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

Contenido

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

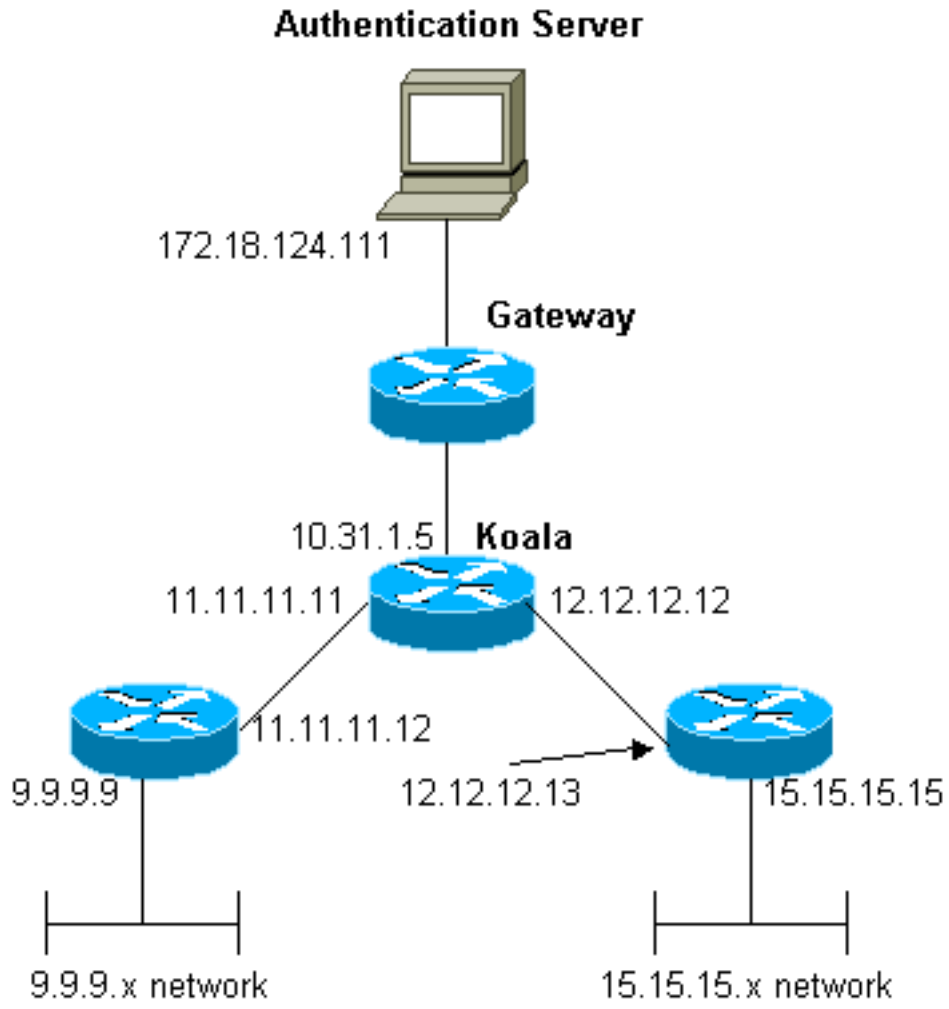
La información que se presenta en este documento se originó a partir de dispositivos dentro de un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese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

Convenciones

Para obtener más información sobre las convenciones del documento, consulte las Convenciones de Consejos Técnicos de Cisco.

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
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.l7v.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
```

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

```
aaa authentication login default radius local
aaa authentication ppp default if-needed radius local
aaa authorization network default radius
```

Cisco IOS Software Release 11.1 con 11.3.3.T

```
aaa authentication login default radius
aaa authentication ppp default if-needed radius
aaa authorization network radius
```

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.inNota:** 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 CONFREJ [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 "chaprtr" *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='chaprtr' 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: 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='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: 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='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 CONFREJ [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='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#
```

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.

```
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
```

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.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 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

```
aaa authentication login default radius local
aaa authentication ppp default if-needed radius local
aaa authorization network default radius
```

Cisco IOS Software Release 11.3 con 11.3.3.T

```
aaa authentication login default radius
aaa authentication ppp default if-needed radius
aaa authorization network radius
```

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 Ciscos 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: Este las 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 000000009012E6970
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
- Field Notice de los productos de seguridad (Cisco incluyendo UNIX seguro)
- Página de soporte de RADIUS
- Configurar el RADIUS
- Solicitudes de Comentarios (RFC)
- Soporte Técnico - Cisco Systems