

Cómo aplicar listas de acceso a interfaces de marcación con un servidor RADIUS

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[Introducción](#)

Este documento demuestra cómo aplicar las Listas de acceso a las interfaces de marcación con un servidor de RADIUS. Hay dos métodos posibles:

- Defina la lista de acceso numerada en el router, después refiérase a la lista de acceso numerada en el servidor de RADIUS. La mayoría de las versiones de software de Cisco IOS® soportan esto. Por ejemplo, defina la lista de acceso numerada en el router y refiérase a ellas en el servidor.
- Defina la lista de acceso entera en el servidor. El Cisco IOS Software Release 11.3 o Posterior se requiere para este método por usuario. Por ejemplo, defina la lista de acceso en el servidor de RADIUS (bastante que en el NAS). Cuando la llamada conecta, el NAS autentica la llamada con el servidor de RADIUS. Junto con cualquier información de autenticación, el servidor devuelve la lista de acceso al NAS que entonces aplica a la interfaz de marcación.

Nota: Para el ISDN, usted debe utilizar el **método por usuario** y usted debe configurar los Perfiles virtuales en el router. Éstos se describen para el Cisco IOS Software Release 11.3 en [configurar los Perfiles virtuales](#).

prerrequisitos

Requisitos

No hay requisitos específicos para este documento.

Componentes Utilizados

La información que contiene este documento se basa en estas versiones de software y hardware.

- Cisco IOS Software Release 11.1 o Posterior (defina las Listas de acceso en el router)
- Cisco IOS Software Release 11.3 o Posterior (defina las Listas de acceso en el servidor)
- Cisco Secure ACS UNIX o Cisco Secure ACS for Windows 2.x o Livingston RADIUS o Merit RADIUS

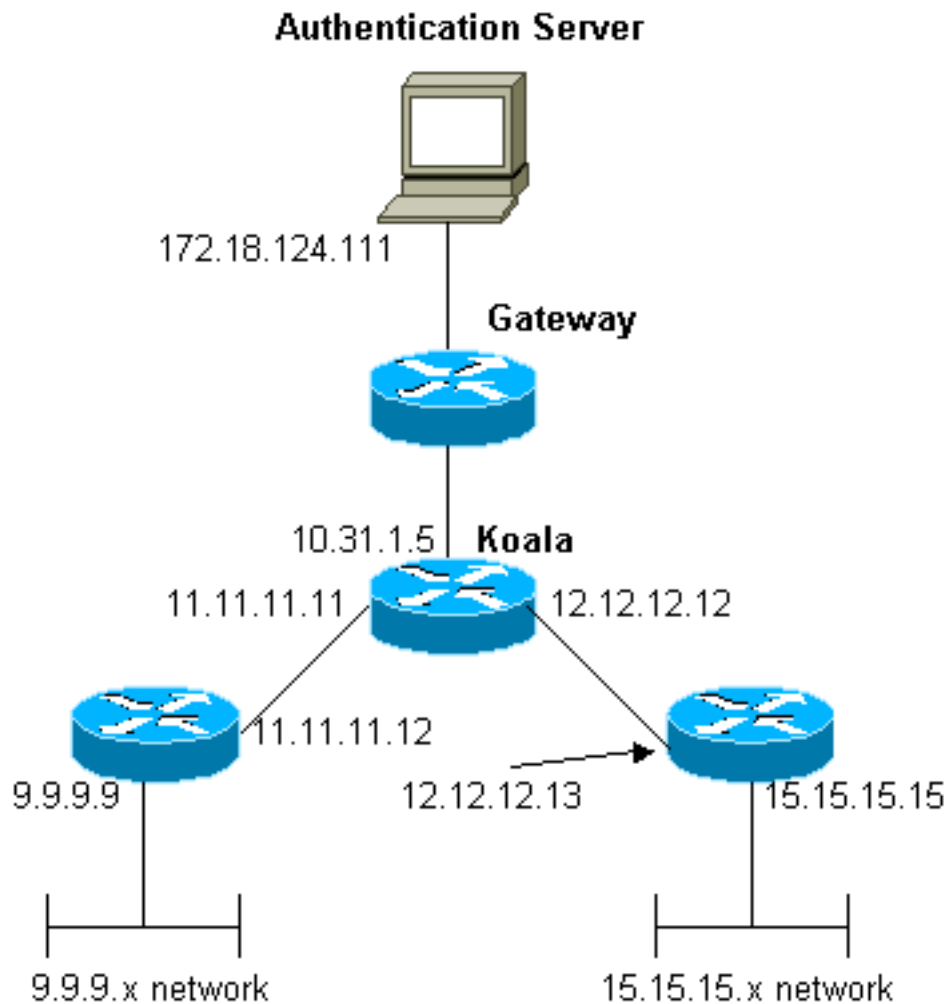
La información que se presenta en este documento se originó a partir de dispositivos dentro de un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese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

Convenciones

For more information on document conventions, refer to the [Cisco Technical Tips Conventions](#).

Diagrama de la red

Esta red se utiliza en ambos ejemplos:



Defina las listas de acceso numeradas en el router

Configuración del router

```

Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- The following three lines of the configuration !---
!--- are specific to Cisco IOS Software Release 12.0.5.T and
!--- later. !--- See below this configuration for commands !-
!--- for other Cisco IOS Software Releases. ! aaa
aaa authentication login default local group radius
aaa authentication ppp default if-needed group radius
aaa authorization network default group radius
enable secret 5 $1$mNzQ$g6XdsgVnnYjEa.17v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero

```

```

!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
access-list 101 permit icmp 1.1.1.0 0.0.0.255 9.9.9.0
0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0
0.0.0.255
!--- This is the access-list that is specified by the
RADIUS server. dialer-list 1 protocol ip permit dialer-
list 1 protocol ipx permit ! radius-server host
172.18.124.111 auth-port 1645 acct-port 1646 radius-
server key cisco ! line con 0 transport input none line
1 modem InOut transport input all stopbits 1 speed
115200 flowcontrol hardware line 2 16 line aux 0 line
vty 0 4 password ww ! end

```

[Comandos para otras versiones de Cisco IOS Software](#)

Nota: Para utilizar estos comandos, quite los comandos en intrépido de la configuración antedicha y pegue estos comandos adentro, según lo dictado por su versión de Cisco IOS Software.

[Cisco IOS Software Release 11.3.3.T con 12.0.5.T](#)

```

Current configuration:
!
version 12.0

```

```

service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- The following three lines of the configuration !--- are specific to Cisco IOS Software
Release 12.0.5.T and later. !--- See below this configuration for commands !--- for other Cisco
IOS Software Releases. ! aaa authentication login default local group radius
aaa authentication ppp default if-needed group radius
aaa authorization network default group radius
enable secret 5 $1$mznZQ$g6XdsgVnnYjEa.17v.Pij1
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 9.9.9.0 255.255.255.0 11.11.11.12
ip route 15.15.15.0 255.255.255.0 12.12.12.13
no ip http server
!
access-list 101 permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
!--- This is the access-list that is specified by the RADIUS server. dialer-list 1 protocol ip
permit dialer-list 1 protocol ipx permit ! radius-server host 172.18.124.111 auth-port 1645
acct-port 1646 radius-server key cisco ! line con 0 transport input none line 1 modem InOut
transport input all stopbits 1 speed 115200 flowcontrol hardware line 2 16 line aux 0 line vty 0
4 password ww ! end

```

[Cisco IOS Software Release 11.1 con 11.3.3.T](#)

Current configuration:

```
!  
version 12.0  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname koala  
!  
aaa new-model  
!  
!--- The following three lines of the configuration !--- are specific to Cisco IOS Software  
Release 12.0.5.T and later. !--- See below this configuration for commands !--- for other Cisco  
IOS Software Releases. ! aaa authentication login default local group radius  
aaa authentication ppp default if-needed group radius  
aaa authorization network default group radius  
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.17v.Pij1  
enable password ww  
!  
username john password 0 doe  
!  
ip subnet-zero  
!  
cns event-service server  
!  
interface Ethernet0  
ip address 10.31.1.5 255.255.255.0  
no ip directed-broadcast  
no mop enabled  
!  
interface Serial0  
ip address 11.11.11.11 255.255.255.0  
no ip directed-broadcast  
no ip mroute-cache  
no fair-queue  
!  
interface Serial1  
ip address 12.12.12.12 255.255.255.0  
no ip directed-broadcast  
!  
interface Async1  
ip unnumbered Ethernet0  
no ip directed-broadcast  
encapsulation ppp  
no ip route-cache  
no ip mroute-cache  
async mode dedicated  
peer default ip address pool mypool  
fair-queue 64 16 0  
no cdp enable  
ppp authentication chap  
!  
ip local pool mypool 1.1.1.1 1.1.1.5  
ip classless  
ip route 0.0.0.0 0.0.0.0 10.31.1.1  
ip route 9.9.9.0 255.255.255.0 11.11.11.12  
ip route 15.15.15.0 255.255.255.0 12.12.12.13  
no ip http server  
!  
access-list 101 permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
```

```
access-list 101 permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
!--- This is the access-list that is specified by the RADIUS server. dialer-list 1 protocol ip
permit dialer-list 1 protocol ipx permit ! radius-server host 172.18.124.111 auth-port 1645
acct-port 1646 radius-server key cisco ! line con 0 transport input none line 1 modem InOut
transport input all stopbits 1 speed 115200 flowcontrol hardware line 2 16 line aux 0 line vty 0
4 password ww ! end
```

Configuraciones del servidor - Listas de acceso del router

Este procedimiento implica la configuración de la lista de acceso sí mismo en el router. Configuran al servidor de RADIUS con el número de lista de acceso que es aplicado. Cuando la llamada autentica, el servidor de RADIUS vuelve el número de lista de acceso al NAS, que entonces aplica la lista de acceso correspondiente.

Configuración del servidor - Cisco Secure ACS for Windows 2.X - RADIUS

Siga los pasos a continuación:

1. En los ajustes de usuario, complete el nombre y las contraseñas.
2. En las configuraciones de grupo, marque:Atributo 6 - **Framed**Atributo 7 - **PPP**Atributo 11 - **Id del filtro**. En el área abajo, tipo el **101.in****Nota:** El atributo 11 especifica que la lista de acceso 101 es aplicada. Asegúrese de que el access-list 101 esté configurado en el router.

Configuración del servidor - UNIX RADIUS del Cisco Secure ACS

```
rtp-evergreen# ./ViewProfile -p 9900 -u chaprtr
User Profile Information
user = chaprtr{
profile_id = 51
profile_cycle = 1
radius=Cisco {
check_items= {
2="chaprtr"
}
reply_attributes= {
6=2
7=1
11=101.in
}
}
}
```

Nota: El atributo 11 especifica que el access-list 101 es aplicado. Asegúrese de que el access-list 101 esté configurado en el router.

Configuración del servidor - Livingston RADIUS

```
chaprtr Password = chaprtr
User-Service-Type = Framed-User,
Framed-Protocol = PPP,
Framed-Filter-Id = 101.in
```

Nota: Esto especifica que el access-list 101 es aplicado. Asegúrese de que el access-list 101 esté configurado en el router.

Depuración del router de ejemplo

koala#show debug

General OS:

AAA Authentication debugging is on

AAA Authorization debugging is on

PPP:

PPP protocol negotiation debugging is on

Radius protocol debugging is on

koala#

```
*Mar 1 00:55:36.307: As1 LCP: I CONFREQ [Closed] id 0 len 23
*Mar 1 00:55:36.311: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.311: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.315: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.319: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.319: As1 LCP: Callback 6 (0x0D0306)
*Mar 1 00:55:36.323: As1 LCP: Lower layer not up, Fast Starting
*Mar 1 00:55:36.323: As1 PPP: Treating connection as a dedicated line
*Mar 1 00:55:36.327: As1 PPP: Phase is ESTABLISHING,
    Active Open [0 sess, 0 load]
*Mar 1 00:55:36.331: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
*Mar 1 00:55:36.335: As1 LCP: O CONFREQ [Closed] id 26 len 25
*Mar 1 00:55:36.339: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 00:55:36.343: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 00:55:36.343: As1 LCP: MagicNumber 0xE0512B4A (0x0506E0512B4A)
*Mar 1 00:55:36.347: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.347: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.355: As1 LCP: O CONFREQ [REQsent] id 0 len 7
*Mar 1 00:55:36.355: As1 LCP: Callback 6 (0x0D0306)
00:55:36: %LINK-3-UPDOWN: Interface Async1, changed state to up
*Mar 1 00:55:36.479: As1 LCP: I CONFACK [REQsent] id 26 len 25
*Mar 1 00:55:36.483: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 00:55:36.483: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 00:55:36.487: As1 LCP: MagicNumber 0xE0512B4A (0x0506E0512B4A)
*Mar 1 00:55:36.491: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.491: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.495: As1 LCP: I CONFREQ [ACKrcvd] id 1 len 20
*Mar 1 00:55:36.499: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.503: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.503: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.507: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.511: As1 LCP: O CONFACK [ACKrcvd] id 1 len 20
*Mar 1 00:55:36.515: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.515: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.519: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.519: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.523: As1 LCP: State is Open
*Mar 1 00:55:36.527: As1 PPP: Phase is AUTHENTICATING,
    by this end [0 sess, 1 load]
*Mar 1 00:55:36.531: As1 CHAP: O CHALLENGE id 8 len 26 from "koala"
*Mar 1 00:55:36.647: As1 LCP: I IDENTIFY [Open] id 2 len 18
    magic 0x00004CDD MSRASV4.00
*Mar 1 00:55:36.651: As1 LCP: I IDENTIFY [Open] id 3 len 21
    magic 0x00004CDD MSRAS-1-ZEKIE
*Mar 1 00:55:36.655: As1 CHAP: I RESPONSE id 8 len 28 from "chaptrtr"
*Mar 1 00:55:36.663: AAA: parse name=Async1 idb type=10 tty=1
*Mar 1 00:55:36.667: AAA: name=Async1 flags=0x11 type=4 shelf=0
    slot=0 adapter=0 port=1 channel=0
*Mar 1 00:55:36.671: AAA/MEMORY: create_user (0x4E9DF4) user='chaptrtr'
    ruser='' port='Async1' rem_addr='async'
    authen_type=CHAP service=PPP priv=1
*Mar 1 00:55:36.675: AAA/AUTHEN/START (128288046): port='Async1'
```



```
list='' action=LOGIN service=PPP
*Mar 1 00:55:36.675: AAA/AUTHEN/START (128288046): using "default" list
*Mar 1 00:55:36.679: AAA/AUTHEN (128288046): status = UNKNOWN
*Mar 1 00:55:36.679: AAA/AUTHEN/START (128288046): Method=radius (radius)
*Mar 1 00:55:36.683: RADIUS: ustruct sharecount=1
*Mar 1 00:55:36.687: RADIUS: Initial Transmit Async1
    id 8 172.18.124.111:1645, Access-Request, len 78
*Mar 1 00:55:36.691:      Attribute 4 6 0A1F0105
*Mar 1 00:55:36.695:      Attribute 5 6 00000001
*Mar 1 00:55:36.695:      Attribute 61 6 00000000
*Mar 1 00:55:36.695:      Attribute 1 9 63686170
*Mar 1 00:55:36.699:      Attribute 3 19 08E468A8
*Mar 1 00:55:36.699:      Attribute 6 6 00000002
*Mar 1 00:55:36.703:      Attribute 7 6 00000001
*Mar 1 00:55:36.835: RADIUS: Received from
    id 8 172.18.124.111:1645, Access-Accept, len 40
*Mar 1 00:55:36.839:      Attribute 6 6 00000002
*Mar 1 00:55:36.843:      Attribute 7 6 00000001
*Mar 1 00:55:36.843:      Attribute 11 8 3130312E
*Mar 1 00:55:36.851: AAA/AUTHEN (128288046): status = PASS
*Mar 1 00:55:36.855: As1 AAA/AUTHOR/LCP: Authorize LCP
*Mar 1 00:55:36.855: As1 AAA/AUTHOR/LCP (821299011):
    Port='Async1' list='' service=NET
*Mar 1 00:55:36.859: AAA/AUTHOR/LCP: As1 (821299011) user='chaprtr'
*Mar 1 00:55:36.859: As1 AAA/AUTHOR/LCP (821299011):
    send AV service=ppp
*Mar 1 00:55:36.863: As1 AAA/AUTHOR/LCP (821299011):
    send AV protocol=lcp
*Mar 1 00:55:36.863: As1 AAA/AUTHOR/LCP (821299011):
    found list "default"
*Mar 1 00:55:36.867: As1 AAA/AUTHOR/LCP (821299011):
    Method=radius (radius)
*Mar 1 00:55:36.871: As1 AAA/AUTHOR (821299011): Post
    authorization status = PASS_REPL
*Mar 1 00:55:36.871: As1 AAA/AUTHOR/LCP: Processing
    AV service=ppp
*Mar 1 00:55:36.879: As1 CHAP: 0 SUCCESS id 8 len 4
*Mar 1 00:55:36.883: As1 PPP: Phase is UP [0 sess, 1 load]
*Mar 1 00:55:36.887: As1 AAA/AUTHOR/FSM: (0): Can we
    start IPCP?
*Mar 1 00:55:36.887: As1 AAA/AUTHOR/FSM (3701006396):
    Port='Async1' list='' service=NET
*Mar 1 00:55:36.891: AAA/AUTHOR/FSM: As1 (3701006396)
    user='chaprtr'
*Mar 1 00:55:36.891: As1 AAA/AUTHOR/FSM (3701006396):
    send AV service=ppp
*Mar 1 00:55:36.895: As1 AAA/AUTHOR/FSM (3701006396):
    send AV protocol=ip
*Mar 1 00:55:36.899: As1 AAA/AUTHOR/FSM (3701006396):
    found list "default"
*Mar 1 00:55:36.899: As1 AAA/AUTHOR/FSM (3701006396):
    Method=radius (radius)
*Mar 1 00:55:36.903: As1 AAA/AUTHOR (3701006396):
    Post authorization status = PASS_REPL
*Mar 1 00:55:36.907: As1 AAA/AUTHOR/FSM: We can start IPCP
*Mar 1 00:55:36.915: As1 IPCP: 0 CONFREQ [Closed] id 5 len 10
*Mar 1 00:55:36.915: As1 IPCP:      Address 10.31.1.5 (0x03060A1F0105)
*Mar 1 00:55:36.923: As1 AAA/AUTHOR/FSM: (0): Can we start CDPCP?
*Mar 1 00:55:36.923: As1 AAA/AUTHOR/FSM (3075092411):
    Port='Async1' list='' service=NET
*Mar 1 00:55:36.927: AAA/AUTHOR/FSM: As1 (3075092411) user='chaprtr'
*Mar 1 00:55:36.931: As1 AAA/AUTHOR/FSM (3075092411):
    send AV service=ppp
*Mar 1 00:55:36.931: As1 AAA/AUTHOR/FSM (3075092411):
```

```
send AV protocol=cdp
*Mar 1 00:55:36.935: As1 AAA/AUTHOR/FSM (3075092411):
found list "default"
*Mar 1 00:55:36.935: As1 AAA/AUTHOR/FSM (3075092411):
Method=radius (radius)
*Mar 1 00:55:36.939: RADIUS: unknown proto "cdp" in acl-check
*Mar 1 00:55:36.943: RADIUS: Filter-Id 101 out of range
for protocol cdp. Ignoring.
*Mar 1 00:55:36.943: As1 AAA/AUTHOR (3075092411): Post
authorization status = PASS_REPL
*Mar 1 00:55:36.947: As1 AAA/AUTHOR/FSM: We can start CDPCP
*Mar 1 00:55:36.951: As1 CDPCP: O CONFREQ [Closed] id 5 len 4
*Mar 1 00:55:36.987: As1 CCP: I CONFREQ [Not negotiated] id 4 len 12
*Mar 1 00:55:36.991: As1 CCP: OUI (0x0002)
*Mar 1 00:55:36.991: As1 CCP: MS-PPC supported bits
0x00007080 (0x120600007080)
*Mar 1 00:55:36.999: As1 LCP: O PROTREJ [Open] id 27 len 18
protocol CCP (0x80FD0104000C0002120600007080)
*Mar 1 00:55:37.003: As1 IPCP: I CONFREQ [REQsent] id 5 len 40
*Mar 1 00:55:37.007: As1 IPCP: CompressType VJ 15 slots
CompressSlotID (0x0206002D0F01)
*Mar 1 00:55:37.011: As1 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 1 00:55:37.015: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
*Mar 1 00:55:37.019: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
*Mar 1 00:55:37.023: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
*Mar 1 00:55:37.027: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
*Mar 1 00:55:37.027: As1 AAA/AUTHOR/IPCP: Start. Her
address 0.0.0.0, we want 0.0.0.0
*Mar 1 00:55:37.031: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp
*Mar 1 00:55:37.035: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101
!--- Note that acl 101 is applied to the dialer interface. *Mar 1 00:55:37.035: As1
AAA/AUTHOR/IPCP: Authorization succeeded *Mar 1 00:55:37.039: As1 AAA/AUTHOR/IPCP: Done. Her
address 0.0.0.0, we want 0.0.0.0 *Mar 1 00:55:37.043: As1 IPCP: Pool returned 1.1.1.1 *Mar 1
00:55:37.047: As1 IPCP: O CONFREQ [REQsent] id 5 len 28 *Mar 1 00:55:37.051: As1 IPCP:
CompressType VJ 15 slots CompressSlotID (0x0206002D0F01) *Mar 1 00:55:37.055: As1 IPCP:
PrimaryWINS 0.0.0.0 (0x820600000000) *Mar 1 00:55:37.059: As1 IPCP: SecondaryDNS 0.0.0.0
(0x830600000000) *Mar 1 00:55:37.063: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000) *Mar 1
00:55:37.067: As1 IPCP: I CONFACK [REQsent] id 5 len 10 *Mar 1 00:55:37.071: As1 IPCP: Address
10.31.1.5 (0x03060A1F0105) *Mar 1 00:55:37.075: As1 LCP: I PROTREJ [Open] id 6 len 10 protocol
CDPCP (0x820701050004) *Mar 1 00:55:37.079: As1 CDPCP: State is Closed *Mar 1 00:55:37.183: As1
IPCP: I CONFREQ [ACKrcvd] id 7 len 16 *Mar 1 00:55:37.187: As1 IPCP: Address 0.0.0.0
(0x030600000000) *Mar 1 00:55:37.191: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000) *Mar 1
00:55:37.191: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 1.1.1.1 *Mar 1
00:55:37.195: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp *Mar 1 00:55:37.199: As1
AAA/AUTHOR/IPCP: Processing AV inacl=101 *Mar 1 00:55:37.199: As1 AAA/AUTHOR/IPCP: Authorization
succeeded *Mar 1 00:55:37.203: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 1.1.1.1
*Mar 1 00:55:37.207: As1 IPCP: O CONFNAK [ACKrcvd] id 7 len 16 *Mar 1 00:55:37.211: As1 IPCP:
Address 1.1.1.1 (0x030601010101) *Mar 1 00:55:37.215: As1 IPCP: PrimaryDNS 172.18.125.3
(0x8106AC127D03) *Mar 1 00:55:37.327: As1 IPCP: I CONFREQ [ACKrcvd] id 8 len 16 *Mar 1
00:55:37.331: As1 IPCP: Address 1.1.1.1 (0x030601010101) *Mar 1 00:55:37.335: As1 IPCP:
PrimaryDNS 172.18.125.3 (0x8106AC127D03) *Mar 1 00:55:37.335: As1 AAA/AUTHOR/IPCP: Start. Her
address 1.1.1.1, we want 1.1.1.1 *Mar 1 00:55:37.343: As1 AAA/AUTHOR/IPCP (408915304):
Port='Asyncl' list='' service=NET *Mar 1 00:55:37.347: AAA/AUTHOR/IPCP: As1 (408915304)
user='chaprtr' *Mar 1 00:55:37.347: As1 AAA/AUTHOR/IPCP (408915304): send AV service=ppp *Mar 1
00:55:37.351: As1 AAA/AUTHOR/IPCP (408915304): send AV protocol=ip *Mar 1 00:55:37.355: As1
AAA/AUTHOR/IPCP (408915304): send AV addr*1.1.1.1 *Mar 1 00:55:37.355: As1 AAA/AUTHOR/IPCP
(408915304): found list "default" *Mar 1 00:55:37.359: As1 AAA/AUTHOR/IPCP (408915304):
Method=radius (radius) *Mar 1 00:55:37.363: As1 AAA/AUTHOR (408915304): Post authorization
status = PASS_REPL *Mar 1 00:55:37.367: As1 AAA/AUTHOR/IPCP: Reject 1.1.1.1, using 1.1.1.1 *Mar
1 00:55:37.375: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp *Mar 1 00:55:37.375: As1
AAA/AUTHOR/IPCP: Processing AV inacl=101 *Mar 1 00:55:37.379: As1 AAA/AUTHOR/IPCP: Processing AV
addr*1.1.1.1 *Mar 1 00:55:37.379: As1 AAA/AUTHOR/IPCP: Authorization succeeded *Mar 1
00:55:37.383: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.1, we want 1.1.1.1 *Mar 1
00:55:37.387: As1 IPCP: O CONFACK [ACKrcvd] id 8 len 16 *Mar 1 00:55:37.391: As1 IPCP: Address
```

```
1.1.1.1 (0x030601010101) *Mar 1 00:55:37.395: As1 IPCP: PrimaryDNS 172.18.125.3 (0x8106AC127D03)
*Mar 1 00:55:37.399: As1 IPCP: State is Open *Mar 1 00:55:37.727: As1 IPCP: Install route to
1.1.1.1 *Mar 1 00:55:37: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state
to up koala#
```

Defina las Listas de acceso en el servidor

Nota: Las sentencias de Route no tienen que ser pasadas abajo del servidor al router; el usuario del dial coge normalmente las rutas del router. La presencia de las sentencias de Route en el router depende encendido si las rutas deben ser pasadas abajo del servidor o ser cogidas del router. Sin embargo, en este ejemplo, la lista de acceso y las sentencias de Route se pasan abajo.

```
koala#show debug
```

```
General OS:
```

```
AAA Authentication debugging is on
```

```
AAA Authorization debugging is on
```

```
PPP:
```

```
PPP protocol negotiation debugging is on
```

```
Radius protocol debugging is on
```

```
koala#
```

```
*Mar 1 00:55:36.307: As1 LCP: I CONFREQ [Closed] id 0 len 23
*Mar 1 00:55:36.311: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.311: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.315: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.319: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.319: As1 LCP: Callback 6 (0x0D0306)
*Mar 1 00:55:36.323: As1 LCP: Lower layer not up, Fast Starting
*Mar 1 00:55:36.323: As1 PPP: Treating connection as a dedicated line
*Mar 1 00:55:36.327: As1 PPP: Phase is ESTABLISHING,
Active Open [0 sess, 0 load]
*Mar 1 00:55:36.331: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
*Mar 1 00:55:36.335: As1 LCP: O CONFREQ [Closed] id 26 len 25
*Mar 1 00:55:36.339: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 00:55:36.343: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 00:55:36.343: As1 LCP: MagicNumber 0xE0512B4A (0x0506E0512B4A)
*Mar 1 00:55:36.347: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.347: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.355: As1 LCP: O CONFREQ [REQsent] id 0 len 7
*Mar 1 00:55:36.355: As1 LCP: Callback 6 (0x0D0306)
00:55:36: %LINK-3-UPDOWN: Interface Async1, changed state to up
*Mar 1 00:55:36.479: As1 LCP: I CONFACK [REQsent] id 26 len 25
*Mar 1 00:55:36.483: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 1 00:55:36.483: As1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 00:55:36.487: As1 LCP: MagicNumber 0xE0512B4A (0x0506E0512B4A)
*Mar 1 00:55:36.491: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.491: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.495: As1 LCP: I CONFREQ [ACKrcvd] id 1 len 20
*Mar 1 00:55:36.499: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.503: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.503: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.507: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.511: As1 LCP: O CONFACK [ACKrcvd] id 1 len 20
*Mar 1 00:55:36.515: As1 LCP: ACCM 0x00000000 (0x020600000000)
*Mar 1 00:55:36.515: As1 LCP: MagicNumber 0x00004CDD (0x050600004CDD)
*Mar 1 00:55:36.519: As1 LCP: PFC (0x0702)
*Mar 1 00:55:36.519: As1 LCP: ACFC (0x0802)
*Mar 1 00:55:36.523: As1 LCP: State is Open
*Mar 1 00:55:36.527: As1 PPP: Phase is AUTHENTICATING,
by this end [0 sess, 1 load]
*Mar 1 00:55:36.531: As1 CHAP: O CHALLENGE id 8 len 26 from "koala"
```

*Mar 1 00:55:36.647: As1 LCP: I IDENTIFY [Open] id 2 len 18
magic 0x00004CDD MSRASV4.00

*Mar 1 00:55:36.651: As1 LCP: I IDENTIFY [Open] id 3 len 21
magic 0x00004CDD MSRAS-1-ZEKIE

*Mar 1 00:55:36.655: As1 CHAP: I RESPONSE id 8 len 28 from "chaptrtr"

*Mar 1 00:55:36.663: AAA: parse name=Async1 idb type=10 tty=1

*Mar 1 00:55:36.667: AAA: name=Async1 flags=0x11 type=4 shelf=0
slot=0 adapter=0 port=1 channel=0

*Mar 1 00:55:36.671: AAA/MEMORY: create_user (0x4E9DF4) user='chaptrtr'
ruser='' port='Async1' rem_addr='async'
authen_type=CHAP service=PPP priv=1

*Mar 1 00:55:36.675: AAA/AUTHEN/START (128288046): port='Async1'
list='' action=LOGIN service=PPP

*Mar 1 00:55:36.675: AAA/AUTHEN/START (128288046): using "default" list

*Mar 1 00:55:36.679: AAA/AUTHEN (128288046): status = UNKNOWN

*Mar 1 00:55:36.679: AAA/AUTHEN/START (128288046): Method=radius (radius)

*Mar 1 00:55:36.683: RADIUS: ustruct sharecount=1

*Mar 1 00:55:36.687: RADIUS: Initial Transmit Async1
id 8 172.18.124.111:1645, Access-Request, len 78

*Mar 1 00:55:36.691: Attribute 4 6 0A1F0105

*Mar 1 00:55:36.695: Attribute 5 6 00000001

*Mar 1 00:55:36.695: Attribute 61 6 00000000

*Mar 1 00:55:36.695: Attribute 1 9 63686170

*Mar 1 00:55:36.699: Attribute 3 19 08E468A8

*Mar 1 00:55:36.699: Attribute 6 6 00000002

*Mar 1 00:55:36.703: Attribute 7 6 00000001

*Mar 1 00:55:36.835: RADIUS: Received from
id 8 172.18.124.111:1645, Access-Accept, len 40

*Mar 1 00:55:36.839: Attribute 6 6 00000002

*Mar 1 00:55:36.843: Attribute 7 6 00000001

*Mar 1 00:55:36.843: Attribute 11 8 3130312E

*Mar 1 00:55:36.851: AAA/AUTHEN (128288046): status = PASS

*Mar 1 00:55:36.855: As1 AAA/AUTHOR/LCP: Authorize LCP

*Mar 1 00:55:36.855: As1 AAA/AUTHOR/LCP (821299011):
Port='Async1' list='' service=NET

*Mar 1 00:55:36.859: AAA/AUTHOR/LCP: As1 (821299011) user='chaptrtr'

*Mar 1 00:55:36.859: As1 AAA/AUTHOR/LCP (821299011):
send AV service=ppp

*Mar 1 00:55:36.863: As1 AAA/AUTHOR/LCP (821299011):
send AV protocol=lcp

*Mar 1 00:55:36.863: As1 AAA/AUTHOR/LCP (821299011):
found list "default"

*Mar 1 00:55:36.867: As1 AAA/AUTHOR/LCP (821299011):
Method=radius (radius)

*Mar 1 00:55:36.871: As1 AAA/AUTHOR (821299011): Post
authorization status = PASS_REPL

*Mar 1 00:55:36.871: As1 AAA/AUTHOR/LCP: Processing
AV service=ppp

*Mar 1 00:55:36.879: As1 CHAP: O SUCCESS id 8 len 4

*Mar 1 00:55:36.883: As1 PPP: Phase is UP [0 sess, 1 load]

*Mar 1 00:55:36.887: As1 AAA/AUTHOR/FSM: (0): Can we
start IPCP?

*Mar 1 00:55:36.887: As1 AAA/AUTHOR/FSM (3701006396):
Port='Async1' list='' service=NET

*Mar 1 00:55:36.891: AAA/AUTHOR/FSM: As1 (3701006396)
user='chaptrtr'

*Mar 1 00:55:36.891: As1 AAA/AUTHOR/FSM (3701006396):
send AV service=ppp

*Mar 1 00:55:36.895: As1 AAA/AUTHOR/FSM (3701006396):
send AV protocol=ip

*Mar 1 00:55:36.899: As1 AAA/AUTHOR/FSM (3701006396):
found list "default"

*Mar 1 00:55:36.899: As1 AAA/AUTHOR/FSM (3701006396):
Method=radius (radius)

*Mar 1 00:55:36.903: As1 AAA/AUTHOR (3701006396):
Post authorization status = PASS_REPL

*Mar 1 00:55:36.907: As1 AAA/AUTHOR/FSM: We can start IPCP

*Mar 1 00:55:36.915: As1 IPCP: O CONFREQ [Closed] id 5 len 10

*Mar 1 00:55:36.915: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)

*Mar 1 00:55:36.923: As1 AAA/AUTHOR/FSM: (0): Can we start CDPCP?

*Mar 1 00:55:36.923: As1 AAA/AUTHOR/FSM (3075092411):
Port='Asyncl' list='' service=NET

*Mar 1 00:55:36.927: AAA/AUTHOR/FSM: As1 (3075092411) user='chaprtr'

*Mar 1 00:55:36.931: As1 AAA/AUTHOR/FSM (3075092411):
send AV service=ppp

*Mar 1 00:55:36.931: As1 AAA/AUTHOR/FSM (3075092411):
send AV protocol=cdp

*Mar 1 00:55:36.935: As1 AAA/AUTHOR/FSM (3075092411):
found list "default"

*Mar 1 00:55:36.935: As1 AAA/AUTHOR/FSM (3075092411):
Method=radius (radius)

*Mar 1 00:55:36.939: RADIUS: unknown proto "cdp" in acl-check

*Mar 1 00:55:36.943: RADIUS: Filter-Id 101 out of range
for protocol cdp. Ignoring.

*Mar 1 00:55:36.943: As1 AAA/AUTHOR (3075092411): Post
authorization status = PASS_REPL

*Mar 1 00:55:36.947: As1 AAA/AUTHOR/FSM: We can start CDPCP

*Mar 1 00:55:36.951: As1 CDPCP: O CONFREQ [Closed] id 5 len 4

*Mar 1 00:55:36.987: As1 CCP: I CONFREQ [Not negotiated] id 4 len 12

*Mar 1 00:55:36.991: As1 CCP: OUI (0x0002)

*Mar 1 00:55:36.991: As1 CCP: MS-PPC supported bits
0x00007080 (0x120600007080)

*Mar 1 00:55:36.999: As1 LCP: O PROTREJ [Open] id 27 len 18
protocol CCP (0x80FD0104000C0002120600007080)

*Mar 1 00:55:37.003: As1 IPCP: I CONFREQ [REQsent] id 5 len 40

*Mar 1 00:55:37.007: As1 IPCP: CompressType VJ 15 slots
CompressSlotID (0x0206002D0F01)

*Mar 1 00:55:37.011: As1 IPCP: Address 0.0.0.0 (0x030600000000)

*Mar 1 00:55:37.015: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)

*Mar 1 00:55:37.019: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)

*Mar 1 00:55:37.023: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)

*Mar 1 00:55:37.027: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)

*Mar 1 00:55:37.027: As1 AAA/AUTHOR/IPCP: Start. Her
address 0.0.0.0, we want 0.0.0.0

*Mar 1 00:55:37.031: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp

***Mar 1 00:55:37.035: As1 AAA/AUTHOR/IPCP: Processing AV inacl=101**

!--- Note that acl 101 is applied to the dialer interface. *Mar 1 00:55:37.035: As1
AAA/AUTHOR/IPCP: Authorization succeeded *Mar 1 00:55:37.039: As1 AAA/AUTHOR/IPCP: Done. Her
address 0.0.0.0, we want 0.0.0.0 *Mar 1 00:55:37.043: As1 IPCP: Pool returned 1.1.1.1 *Mar 1
00:55:37.047: As1 IPCP: O CONFREQ [REQsent] id 5 len 28 *Mar 1 00:55:37.051: As1 IPCP:
CompressType VJ 15 slots CompressSlotID (0x0206002D0F01) *Mar 1 00:55:37.055: As1 IPCP:
PrimaryWINS 0.0.0.0 (0x820600000000) *Mar 1 00:55:37.059: As1 IPCP: SecondaryDNS 0.0.0.0
(0x830600000000) *Mar 1 00:55:37.063: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000) *Mar 1
00:55:37.067: As1 IPCP: I CONFREQ [REQsent] id 5 len 10 *Mar 1 00:55:37.071: As1 IPCP: Address
10.31.1.5 (0x03060A1F0105) *Mar 1 00:55:37.075: As1 LCP: I PROTREJ [Open] id 6 len 10 protocol
CDPCP (0x820701050004) *Mar 1 00:55:37.079: As1 CDPCP: State is Closed *Mar 1 00:55:37.183: As1
IPCP: I CONFREQ [ACKrcvd] id 7 len 16 *Mar 1 00:55:37.187: As1 IPCP: Address 0.0.0.0
(0x030600000000) *Mar 1 00:55:37.191: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000) *Mar 1
00:55:37.191: As1 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 1.1.1.1 *Mar 1
00:55:37.195: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp *Mar 1 00:55:37.199: As1
AAA/AUTHOR/IPCP: Processing AV inacl=101 *Mar 1 00:55:37.199: As1 AAA/AUTHOR/IPCP: Authorization
succeeded *Mar 1 00:55:37.203: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 1.1.1.1
*Mar 1 00:55:37.207: As1 IPCP: O CONFREQ [ACKrcvd] id 7 len 16 *Mar 1 00:55:37.211: As1 IPCP:
Address 1.1.1.1 (0x030601010101) *Mar 1 00:55:37.215: As1 IPCP: PrimaryDNS 172.18.125.3
(0x8106AC127D03) *Mar 1 00:55:37.327: As1 IPCP: I CONFREQ [ACKrcvd] id 8 len 16 *Mar 1
00:55:37.331: As1 IPCP: Address 1.1.1.1 (0x030601010101) *Mar 1 00:55:37.335: As1 IPCP:
PrimaryDNS 172.18.125.3 (0x8106AC127D03) *Mar 1 00:55:37.335: As1 AAA/AUTHOR/IPCP: Start. Her
address 1.1.1.1, we want 1.1.1.1 *Mar 1 00:55:37.343: As1 AAA/AUTHOR/IPCP (408915304):

```
Port='Async1' list='' service=NET *Mar 1 00:55:37.347: AAA/AUTHOR/IPCP: As1 (408915304)
user='chaprtr' *Mar 1 00:55:37.347: As1 AAA/AUTHOR/IPCP (408915304): send AV service=ppp *Mar 1
00:55:37.351: As1 AAA/AUTHOR/IPCP (408915304): send AV protocol=ip *Mar 1 00:55:37.355: As1
AAA/AUTHOR/IPCP (408915304): send AV addr*1.1.1.1 *Mar 1 00:55:37.355: As1 AAA/AUTHOR/IPCP
(408915304): found list "default" *Mar 1 00:55:37.359: As1 AAA/AUTHOR/IPCP (408915304):
Method=radius (radius) *Mar 1 00:55:37.363: As1 AAA/AUTHOR (408915304): Post authorization
status = PASS_REPL *Mar 1 00:55:37.367: As1 AAA/AUTHOR/IPCP: Reject 1.1.1.1, using 1.1.1.1 *Mar
1 00:55:37.375: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp *Mar 1 00:55:37.375: As1
AAA/AUTHOR/IPCP: Processing AV inacl=101 *Mar 1 00:55:37.379: As1 AAA/AUTHOR/IPCP: Processing AV
addr*1.1.1.1 *Mar 1 00:55:37.379: As1 AAA/AUTHOR/IPCP: Authorization succeeded *Mar 1
00:55:37.383: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.1, we want 1.1.1.1 *Mar 1
00:55:37.387: As1 IPCP: O CONFACK [ACKrcvd] id 8 len 16 *Mar 1 00:55:37.391: As1 IPCP: Address
1.1.1.1 (0x030601010101) *Mar 1 00:55:37.395: As1 IPCP: PrimaryDNS 172.18.125.3 (0x8106AC127D03)
*Mar 1 00:55:37.399: As1 IPCP: State is Open *Mar 1 00:55:37.727: As1 IPCP: Install route to
1.1.1.1 *Mar 1 00:55:37: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state
to up koala#
```

En esta configuración de muestra, el paso de las rutas abajo del servidor está solamente con objeto del ejemplo.

Configuración del router

```
Current configuration:
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- The following three lines of the configuration are
!--- specific to Cisco IOS Software Release 12.0.5.T and
!--- later. !--- See below this configuration for commands !-
-- for other Cisco IOS Software Releases. ! aaa
authentication login default group radius none
aaa authentication ppp default if-needed group radius
aaa authorization network default group radius
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
```

```
!  
interface Async1  
ip unnumbered Ethernet0  
no ip directed-broadcast  
encapsulation ppp  
no ip route-cache  
no ip mroute-cache  
async mode dedicated  
peer default ip address pool mypool  
fair-queue 64 16 0  
no cdp enable  
ppp authentication chap  
!  
ip local pool mypool 1.1.1.1 1.1.1.5  
ip classless  
ip route 0.0.0.0 0.0.0.0 10.31.1.1  
ip route 172.17.192.0 255.255.255.0 10.31.1.1  
ip route 172.18.124.0 255.255.255.0 10.31.1.1  
ip route 172.18.125.0 255.255.255.0 10.31.1.1  
no ip http server  
!  
dialer-list 1 protocol ip permit  
dialer-list 1 protocol ipx permit  
!  
radius-server host 172.18.124.111 auth-port 1645 acct-  
port 1646  
radius-server key cisco  
!  
line con 0  
transport input none  
line 1  
autoselect during-login  
autoselect ppp  
modem InOut  
transport input all  
stopbits 1  
speed 115200  
flowcontrol hardware  
line 2 16  
line aux 0  
line vty 0 4  
password ww  
!  
end
```

[Comandos para otras versiones de Cisco IOS Software](#)

Nota: Para utilizar estos comandos, quite los comandos en intrépido de la configuración antedicha y pegue estos comandos adentro, según lo dictado por su versión de Cisco IOS Software.

[Cisco IOS Software Release 11.3.3.T con 12.0.5.T](#)

Current configuration:

```
!  
version 12.0  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname koala
```

```
!  
aaa new-model  
!  
!--- The following three lines of the configuration are !--- specific to Cisco IOS Software  
Release 12.0.5.T and later. !--- See below this configuration for commands !--- for other Cisco  
IOS Software Releases. ! aaa authentication login default group radius none  
aaa authentication ppp default if-needed group radius  
aaa authorization network default group radius  
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl  
enable password ww  
!  
username john password 0 doe  
!  
ip subnet-zero  
!  
cns event-service server  
!  
interface Ethernet0  
ip address 10.31.1.5 255.255.255.0  
no ip directed-broadcast  
no mop enabled  
!  
interface Serial0  
ip address 11.11.11.11 255.255.255.0  
no ip directed-broadcast  
no ip mroute-cache  
no fair-queue  
!  
interface Serial1  
ip address 12.12.12.12 255.255.255.0  
no ip directed-broadcast  
!  
interface Async1  
ip unnumbered Ethernet0  
no ip directed-broadcast  
encapsulation ppp  
no ip route-cache  
no ip mroute-cache  
async mode dedicated  
peer default ip address pool mypool  
fair-queue 64 16 0  
no cdp enable  
ppp authentication chap  
!  
ip local pool mypool 1.1.1.1 1.1.1.5  
ip classless  
ip route 0.0.0.0 0.0.0.0 10.31.1.1  
ip route 172.17.192.0 255.255.255.0 10.31.1.1  
ip route 172.18.124.0 255.255.255.0 10.31.1.1  
ip route 172.18.125.0 255.255.255.0 10.31.1.1  
no ip http server  
!  
dialer-list 1 protocol ip permit  
dialer-list 1 protocol ipx permit  
!  
radius-server host 172.18.124.111 auth-port 1645 acct-port 1646  
radius-server key cisco  
!  
line con 0  
transport input none  
line 1  
autoselect during-login  
autoselect ppp  
modem InOut
```



```
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end
```

[Cisco IOS Software Release 11.3 con 11.3.3.T](#)

Current configuration:

```
!
version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname koala
!
aaa new-model
!
!--- The following three lines of the configuration are !--- specific to Cisco IOS Software
Release 12.0.5.T and later. !--- See below this configuration for commands !--- for other Cisco
IOS Software Releases. ! aaa authentication login default group radius none
aaa authentication ppp default if-needed group radius
aaa authorization network default group radius
enable secret 5 $1$mnZQ$g6XdsgVnnYjEa.l7v.Pijl
enable password ww
!
username john password 0 doe
!
ip subnet-zero
!
cns event-service server
!
interface Ethernet0
ip address 10.31.1.5 255.255.255.0
no ip directed-broadcast
no mop enabled
!
interface Serial0
ip address 11.11.11.11 255.255.255.0
no ip directed-broadcast
no ip mroute-cache
no fair-queue
!
interface Serial1
ip address 12.12.12.12 255.255.255.0
no ip directed-broadcast
!
interface Async1
ip unnumbered Ethernet0
no ip directed-broadcast
encapsulation ppp
no ip route-cache
no ip mroute-cache
async mode dedicated
peer default ip address pool mypool
fair-queue 64 16 0
no cdp enable
```

```

ppp authentication chap
!
ip local pool mypool 1.1.1.1 1.1.1.5
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
ip route 172.17.192.0 255.255.255.0 10.31.1.1
ip route 172.18.124.0 255.255.255.0 10.31.1.1
ip route 172.18.125.0 255.255.255.0 10.31.1.1
no ip http server
!
dialer-list 1 protocol ip permit
dialer-list 1 protocol ipx permit
!
radius-server host 172.18.124.111 auth-port 1645 acct-port 1646
radius-server key cisco
!
line con 0
transport input none
line 1
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 115200
flowcontrol hardware
line 2 16
line aux 0
line vty 0 4
password ww
!
end

```

[Configuración del servidor](#)

[Configuración del servidor - UNIX RADIUS del Cisco Secure ACS](#)

```

# ./ViewProfile -p 9900 -u chaprtr
User Profile Information
user = chaprtr{
profile_id = 31
profile_cycle = 1
radius=Cisco {
check_items= {
2="chaprtr"
}
reply_attributes= {
6=2
7=1
9,1="ip:route#1=9.9.9.9 255.255.255.255 11.11.11.12"
9,1="ip:route#2=15.15.15.15 255.255.255.255 12.12.12.13"
9,1="ip:route#3=15.15.15.16 255.255.255.255 12.12.12.13"
9,1="ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255"
9,1="ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255"
!--- The access-list to be applied is specified. !--- Note that the number after inacl#
increments for each line of the access-list. } } }

```

Configuración del servidor - Cisco Secure ACS for Windows 2.x - RADIUS

Complete estos pasos:

1. En los ajustes de usuario, complete el nombre y las contraseñas.
2. En las configuraciones de grupo, marque: Atributo 6 - **Framed** Atributo 7 - **PPP**
3. Bajo Cisco RADIUS Attribute, el **Par AV del control [009|001]** y teclea el texto siguiente en el cuadro debajo:

```
ip:route#1=9.9.9.9 255.255.255.255 11.11.11.12
ip:route#2=15.15.15.15 255.255.255.255 12.12.12.13
ip:route#3=15.15.15.16 255.255.255.255 12.12.12.13
ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255
ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255
!--- The access-list to be applied is specified. !--- Note that the number after inacl#
increments for !--- each line of the access-list.
```

Configuración del servidor - Merit RADIUS

Nota: Estas configuraciones son válidas para las versiones de la versión 3.6b o posterior del Merit RADIUS que soportan los cisco av-pair.

```
chaprtr Password = "chaprtr",
Service-Type = Framed,
Framed-Protocol = PPP,
Framed-IP-Address = 255.255.255.254
Cisco:Avpair="ip:route#1=9.9.9.9 255.255.255.255 11.11.11.12"
Cisco:Avpair="ip:route#2=15.15.15.15 255.255.255.255 12.12.12.13"
Cisco:Avpair="ip:route#3=15.15.15.16 255.255.255.255 12.12.12.13"
Cisco:Avpair="ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255"
Cisco:Avpair="ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255"
!--- The access-list to be applied is specified. ! --- Note that the number after inacl#
increments for each line of the access-list.
```

Depuración del router de ejemplo

La configuración del usuario de RADIUS para el debug abajo era:

```
RADIUS user password = "radiususer",
Service-Type = Framed,
Framed-Protocol = PPP,
Framed-IP-Address = 255.255.255.254
cisco-avpair = "ip:route#1=9.9.9.0 255.255.255.0 11.11.11.12"
cisco-avpair = "ip:route#2=15.15.15.0 255.255.255.0 12.12.12.13"
cisco-avpair = "ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log"
cisco-avpair = "ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15 .0 0.0.0.255 log"
```

koala#

```
koala#
4d05h: As1 AAA/AUTHOR/FSM: (0): LCP succeeds trivially
4d05h: %LINK-3-UPDOWN: Interface Async1, changed state to up
4d05h: AAA: parse name=Async1 idb type=10 tty=1
4d05h: AAA: name=Async1 flags=0x11 type=4 shelf=0 slot=0
      adapter=0 port=1 channel=0
4d05h: AAA/MEMORY: create_user (0x552AB4) user='radiususer'
      ruser='' port='Async1' rem_addr='async' authen_type=CHAP
      service=PPP priv=1
4d05h: AAA/AUTHEN/START (624846144): port='Async1' list=''
      action=LOGIN service=PPP
4d05h: AAA/AUTHEN/START (624846144): using "default" list
4d05h: AAA/AUTHEN (624846144): status = UNKNOWN
4d05h: AAA/AUTHEN/START (624846144): Method=radius (radius)
```

```

4d05h: RADIUS: ustruct sharecount=1
4d05h: RADIUS: Initial Transmit Async1 id 9 172.18.124.111:1645,
    Access-Request, len 81
4d05h: Attribute 4 6 0A1F0105
4d05h: Attribute 5 6 00000001
4d05h: Attribute 61 6 00000000
4d05h: Attribute 1 12 72616469
4d05h: Attribute 3 19 1672E16F
4d05h: Attribute 6 6 00000002
4d05h: Attribute 7 6 00000001
4d05h: RADIUS: Received from id 9 172.18.124.111:1645,
    Access-Accept, len 287
4d05h: Attribute 6 6 00000002
4d05h: Attribute 7 6 00000001
4d05h: Attribute 8 6 FFFFFFFE
4d05h: Attribute 26 52 00000009012E6970
4d05h: Attribute 26 55 0000000901316970
4d05h: Attribute 26 70 0000000901406970
4d05h: Attribute 26 72 0000000901426970
4d05h: AAA/AUTHEN (624846144): status = PASS
4d05h: As1 AAA/AUTHOR/LCP: Authorize LCP
4d05h: As1 AAA/AUTHOR/LCP (3679631149): Port='Async1' list=''
    service=NET
4d05h: AAA/AUTHOR/LCP: As1 (3679631149) user='radiususer'
4d05h: As1 AAA/AUTHOR/LCP (3679631149): send AV service=ppp
4d05h: As1 AAA/AUTHOR/LCP (3679631149): send AV protocol=lcp
4d05h: As1 AAA/AUTHOR/LCP (3679631149): found list "default"
4d05h: As1 AAA/AUTHOR/LCP (3679631149): Method=radius (radius)
4d05h: RADIUS: cisco AVPair "ip:route#1=9.9.9.0 255.255.255.0
    11.11.11.12" not applied for lcp
4d05h: RADIUS: cisco AVPair "ip:route#2=15.15.15.0 255.255.255.0
    12.12.12.13" not applied for lcp
4d05h: RADIUS: cisco AVPair "ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255
    9.9.9.0 0.0.0.255 log" not applied for lcp
4d05h: RADIUS: cisco AVPair "ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255
    15.15.15.0 0.0.0.255 log" not applied for lcp
4d05h: As1 AAA/AUTHOR (3679631149): Post authorization
    status = PASS_REPL
4d05h: As1 AAA/AUTHOR/LCP: Processing AV service=ppp
4d05h: As1 AAA/AUTHOR/FSM: (0): Can we start IPCP?
4d05h: As1 AAA/AUTHOR/FSM (231623628): Port='Async1' list=''
    service=NET
4d05h: AAA/AUTHOR/FSM: As1 (231623628) user='radiususer'
4d05h: As1 AAA/AUTHOR/FSM (231623628): send AV service=ppp
4d05h: As1 AAA/AUTHOR/FSM (231623628): send AV protocol=ip
4d05h: As1 AAA/AUTHOR/FSM (231623628): found list "default"
4d05h: As1 AAA/AUTHOR/FSM (231623628): Method=radius (radius)
4d05h: RADIUS: Using NAS default peer
4d05h: RADIUS: Authorize IP address 0.0.0.0
4d05h: RADIUS: cisco AVPair "ip:route#1=9.9.9.0 255.255.255.0
    11.11.11.12"
4d05h: RADIUS: cisco AVPair "ip:route#2=15.15.15.0 255.255.255.0
    12.12.12.13"
4d05h: RADIUS: cisco AVPair "ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255
    9.9.9.0 0.0.0.255 log"
4d05h: RADIUS: cisco AVPair "ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255
    15.15.15.0 0.0.0.255 log"
!--- The access list is sent down from the RADIUS server. 4d05h: As1 AAA/AUTHOR (231623628):
Post authorization status = PASS_REPL 4d05h: As1 AAA/AUTHOR/FSM: We can start IPCP 4d05h: As1
AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 0.0.0.0 4d05h: As1 AAA/AUTHOR/IPCP:
Processing AV service=ppp 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV addr=0.0.0.0 4d05h: As1
AAA/AUTHOR/IPCP: Processing AV route#1=9.9.9.0 255.255.255.0 11.11.11.12 4d05h: As1
AAA/AUTHOR/IPCP: Processing AV route#2=15.15.15.0 255.255.255.0 12.12.12.13 4d05h: As1
AAA/AUTHOR/IPCP: Processing AV inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log

```

```

4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0
0.0.0.255 log 4d05h: As1 AAA/AUTHOR/IPCP: Authorization succeeded 4d05h: As1 AAA/AUTHOR/IPCP:
Done. Her address 0.0.0.0, we want 0.0.0.0 4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address
0.0.0.0, we want 1.1.1.3 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV service=ppp 4d05h: As1
AAA/AUTHOR/IPCP: Processing AV addr=0.0.0.0 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
route#1=9.9.9.0 255.255.255.0 11.11.11.12 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
route#2=15.15.15.0 255.255.255.0 12.12.12.13 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log 4d05h: As1 AAA/AUTHOR/IPCP:
Processing AV inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log 4d05h: As1
AAA/AUTHOR/IPCP: Authorization succeeded 4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0,
we want 1.1.1.3 4d05h: As1 AAA/AUTHOR/IPCP: Start. Her address 1.1.1.3, we want 1.1.1.3 4d05h:
As1 AAA/AUTHOR/IPCP (2383669304): Port='Async1' list='' service=NET 4d05h: AAA/AUTHOR/IPCP: As1
(2383669304) user='radiususer' 4d05h: As1 AAA/AUTHOR/IPCP (2383669304): send AV service=ppp
4d05h: As1 AAA/AUTHOR/IPCP (2383669304): send AV protocol=ip 4d05h: As1 AAA/AUTHOR/IPCP
(2383669304): send AV addr*1.1.1.3 4d05h: As1 AAA/AUTHOR/IPCP (2383669304): found list "default"
4d05h: As1 AAA/AUTHOR/IPCP (2383669304): Method=radius (radius) 4d05h: RADIUS: Using NAS default
peer 4d05h: RADIUS: Authorize IP address 1.1.1.3 4d05h: RADIUS: cisco AVPair "ip:route#1=9.9.9.0
255.255.255.0 11.11.11.12" 4d05h: RADIUS: cisco AVPair "ip:route#2=15.15.15.0 255.255.255.0
12.12.12.13" 4d05h: RADIUS: cisco AVPair "ip:inacl#1=permit icmp 1.1.1.0 0.0.0.255 9.9.9.0
0.0.0.255 log" 4d05h: RADIUS: cisco AVPair "ip:inacl#2=permit tcp 1.1.1.0 0.0.0.255 15.15.15.0
0.0.0.255 log" 4d05h: As1 AAA/AUTHOR (2383669304): Post authorization status = PASS_REPL 4d05h:
As1 AAA/AUTHOR/IPCP: Processing AV service=ppp 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV
addr=1.1.1.3 4d05h: As1 AAA/AUTHOR/IPCP: Processing AV route#1=9.9.9.0 255.255.255.0 11.11.11.12
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV route#2=15.15.15.0 255.255.255.0 12.12.12.13 4d05h:
As1 AAA/AUTHOR/IPCP: Processing AV inacl#1=permit icmp
1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log
4d05h: As1 AAA/AUTHOR/IPCP: Processing AV inacl#2=permit tcp
1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log
!--- Access list from the RADIUS server is applied. 4d05h: As1 AAA/AUTHOR/IPCP: Authorization
succeeded 4d05h: As1 AAA/AUTHOR/IPCP: Done. Her address 1.1.1.3, we want 1.1.1.3 4d05h: As1
AAA/AUTHOR/PER-USER: Event IP_UP 4d05h: As1 AAA/AUTHOR: IP_UP 4d05h: As1 AAA/PER-USER:
processing author params. 4d05h: As1 AAA/AUTHOR: Parse 'IP route 9.9.9.0 255.255.255.0
11.11.11.12' 4d05h: As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1 AAA/AUTHOR: enqueue peruser
IP txt=no IP route 9.9.9.0 255.255.255.0 11.11.11.12 4d05h: As1 AAA/AUTHOR: Parse 'IP route
15.15.15.0 255.255.255.0 12.12.12.13' 4d05h: As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1
AAA/AUTHOR: enqueue peruser IP txt=no IP route 15.15.15.0 255.255.255.0 12.12.12.13 4d05h: As1
AAA/AUTHOR: Parse 'ip access-list extended Async1#0' 4d05h: As1 AAA/AUTHOR: Parse returned ok
(0) 4d05h: As1 AAA/AUTHOR: Parse 'permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log' 4d05h:
As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1 AAA/AUTHOR: Parse 'permit tcp 1.1.1.0 0.0.0.255
15.15.15.0 0.0.0.255 log' 4d05h: As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1 AAA/AUTHOR:
enqueue peruser IP txt=no ip access-list extended Async1#0 4d05h: As1 AAA/AUTHOR: Parse
'interface Async1' 4d05h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state
to up 4d05h: As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1 AAA/AUTHOR: Parse 'IP access-group
Async1#0 in' 4d05h: As1 AAA/AUTHOR: Parse returned ok (0) 4d05h: As1 AAA/AUTHOR: enqueue peruser
IP txt=interface Async1 no IP access-group Async1#0 in koala#show ip access-list
Extended IP access list 101
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log (5 matches)
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log (11 matches)
Extended IP access list Async1#0 (per-user)
permit icmp 1.1.1.0 0.0.0.255 9.9.9.0 0.0.0.255 log
permit tcp 1.1.1.0 0.0.0.255 15.15.15.0 0.0.0.255 log
!--- Verify that the access list is applied to the AS1 dial interface. koala#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 10.31.1.1 to network 0.0.0.0

1.0.0.0/32 is subnetted, 1 subnets
C 1.1.1.3 is directly connected, Async1

```

```
172.17.0.0/24 is subnetted, 1 subnets
S 172.17.192.0 [1/0] via 10.31.1.1
172.18.0.0/24 is subnetted, 2 subnets
S 172.18.124.0 [1/0] via 10.31.1.1
S 172.18.125.0 [1/0] via 10.31.1.1
9.0.0.0/24 is subnetted, 1 subnets
U 9.9.9.0 [1/0] via 11.11.11.12
!--- The static user route specified by the RADIUS server is applied. 10.0.0.0/24 is subnetted,
1 subnets C 10.31.1.0 is directly connected, Ethernet0 11.0.0.0/24 is subnetted, 1 subnets C
11.11.11.0 is directly connected, Serial0 12.0.0.0/24 is subnetted, 1 subnets C 12.12.12.0 is
directly connected, Serial1 15.0.0.0/24 is subnetted, 1 subnets U 15.15.15.0 [1/0] via
12.12.12.13
!--- The static user route specified by the RADIUS server is applied. S* 0.0.0.0/0 [1/0] via
10.31.1.1
```

Comandos de Debug

- **autenticación aaa del debug** - Visualiza la información sobre la autenticación AAA.
- **debug aaa authorization** - Visualiza la información sobre la autorización AAA.
- **debug aaa por usuario** - Información de las visualizaciones sobre los ajustes de la configuración por usuario en el router o servidor de acceso que se envían de un servidor de AAA.
- **radio del debug** - Visualiza la información de debugging detallada asociada al RADIUS.
- **negociación ppp del debug** - Visualiza los paquetes PPP transmitidos durante el inicio de PPP, donde se negocian las opciones PPP.

Para la información de Troubleshooting, vea las [Listas de acceso del troubleshooting en las interfaces de marcación](#).

Información Relacionada

- [Documentación de Cisco Secure ACS para UNIX](#)
- [Página de soporte de Cisco Secure ACS para Windows](#)
- [Documentación de Cisco Secure ACS para Windows](#)
- [Página de soporte de RADIUS](#)
- [Configurar el RADIUS](#)
- [Solicitudes de Comentarios \(RFC\)](#)