interface Serial1 no ip address no ip
directed-broadcast shutdown ! interface BRI0 !--- BRI
interface for incoming call. ip address 10.1.1.66
255.255.255.192 !--- IP address is the same as that
configured on the 5400 Dialer 2 !--- dialer map
statement. !--- A dialer map is not needed on this
router. A dynamic map will be created !--- for incoming
calls. If this router is to be used for outgoing calls
!--- then a dialer map is needed. no ip directed-
```

```
broadcast encapsulation ppp dialer-group 1 !---  
Interesting traffic definition from dialer-list 1. isdn  
switch-type basic-5ess ppp authentication chap ! no ip  
http server ip classless ip route 0.0.0.0 0.0.0.0  
10.1.1.65 !--- Default route points to ip address of  
5400 dialer 2 interface. ! dialer-list 1 protocol ip  
permit ! line con 0 transport input none line aux 0 line  
vty 0 4 ! 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.

- **état de show isdn** — L'état devrait être `:layer 1 = active layer 2 = MULTIPLE_FRAMES_ESTABLISHED`. Si la couche 1 n'est pas en activité, l'adaptateur ou le port de câblage peut être mauvais ou non branché. Si la couche 2 est dans un état de « `TEI_ASSIGNED` », le routeur ne parle pas au commutateur. Référez-vous au [T1 PRI dépannant le](#) pour en savoir plus de document.
- **service de show isdn** — Pour vérifier le statut des canaux B. Il devrait y a un canal occupé pour chaque appel.
- **show caller** — Affiche des paramètres pour l'utilisateur particulier tel que l'adresse IP assignée, le protocole de point-à-point (PPP) et les paramètres d'ensemble de PPP, et ainsi de suite. Si votre version de logiciel de Cisco IOS ne prend en charge pas cette commande, utilisez l'ordre d'**utilisateur d'exposition**.

Dépannez

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

[Dépannage des commandes](#)

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.

Remarque: Avant d'émettre des commandes de **débogage**, référez-vous aux [informations importantes sur des commandes de debug](#).

Configurez les horodateurs en configuration globale comme suit :

```
service timestamps debug datetime msec  
service timestamps log datetime msec
```

Utilisez les commandes suivantes pour le dépannage :

- **mettez au point le numéroteur** — Quand le Routage à établissement de connexion à la demande (DDR) est activé sur l'interface, cette affiche des informations de commande au sujet de la cause de tout appel (appelé la cause d'appel).

- **debug isdn q931** — Pour vérifier des connexions RNIS comme appels sortants sont initiés.
- **debug ppp negotiation** — Pour voir si un client passe la négociation PPP. Un nombre élevé de négociations PPP simultanées peut accabler la CPU de routeur.
- **debug ppp authentication** — Pour voir si un client passe l'authentification.
- **debug ppp error** — Pour afficher des erreurs de protocole et des statistiques sur les erreurs associées avec la négociation et l'exécution de connexion PPP.

Pour le dépannage de modem, utilisez les commandes suivantes :

- **debug modem** — Pour voir si le routeur reçoit les bons signaux du modem.
- **debug modem csm** — Pour activer le module de commutation d'appel de gestion de modems (CSM) mettez au point le mode.

Pour plus d'informations sur le NextPort les commandes satisfont se rapportent à [gérer des services des ports sur la Passerelle universelle Cisco AS5400](#).

Exemple de sortie de débogage

Sont ci-dessous quelques sorties de débogage pour des appels réussis. Prêtez l'attention aux sections en gras et aux commentaires fournis dans les sorties. Comparez la sortie que vous obtenez avec le résultat affiché ci-dessous.

Appel par modem sortant

```
Router#show debug General OS: Modem control/process activation debugging is on Dial on demand:
Dial on demand events debugging is on CSM Modem: Modem Management Call Switching Module
debugging is on PPP: PPP authentication debugging is on PPP protocol errors debugging is on PPP
protocol negotiation debugging is on ISDN: ISDN events debugging is on ISDN Q931 packets
debugging is on ISDN events debug DSLs. (On/Off/No DSL:1/0/-) DSL 0 --> 31 1 - - - - -
- - - - - ISDN Q931 packets debug DSLs. (On/Off/No DSL:1/0/-)
DSL 0 --> 31 1 - - - - - Router#ping
10.1.1.2 Type escape sequence to abort. Sending 5, 100-byte ICMP Echos to 10.1.1.2, timeout is 2
seconds: *Jan 2 01:07:19.085: As1/107 DDR: rotor dialout [priority] *Jan 2 01:07:19.085: As1/107
DDR: Dialing cause ip (s=10.1.1.1, d=10.1.1.2) *Jan 2 01:07:19.085: As1/107 DDR: Attempting to
dial 4724125 !--- The DDR process has detected interesting traffic destined for a device off !--
- dialer 1's interface and is inticating a call. *Jan 2 01:07:19.085: CHAT1/107: Attempting
async line dialer script *Jan 2 01:07:19.085: CHAT1/107: no matching chat script found for
4724125 *Jan 2 01:07:19.085: CHAT1/107: Dialing using Modem script: d0efault-d0ials0cript &
System script: none *Jan 2 01:07:19.085: CHAT1/107: process started *Jan . 2 01:07:19.085:
CHAT1/107: Asserting DTR *Jan 2 01:07:19.085: CHAT1/107: Chat script d0efault-d0ials0cript
started *Jan 2 01:07:20.533: CSM DSPLIB(1/107): Rcvd Dial String (4724125) *Jan 2 01:07:20.533:
CSM_PROC_IDLE: CSM_EVENT_MODEM_OFFHOOK at slot 1, port 107 *Jan 2 01:07:20.537:
csm_get_signaling_channel csm_call_info->bchan_num 0xFFFFFFFF *Jan 2 01:07:20.537:
csm_get_signaling_channel dchan_index=16504,next_index=0, dchan_info=0x628C2BF0 *Jan 2
01:07:20.537: CSM_PROC_OC3_COLLECT_ALL_DIGIT: CSM_EVENT_GET_ALL_DIGITS at slot 1, port 107 *Jan
2 01:07:20.537: CSM_PROC_OC3_COLLECT_ALL_DIGIT: called party num: (4724125) at slot 1, port 107
!--- The Call Switch Module (CSM) is informed of the call. !--- The CSM allocates modem 1/107
for the outbound call. *Jan 2 01:07:20.537: csm_get_signaling_channel csm_call_info->bchan_num
0xFFFFFFFF *Jan 2 01:07:20.537: csm_get_signaling_channel dchan_index=24935,next_index=0,
dchan_info=0x628C2BF0 *Jan 2 01:07:20.537: ISDN Se7/0:23: Outgoing call id = 0x800F, dsl 0 *Jan
2 01:07:20.537: CSM_PROC_OC3_COLLECT_ALL_DIGIT: csm_call_info->bchan_num 0xFFFFFFFF *Jan 2
01:07:20.537: ISDN Se7/0:23: VOICE_I.SDNCALL Event: call id 0x800F, bchan 65535, ces 0 *Jan 2
01:07:20.537: ISDN Se7/0:23: process_pri_call(): call id 0x800F, number 4724125, speed 64, call
type VOICE, redialed? f, csm call? t, pdata? f *Jan 2 01:07:20.537: trying to get callinf from
isdn_info *Jan 2 01:07:20.537: Don't know what calling number for later redial. *Jan 2
01:07:20.537: ISDN: Created entry call_id 0x800F, speed 64, remote 4724125, calling *Jan 2
01:07:20.537: called type/plan overridden by call_decode *Jan 2 01:07:20.537: didn't copy oct3a
reason: not CALLER_NUMBER_IE *Jan 2 01:07:20.537: building outgoing channel id for call nfasc_int
```

is 0 len is 0 *Jan 2 01:07:20.537: ISDN Se7/0:23: **TX -> SETUP** pd = 8 callref = 0x000C *Jan 2 01:07:20.537: Bearer Capability i = 0x8090A2 *Jan 2 01:07:20.537: Channel ID i = 0xA98397 *Jan 2 01:07:20.537: Called Party Number i = 0xA1, '4724125', Plan:ISDN, Type:National *!--- Outgoing Q.931 SETUP message. Indicates an outgoing call. !--- For more information on Q.931 refer to the document: !--- Troubleshooting ISDN Layer 3 using the debug isdn q931 Command.* *Jan 2 01:07:20.617: ISDN Se7/0:23: **RX <- CALL_PROC** pd = 8 callref = 0x800C *Jan 2 01:07:20.617: Channel. ID i = 0xA98397 *!--- The Call Proceeding Message is sent through the D-channel.* *Jan 2 01:07:20.617: ISDN Se7/0:23: LIF_EVENT: ces/callid 1/0x800F CALL_PROCEEDING *Jan 2 01:07:20.617: ISDN Se7/0:23: CALL_PROCEEDING id 0x800F *Jan 2 01:07:20.617: ISDN Se7/0:23: PRI Event: 6, bchan = 22, call type = VOICE *Jan 2 01:07:20.617: EVENT_FROM_ISDN: dchan_idb=0x62C31CC0, call_id=0x800F, ces=0x1 bchan=0x16, event=0x3, cause=0x0 *Jan 2 01:07:20.617: EVENT_FROM_ISDN:(800F): DEV_CALL_PROC at slot 1 and port 107, bchan 22 on Serial7/0:23 *Jan 2 01:07:20.617: CSM_PROC_OC4_DIALING: CSM_EVENT_ISDN_BCHAN_ASSIGNED at slot 1, port 107 *Jan 2 01:07:20.617: csm_connect_pri_vdev: TS allocated at bp_stream 0, bp_Ch 9, vdev_common 0x624BAD88 1/107 *Jan 2 01:07:20.617: CSM DSPLIB(1/107): np_dsplib_prepare_modem *Jan 2 01:07:20.625: CSM DSPLIB(1/107):DSPLIB_MODEM_INIT: Modem session transition to IDLE *Jan 2 01:07:20.717: ISDN Se7/0:23: RX <- ALERTING pd = 8 callref = 0x800C *Jan 2 01:07:20.717: ISDN Se7/0:23: LIF_EVENT: ces/callid 1/0x800F CALL_PROGRESS *Jan 2 01:07:20.717: ISDN Se7/0:23: event CALL_PROGRESS dsl 0 *Jan 2 01:07:20.797: ISDN Se7/0:23: **RX <- CONNECT** pd = 8 callref = 0x800C *!--- Received the Q.931 CONNECT.* *Jan 2 01:07:20.797: ISDN Se7/0:23: LIF_EVENT: ces/callid 1/0x800F CALL_CONNECT *Jan 2 01:07:20.797: ISDN Se7/0:23: Event CALL_CONNECT dsl 0 *Jan 2 01:07:20.797: EVENT_FROM_ISDN: dchan_idb=0x62C31CC0, call_id=0x800F, ces=0x1 bchan=0x16, event=0x4, cause=0x0 *Jan 2 01:07:20.797: EVENT_FROM_ISDN:(800F): DEV_CONNECTED at slot 1 and port 107 *Jan 2 01:07:20.797: CSM_PROC_OC5_WAIT_FOR_CARRIER: CSM_EVENT_ISDN_CONNECTED at slot 1, port 107 *Jan 2 01:07:20.797: CSM DSPLIB(1/107): np_dsplib_call_accept *Jan 2 01:07:20.797: ISDN Se7/0:23: LIF_EVENT: ces/callid 1/0x800F CALL_PROGRESS *Jan 2 01:07:20.797: ISDN Se7/0:23: event CALL_PROGRESS dsl 0 *Jan 2 01:07:20.797: ISDN Se7/0:23: **TX -> CONNECT_ACK** pd = 8 callref = 0x000C *!--- D-channel transmits a CONNECT_ACK.* *Jan 2 01:07:20.801: CSM DSPLIB(1/107):DSPLIB_MODEM_WAIT_ACTIVE: Modem session transition to ACTIVE *Jan 2 01:07:20.801: CSM DSPLIB(1/107): Modem state changed to (CONNECT_STATE) *Jan 2 01:07:26.797: %ISDN-6-CONNECT: Interface Serial7/0:22 is now connected to 4724125 *Jan 2 01:07:26.893: CSM DSPLIB(1/107): Modem state changed to (LINK_STATE) *Jan 2 01:07:29.837: CSM DSPLIB(1/107): Modem state changed to (TRAINUP_STATE) *Jan 2 01:07:37.997: CSM DSPLIB(1/107): Modem state changed to (EC_NEGOTIATING_STATE) *Jan 2 01:07:38.333: CSM DSPLIB(1/107): Modem state changed to (STEADY_STATE) *!--- Modems have trained up and are in a steady state.* *Jan 2 01:07:38.333: CHAT1/107: Chat script d0efault-d0ials0cript finished, status = Success *Jan 2 01:07:38.333: TTY1/107: no timer type 1 to destroy *Jan 2 01:07:38.333: TTY1/107: no timer type 0 to destroy *Jan 2 01:07:38.333: Di1 IPCP: Install route to 10.1.1.2 *Jan 2 01:07:40.333: %LINK-3-UPDOWN: Interface Async1/107, changed state to up *Jan 2 01:07:40.333: As1/107 DDR: Dialer statechange to up *Jan 2 01:07:40.333: As1/107 DDR: Dialer call has been placed *Jan 2 01:07:40.333: As1/107 PPP: Treating connection as a callout *Jan 2 01:07:40.333: As1/107 PPP: **Phase is ESTABLISHING, Active Open [0 sess, 1 load] !--- LCP negotiation begins.** *Jan 2 01:07:42.469: As1/107 LCP: I CONFREQ [REQsent] id 1 len 25 *Jan 2 01:07:42.469: As1/107 LCP: ACCM 0x000A0000 (0x0206000A0000) *Jan 2 01:07:42.469: As1/107 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 01:07:42.469: As1/107 LCP: MagicNumber 0x2862C096 (0x05062862C096) *Jan 2 01:07:42.469: As1/107 LCP: PFC (0x0702) *Jan 2 01:07:42.469: As1/107 LCP: ACFC (0x0802) *!--- Incoming LCP CONFREQ. !--- For more information on interpreting PPP debugs refer to the document: !--- Dialup Technology: Troubleshooting Techniques* *Jan 2 01:07:42.469: As1/107 LCP: O CONFACK [REQsent] id 1 len 25 *Jan 2 01:07:42.469: As1/107 LCP: ACCM 0x000A0000 (0x0206000A0000) *Jan 2 01:07:42.469: As1/107 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 01:07:42.469: As1/107 LCP: MagicNumber 0x2862C096 (0x05062862C096) *Jan 2 01:07:42.469: As1/107 LCP: PFC (0x0702) *Jan 2 01:07:42.469: As1/107 LCP: ACFC (0x0802) *Jan 2 01:07:44.333: As1/107 LCP: O CONFREQ [ACKsent] id 29 len 25 *Jan 2 01:07:44.333: As1/107 LCP: ACCM 0x000A0000 (0x0206000A0000) *Jan 2 01:07:44.333: As1/107 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 01:07:44.333: As1/107 LCP: MagicNumber 0x081D8CEC (0x0506081D8CEC) *Jan 2 01:07:44.333: As1/107 LCP: PFC (0x0702) *Jan 2 01:07:44.333: As1/107 LCP: ACFC (0x0802) *Jan 2 01:07:44.461: As1/107 LCP: I CONFACK [ACKsent] id 29 len 25 *Jan 2 01:07:44.461: As1/107 LCP: ACCM 0x000A0000 (0x0206000A0000) *Jan 2 01:07:44.461: As1/107 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 01:07:44.461: As1/107 LCP: MagicNumber 0x081D8CEC (0x0506081D8CEC) *Jan 2 01:07:44.461: As1/107 LCP: PFC (0x0702) *Jan 2 01:07:44.461: As1/107 LCP: ACFC (0x0802) *Jan 2 01:07:44.461: As1/107 LCP: **State is Open ! --- LCP negotiation is complete.** *Jan 2 01:07:44.461: As1/107 PPP: Phase is AUTHENTICATING, by both [0 sess, 1 load] *Jan 2 01:07:44.461: As1/107 CHAP: O CHALLENGE id 16 len 27 from "Router" *Jan 2 01:07:44.477: As1/107 CHAP: I CHALLENGE id 1 len 34 from "remoteAsync01" *Jan 2 01:07:44.477: As1/107 CHAP: O RESPONSE id 1 len 27 from "Router" *Jan 2 01:07:44.581: As1/107 CHAP: I RESPONSE id 16 len 34


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from "remoteAsync01" *Jan 2 01:07:44.581: As1/107 CHAP: O SUCCESS id 16 len 4 *Jan 2
01:07:44.601: As1/107 CHAP: I SUCCESS id 1 len 4 !--- CHAP authentication is successful. !--- If
this fails, verify that the username and password are correct. !--- Refer to Dialup Technology:
Troubleshooting Techniques. *Jan 2 01:07:44.601: As1/107 PPP: Phase is UP [0 sess, 1 load] *Jan
2 01:07:44.601: As1/107 IPCP: O CONFREQ [Closed] id 6 len 10 *Jan 2 01:07:44.601: As1/107 IPCP:
Address 10.1.1.1 (0x03060A010101) *Jan 2 01:07:44.601: As1/107 CDPCP: O CONFREQ [Closed] id 5
len 4 *Jan 2 01:07:44.701: As1/107 IPCP: I CONFREQ [REQsent] id 1 len 10 *Jan 2 01:07:44.701:
As1/107 IPCP: Address 10.1.1.2 (0x03060A010102) *Jan 2 01:07:44.701: As1/107 IPCP: O CONFACK
[REQsent] id 1 len 10 *Jan 2 01:07:44.701: As1/107 IPCP: Address 10.1.1.2 (0x03060A010102) *Jan
2 01:07:44.705: As1/107 CDPCP: I CONFREQ [REQsent] id 1 len 4 *Jan 2 01:07:44.705: As1/107
CDPCP: O CONFACK [REQsent] id 1 len 4 *Jan 2 01:07:44.733: As1/107 IPCP: I CONFACK [ACKsent] id
6 len 10 *Jan 2 01:07:44.733: As1/107 IPCP: Address 10.1.1.1 (0x03060A010101) *Jan 2
01:07:44.733: As1/107 IPCP: State is Open *Jan 2 01:07:44.733: As1/107 DDR: dialer protocol up
!--- The route has been successfully negotiated and installed in the routing table. *Jan 2
01:07:44.737: As1/107 CDPCP: I CONFACK [ACKsent] id 5 len 4 *Jan 2 01:07:44.737: As1/107 CDPCP:
State is Open *Jan 2 01:07:45.601: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1/107,
changed state to up *Jan 2 01:07:48.321: TTY0: timer type 1 expired *Jan 2 01:07:48.321: TTY0:
Exec timer (continued)

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Appel RNIS sortant

Sont ci-dessous quelques sorties de débogage pour l'appel sortant réussi RNIS. Prêtez l'attention aux sections en gras et aux commentaires fournis dans les sorties. Comparez la sortie que vous obtenez avec le résultat affiché ci-dessous.

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Router#show debug Dial on demand: Dial on demand events debugging is on PPP: PPP authentication
debugging is on PPP protocol errors debugging is on PPP protocol negotiation debugging is on
ISDN: ISDN events debugging is on ISDN Q931 packets debugging is on ISDN events debug DSLs.
(On/Off/No DSL:1/0/-) DSL 0 --> 31 1 - - - - -
- ISDN Q931 packets de ISDN Q931 packets debug DSLs. (On/Off/No DSL:1/0/-) DSL 0 --> 31 1 - - -
- - - - - Router#ping 10.1.1.66 Type escape
sequence to abort. Sending 5, 100-byte ICMP Echos to 10.1.1.66, timeout is 2 seconds: *Jan 2
02:00:59.937: Se7/0:23 DDR: rotor dialout [priority] *Jan 2 02:00:59.937: Se7/0:23 DDR: Dialing
cause ip (s=10.1.1.65, d=10.1.1.66) *Jan 2 02:00:59.937: Se7/0:23 DDR: Attempting to dial
6665800 !--- The DDR process has detected interesting traffic destined for a device off !---
dialer 1's interface and is inticating a call. *Jan 2 02:00:59.937: ISDN Se7/0:23: Outgoing call
id = 0x8016, dsl 0 *Jan 2 02:00:59.937: ISDN Se7/0:23: Event: Call to 4724125 at 64 Kb/s *Jan 2
02:00:59.937: ISDN Se7/0:23: process_pri_call(): call id 0x8016, number 6665800, speed 64, call
type DATA, redialed? f, csm call? f, pdata? f *Jan 2 02:00:59.937: called type/plan overridden
by call_decode *Jan 2 02:00:59.937: didn't copy oct3a reason: not CALLER_NUMBER_IE *Jan 2
02:00:59.941: building outgoing channel id for call nfas_int is 0 len is 0 *Jan 2 02:00:59.941:
ISDN Se7/0:23: TX -> SETUP pd = 8 callref = 0x0013 *Jan 2 02:00:59.941: Bearer Capability i =
0x8890 *Jan 2 02:00:59.941: Channel ID i = 0xA98397 *Jan 2 02:00:59.941: Called Pa.rty Number i
= 0xA1, '6665800', Plan:ISDN, Type:National !--- Outgoing Q.931 SETUP message. Indicates an
outgoing call. !--- For more information on Q.931 refer to the document. !--- Troubleshooting
ISDN Layer 3 using the debug isdn q931 Command. *Jan 2 02:01:00.017: ISDN Se7/0:23: RX <-
CALL_PROC pd = 8 callref = 0x8013 *Jan 2 02:01:00.017: Channel ID i = 0xA98397 !--- The Call
Proceeding Message is sent through the D-channel. *Jan 2 02:01:00.017: ISDN Se7/0:23: LIF_EVENT:
ces/callid 1/0x8016 CALL_PROCEEDING *Jan 2 02:01:00.017: ISDN Se7/0:23: CALL_PROCEEDING id
0x8016 *Jan 2 02:01:00.021: ISDN Se7/0:23: PRI Event: 6, bchan = 22, call type = DATA *Jan 2
02:01:00.093: ISDN Se7/0:23: RX <- CONNECT pd = 8 callref = 0x8013 !--- Received the Q.931
CONNECT. *Jan 2 02:01:00.097: ISDN Se7/0:23: LIF_EVENT: ces/callid 1/0x8016 CALL_CONNECT *Jan 2
02:01:00.097: ISDN Se7/0:23: Event CALL_CONNECT dsl 0 *Jan 2 02:01:00.097: %LINK-3-UPDOWN:
Interface Serial7/0:22, changed state to up *Jan 2 02:01:00.097: Se7/0:22 PPP: Treating
connection as a callout *Jan 2 02:01:00.097: Se7/0:22 PPP: Phase is ESTABLISHING, Active Open [0
sess, 1 load] !--- LCP negotiation begins. *Jan 2 02:01:00.097: Se7/0:22 LCP: O CONFREQ [Closed]
id 7 len 15 *Jan 2 02:01:00.097: Se7/0:22 LCP: AuthProto CHAP (0x0305C22305) *Jan 2
02:01:00.097: Se7/0:22 LCP: MagicNumber 0x084E600A (0x0506084E600A) !--- Outgoing LCP CONFREQ.
!--- For more information on interpreting PPP debugs refer to the document !--- Dialup
Technology: Troubleshooting Techniques. *Jan 2 02:01:00.097: ISDN Se7/0:23: LIF_EVENT:
ces/callid 1/0x8016 CALL_PROGRESS *Jan 2 02:01:00.097: ISDN Se7/0:23: event CALL_PROGRESS dsl 0
*Jan 2 02:01:00.097: ISDN Se7/0:23: TX -> CONNECT_ACK pd = 8 callref = 0x0013 !--- D-channel
transmits a CONNECT_ACK. *Jan 2 02:01:00.105: Se7/0:22 LCP: I CONFREQ [REQsent] id 30 len 15

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*Jan 2 02:01:00.105: Se7/0:22 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 02:01:00.105: Se7/0:22 LCP: MagicNumber 0x28938B8C (0x050628938B8C) *Jan 2 02:01:00.105: Se7/0:22 LCP: O CONFACK [REQsent] id 30 len 15 *Jan 2 02:01:00.105: Se7/0:22 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 02:01:00.109: Se7/0:22 LCP: MagicNumber 0x28938B8C (0x050628938B8C) *Jan 2 02:01:00.109: Se7/0:22 LCP: I CONFACK [ACKsent] id 7 len 15 *Jan 2 02:01:00.109: Se7/0:22 LCP: AuthProto CHAP (0x0305C22305) *Jan 2 02:01:00.109: Se7/0:22 LCP: MagicNumber 0x084E600A (0x0506084E600A) *Jan 2 02:01:00.109: Se7/0:22 **LCP: State is Open ! --- LCP negotiation is complete.** *Jan 2 02:01:00.109: Se7/0:22 PPP: Phase is AUTHENTICATING, by both [0 sess, 1 load] *Jan 2 02:01:00.109: Se7/0:22 CHAP: O CHALLENGE id 7 len 27 from "Router" *Jan 2 02:01:00.121: Se7/0:22 CHAP: I CHALLENGE id 25 len 33 from "remoteISDN01" *Jan 2 02:01:00.121: Se7/0:22 CHAP: O RESPONSE id 25 len 27 from "Router" *Jan 2 02:01:00.129: Se7/0:22 CHAP: I SUCCESS id 25 len 4 *Jan 2 02:01:00.137: Se7/0:22 CHAP: I RESPONSE id 7 len 33 from "remoteISDN01" *Jan 2 02:01:00.137: Se7/0:22 CHAP: O SUCCESS id 7 len 4 **!--- CHAP authentication is successful. !--- If this fails verify that the username and password are correct. !--- Refer to [Dialup Technology: Troubleshooting Techniques](#).** *Jan 2 02:01:00.137: Se7/0:22 PPP: Phase is UP [0 sess, 1 load] *Jan 2 02:01:00.137: Se7/0:22 IPCP: O CONFREQ [Closed] id 2 len 10 *Jan 2 02:01:00.137: Se7/0:22 IPCP: Address 10.1.1.65 (0x03060A010141) *Jan 2 02:01:00.145: Se7/0:22 IPCP: I CONFREQ [REQsent] id 3 len 10 *Jan 2 02:01:00.145: Se7/0:22 IPCP: Address 10.1.1.66 (0x03060A010142) *Jan 2 02:01:00.145: Se7/0:22 IPCP: O CONFACK [REQsent] id 3 len 10 *Jan 2 02:01:00.145: Se7/0:22 IPCP: Address 10.1.1.66 (0x03060A010142) *Jan 2 02:01:00.145: Se7/0:22 IPCP: I CONFACK [ACKsent] id 2 len 10 *Jan 2 02:01:00.145: Se7/0:22 IPCP: Address 10.1.1.65 (0x03060A010141) *Jan 2 02:01:00.145: Se7/0:22 IPCP: State is Open *Jan 2 02:01:00.145: Se7/0:22 DDR: dialer protocol up *Jan 2 02:01:00.145: Di2 IPCP: **Install route to 10.1.1.66 !--- The Route has been successfully negotiated and installed in the routing table.** *Jan 2 02:01:01.137: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial7/0:22, changed state to up *Jan 2 02:01:06.097: %ISDN-6-CONNECT: Interface Serial7/0:22 is now connected to 6665800 remoteISDN01

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