

如何配置 VPDN 的 RADIUS 认证

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简介

使用虚拟专用拨号网络 (VPDN) 可以将服务中的专用网络拨号分布到远程接入服务器 (定义为 L2TP 接入集中器 [LAC])。在点对点协议 (PPP) 客户端拨入 LAC 后，LAC 会确定应该将该 PPP 会话转发到该客户端的 L2TP 网络服务器 (LNS)，后者随后将对用户进行身份验证并启动 PPP 协商。完成 PPP 设置后，所有帧都将通过 LAC 发送到客户端和 LNS。

此示例配置允许您通过 VPDN 执行 RADIUS 身份验证。LAC 将查询 RADIUS 服务器，确定将用户转发到哪个 LNS，然后建立适当的隧道。

有关 VPDN 的更多信息，请参考[了解 VPDN](#)。

先决条件

要求

本文档没有任何特定的要求。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- Cisco Secure ACS UNIX 版本 2.x.x 及更高版本，或者 Merit RADIUS
- Cisco IOS®软件版本11.2及以上版本

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

背景信息

在此示例中，用户为“jsmith@hp.com”，其密码为“test”。当“jsmith@hp.com”拨入 ISP 路由器后，ISP 路由器将“hp.com”用户 ID 发送给 ISP RADIUS 服务器。ISP 服务器会发现“hp.com”用户 ID，并将其隧道 ID（“isp”）、家庭网关 (HGW) 路由器的 IP 地址 (10.31.1.50)、网络接入服务器 (NAS) 密码（“Hello”）以及网关密码（“there”）发送回 ISP 路由器。

ISP 路由器将开启一条隧道，并连接到 10.31.1.50 HGW 路由器，该路由器会在本地对用户“hp-gw”进行身份验证，并将用户 ID“isp”的密码（“Hello”）转发给 HGW RADIUS 服务器。隧道一旦建立，ISP 路由器会将拨入此用户的用户 ID（“jsmith@hp.com”）和密码（“test”）转发给 HGW 路由器，然后在 HGW 服务器上对此用户进行身份验证。在本例中，ISP 路由器名为“Koala”，HGW 路由器名为“sneetches”。

配置

本部分提供有关如何配置本文档所述功能的信息。

网络图

本文档使用此图所示的网络设置。

服务器配置

Merit RADIUS 配置

```
!--- 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 配置

```
!--- 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 } } }
```

路由器配置

ISP 路由器配置

```
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
```

HGW 路由器配置

```
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
```

验证

当前没有可用于此配置的验证过程。

故障排除

本部分提供的信息可用于对配置进行故障排除。

故障排除命令

输出解释器工具支持某些 **show** 命令（只限于注册用户），通过它可以查看 **show** 命令输出的分析。

注意： 在发出 **debug** 命令之前，请参阅[有关 Debug 命令的重要信息](#)。

- **debug aaa authentication** - 显示有关 AAA/增强型终端访问控制器访问控制系统 (TACACS+) 认证的信息。
- **debug aaa authorization** - 显示有关 AAA/TACACS+ 授权的信息。
- **debug ppp negotiation** — 显示在 PPP 启动期间传输的 PPP 数据包，在此启动期间将协商 PPP 选项。
- **debug radius** - 显示与 RADIUS 相关的调试详细信息。
- **debug vpdn error** — 显示阻止建立 PPP 隧道的错误，或者导致已建隧道被关闭的错误。
- **debug vpdn events** -显示关于正常PPP隧道建立或关闭的一部分事件的消息。
- **debug vpdn l2f-errors** — 显示阻止建立第 2 层或阻止其正常运行的第 2 层协议错误。
- **debug vpdn l2f-events** — 显示第 2 层的 PPP 隧道正常建立或关闭过程中的事件相关消息。
- **debug vpdn l2f-packets** — 显示有关第 2 层转发协议报头和状态的消息。
- **debug vpdn packets** — 显示 VPDN 的隧道正常建立或关闭过程中的第 2 层隧道协议错误和事件。
- **debug vtemplate** - 显示从虚拟模板克隆虚拟访问接口时到虚拟访问接口因呼叫结束而关闭时虚拟访问接口的克隆信息。

调试输出

ISP 路由器正常调试

```
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#

HWG 路由器正常调试

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: Vil VPDN: Virtual interface
created for jsmith@hp.com 17:28:21: Vil VPDN: Set to Async interface 17:28:21: Vil VPDN: Clone
from Vtemplate 1 filterPPP=0 blocking %LINK-3-UPDOWN: Interface Virtual-Access1, changed state
to up 17:28:23: Vil VPDN: Bind interface direction=2 17:28:23: Vil 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 Vil: Authorize LCP 17:28:23: AAA/AUTHOR/LCP Vil (1528831370): Port='Virtual-
Access1' list='' service=NET 17:28:23: AAA/AUTHOR/LCP: Vil (1528831370) user='jsmith@hp.com'
17:28:23: AAA/AUTHOR/LCP: Vil (1528831370) send AV service=ppp 17:28:23: AAA/AUTHOR/LCP: Vil
(1528831370) send AV protocol=lcp 17:28:23: AAA/AUTHOR/LCP (1528831370) found list "default"
17:28:23: AAA/AUTHOR/LCP: Vil (1528831370) Method=RADIUS 17:28:23: AAA/AUTHOR (1528831370): Post
authorization status = PASS_REPL 17:28:23: AAA/AUTHOR/LCP Vil: 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 Vil: (0): Can we start IPCP?
17:28:23: AAA/AUTHOR/FSM Vil (4249637449): Port='Virtual-Access1' list='' service=NET 17:28:23:
AAA/AUTHOR/FSM: Vil (4249637449) user='jsmith@hp.com' 17:28:23: AAA/AUTHOR/FSM: Vil (4249637449)
send AV service=ppp 17:28:23: AAA/AUTHOR/FSM: Vil (4249637449) send AV protocol=ip 17:28:23:
AAA/AUTHOR/FSM (4249637449) found list "default" 17:28:23: AAA/AUTHOR/FSM: Vil (4249637449)
Method=RADIUS 17:28:23: AAA/AUTHOR (4249637449): Post authorization status = PASS_REPL 17:28:23:
AAA/AUTHOR/FSM Vil: 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 Vil: Start. Her address 0.0.0.0, we want 0.0.0.0
17:28:23: AAA/AUTHOR/IPCP Vil: Processing AV service=ppp 17:28:23: AAA/AUTHOR/IPCP Vil:
Authorization succeeded 17:28:23: AAA/AUTHOR/IPCP Vil: Done. Her address 0.0.0.0, we want
0.0.0.0 17:28:23: AAA/AUTHOR/IPCP Vil: Start. Her address 0.0.0.0, we want 1.1.1.1 17:28:23:
AAA/AUTHOR/IPCP Vil: Processing AV service=ppp 17:28:23: AAA/AUTHOR/IPCP Vil: Authorization
succeeded 17:28:23: AAA/AUTHOR/IPCP Vil: Done. Her address 0.0.0.0, we want 1.1.1.1 17:28:24:
AAA/AUTHOR/IPCP Vil: Start. Her address 1.1.1.1, we want 1.1.1.1 17:28:24: AAA/AUTHOR/IPCP Vil
(923857566): Port='Virtual-Access1' list='' service=NET 17:28:24: AAA/AUTHOR/IPCP: Vil
(923857566) user='jsmith@hp.com' 17:28:24: AAA/AUTHOR/IPCP: Vil (923857566) send AV service=ppp
17:28:24: AAA/AUTHOR/IPCP: Vil (923857566) send AV protocol=ip 17:28:24: AAA/AUTHOR/IPCP: Vil
(923857566) send AV addr*1.1.1.1 17:28:24: AAA/AUTHOR/IPCP (923857566) found list "default"
17:28:24: AAA/AUTHOR/IPCP: Vil (923857566) Method=RADIUS 17:28:24: AAA/AUTHOR (923857566): Post
authorization status = PASS_REPL 17:28:24: AAA/AUTHOR/IPCP Vil: Reject 1.1.1.1, using 1.1.1.1
17:28:24: AAA/AUTHOR/IPCP Vil: Processing AV service=ppp 17:28:24: AAA/AUTHOR/IPCP Vil:
Processing AV addr*1.1.1.1 17:28:24: AAA/AUTHOR/IPCP Vil: Authorization succeeded 17:28:24:
AAA/AUTHOR/IPCP Vil: 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: Vil VPDN: Reset 17:28:50: Vil VPDN: Reset %LINK-3-UPDOWN:
Interface Virtual-Access1, changed state to down 17:28:50: Vil VPDN: Cleanup 17:28:50: Vil VPDN:
Reset 17:28:50: Vil VPDN: Reset 17:28:50: Vil VPDN: Unbind interface 17:28:50: Vil VPDN: Reset
17:28:50: Vil 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#
```

对 ISP 路由器上的失败连接的调试

```
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
```

对 HGW 路由器上的失败连接的调试

```
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 Vil user
jsmith@hp.com; Authentication failure
```

相关信息

- [RADIUS 技术支持页](#)
- [请求注解 \(RFC\)](#)
- [Cisco Secure UNIX 产品支持页](#)

- [技术支持 - Cisco Systems](#)