Konfigurieren der RADIUS-Authentifizierung für VPDNs

Inhalt

Einführung

Mit einem Virtual Private Dial-up Network (VPDN) kann ein privater Netzwerk-Einwahldienst über Remote-Zugriffsserver (definiert als L2TP Access Concentrator [LAC]) verteilt werden. Wenn sich ein PPP-Client (Point-to-Point Protocol) in eine LAC einwählt, legt die LAC fest, dass diese PPP-Sitzung an einen L2TP-Netzwerkserver (LNS) für diesen Client weitergeleitet werden soll, der dann den Benutzer authentifiziert und die PPP-Aushandlung startet. Nach Abschluss der PPP-Einrichtung werden alle Frames über die LAC an den Client und das LNS gesendet.

Mit dieser Beispielkonfiguration können Sie RADIUS-Authentifizierung mit VPDNs verwenden. Die LAC fragt den RADIUS-Server ab, bestimmt, welches LNS den Benutzer weiterleiten soll, und erstellt den entsprechenden Tunnel.

Weitere Informationen zu VPDNs finden Sie unter VPDN-Verständnis.

Voraussetzungen

Anforderungen

Für dieses Dokument bestehen keine speziellen Anforderungen.

Verwendete Komponenten

Die Informationen in diesem Dokument basieren auf den folgenden Software- und Hardwareversionen:

- Cisco Secure ACS UNIX Version 2.x.x oder höher oder Merit RADIUS
- Cisco IOS® Softwareversion 11.2 und höher

Die Informationen in diesem Dokument wurden von den Geräten in einer bestimmten Laborumgebung erstellt. Alle in diesem Dokument verwendeten Geräte haben mit einer leeren (Standard-)Konfiguration begonnen. Wenn Ihr Netzwerk in Betrieb ist, stellen Sie sicher, dass Sie die potenziellen Auswirkungen eines Befehls verstehen.

Konventionen

Weitere Informationen zu Dokumentkonventionen finden Sie unter Cisco Technical Tips Conventions.

Hintergrundinformationen

In diesem Beispiel lautet der Benutzer "jsmith@hp.com" mit dem Kennwort "test". Wenn sich "jsmith@hp.com" beim ISP-Router anwählt, sendet der ISP-Router die "hp.com"-Benutzer-ID an den ISP RADIUS-Server. Der ISP-Server findet die "hp.com"-Benutzer-ID und sendet seine Tunnel-ID ("isp"), die IP-Adresse des HGW-Routers (10.31.1.50), das Network Access Server (NAS)-Kennwort ("hello") und das Gateway-Kennwort ("dorthin") zurück an den ISP-Router.

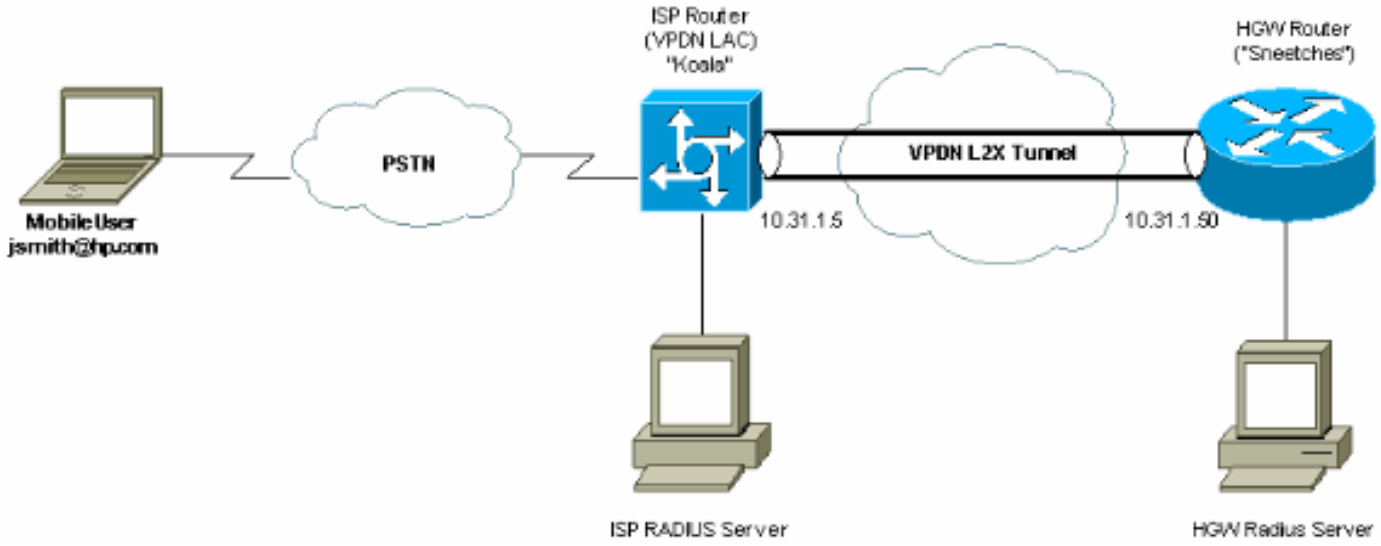
Der ISP-Router initiiert einen Tunnel und stellt eine Verbindung zum 10.31.1.50-HGW-Router her, der den Benutzer "hp-gw" lokal authentifiziert und das Kennwort für "isp" ("hello") an den HGW-RADIUS-Server weiterleitet. Sobald die Tunnel eingerichtet sind, leitet der ISP-Router den Router an den HGW-Router weiter, und die Benutzer-ID ("jsmith@hp.com") und das Kennwort ("test") der Benutzerwahl in diesem Benutzer werden auf dem HGW-Server authentifiziert. In diesem Beispiel wird der ISP-Router als "Koala" und der HGW-Router als "Sneetches" bezeichnet.

Konfigurieren

In diesem Abschnitt erhalten Sie Informationen zum Konfigurieren der in diesem Dokument beschriebenen Funktionen.

Netzwerkdiagramm

In diesem Dokument wird die in diesem Diagramm dargestellte Netzwerkeinrichtung verwendet.



Serverkonfigurationen

RADIUS-Konfiguration vermerken

```
!--- The RADIUS Server must support Cisco av-pairs. !--- This user is on the ISP RADIUS server.
hp.com Password = "cisco" Service-Type = Outbound-User, cisco-avpair = "vpdn:tunnel-id=isp",
cisco-avpair = "vpdn:ip-addresses=10.31.1.50", cisco-avpair = "vpdn:nas-password=hello", cisco-
avpair = "vpdn:gw-password=there" !--- The next two users are on the HGW Server. isp Password =
"hello", Service-Type = Framed, Framed-Protocol = PPP jsmith@hp.com Password = "test", Service-
Type = Framed, Framed-Protocol = PPP
```

Cisco Secure ACS UNIX 2.x.x-Konfiguration

```
!--- This user is on the ISP server. # ./ViewProfile -p 9900 -u hp.com User Profile Information
user = hp.com{ profile_id = 86 profile_cycle = 1 RADIUS=Cisco { check_items= { 2="cisco" }
reply_attributes= { 9,1="vpdn:tunnel-id=isp" 9,1="vpdn:ip-addresses=10.31.1.50" 9,1="vpdn:NAS-
password=hello" 9,1="vpdn:gw-password=there" } } } !--- The next two users are on the HGW
Server. # ./ViewProfile -p 9900 -u isp User Profile Information user = isp{ profile_id = 70
profile_cycle = 1 RADIUS=Cisco { check_items= { 2="hello" } reply_attributes= { 6=2 7=1 } } } #
./ViewProfile -p 9900 -u jsmith@hp.com User Profile Information user = jsmith@hp.com{ profile_id
= 84 profile_cycle = 1 RADIUS=Cisco { check_items= { 2="test" } reply_attributes= { 6=2 7=1 } }
}
```

Router-Konfigurationen

ISP-Router-Konfiguration

```
koala#show running config

Building configuration...


Current configuration:
!
version 11.3
no service password-encryption
service udp-small-servers
service tcp-small-servers
```

```
!
hostname koala
!
aaa new-model
aaa authentication ppp default if-needed RADIUS
aaa authorization network default RADIUS
aaa accounting network default start-stop RADIUS
enable password ww
!
vpdn enable
!--- VPDN is enabled. ! interface Ethernet0 ip address
10.31.1.5 255.255.255.0 ! interface Serial0 shutdown !
interface Serial1 shutdown ! interface Async1 ip
unnumbered Ethernet0 encapsulation ppp async mode
dedicated no peer default ip address no cdp enable ppp
authentication chap ! ip default-gateway 10.31.1.1 no ip
classless ip route 0.0.0.0 0.0.0.0 10.31.1.1 logging
trap debugging logging 171.68.118.101 snmp-server
community public RW snmp-server enable traps config
snmp-server host 171.68.118.105 traps public RADIUS-
server host 171.68.120.194 auth-port 1645 acct-port 1646
RADIUS-server key cisco
!--- Specify RADIUS server information on the NAS. !
line con 0 password WW line 1 password WW autoselect ppp
modem InOut transport input all stopbits 1 speed 115200
flowcontrol hardware line 2 16 autoselect during-login
line aux 0 line vty 0 4 exec-timeout 0 0 password WW !
end
```

Konfiguration des HGW-Routers

```
Sneetches#show running config
Building configuration...

Current configuration:
!
version 11.3
no service password-encryption
service udp-small-servers
service tcp-small-servers
!
hostname Sneetches
!
aaa new-model
aaa authentication ppp default RADIUS local
aaa authorization network default RADIUS local
aaa accounting network default start-stop RADIUS
!
username hp-gw password 0 there
username isp password 0 hello
vpdn enable
!--- Enable VPDN. vpdn incoming isp hp-gw virtual-
template 1
!--- Specify the remote host (the network access server)
!--- the local name (the home gateway) to use for
authenticating !--- and the virtual template to use. !
interface Ethernet0 ip address 10.31.1.50 255.255.255.0
! interface Ethernet1 no ip address shutdown ! interface
Virtual-Template1
!--- Create a virtual template interface. ip unnumbered
Ethernet0
!--- Un-number the Virtual interface to an available LAN
interface. peer default ip address pool async
```

```
!--- Use the pool "async" to assign the IP address for
incoming connections. ppp authentication chap
!--- Use CHAP authentication for the incoming
connection. ! interface Serial0 shutdown ! interface
Serial1 shutdown ! ip local pool async 1.1.1.1 1.1.1.6
ip default-gateway 10.31.1.1 no ip classless ip route
0.0.0.0 0.0.0.0 10.31.1.1 RADIUS-server host
171.68.118.101 auth-port 1645 acct-port 1646
RADIUS-server timeout 20
RADIUS-server key cisco
!--- Specify RADIUS server information on the NAS. !
line con 0 exec-timeout 3600 0 line aux 0 line vty 0 4
password WW ! end
```

Überprüfen

Für diese Konfiguration ist derzeit kein Überprüfungsverfahren verfügbar.

Fehlerbehebung

Dieser Abschnitt enthält Informationen zur Fehlerbehebung in Ihrer Konfiguration.

Befehle zur Fehlerbehebung

Bestimmte **show**-Befehle werden vom Tool Output Interpreter unterstützt, mit dem Sie eine Analyse der **Ausgabe** des Befehls **show** anzeigen können.

Hinweis: Bevor Sie **Debugbefehle** ausgeben, lesen Sie Wichtige Informationen über Debug-Befehle.

- **debug aaa authentication**: Zeigt Informationen zur AAA/Terminal Access Controller Access Control System Plus (TACACS+)-Authentifizierung an.
- **debug aaa autorization**: Zeigt Informationen zur AAA/TACACS+-Autorisierung an.
- **debug ppp negotiation**: Zeigt PPP-Pakete an, die während des PPP-Starts übertragen werden und über die PPP-Optionen ausgehandelt werden.
- **debug RADIUS** (RADIUS debuggen): Zeigt detaillierte Debuginformationen für RADIUS an.
- **debug vpdn errors** (**vpdn-Fehler debuggen**): Zeigt Fehler an, die verhindern, dass ein PPP-Tunnel erstellt wird, oder Fehler, die das Schließen eines etablierten Tunnels verursachen.
- **debug vpdn events**: Zeigt Meldungen über Ereignisse an, die Teil der normalen PPP-Tunneleinrichtung oder des normalen Herunterfahrens sind.
- **debug vpdn l2f-errors**: Zeigt Layer-2-Protokollfehler an, die eine Layer-2-Einrichtung verhindern oder deren normalen Betrieb verhindern.
- **debug vpdn l2f-events**: Zeigt Meldungen über Ereignisse an, die zum normalen PPP-Tunnelaufbau oder -Herunterfahren für Layer 2 gehören.
- **debug vpdn l2f-pakete**: Zeigt Meldungen über Header und Status des Layer-2-Forwarding-Protokolls an.
- **debug vpdn pakete**: Zeigt Layer-2-Tunnelprotokollfehler und -ereignisse an, die Teil der normalen Tunneleinrichtung oder -abschaltung für VPDNs sind.
- **debug vtemplate**: Zeigt Informationen zum Klonen einer virtuellen Zugriffsschnittstelle an, vom Zeitpunkt des Klonens von einer virtuellen Vorlage bis hin zum Zeitpunkt des Abbruchs der

virtuellen Zugriffsschnittstelle beim Beenden des Anrufs.

Debugausgabe

ISP-Router - gute Fehlerbehebung

```
koala#show debug
General OS:
AAA Authentication debugging is on
AAA Authorization debugging is on
AAA Accounting debugging is on
VPN:
VPN events debugging is on
VPN errors debugging is on
RADIUS protocol debugging is on
koala#
%LINK-3-UPDOWN: Interface Async1, changed state to up
17:28:19: VPDN: Looking for tunnel -- hp.com --
17:28:19: AAA/AUTHEN: create_user (0x15D28C) user='hp.com' ruser='' port='Async1'
 rem_addr='' authen_type=NONE service=LOGIN priv=0
17:28:19: AAA/AUTHOR/VPDN (982041598): Port='Async1' list='default' service=NET
17:28:19: AAA/AUTHOR/VPDN: (982041598) user='hp.com'
17:28:19: AAA/AUTHOR/VPDN: (982041598) send AV service=ppp
17:28:19: AAA/AUTHOR/VPDN: (982041598) send AV protocol=vpdn
17:28:19: AAA/AUTHOR/VPDN (982041598) found list "default"
17:28:19: AAA/AUTHOR/VPDN: (982041598) Method=RADIUS
17:28:19: RADIUS: authenticating to get author data
17:28:19: RADIUS: Computed extended port value 0:1:
17:28:19: RADIUS: Initial Transmit id 62 171.68.120.194:1645, Access-Request, len 70
17:28:19: Attribute 4 6 0A1F0105
17:28:19: Attribute 5 6 00000001
17:28:19: Attribute 61 6 00000000
17:28:19: Attribute 1 8 68702E63
17:28:19: Attribute 2 18 8070079C
17:28:19: Attribute 6 6 00000005
17:28:19: RADIUS: Received from id 62 171.68.120.194:1645, Access-Accept, len 143
17:28:19: Attribute 26 26 0000000901147670
17:28:19: Attribute 26 36 00000009011E7670
17:28:19: Attribute 26 31 0000000901197670
17:28:19: Attribute 26 30 0000000901187670
 !--- These messages can be decrypted using the OI tool. !--- As of Cisco IOS Software Release
12.2(11)T, !--- the output was changed to be readable. 17:28:19: RADIUS: saved authorization
data for user 15D28C at 10EE74 17:28:19: RADIUS: cisco AVPair "vpdn:tunnel-id=isp" 17:28:19:
RADIUS: cisco AVPair "vpdn:ip-addresses=10.31.1.50" 17:28:19: RADIUS: cisco AVPair "vpdn:nas-
password=hello" 17:28:19: RADIUS: cisco AVPair "vpdn:gw-password=there" 17:28:19: AAA/AUTHOR
(982041598): Post authorization status = PASS_ADD 17:28:19: AAA/AUTHOR/VPDN: Processing AV
service=ppp
17:28:19: AAA/AUTHOR/VPDN: Processing AV protocol=vpdn
17:28:19: AAA/AUTHOR/VPDN: Processing AV tunnel-id=isp
17:28:19: AAA/AUTHOR/VPDN: Processing AV ip-addresses=10.31.1.50
17:28:19: AAA/AUTHOR/VPDN: Processing AV nas-password=hello
17:28:19: AAA/AUTHOR/VPDN: Processing AV gw-password=there
17:28:19: VPDN: Get tunnel info with NAS isp GW hp.com, IP 10.31.1.50
!--- The RADIUS server returns the attributes the !--- NAS should use for the tunnel. !---
Tunnel-id is "ISP" and the IP address of HGW is 10.31.1.50. 17:28:19: AAA/AUTHEN: free_user
(0x15D28C) user='hp.com' ruser='' port='Async1' rem_addr='' authen_type=NONE service=LOGIN
priv=0 17:28:19: VPDN: Forward to address 10.31.1.50 17:28:19: As1 VPDN: Forwarding... 17:28:19:
AAA/AUTHEN: create_user (0x15D334) user='jsmith@hp.com' ruser='' port='Async1' rem_addr='async'
authen_type=CHAP service=PPP priv=1 17:28:19: As1 VPDN: Bind interface direction=1 17:28:19: As1
VPDN: jsmith@hp.com is forwarded 17:28:19: AAA/ACCT/NET/START User jsmith@hp.com, Port Async1,
```

List "" 17:28:19: AAA/ACCT/NET: Found list "default" 17:28:19: RADIUS: Computed extended port value 0:1: 17:28:19: RADIUS: Initial Transmit id 63 171.68.120.194:1646, Accounting-Request, len 93 17:28:19: Attribute 4 6 0A1F0105 17:28:19: Attribute 5 6 00000001 17:28:19: Attribute 61 6 00000000 17:28:19: Attribute 1 15 6A736D69 17:28:19: Attribute 40 6 00000001 17:28:19: Attribute 45 6 00000002 17:28:19: Attribute 6 6 00000002 17:28:19: Attribute 44 10 30303030 17:28:19: Attribute 7 6 7670646E 17:28:19: Attribute 41 6 00000000 17:28:19: RADIUS: Received from id 63 171.68.120.194:1646, Accounting-response, len 20 %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state to up koala# *!--- The user finishes and disconnects.* %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state to down %LINK-5-CHANGED: Interface Async1, changed state to reset 17:28:48: As1 VPDN: Cleanup 17:28:48: As1 VPDN: Reset 17:28:48: As1 VPDN: Reset 17:28:48: As1 VPDN: Unbind interface 17:28:48: AAA/ACCT/NET/STOP User jsmith@hp.com, Port Async1: task_id=20 start_time=900759730 timezone=UTC service=vpdn disc-cause=2 disc-cause-ext=1011 pre-bytes-in=-226131998 pre-bytes-out=-1034130241 pre-paks-in=-63570 pre-paks-out=-64410 bytes_in=1999 bytes_out=364 paks_in=29 paks_out=12 pre-session-time=5 elapsed_time=29 data-rate=0 xmit-rate=0 17:28:48: RADIUS: Computed extended port value 0:1: 17:28:48: RADIUS: Initial Transmit id 64 171.68.120.194:1646, Accounting-Request, len 129 17:28:48: Attribute 4 6 0A1F0105 17:28:48: Attribute 5 6 00000001 17:28:48: Attribute 61 6 00000000 17:28:48: Attribute 1 15 6A736D69 17:28:48: Attribute 40 6 00000002 17:28:48: Attribute 45 6 00000002 17:28:48: Attribute 6 6 00000002 17:28:48: Attribute 44 10 30303030 17:28:48: Attribute 7 6 7670646E 17:28:48: Attribute 49 6 00000002 17:28:48: Attribute 42 6 000007CF 17:28:48: Attribute 43 6 0000016C 17:28:48: Attribute 47 6 0000001D 17:28:48: Attribute 48 6 0000000C 17:28:48: Attribute 46 6 0000001D 17:28:48: Attribute 41 6 00000000 17:28:48: RADIUS: Received from id 64 171.68.120.194:1646, Accounting-response, len 20 %LINK-3-UPDOWN: Interface Async1, changed state to down 17:28:51: AAA/AUTHEN: free_user (0x15D334) user='jsmith@hp.com' ruser='' port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1 koala#

HGW-Router Gute Fehlersuche

```
Sneetches#show debug
General OS:
AAA Authentication debugging is on
AAA Authorization debugging is on
AAA Accounting debugging is on
VPN:
VPN events debugging is on
VPN errors debugging is on
RADIUS protocol debugging is on
Sneetches#
17:28:21: AAA/AUTHEN: create_user (0x14A914) user='hp-gw' ruser='' port=''
rem_addr='' authen_type=CHAP service=PPP priv=1
17:28:21: AAA/AUTHEN/START (496523999): port='' list='default'
action=SENDAUTH service=PPP
17:28:21: AAA/AUTHEN/START (496523999): found list default
17:28:21: AAA/AUTHEN/START (496523999): Method=RADIUS
17:28:21: RADIUS: SENDPASS not supported (action=4)
17:28:21: AAA/AUTHEN (496523999): status = ERROR
17:28:21: AAA/AUTHEN/START (496523999): Method=LOCAL
17:28:21: AAA/AUTHEN (496523999): status = PASS
17:28:21: AAA/AUTHEN: free_user (0x14A914) user='hp-gw' ruser='' port=''
rem_addr='' authen_type=CHAP service=PPP priv=1
17:28:21: AAA/AUTHEN: create_user (0x14A914) user='isp' ruser='' port=''
rem_addr='' authen_type=CHAP service=PPP priv=1
17:28:21: AAA/AUTHEN/START (3095573082): port='' list='default'
action=SENDAUTH service=PPP
17:28:21: AAA/AUTHEN/START (3095573082): found list default
17:28:21: AAA/AUTHEN/START (3095573082): Method=RADIUS
17:28:21: RADIUS: SENDPASS not supported (action=4)
17:28:21: AAA/AUTHEN (3095573082): status = ERROR
17:28:21: AAA/AUTHEN/START (3095573082): Method=LOCAL
17:28:21: AAA/AUTHEN (3095573082): status = PASS
17:28:21: AAA/AUTHEN: free_user (0x14A914) user='isp' ruser='' port=''
rem_addr='' authen_type=CHAP service=PPP priv=1
17:28:21: AAA/AUTHEN: create_user (0x14ADB4) user='isp' ruser='' port=''
```

```
rem_addr='' authen_type=CHAP service=PPP priv=1
17:28:21: AAA/AUTHEN/START (3506257139): port='' list='default'
action=LOGIN service=PPP
17:28:21: AAA/AUTHEN/START (3506257139): found list default
17:28:21: AAA/AUTHEN/START (3506257139): Method=RADIUS
17:28:21: RADIUS: Initial Transmit id 53 171.68.118.101:1645, Access-Request, len 68
17:28:21: Attribute 4 6 0A1F0132
17:28:21: Attribute 61 6 00000000
17:28:21: Attribute 1 5 69737003
17:28:21: Attribute 3 19 10C82B7A
17:28:21: Attribute 6 6 00000002
17:28:21: Attribute 7 6 00000001
17:28:21: RADIUS: Received from id 53 171.68.118.101:1645, Access-Accept, len 32
17:28:21: Attribute 6 6 00000002
17:28:21: Attribute 7 6 00000001
17:28:21: AAA/AUTHEN (3506257139): status = PASS
17:28:21: VPDN: Chap authentication succeeded for isp
17:28:21: AAA/AUTHEN: free_user (0x14ADB4) user='isp' ruser='' port='' rem_addr=''
authen_type=CHAP service=PPP priv=1
17:28:21: Vi1 VPDN: Virtual interface created for jsmith@hp.com
17:28:21: Vi1 VPDN: Set to Async interface
17:28:21: Vi1 VPDN: Clone from Vtemplate 1 filterPPP=0 blocking
%LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up
17:28:23: Vi1 VPDN: Bind interface direction=2
17:28:23: Vi1 VPDN: PPP LCP accepted sent & rcv CONFACK
17:28:23: AAA/AUTHEN: create_user (0x143368) user='jsmith@hp.com' ruser=''
 port='Virtual-Access1' rem_addr='async' authen_type=CHAP service=PPP priv=1
17:28:23: AAA/AUTHEN/START (637397616): port='Virtual-Access1' list=''
 action=LOGIN service=PPP
17:28:23: AAA/AUTHEN/START (637397616): using "default" list
17:28:23: AAA/AUTHEN/START (637397616): Method=RADIUS
17:28:23: RADIUS: Computed extended port value 0:60100:
17:28:23: RADIUS: Initial Transmit id 54 171.68.118.101:1645, Access-Request, len 78
17:28:23: Attribute 4 6 0A1F0132
17:28:23: Attribute 5 6 0000EAC4
17:28:23: Attribute 1 15 6A736D69
17:28:23: Attribute 3 19 186C2AC9
17:28:23: Attribute 6 6 00000002
17:28:23: Attribute 7 6 00000001
17:28:23: RADIUS: Received from id 54 171.68.118.101:1645, Access-Accept, len 32
17:28:23: Attribute 6 6 00000002
17:28:23: Attribute 7 6 00000001
17:28:23: AAA/AUTHEN (637397616): status = PASS
17:28:23: AAA/AUTHOR/LCP Vi1: Authorize LCP
17:28:23: AAA/AUTHOR/LCP Vi1 (1528831370): Port='Virtual-Access1' list=''
 service=NET
17:28:23: AAA/AUTHOR/LCP: Vi1 (1528831370) user='jsmith@hp.com'
17:28:23: AAA/AUTHOR/LCP: Vi1 (1528831370) send AV service=ppp
17:28:23: AAA/AUTHOR/LCP: Vi1 (1528831370) send AV protocol=lcp
17:28:23: AAA/AUTHOR/LCP (1528831370) found list "default"
17:28:23: AAA/AUTHOR/LCP: Vi1 (1528831370) Method=RADIUS
17:28:23: AAA/AUTHOR (1528831370): Post authorization status = PASS_REPL
17:28:23: AAA/AUTHOR/LCP Vi1: Processing AV service=ppp
17:28:23: AAA/ACCT/NET/START User jsmith@hp.com, Port Virtual-Access1, List ""
17:28:23: AAA/ACCT/NET: Found list "default"
17:28:23: AAA/AUTHOR/FSM Vi1: (0): Can we start IPCP?
17:28:23: AAA/AUTHOR/FSM Vi1 (4249637449): Port='Virtual-Access1' list=''
 service=NET
17:28:23: AAA/AUTHOR/FSM: Vi1 (4249637449) user='jsmith@hp.com'
17:28:23: AAA/AUTHOR/FSM: Vi1 (4249637449) send AV service=ppp
17:28:23: AAA/AUTHOR/FSM: Vi1 (4249637449) send AV protocol=ip
17:28:23: AAA/AUTHOR/FSM (4249637449) found list "default"
17:28:23: AAA/AUTHOR/FSM: Vi1 (4249637449) Method=RADIUS
17:28:23: AAA/AUTHOR (4249637449): Post authorization status = PASS_REPL
```

```
17:28:23: AAA/AUTHOR/FSM Vi1: We can start IPCP
17:28:23: RADIUS: Computed extended port value 0:60100:
17:28:23: RADIUS: Initial Transmit id 55 171.68.118.101:1646, Accounting-Request,
 len 87
17:28:23: Attribute 4 6 0A1F0132
17:28:23: Attribute 5 6 0000EAC4
17:28:23: Attribute 1 15 6A736D69
17:28:23: Attribute 40 6 00000001
17:28:23: Attribute 45 6 00000001
17:28:23: Attribute 6 6 00000002
17:28:23: Attribute 44 10 30303030
17:28:23: Attribute 7 6 00000001
17:28:23: Attribute 41 6 00000000
17:28:23: RADIUS: Received from id 55 171.68.118.101:1646, Accounting-response,
 len 20
17:28:23: AAA/AUTHOR/IPCP Vi1: Start. Her address 0.0.0.0, we want 0.0.0.0
17:28:23: AAA/AUTHOR/IPCP Vi1: Processing AV service=ppp
17:28:23: AAA/AUTHOR/IPCP Vi1: Authorization succeeded
17:28:23: AAA/AUTHOR/IPCP Vi1: Done. Her address 0.0.0.0, we want 0.0.0.0
17:28:23: AAA/AUTHOR/IPCP Vi1: Start. Her address 0.0.0.0, we want 1.1.1.1
17:28:23: AAA/AUTHOR/IPCP Vi1: Processing AV service=ppp
17:28:23: AAA/AUTHOR/IPCP Vi1: Authorization succeeded
17:28:23: AAA/AUTHOR/IPCP Vi1: Done. Her address 0.0.0.0, we want 1.1.1.1
17:28:24: AAA/AUTHOR/IPCP Vi1: Start. Her address 1.1.1.1, we want 1.1.1.1
17:28:24: AAA/AUTHOR/IPCP Vi1 (923857566): Port='Virtual-Access1' list=''
 service=NET
17:28:24: AAA/AUTHOR/IPCP: Vi1 (923857566) user='jsmith@hp.com'
17:28:24: AAA/AUTHOR/IPCP: Vi1 (923857566) send AV service=ppp
17:28:24: AAA/AUTHOR/IPCP: Vi1 (923857566) send AV protocol=ip
17:28:24: AAA/AUTHOR/IPCP: Vi1 (923857566) send AV addr*1.1.1.1
17:28:24: AAA/AUTHOR/IPCP (923857566) found list "default"
17:28:24: AAA/AUTHOR/IPCP: Vi1 (923857566) Method=RADIUS
17:28:24: AAA/AUTHOR (923857566): Post authorization status = PASS_REPL
17:28:24: AAA/AUTHOR/IPCP Vi1: Reject 1.1.1.1, using 1.1.1.1
17:28:24: AAA/AUTHOR/IPCP Vi1: Processing AV service=ppp
17:28:24: AAA/AUTHOR/IPCP Vi1: Processing AV addr*1.1.1.1
17:28:24: AAA/AUTHOR/IPCP Vi1: Authorization succeeded
17:28:24: AAA/AUTHOR/IPCP Vi1: Done. Her address 1.1.1.1, we want 1.1.1.1
%LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1, changed state to up
Sneetches#
 !--- The user finishes and disconnects. Sneetches# 17:28:50: Vi1 VPDN: Reset 17:28:50: Vi1
VPDN: Reset %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to down 17:28:50: Vi1 VPDN:
Cleanup 17:28:50: Vi1 VPDN: Reset 17:28:50: Vi1 VPDN: Reset 17:28:50: Vi1 VPDN: Unbind interface
17:28:50: Vi1 VPDN: Reset 17:28:50: Vi1 VPDN: Reset 17:28:50: AAA/ACCT/NET/STOP User
jsmith@hp.com, Port Virtual-Access1: task_id=14 start_time=900759731 timezone=UTC service=ppp
protocol=ip addr=1.1.1.1 disc-cause=2 disc-cause-ext=1011 pre-bytes-in=0 pre-bytes-out=42 pre-
paks-in=0 pre-paks-out=2 bytes_in=882 bytes_out=356 paks_in=17 paks_out=11 pre-session-time=0
elapsed_time=27 data-rate=0 xmit-rate=0 17:28:50: RADIUS: Computed extended port value 0:60100:
17:28:50: RADIUS: Initial Transmit id 56 171.68.118.101:1646, Accounting-Request, len 129
17:28:50: Attribute 4 6 0A1F0132 17:28:50: Attribute 5 6 0000EAC4 17:28:50: Attribute 1 15
6A736D69 17:28:50: Attribute 40 6 00000002 17:28:50: Attribute 45 6 00000001 17:28:50: Attribute
6 6 00000002 17:28:50: Attribute 44 10 30303030 17:28:50: Attribute 7 6 00000001 17:28:50:
Attribute 8 6 01010101 17:28:50: Attribute 49 6 00000002 17:28:50: Attribute 42 6 00000372
17:28:50: Attribute 43 6 00000164 17:28:50: Attribute 47 6 00000011 17:28:50: Attribute 48 6
0000000B 17:28:50: Attribute 46 6 0000001B 17:28:50: Attribute 41 6 00000000 17:28:50: RADIUS:
Received from id 56 171.68.118.101:1646, Accounting-response, len 20 17:28:50: AAA/AUTHEN:
free_user (0x143368) user='jsmith@hp.com' ruser='' port='Virtual-Access1' rem_addr='async'
authen_type=CHAP service=PPP priv=1 %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-
Access1, changed state to down Sneetches#
```

Debugger für fehlgeschlagene Verbindung auf ISP-Router

```
koala#show debug
```

```
General OS:
AAA Authentication debugging is on
AAA Authorization debugging is on
AAA Accounting debugging is on
VPN:
VPN events debugging is on
VPN errors debugging is on
RADIUS protocol debugging is on
koala#
!--- Problem 1: !--- User hp.com is not in the ISP server: !--- There is no output on HGW router
because the call has not gone that far.

RADIUS: Received from id 83 171.68.120.194:1645, Access-Reject, len 20 18:43:18:
AAA/AUTHEN (4063976505): status = FAIL
!--- Problem 2: !--- User hp.com is not in the ISP server. !--- There is no output on HGW router
because !--- the call has not gone that far.

RADIUS: Received from id 83 171.68.120.194:1645, Access-Reject, len 20 18:43:18:
AAA/AUTHEN (4063976505): status = FAIL
!--- Problem 3: !--- Problem in tunnel definition on HGW router; in HGW configuration !--- vpdn
incoming hp-gw isp virtual-template 1 is inserted !--- instead of vpdn incoming isp hp-gw
virtual-template 1.

%VPDN-5-UNREACH: L2F HGW 10.31.1.50 is unreachable
VPDN: Timeout opening tunnel to 10.31.1.50
VPDN: Free busy address 10.31.1.50
!--- Problem 4: !--- User "isp" or "hp-gw" is removed from HGW router.

%VPDN-6-AUTHENFAIL: L2F NAS koala, authentication failure for tunnel hp-gw;
 Invalid key
 !--- Problem 5: !--- User "isp" is not in the HGW server.

%VPDN-6-AUTHENFAIL: L2F HGW , AAA authentication failure for tunnel hp-gw
 !--- Problem 6: !--- User jsmith@hp.com is not in the HGW server.

%VPDN-6-AUTHENFAIL: L2F HGW hp-gw, AAA authentication failure for As1
user jsmith@hp.com; Authentication failure
```

Debugger für fehlgeschlagene Verbindungen auf dem HGW-Router

```
Sneetches#show debug
General OS:
AAA Authentication debugging is on
AAA Authorization debugging is on
AAA Accounting debugging is on
VPN:
VPN events debugging is on
VPN errors debugging is on
RADIUS protocol debugging is on
Sneetches#
!--- Problem 1: !--- Problem in tunnel definition on the HGW router; in HGW configuration !---
vpdn incoming hp-gw isp virtual-template 1 is inserted !--- instead of vpdn incoming isp hp-gw
virtual-template 1 !--- debug vpdn l2f-errors display.

19:25:27: L2F: Couldn't find tunnel named isp
19:25:30: L2F: Couldn't find tunnel named isp
!--- Problem 2: !--- User "isp" is removed from the HGW router.

AAA/AUTHEN (3372073334): SENDAUTH no password for isp
AAA/AUTHEN (3372073334): status = ERROR
AAA/AUTHEN/START (3372073334): no methods left to try
AAA/AUTHEN (3372073334): status = ERROR
AAA/AUTHEN/START (3372073334): failed to authenticate
```

```
 !--- Problem 3: !--- User "hp-gw" is removed from the HGW router.

AAA/AUTHEN (3999868118): SENDAUTH no password for hp-gw
AAA/AUTHEN (3999868118): status = ERROR
AAA/AUTHEN/START (3999868118): no methods left to try
AAA/AUTHEN (3999868118): status = ERROR
AAA/AUTHEN/START (3999868118): failed to authenticate
 !--- Problem 4: !--- User "isp" is removed from HGW RADIUS server.

RADIUS: Received from id 107 171.68.118.101:1645, Access-Reject, len 46
Attribute 18 26 41757468
AAA/AUTHEN (2759462034): status = FAIL
VPDN: Chap authentication failed for isp
%VPDN-6-AUTHENFAIL: L2F HGW , AAA authentication failure for tunnel isp
 !--- Problem 5: !--- User "jsmith@hp.com" is not in the HGW server.

RADIUS: Received from id 109 171.68.118.101:1645, Access-Reject, len 46
Attribute 18 26 41757468
AAA/AUTHEN (2765235576): status = FAIL
%VPDN-6-AUTHENFAIL: L2F HGW hp-gw, AAA authentication failure for Vi1
 user jsmith@hp.com; Authentication failure
```

Zugehörige Informationen

- Support-Seite für RADIUS-Technologie
- Anforderungen für Kommentare (RFCs)
- Support-Seite für Cisco Secure UNIX-Produkte
- Technischer Support - Cisco Systems