

# 为 VPDN 配置 TACACS+ 认证

## 目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[规则](#)

[配置](#)

[网络图](#)

[TACACS+ 服务器配置](#)

[路由器配置](#)

[验证](#)

[故障排除](#)

[故障排除命令](#)

[调试输出示例](#)

[相关信息](#)

## 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。

此示例配置允许您对虚拟专用拨号网络 (VPDN) 使用 TACACS+ 身份验证。LAC 将查询 TACACS+ 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 的详细信息，请参阅[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 for UNIX 2.x.x 版及更高版本或 TACACS+ 免费软件
- 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](#)。

## 配置

本节提供了配置本文档中所述功能所需的信息。

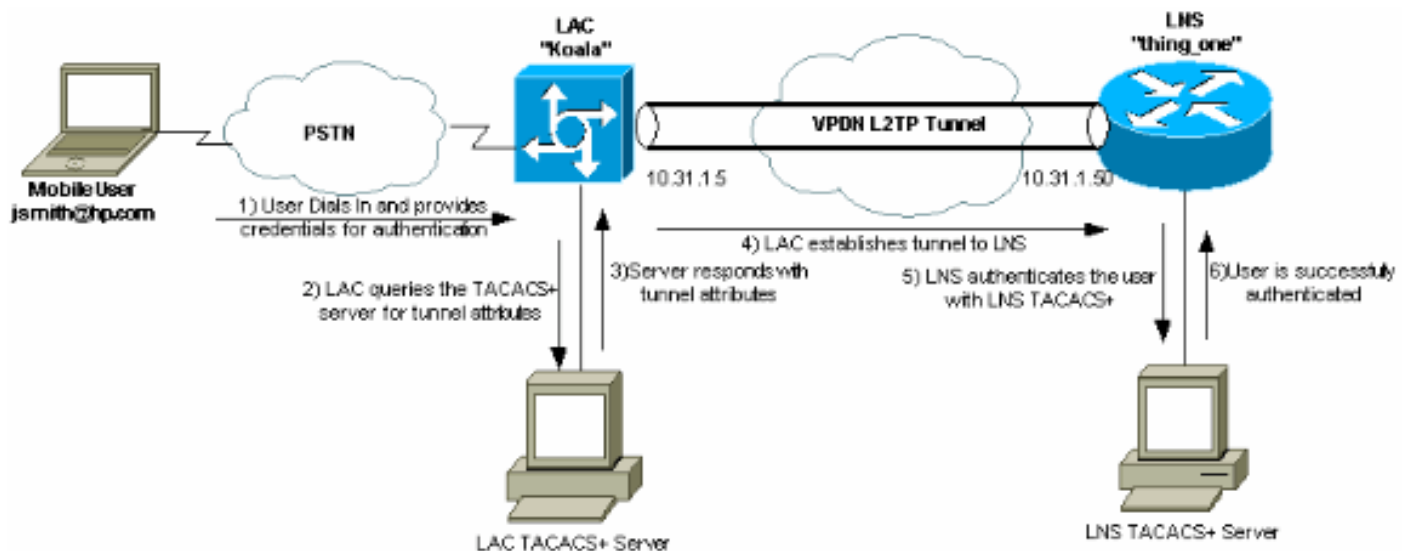
在此示例中，用户为“jsmith@hp.com”，其密码为“test”。在“jsmith@hp.com”拨入 ISP 路由器后，ISP 路由器将“hp.com”用户 ID 发送到 ISP TACACS+ 服务器。ISP 服务器会发现“hp.com”用户 ID，并将其隧道 ID（“isp”）、家庭网关 (HGW) 路由器的 IP 地址 (10.31.1.50)、网络接入服务器 (NAS) 密码（“Hello”）以及网关密码（“there”）发送回 ISP 路由器。

ISP 路由器将启动隧道并连接到 HGW 路由器，后者将用户 ID“hp-gw”的密码（“there”）和用户 ID“isp”的密码（“Hello”）转发到 HGW TACACS+ 服务器。在建立隧道后，ISP 路由器将拨入的用户的用户 ID（“jsmith@hp.com”）和密码（“test”）转发到 HGW 路由器。在 HGW 服务器上对此用户进行身份验证。在本文档中的示例配置中，ISP 路由器主机名是“koala”，并且 HGW 路由器主机名是“thing\_one”。

**注意：**要查找本文档所用命令的其他信息，请使用[命令查找工具](#)（仅限注册用户）。

## 网络图

本文档使用此图所示的网络设置。



## TACACS+ 服务器配置

本文档使用此处所示的服务器配置。

- [TACACS+ 免费软件](#)
- [Cisco Secure ACS for UNIX 2.x.x](#)

## [TACACS+ 免费软件](#)

```
!--- This user is on the ISP TACACS+ server. !--- The profile includes the Tunnel ID ("isp"),
the IP address !--- of the Peer (10.31.1.50), !--- and the passwords used to authenticate the
tunnel. !--- The ISP uses these attributes to establish the tunnel. user = hp.com { service = ppp
protocol = vpdn { tunnel-id = isp ip-addresses = "10.31.1.50" nas-password = "hello" gw-password
= "there" } } !--- The next three users are on the HGW server. user = isp { chap = cleartext
"hello" service = ppp protocol = ip { default attribute = permit } } user = hp-gw { chap =
cleartext "there" service = ppp protocol = ip { default attribute = permit } } user =
jsmith@hp.com { chap = cleartext "test" service = ppp protocol = ip { default attribute = permit
} }
```

## [Cisco Secure ACS for UNIX 2.x.x](#)

```
!--- This user is on the ISP server. # ./ViewProfile -p 9900 -u hp.com User Profile Information
user = hp.com{ profile_id = 83 profile_cycle = 1 service=ppp { protocol=vpdn { set tunnel-id=isp
set ip-addresses="10.31.1.50" set nas-password="hello" set gw-password="there" } protocol=lcp {
} } } !--- The next three users are on the HGW server. !--- The next two usernames are used to
authenticate the LAC !--- during tunnel initialization. # ./ViewProfile -p 9900 -u isp User
Profile Information user = isp{ profile_id = 84 profile_cycle = 1 password = chap "*****"
service=ppp { protocol=ip { default attribute=permit } protocol=lcp { } } } # ./ViewProfile -p
9900 -u hp-gw User Profile Information user = hp-gw{ profile_id = 82 profile_cycle = 1 password
= chap "*****" service=ppp { protocol=ip { default attribute=permit } protocol=lcp { } } } !-
-- This username is used to authenticate the end user !--- after the tunnel is established. #
./ViewProfile -p 9900 -u jsmith@hp.com User Profile Information user = jsmith@hp.com{ profile_id
= 85 profile_cycle = 1 password = chap "*****" service=ppp { protocol=ip { default
attribute=permit } protocol=lcp { } } }
```

## [路由器配置](#)

本文档使用此处所示的配置。

- [ISP 路由器](#)
- [HGW 路由器](#)

### ISP 路由器配置

```
koala#show running config Building configuration...
Current configuration: ! version 11.2 no service
password-encryption service udp-small-servers service
tcp-small-servers ! hostname koala ! aaa new-model aaa
authentication ppp default tacacs+ none aaa
authorization network tacacs+ none aaa accounting
network start-stop tacacs+ enable password ww ! !---
VPDN is enabled. vpdn enable ! 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 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 ! !--- Specify the TACACS
server information on the NAS. tacacs-server host
171.68.120.194 tacacs-server key cisco no tacacs-server
directed-request snmp-server community public RW snmp-
server enable traps config ! line con 0 password ww line
1 16 password ww autoselect ppp modem InOut transport
input all stopbits 1 rxspeed 115200 txspeed 115200
flowcontrol hardware line aux 0 line vty 0 4 exec-
timeout 0 0 password ww ! end
```

## HGW 路由器配置

```
thing_one#show running config Building configuration...
Current configuration: ! version 11.2 no service
password-encryption no service udp-small-servers no
service tcp-small-servers ! hostname thing_one ! aaa
new-model aaa authentication ppp default tacacs+ none
aaa authorization network tacacs+ none enable password
ww ! !--- Enable VPDN. vpdn enable !--- Specify the
remote host ("isp" on the network access server) !---
and the local name ("hp-gw" on the home gateway) to use
to authenticate. !--- Also specify the virtual template
to use. !--- The local name and the remote host name
must match !--- the ones in the TACACS server. vpdn
incoming isp hp-gw virtual-template 1 ! interface
Loopback0 shutdown ! interface Ethernet0 ip address
10.31.1.50 255.255.255.0 ! 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 15.15.15.15 no ip classless ip
route 0.0.0.0 0.0.0.0 10.31.1.1 ! tacacs-server host
171.68.118.101 no tacacs-server directed-request tacacs-
server key cisco !--- Specify the TACACS+ server
information on the NAS. ! line con 0 exec-timeout 0 0
line 1 8 line aux 0 line vty 0 4 ! 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

**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` — 显示有关身份验证、授权和记帐 (AAA)/TACACS+ 身份验证的信息。
- `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 tacacs+` - 显示与 TACACS+ 相关的详细调试信息。
- `debug vpdn errors` — 显示阻止建立 PPP 隧道的错误或导致已建立的隧道关闭的错误。
- `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 (L2TP) 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。

## 调试输出示例

提供了以下调试以供参考。

- [ISP 路由器正常调试](#)
- [HGW 路由器正常调试](#)
- [对 ISP 路由器上的失败连接的调试](#)
- [对 HGW 路由器上的失败连接的调试](#)

### 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
koala# %LINK-3-UPDOWN: Interface Async1, changed state to up 15:04:47: VPDN: Looking for tunnel
-- hp.com -- 15:04:47: AAA/AUTHEN: create_user (0x15FA80) user='hp.com' ruser='' port='Async1'
rem_addr='' authn_type=NONE service=LOGIN priv=0 15:04:47: AAA/AUTHOR/VPDN: : (2445181346):
user='hp.com' 15:04:47: AAA/AUTHOR/VPDN: : (2445181346): send AV service=ppp 15:04:47:
AAA/AUTHOR/VPDN: : (2445181346): send AV protocol=vpdn 15:04:47: AAA/AUTHOR/VPDN: :
(2445181346): Method=TACACS+ 15:04:47: AAA/AUTHOR/TAC+: (2445181346): user=hp.com 15:04:47:
AAA/AUTHOR/TAC+: (2445181346): send AV service=ppp 15:04:47: AAA/AUTHOR/TAC+: (2445181346): send
AV protocol=vpdn 15:04:47: TAC+: (2445181346): received author response status = PASS_ADD
15:04:47: AAA/AUTHOR (2445181346): Post authorization status = PASS_ADD 15:04:47:
AAA/AUTHOR/VPDN: Processing AV service=ppp 15:04:47: AAA/AUTHOR/VPDN: Processing AV
protocol=vpdn 15:04:47: AAA/AUTHOR/VPDN: Processing AV tunnel-id=isp 15:04:47: AAA/AUTHOR/VPDN:
Processing AV ip-addresses=10.31.1.50 15:04:47: AAA/AUTHOR/VPDN: Processing AV nas-
password=hello 15:04:47: AAA/AUTHOR/VPDN: Processing AV gw-password=there 15:04:47: VPDN: Get
tunnel info with NAS isp GW hp.com, IP 10.31.1.50 !--- The TACACS+ server returns the attributes
the !--- NAS should use for the tunnel. !--- The tunnel-id is "ISP" and the IP address of HGW is
10.31.1.50. 15:04:47: AAA/AUTHEN: free_user (0x15FA80) user='hp.com' ruser='' port='Async1'
rem_addr='' authn_type=NONE service=LOGIN priv=0 15:04:47: VPDN: Forward to address 10.31.1.50
15:04:47: As1 VPDN: Forwarding... 15:04:47: AAA/AUTHEN: create_user (0x118008)
user='jsmith@hp.com' ruser='' port='Async1' rem_addr='async' authn_type=CHAP service=PPP priv=1
15:04:47: As1 VPDN: Bind interface direction=1 15:04:47: As1 VPDN: jsmith@hp.com is forwarded
%LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state to up 15:04:49: AAA/ACCT:
NET acct start. User jsmith@hp.com, Port Async1: Async1 !--- 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 15:05:27: As1 VPDN: Cleanup 15:05:27: As1 VPDN: Reset
15:05:27: As1 VPDN: Reset 15:05:27: As1 VPDN: Unbind interface 15:05:27: AAA/ACCT: Network acct
stop. User jsmith@hp.com, Port Async1: task_id=2 timezone=UTC service=vpdn bytes_in=1399
bytes_out=150 paks_in=27 paks_out=9 elapsed_time=38 %LINK-3-UPDOWN: Interface Async1, changed
state to down 15:05:30: AAA/AUTHEN: free_user (0x118008) user='jsmith@hp.com' ruser=''
port='Async1' rem_addr='async' authn_type=CHAP service=PPP priv=1 koala#
```

### HGW 路由器正常调试

```
thing_one#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
VTEMPLATE: Virtual Template debugging is on thing_one# 15:04:46: AAA/AUTHEN: create_user
(0x15E6E0) user='isp' ruser='' port='' rem_addr='' authn_type=CHAP service=PPP priv=1 15:04:46:
TAC+: ver=192 id=969200103 received AUTHEN status = PASS 15:04:46: AAA/AUTHEN: free_user
(0x15E6E0) user='isp' ruser='' port='' rem_addr='' authn_type=CHAP service=PPP priv=1 15:04:46:
AAA/AUTHEN (3252085483): status = PASS 15:04:46: AAA/AUTHEN: free_user (0x15CBEC) user='isp'
ruser='' port='' rem_addr='' authn_type=CHAP service=PPP priv=1 15:04:46: AAA/AUTHEN:
```

```
create_user (0x15F1B8) user='isp' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP
priv=1 15:04:46: AAA/AUTHEN/START (3897539709): port='' list='default' action=LOGIN service=PPP
15:04:46: AAA/AUTHEN/START (3897539709): found list default 15:04:46: AAA/AUTHEN/START
(3897539709): Method=TACACS+ 15:04:46: TAC+: send AUTHEN/START packet ver=193 id=3897539709
15:04:46: TAC+: ver=192 id=3897539709 received AUTHEN status = GETPASS 15:04:46: AAA/AUTHEN:
create_user (0x15E6F0) user='isp' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP
priv=1 15:04:46: TAC+: ver=192 id=2306139011 received AUTHEN status = PASS 15:04:46: AAA/AUTHEN:
free_user (0x15E6F0) user='isp' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP priv=1
15:04:46: AAA/AUTHEN (3897539709): status = PASS 15:04:46: VPDN: Chap authentication succeeded
for isp !--- The LAC ("ISP") is succesfully authenticated. 15:04:46: AAA/AUTHEN: free_user
(0x15F1B8) user='isp' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP priv=1 15:04:46:
Vil VTEMPLATE: Reuse Vil, recycle queue size 0 15:04:46: Vil VTEMPLATE: Set default settings
with no ip address 15:04:47: Vil VTEMPLATE: Hardware address 00e0.1e68.942c 15:04:47: Vil VPDN:
Virtual interface created for jsmith@hp.com 15:04:47: Vil VPDN: Set to Async interface 15:04:47:
Vil VPDN: Clone from Vtemplate 1 filterPPP=0 blocking 15:04:47: Vil VTEMPLATE: Has a new
cloneblk vtemplate, now it has vtemplate 15:04:47: Vil VTEMPLATE: Undo default settings
15:04:47: Vil VTEMPLATE: ***** CLONE VACCESS1 ***** 15:04:47: Vil VTEMPLATE:
Clone from vtemplate1 interface Virtual-Access1 no ip address encap ppp ip unnum eth 0 peer
default ip address pool async ppp authen chap end %LINK-3-UPDOWN: Interface Virtual-Access1,
changed state to up 15:04:48: Vil VPDN: Bind interface direction=2 15:04:48: Vil VPDN: PPP LCP
accepted sent & rcv CONFACK 15:04:48: Vil VPDN: Virtual interface iteration 15:04:48:
AAA/AUTHEN: create_user (0x161688) user='jsmith@hp.com' ruser='' port='Virtual-Access1'
rem_addr='async' authen_type=CHAP service=PPP priv=1 15:04:48: AAA/AUTHEN/START (580760432):
port='Virtual-Access1' list='' action=LOGIN service=PPP 15:04:48: AAA/AUTHEN/START (580760432):
using "default" list 15:04:48: AAA/AUTHEN/START (580760432): Method=TACACS+ 15:04:48: TAC+: send
AUTHEN/START packet ver=193 id=580760432 15:04:48: Vil VPDN: Virtual interface iteration
15:04:49: TAC+: ver=192 id=580760432 received AUTHEN status = GETPASS !--- Authenticate user
jsmith@hp.com with the TACACS+ server. 15:04:49: AAA/AUTHEN: create_user (0x1667C0)
user='jsmith@hp.com' ruser='' port='Virtual-Access1' rem_addr='async' authen_type=CHAP
service=PPP priv=1 15:04:49: TAC+: ver=192 id=2894253624 received AUTHEN status = PASS 15:04:49:
AAA/AUTHEN: free_user (0x1667C0) user='jsmith@hp.com' ruser='' port='Virtual-Access1'
rem_addr='async' authen_type=CHAP service=PPP priv=1 15:04:49: AAA/AUTHEN (580760432): status =
PASS 15:04:49: AAA/AUTHOR/LCP Vil: Authorize LCP 15:04:49: AAA/AUTHOR/LCP: Virtual-Access1:
(687698354): user='jsmith@hp.com' 15:04:49: AAA/AUTHOR/LCP: Virtual-Access1: (687698354): send
AV service=ppp 15:04:49: AAA/AUTHOR/LCP: Virtual-Access1: (687698354): send AV protocol=lcp
15:04:49: AAA/AUTHOR/LCP: Virtual-Access1: (687698354): Method=TACACS+ 15:04:49:
AAA/AUTHOR/TAC+: (687698354): user=jsmith@hp.com 15:04:49: AAA/AUTHOR/TAC+: (687698354): send AV
service=ppp 15:04:49: AAA/AUTHOR/TAC+: (687698354): send AV protocol=lcp 15:04:49: TAC+:
(687698354): received author response status = PASS_ADD 15:04:49: AAA/AUTHOR (687698354): Post
authorization status = PASS_ADD 15:04:49: AAA/ACCT: NET acct start. User jsmith@hp.com, Port
Virtual-Access1: Virtual-Access1 15:04:49: AAA/AUTHOR/FSM Vil: (0): Can we start IPCP? 15:04:49:
AAA/AUTHOR/FSM: Virtual-Access1: (3562892028): user='jsmith@hp.com' 15:04:49: AAA/AUTHOR/FSM:
Virtual-Access1: (3562892028): send AV service=ppp 15:04:49: AAA/AUTHOR/FSM: Virtual-Access1:
(3562892028): send AV protocol=ip 15:04:49: AAA/AUTHOR/FSM: Virtual-Access1: (3562892028):
Method=TACACS+ 15:04:49: AAA/AUTHOR/TAC+: (3562892028): user=jsmith@hp.com 15:04:49:
AAA/AUTHOR/TAC+: (3562892028): send AV service=ppp 15:04:49: AAA/AUTHOR/TAC+: (3562892028): send
AV protocol=ip %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1, changed state to
up 15:04:49: TAC+: (3562892028): received author response status = PASS_ADD 15:04:49: AAA/AUTHOR
(3562892028): Post authorization status = PASS_ADD !--- IPCP negotiation begins. 15:04:49:
AAA/AUTHOR/FSM Vil: We can start IPCP 15:04:50: AAA/AUTHOR/IPCP Vil: Start. Her address 0.0.0.0,
we want 0.0.0.0 15:04:50: AAA/AUTHOR/IPCP Vil: Processing AV service=ppp 15:04:50:
AAA/AUTHOR/IPCP Vil: Processing AV protocol=ip 15:04:50: AAA/AUTHOR/IPCP Vil: Authorization
succeeded 15:04:50: AAA/AUTHOR/IPCP Vil: Done. Her address 0.0.0.0, we want 0.0.0.0 15:04:51:
AAA/AUTHOR/IPCP Vil: Start. Her address 0.0.0.0, we want 15.15.15.15 15:04:51: AAA/AUTHOR/IPCP
Vil: Processing AV service=ppp 15:04:51: AAA/AUTHOR/IPCP Vil: Processing AV protocol=ip
15:04:51: AAA/AUTHOR/IPCP Vil: Authorization succeeded 15:04:51: AAA/AUTHOR/IPCP Vil: Done. Her
address 0.0.0.0, we want 15.15.15.15 15:04:51: AAA/AUTHOR/IPCP Vil: Start. Her address
15.15.15.15, we want 15.15.15.15 15:04:51: AAA/AUTHOR/IPCP: Virtual-Access1: (3193852847):
user='jsmith@hp.com' 15:04:51: AAA/AUTHOR/IPCP: Virtual-Access1: (3193852847): send AV
service=ppp 15:04:51: AAA/AUTHOR/IPCP: Virtual-Access1: (3193852847): send AV protocol=ip
15:04:51: AAA/AUTHOR/IPCP: Virtual-Access1: (3193852847): send AV addr*15.15.15.15 15:04:51:
AAA/AUTHOR/IPCP: Virtual-Access1: (3193852847): Method=TACACS+ 15:04:51: AAA/AUTHOR/TAC+:
(3193852847): user=jsmith@hp.com 15:04:51: AAA/AUTHOR/TAC+: (3193852847): send AV service=ppp
15:04:51: AAA/AUTHOR/TAC+: (3193852847): send AV protocol=ip 15:04:51: AAA/AUTHOR/TAC+:
```

```
(3193852847): send AV addr*15.15.15.15 15:04:51: TAC+: (3193852847): received author response
status = PASS_ADD 15:04:51: AAA/AUTHOR (3193852847): Post authorization status = PASS_ADD
15:04:51: AAA/AUTHOR/IPCP Vi1: Processing AV service=ppp 15:04:51: AAA/AUTHOR/IPCP Vi1:
Processing AV protocol=ip 15:04:51: AAA/AUTHOR/IPCP Vi1: Processing AV addr*15.15.15.15
15:04:51: AAA/AUTHOR/IPCP Vi1: Authorization succeeded 15:04:51: AAA/AUTHOR/IPCP Vi1: Done. Her
address 15.15.15.15, we want 15.15.15.15 !--- User finishes and disconnects. 15:05:24: Vi1 VPDN:
Reset 15:05:24: Vi1 VPDN: Reset %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to down
15:05:24: Vi1 VPDN: Cleanup 15:05:24: Vi1 VPDN: Reset 15:05:24: Vi1 VPDN: Reset 15:05:24: Vi1
VPDN: Unbind interface 15:05:24: Vi1 VTEMPLATE: Free vaccess 15:05:24: Vi1 VPDN: Reset 15:05:24:
Vi1 VPDN: Reset 15:05:24: AAA/ACCT: Network acct stop. User jsmith@hp.com, Port Virtual-Access1:
task_id=2 timezone=UTC service=ppp protocol=ip addr=15.15.15.15 bytes_in=564 bytes_out=142
paks_in=15 paks_out=8 elapsed_time=35 15:05:24: AAA/AUTHEN: free_user (0x161688)
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 15:05:25: VTEMPLATE: Clean up dirty vaccess queue, size 1 15:05:25: Vi1 VTEMPLATE:
Found a dirty vaccess clone with vtemplate 15:05:25: Vi1 VTEMPLATE: ***** UNCLONE
VACCESS1 ***** 15:05:25: Vi1 VTEMPLATE: Unclone to-be-freed command#5 interface
Virtual-Access1 default ppp authen chap default peer default ip address pool async default ip
unnum eth 0 default encap ppp default ip address end 15:05:26: Vi1 VTEMPLATE: Set default
settings with no ip address 15:05:26: Vi1 VTEMPLATE: Remove cloneblk vtemplate with vtemplate
15:05:26: Vi1 VTEMPLATE: Add vaccess to recycle queue, queue size=1 thing_one#
```

## 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
koala# !--- Problem 1: !--- The ISP TACACS+ server is down. !--- There is no output on the HGW
router !--- because the call has not gone that far. AAA/AUTHOR (3015476150): Post authorization
status = ERROR AAA/AUTHOR/VPDN: : (3015476150): Method=NOT_SET AAA/AUTHOR/VPDN: : (3015476150):
no methods left to try AAA/AUTHOR (3015476150): Post authorization status = ERROR VPDN: (hp.com)
Authorization failed, could not talk to AAA server or local tunnel problem !--- Problem 2: !---
Userid hp.com is not in the ISP server. !--- There is no output on the Gateway router !---
because the call has not gone that far. TAC+: (894828802): received author response status =
PASS_ADD AAA/AUTHOR (894828802): Post authorization status = PASS_ADD VPDN: (hp.com)
Authorization failed, had talked to AAA server; but both Tunnel ID and IP address are missing
AAA/AUTHEN: free_user (0x16A6E4) user='hp.com' ruser='' port='Async1' rem_addr=''
authen_type=NONE service=LOGIN priv=0 AAA/AUTHEN: create_user (0x16CA8C) user='jsmith@hp.com'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1 AAA/AUTHEN/START
(1904487288): port='Async1' list='' action=LOGIN service=PPP AAA/AUTHEN/START (1904487288):
using "default" list AAA/AUTHEN (1904487288): status = UNKNOWN AAA/AUTHEN/START (1904487288):
Method=TACACS+ TAC+: send AUTHEN/START packet ver=193 id=1904487288 TAC+: ver=193 id=1904487288
received AUTHEN status = FAIL AAA/AUTHEN (1904487288): status = FAIL
```

## 对 HGW 路由器上的失败连接的调试

```
thing_one#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
VTEMPLATE: Virtual Template debugging is on thing_one# !--- Problem 1: !--- The problem is in
the tunnel definition on HGW router. !--- In the HGW configuration, vpdn incoming hp-gw isp
virtual-template 1 !--- is inserted instead of vpdn incoming isp hp-gw virtual-template 1 !---
The debug vpdn l2f-errors command displays. L2F: Couldn't find tunnel named isp L2F: Couldn't
find tunnel named isp !--- Problem 2: !--- This message appears when User hp-gw is not in the
HGW server. TAC+: ver=192 id=1920941753 received AUTHEN status = FAIL AAA/AUTHEN: free_user
(0x138C34) user='hp-gw' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP priv=1
AAA/AUTHEN (3006335673): status = FAIL VPDN: authentication failed, couldn't find user
information for hp-gw !--- Problem 3: !--- This appears when user isp is not in the HGW server.
TAC+: ver=192 id=1917558147 received AUTHEN status = FAIL AAA/AUTHEN: free_user (0x15F20C)
user='isp' ruser='' port='' rem_addr='' authen_type=CHAP service=PPP priv=1 AAA/AUTHEN
(1949507921): status = FAIL VPDN: authentication failed, couldn't find user information for isp
!--- Problem 4: !--- This message appears when User jsmith@hp.com is !--- not in the HGW server:
TAC+: ver=192 id=755036341 received AUTHEN status = FAIL AAA/AUTHEN: free_user (0x15F89C)
user='jsmith@hp.com' ruser='' port='Virtual-Access1' rem_addr='async' authen_type=CHAP
service=PPP priv=1 AAA/AUTHEN (2606986667): status = FAIL
```

## 相关信息

- [Cisco Secure ACS for UNIX 支持页](#)
- [TACACS+ 支持页](#)
- [技术支持和文档 - Cisco Systems](#)