

调试 RADIUS、PAP 与 CHAP 时的一般问题

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简介

本文档会检查使用口令身份验证协议 (PAP) 或质询握手身份验证协议 (CHAP) 时，RADIUS 的常见调试问题，并会提供 Microsoft Windows 95、Windows NT、Windows 98 和 Windows 2000 的普通 PC 设置和各种配置示例，以及调试成功与失败的示例。

开始使用前

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

先决条件

本文档没有任何特定的前提条件。

使用的组件

本文档中的信息基于Cisco IOS®软件版本11.2及更高版本。

本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

普通 PC 设置

Windows 95

按照下面所提供的指导：

1. 在“拨号网络”窗口中，请选择连接名，然后选择**文件 > 属性**。
2. 在“服务器类型”选项卡上，查看是否已勾选“拨号服务器类型”下的**要求加密的口令框**。如果此方框已勾选，表示 PC 只接受 CHAP 身份验证。如果此方框未勾选，表示 PC 接受 PAP 或 CHAP 身份验证。

Windows NT

按照下面所提供的指导：

1. 在“拨号网络”窗口中选择连接名，然后选择**文件 > 属性**。
2. 检查“安全”选项卡上的设置：如果**接受任何身份验证，包括明文方框已勾选**，表示 PC 接受 PAP 或 CHAP。如果**仅接受加密的身份验证方框已勾选**，表示 PC 只接受 CHAP 身份验证。

Windows 98

按照下面所提供的指导：

1. 在“拨号网络”窗口中选择连接名，然后选择**属性**。
2. 在“服务器类型”选项卡上，检查“高级选项”区域中的设置：如果**要求加密的口令框未勾选**，表示 PC 接受 PAP 或 CHAP 身份验证。如果**要求加密的口令框已勾选**，表示 PC 只接受 CHAP 身份验证。

Windows 2000

按照下面所提供的指导：

1. 在“网络和拨号连接”中选择连接名，然后选择**属性**。
2. 在“安全”选项卡上，检查**高级 > 设置 > 允许这些协议区域中的设置**：如果**未加密的口令 (PAP) 方框已勾选**，表示 PC 接受 PAP。如果**质询握手身份验证协议 (CHAP) 方框已勾选**，表示 PC 接受 [RFC 1994](#) 中规定的 CHAP。如果 **Microsoft CHAP (MS-CHAP) 方框已勾选**，表示 PC 接受 MS-CHAP 版本 1，不接受 RFC 1994 中规定的 CHAP。

配置和调试示例

RADIUS 和 PAP

配置 - RADIUS 和 PAP

```
Current configuration:
!
version 11.2
service timestamps debug uptime
no service password-encryption
service udp-small-servers
service tcp-small-servers
!
hostname rtpkrb
!
aaa new-model
!
!--- The following four command lines are specific to !-
-- Cisco IOS 11.2 and later, up until 11.3.3.T. !--- See
below this configuration for commands !--- for other
Cisco IOS releases. ! aaa authentication login default
radius local
aaa authentication ppp default if-needed radius local
aaa authorization exec radius if-authenticated
aaa authorization network radius if-authenticated
!
enable secret 5 $1$pkX.$JdAySRE1SbdbDe7bj0wyt0
enable password ww
!
username john password 0 doe
username cse password 0 csecse
ip host rtpkrb 10.31.1.5
ip domain-name RTP.CISCO.COM
ip name-server 171.68.118.103
!
interface Loopback0
ip address 1.1.1.1 255.255.255.0
!
interface Ethernet0
ip address 10.31.1.5 255.255.0.0
no mop enabled
!
interface Serial0
no ip address
no ip mroute-cache
shutdown
!
interface Serial1
no ip address
shutdown
!
interface Async1
ip unnumbered Ethernet0
encapsulation ppp
async mode dedicated
peer default ip address pool async
no cdp enable
ppp authentication pap
!
ip local pool async 15.15.15.15
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
!
snmp-server community public RW
snmp-server host 171.68.118.100 traps public
radius-server host 171.68.118.101 auth-port 1645 acct-
```

```
port 1646
radius-server key cisco
!
line con 0
line 1
session-timeout 20
exec-timeout 20 0
password ww
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 38400
flowcontrol hardware
line 2
modem InOut
speed 38400
flowcontrol hardware
line 3 16
line aux 0
line vty 0 4
exec-timeout 0 0
password ww
!
end
```

用于其它 Cisco IOS 版本的命令

注意：要使用这些命令，请删除上述配置中突出显示的命令，然后按照Cisco IOS版本的说明将这些命令粘贴到中。

Cisco IOS 11.3.3.T 到 12.0.5.T

```
aaa authen login default radius local
aaa authen ppp default if-needed radius local
aaa authorization exec default radius if-authenticated
aaa authorization network default radius if-authenticated
```

Cisco IOS 12.0.5.T 及更高版本

```
aaa authen login default group radius local
aaa authen ppp default if-needed group radius local
aaa authorization exec default group radius if-authenticated
aaa authorization network default group radius if-authenticated
```

调试示例 - RADIUS 和 PAP

注意：在调试输出中，粗体文本突出显示调试中的问题。纯文本表示调试成功。

```
rtpkrb#
rtpkrb#sho deb
General OS:
AAA Authentication debugging is on
```

```
AAA Authorization debugging is on
PPP:
PPP authentication debugging is on
PPP protocol negotiation debugging is on
Radius protocol debugging is on
rtpkrb#
4d02h: As1 LCP: I CONFREQ [Closed] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x00001F67 (0x050600001F67)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: Lower layer not up, discarding packet
%LINK-3-UPDOWN: Interface Async1, changed state to up
4d02h: As1 PPP: Treating connection as a dedicated line
4d02h: As1 PPP: Phase is ESTABLISHING, Active Open
4d02h: As1 LCP: O CONFREQ [Closed] id 85 len 24
4d02h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
4d02h: As1 LCP: AuthProto PAP (0x0304C023)
4d02h: As1 LCP: MagicNumber 0xF54252D5 (0x0506F54252D5)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)

PC insists on doing chap ('accept encrypted authentication only'),
but router is set up for pap:
As1 LCP: I CONFNAK [REQsent] id 98 len 12
As1 LCP: AuthProto 0xC123 (0x0308C12301000001)
As1 LCP: O CONFREQ [REQsent] id 99 len 24
As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
As1 LCP: AuthProto PAP (0x0304C023)
As1 LCP: MagicNumber 0xF54D1AF8 (0x0506F54D1AF8)
As1 LCP: PFC (0x0702)
As1 LCP: ACFC (0x0802)
As1 LCP: I CONFREJ [REQsent] id 99 len 8
As1 LCP: AuthProto PAP (0x0304C023)
As1 PPP: Closing connection because remote won't authenticate

4d02h: As1 LCP: I CONFACK [REQsent] id 85 len 24
4d02h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
4d02h: As1 LCP: AuthProto PAP (0x0304C023)
4d02h: As1 LCP: MagicNumber 0xF54252D5 (0x0506F54252D5)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: I CONFREQ [ACKrcvd] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x00001F67 (0x050600001F67)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: O CONFACK [ACKrcvd] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x00001F67 (0x050600001F67)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: State is Open
4d02h: As1 PPP: Phase is AUTHENTICATING, by this end
4d02h: As1 PAP: I AUTH-REQ id 14 len 19 from "ddunlap"
4d02h: As1 PAP: Authenticating peer ddunlap
4d02h: AAA/AUTHEN: create_user (0x15AD58) user='ddunlap' ruser=''
port='Async1' rem_addr='async' authen_type=PAP service=PPP priv=1
4d02h: AAA/AUTHEN/START (1953436918): port='Async1' list=''
action=LOGIN service=PPP
4d02h: AAA/AUTHEN/START (1953436918): using "default" list
4d02h: AAA/AUTHEN (1953436918): status = UNKNOWN
4d02h: AAA/AUTHEN/START (1953436918): Method=RADIUS
```

4d02h: RADIUS: Initial Transmit id 7 171.68.118.101:1645,
Access-Request, len 77
4d02h: Attribute 4 6 0A1F0105
4d02h: Attribute 5 6 00000001
4d02h: Attribute 61 6 00000000
4d02h: Attribute 1 9 6464756E
4d02h: Attribute 2 18 7882E0A5
4d02h: Attribute 6 6 00000002
4d02h: Attribute 7 6 00000001

Radius server is down - produces ERROR - since user is not
in local database, failover to local FAILs

As1 PAP: I AUTH-REQ id 16 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=16 already in progress
As1 PAP: I AUTH-REQ id 17 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=17 already in progress
RADIUS: Retransmit id 9
As1 PAP: I AUTH-REQ id 18 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=18 already in progress
As1 PAP: I AUTH-REQ id 19 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=19 already in progress
As1 PAP: I AUTH-REQ id 20 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=20 already in progress
RADIUS: Retransmit id 9
As1 PAP: I AUTH-REQ id 21 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=21 already in progress
As1 PAP: I AUTH-REQ id 22 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=22 already in progress
RADIUS: Retransmit id 9
As1 PAP: I AUTH-REQ id 23 len 19 from "ddunlap"
As1 AUTH: Duplicate authentication request id=23 already in progress
As1 LCP: I TERMREQ [Open] id 1 len 8 (0x000002CE)
As1 LCP: O TERMACK [Open] id 1 len 4
As1 PPP: Phase is TERMINATING
RADIUS: No response for id 9
%RADIUS-3-ALLDEADSERVER: No active radius servers found. Id 9.
RADIUS: No response from server
AAA/AUTHEN (3025998849): status = ERROR
AAA/AUTHEN/START (3025998849): Method=LOCAL
AAA/AUTHEN (3025998849): status = FAIL

Key in router does not match that of server:

RADIUS: Received from id 21 171.68.118.101:1645, Access-Reject, len 20
RADIUS: Reply for 21 fails decrypt

NT client sends 'DOMAIN\user' and Radius server expects 'user':

RADIUS: Received from id 11 171.68.118.101:1645, Access-Reject, len 20
AAA/AUTHEN (1406749115): status = FAIL
As1 PAP: O AUTH-NAK id 25 len 32 msg is "Password validation failure"
As1 PPP: Phase is TERMINATING
As1 LCP: O TERMREQ [Open] id 108 len 4
AAA/AUTHEN: free_user (0xDA520) user='CISCO\ddunlap' ruser=''
port='Async1' rem_addr='async' authen_type=PAP service=PPP priv=1

Radius server refuses user because user user enters bad password,
or both userid & password are bad:

RADIUS: Received from id 12 171.68.118.101:1645, Access-Reject, len 20
AAA/AUTHEN (733718529): status = FAIL
As1 PAP: O AUTH-NAK id 26 len 32 msg is "Password validation failure"
As1 PPP: Phase is TERMINATING

```
As1 LCP: O TERMREQ [Open] id 111 len 4
AAA/AUTHEN: free_user (0x15B030) user='ddunlap' ruser=''
      ='Async1' rem_addr='async' authen_type=PAP service=PPP priv=1
```

```
User passes authentication (i.e. username/password is good)
but fails authorization (profile not set up for Service-Type=Framed &
Framed-Protocol=PPP):
```

```
RADIUS: Received from id 13 171.68.118.101:1645, Access-Accept, len 20
```

```
RADIUS: saved authorization data for user 15AD58 at 15ADFO
```

```
AAA/AUTHEN (56862281): status = PASS
```

```
AAA/AUTHOR/LCP As1: Authorize LCP
```

```
AAA/AUTHOR/LCP: Async1: (959162008): user='cse'
```

```
AAA/AUTHOR/LCP: Async1: (959162008): send AV service=ppp
```

```
AAA/AUTHOR/LCP: Async1: (959162008): send AV protocol=lcp
```

```
AAA/AUTHOR/LCP: Async1: (959162008): Method=RADIUS
```

```
RADIUS: no appropriate authorization type for user.
```

```
AAA/AUTHOR (959162008): Post authorization status = FAIL
```

```
AAA/AUTHOR/LCP As1: Denied
```

```
AAA/AUTHEN: free_user (0x15AD58) user='cse' ruser=''
```

```
port='Async1' rem_addr='async' authen_type=PAP service=PPP priv=1
```

```
As1 PAP: O AUTH-NAK id 27 len 25 msg is "Authorization failed"
```

```
4d02h: RADIUS: Received from id 7 171.68.118.101:1645, Access-Accept, len 32
```

```
4d02h: Attribute 6 6 00000002
```

```
4d02h: Attribute 7 6 00000001
```

```
4d02h: RADIUS: saved authorization data for user 15AD58 at 16C7F4
```

```
4d02h: AAA/AUTHEN (1953436918): status = PASS
```

```
4d02h: AAA/AUTHOR/LCP As1: Authorize LCP
```

```
4d02h: AAA/AUTHOR/LCP: Async1: (2587233868): user='ddunlap'
```

```
4d02h: AAA/AUTHOR/LCP: Async1: (2587233868): send AV service=ppp
```

```
4d02h: AAA/AUTHOR/LCP: Async1: (2587233868): send AV protocol=lcp
```

```
4d02h: AAA/AUTHOR/LCP: Async1: (2587233868): Method=RADIUS
```

```
4d02h: AAA/AUTHOR (2587233868): Post authorization status = PASS_REPL
```

```
4d02h: AAA/AUTHOR/LCP As1: Processing AV service=ppp
```

```
4d02h: As1 PAP: O AUTH-ACK id 14 len 5
```

```
4d02h: As1 PPP: Phase is UP
```

```
4d02h: AAA/AUTHOR/FSM As1: (0): Can we start IPCP?
```

```
4d02h: AAA/AUTHOR/FSM: Async1: (423372862): user='ddunlap'
```

```
4d02h: AAA/AUTHOR/FSM: Async1: (423372862): send AV service=ppp
```

```
4d02h: AAA/AUTHOR/FSM: Async1: (423372862): send AV protocol=ip
```

```
4d02h: AAA/AUTHOR/FSM: Async1: (423372862): Method=RADIUS
```

```
4d02h: AAA/AUTHOR (423372862): Post authorization status = PASS_REPL
```

```
4d02h: AAA/AUTHOR/FSM As1: We can start IPCP
```

```
4d02h: As1 IPCP: O CONFREQ [Closed] id 17 len 10
```

```
4d02h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
```

```
4d02h: As1 IPCP: I CONFREQ [REQsent] id 1 len 34
```

```
4d02h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
```

```
4d02h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
```

```
4d02h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
```

```
4d02h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
```

```
4d02h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
```

```
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0, we want 0.0.0.0
```

```
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
```

```
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
```

```
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0, we want 0.0.0.0
```

```
4d02h: As1 IPCP: Using pool 'async'
```

```
4d02h: As1 IPCP: Pool returned 15.15.15.15
```

```
4d02h: As1 IPCP: O CONFREQ [REQsent] id 1 len 22
```

```
4d02h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
```

```
4d02h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
```

```
4d02h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
```

```
4d02h: As1 IPCP: I CONFACK [REQsent] id 17 len 10
```

```
4d02h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
```

```

%LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state to up
4d02h: As1 IPCP: I CONFREQ [ACKrcvd] id 2 len 16
4d02h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
4d02h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0, we want 15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0, we want 15.15.15.15
4d02h: As1 IPCP: O CONFNAK [ACKrcvd] id 2 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: As1 IPCP: I CONFREQ [ACKrcvd] id 3 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 15.15.15.15, we want 15.15.15.15
4d02h: AAA/AUTHOR/IPCP: Async1: (4204275250): user='ddunlap'
4d02h: AAA/AUTHOR/IPCP: Async1: (4204275250): send AV service=ppp
4d02h: AAA/AUTHOR/IPCP: Async1: (4204275250): send AV protocol=ip
4d02h: AAA/AUTHOR/IPCP: Async1: (4204275250): send AV addr*15.15.15.15
4d02h: AAA/AUTHOR/IPCP: Async1: (4204275250): Method=RADIUS
4d02h: AAA/AUTHOR (4204275250): Post authorization status = PASS_REPL
4d02h: AAA/AUTHOR/IPCP As1: Reject 15.15.15.15, using 15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
4d02h: AAA/AUTHOR/IPCP As1: Processing AV addr*15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 15.15.15.15, we want 15.15.15.15
4d02h: As1 IPCP: O CONFACK [ACKrcvd] id 3 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: As1 IPCP: State is Open
4d02h: As1 IPCP: Install route to 15.15.15.15
rtpkrb#

```

RADIUS 和 CHAP

配置 - RADIUS 和 CHAP

```

Current configuration:
!
version 11.2
service timestamps debug uptime
no service password-encryption
service udp-small-servers
service tcp-small-servers
!
hostname rtpkrb
!
aaa new-model
!
!--- The following four command lines are specific to !-
-- Cisco IOS 11.2 and later, up until 11.3.3.T. !--- See
below this configuration for commands !--- for other
Cisco IOS releases. ! aaa authentication login default
radius local
aaa authentication ppp default if-needed radius local
aaa authorization exec radius if-authenticated
aaa authorization network radius if-authenticated
!
enable secret 5 $1$pkX.$JdAySRE1SbdbDe7bj0wyt0
enable password ww
!

```



```
username john password 0 doe
username cse password 0 csecse
ip host rtpkrb 10.31.1.5
ip name-server 171.68.118.103
!
interface Loopback0
ip address 1.1.1.1 255.255.255.0
!
interface Ethernet0
ip address 10.31.1.5 255.255.0.0
no mop enabled
!
interface Serial0
no ip address
no ip mroute-cache
shutdown
!
interface Serial1
no ip address
shutdown
!
interface Async1
ip unnumbered Ethernet0
encapsulation ppp
async mode dedicated
peer default ip address pool async
no cdp enable
ppp authentication chap
!
ip local pool async 15.15.15.15
ip classless
ip route 0.0.0.0 0.0.0.0 10.31.1.1
!
snmp-server community public RW
snmp-server host 171.68.118.100 traps public
radius-server host 171.68.118.101 auth-port 1645 acct-
port 1646
radius-server key cisco
!
line con 0
line 1
session-timeout 20
exec-timeout 20 0
password ww
autoselect during-login
autoselect ppp
modem InOut
transport input all
stopbits 1
speed 38400
flowcontrol hardware
line 2
modem InOut
speed 38400
flowcontrol hardware
line 3 16
line aux 0
line vty 0 4
exec-timeout 0 0
password ww
!
end
```

用于其它 Cisco IOS 版本的命令

注意：要使用这些命令，请删除上述配置中突出显示的命令，然后按照Cisco IOS版本的说明将这些命令粘贴到中。

Cisco IOS 11.3.3.T 到 12.0.5.T

```
aaa authen login default radius local
aaa authen ppp default if-needed radius local
aaa authorization exec default radius if-authenticated
aaa authorization network default radius if-authenticated
```

Cisco IOS 12.0.5.T 及更高版本

```
aaa authen login default group radius local
aaa authen ppp default if-needed group radius local
aaa authorization exec default group radius if-authenticated
aaa authorization network default group radius if-authenticated
```

调试示例 - RADIUS 和 CHAP

注意：在调试输出中，粗体斜体文本突出显示调试中的问题。纯文本表示调试成功。

```
rtpkrb#show debug
General OS:
AAA Authentication debugging is on
AAA Authorization debugging is on
PPP:
PPP authentication debugging is on
PPP protocol negotiation debugging is on
Radius protocol debugging is on
rtpkrb#
4d02h: As1 LCP: I CONFREQ [Closed] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x0000405F (0x05060000405F)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: Lower layer not up, discarding packet
%LINK-3-UPDOWN: Interface Async1, changed state to up
4d02h: As1 PPP: Treating connection as a dedicated line
4d02h: As1 PPP: Phase is ESTABLISHING, Active Open
4d02h: As1 LCP: O CONFREQ [Closed] id 87 len 25
4d02h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
4d02h: As1 LCP: AuthProto CHAP (0x0305C22305)
4d02h: As1 LCP: MagicNumber 0xF5445B55 (0x0506F5445B55)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: I CONFACK [REQsent] id 87 len 25
4d02h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
4d02h: As1 LCP: AuthProto CHAP (0x0305C22305)
4d02h: As1 LCP: MagicNumber 0xF5445B55 (0x0506F5445B55)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: I CONFREQ [ACKrcvd] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x0000405F (0x05060000405F)
4d02h: As1 LCP: PFC (0x0702)
```

```
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: O CONFACK [ACKrcvd] id 0 len 20
4d02h: As1 LCP: ACCM 0x00000000 (0x020600000000)
4d02h: As1 LCP: MagicNumber 0x0000405F (0x05060000405F)
4d02h: As1 LCP: PFC (0x0702)
4d02h: As1 LCP: ACFC (0x0802)
4d02h: As1 LCP: State is Open
4d02h: As1 PPP: Phase is AUTHENTICATING, by this end
4d02h: As1 CHAP: O CHALLENGE id 11 len 27 from "rtpkrb"
4d02h: As1 CHAP: I RESPONSE id 11 len 28 from "chapadd"
4d02h: AAA/AUTHEN: create_user (0x15AD58) user='chapadd' ruser=''
    port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
4d02h: AAA/AUTHEN/START (575703226): port='Async1' list=''
    action=LOGIN service=PPP
4d02h: AAA/AUTHEN/START (575703226): using "default" list
4d02h: AAA/AUTHEN (575703226): status = UNKNOWN
4d02h: AAA/AUTHEN/START (575703226): Method=RADIUS
4d02h: RADIUS: Initial Transmit id 8 171.68.118.101:1645,
    Access-Request, len 78
4d02h: Attribute 4 6 0A1F0105
4d02h: Attribute 5 6 00000001
4d02h: Attribute 61 6 00000000
4d02h: Attribute 1 9 63686170
4d02h: Attribute 3 19 0B895D57
4d02h: Attribute 6 6 00000002
4d02h: Attribute 7 6 00000001
```

**Radius server is down - produces ERROR - since user is not
in local database, failover to local FAILs:**

```
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
RADIUS: Retransmit id 15
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
RADIUS: Retransmit id 15
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
RADIUS: Retransmit id 15
As1 CHAP: I RESPONSE id 12 len 28 from "chapadd"
As1 AUTH: Duplicate authentication request id=12 already in progress
As1 LCP: I TERMREQ [Open] id 1 len 8 (0x000002CE)
As1 LCP: O TERMACK [Open] id 1 len 4
As1 PPP: Phase is TERMINATING
RADIUS: id 15, requester hung up.
RADIUS: No response for id 15
RADIUS: No response from server
AAA/AUTHEN (1866705040): status = ERROR
AAA/AUTHEN/START (1866705040): Method=LOCAL
AAA/AUTHEN (1866705040): status = FAIL
As1 CHAP: Unable to validate Response. Username chapadd: Authentication failure
As1 CHAP: O FAILURE id 12 len 26 msg is "Authentication failure"
AAA/AUTHEN: free_user (0x1716B8) user='chapadd' ruser=''
    port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
```

Key in router does not match that of server:

RADIUS: Received from id 21 171.68.118.101:1645, Access-Reject, len 20

RADIUS: Reply for 21 fails decrypt

NT client sends 'DOMAIN\user' and Radius server expects 'user':

RADIUS: Received from id 16 171.68.118.101:1645, Access-Reject, len 20

AAA/AUTHEN (2974782384): status = FAIL

As1 CHAP: Unable to validate Response. Username CISCO\chapadd:

Authentication failure

As1 CHAP: O FAILURE id 13 len 26 msg is "Authentication failure"

As1 PPP: Phase is TERMINATING

As1 LCP: O TERMREQ [Open] id 131 len 4

AAA/AUTHEN: free_user (0x171700) user='CISCO\chapadd' ruser=''

port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1

Radius server refuses user because user is set up for pap,

user enters bad password, or both userid & password are bad:

RADIUS: Received from id 17 171.68.118.101:1645, Access-Reject, len 20

AAA/AUTHEN (3898168391): status = FAIL

As1 CHAP: Unable to validate Response. Username ddunlap: Authentication failure

As1 CHAP: O FAILURE id 14 len 26 msg is "Authentication failure"

As1 PPP: Phase is TERMINATING

As1 LCP: O TERMREQ [Open] id 134 len 4

AAA/AUTHEN: free_user (0x1716B8) user='ddunlap' ruser=''

port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1

User PASSES authentication (i.e. username/password is good)

but FAILS authorization (profile not set up for Service-Type=Framed & Framed-Protocol=PPP):

RADIUS: Received from id 19 171.68.118.101:1645, Access-Accept, len 20

AAA/AUTHEN (2006894701): status = PASS

AAA/AUTHOR/LCP As1: Authorize LCP

AAA/AUTHOR/LCP: Async1: (2370106832): user='noauth'

AAA/AUTHOR/LCP: Async1: (2370106832): send AV service=ppp

AAA/AUTHOR/LCP: Async1: (2370106832): send AV protocol=lcp

AAA/AUTHOR/LCP: Async1: (2370106832): Method=RADIUS

RADIUS: no appropriate authorization type for user.

AAA/AUTHOR (2370106832): Post authorization status = FAIL

AAA/AUTHOR/LCP As1: Denied

4d02h: RADIUS: Received from id 8 171.68.118.101:1645, Access-Accept, len 32

4d02h: Attribute 6 6 00000002

4d02h: Attribute 7 6 00000001

4d02h: AAA/AUTHEN (575703226): status = PASS

4d02h: AAA/AUTHOR/LCP As1: Authorize LCP

4d02h: AAA/AUTHOR/LCP: Async1: (4143416222): user='chapadd'

4d02h: AAA/AUTHOR/LCP: Async1: (4143416222): send AV service=ppp

4d02h: AAA/AUTHOR/LCP: Async1: (4143416222): send AV protocol=lcp

4d02h: AAA/AUTHOR/LCP: Async1: (4143416222): Method=RADIUS

4d02h: AAA/AUTHOR (4143416222): Post authorization status = PASS_REPL

4d02h: AAA/AUTHOR/LCP As1: Processing AV service=ppp

4d02h: As1 CHAP: O SUCCESS id 11 len 4

4d02h: As1 PPP: Phase is UP

4d02h: AAA/AUTHOR/FSM As1: (0): Can we start IPCP?

4d02h: AAA/AUTHOR/FSM: Async1: (1916451991): user='chapadd'

4d02h: AAA/AUTHOR/FSM: Async1: (1916451991): send AV service=ppp

4d02h: AAA/AUTHOR/FSM: Async1: (1916451991): send AV protocol=ip

4d02h: AAA/AUTHOR/FSM: Async1: (1916451991): Method=RADIUS

4d02h: AAA/AUTHOR (1916451991): Post authorization status = PASS_REPL

4d02h: AAA/AUTHOR/FSM As1: We can start IPCP

4d02h: As1 IPCP: O CONFREQ [Closed] id 19 len 10

4d02h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)

4d02h: As1 IPCP: I CONFREQ [REQsent] id 1 len 34

```
4d02h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
4d02h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
4d02h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
4d02h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
4d02h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0, we want 0.0.0.0
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0, we want 0.0.0.0
4d02h: As1 IPCP: Using pool 'async'
4d02h: As1 IPCP: Pool returned 15.15.15.15
4d02h: As1 IPCP: O CONFREQ [REQsent] id 1 len 22
4d02h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
4d02h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
4d02h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
4d02h: As1 IPCP: I CONFACK [REQsent] id 19 len 10
4d02h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
4d02h: As1 IPCP: I CONFREQ [ACKrcvd] id 2 len 16
4d02h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
4d02h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0, we want 15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0, we want 15.15.15.15
4d02h: As1 IPCP: O CONFNAK [ACKrcvd] id 2 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: As1 IPCP: I CONFREQ [ACKrcvd] id 3 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: AAA/AUTHOR/IPCP As1: Start. Her address 15.15.15.15, we want 15.15.15.15
4d02h: AAA/AUTHOR/IPCP: Async1: (1096193147): user='chapadd'
4d02h: AAA/AUTHOR/IPCP: Async1: (1096193147): send AV service=ppp
4d02h: AAA/AUTHOR/IPCP: Async1: (1096193147): send AV protocol=ip
4d02h: AAA/AUTHOR/IPCP: Async1: (1096193147): send AV addr*15.15.15.15
4d02h: AAA/AUTHOR/IPCP: Async1: (1096193147): Method=RADIUS
4d02h: AAA/AUTHOR (1096193147): Post authorization status = PASS_REPL
4d02h: AAA/AUTHOR/IPCP As1: Reject 15.15.15.15, using 15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
4d02h: AAA/AUTHOR/IPCP As1: Processing AV addr*15.15.15.15
4d02h: AAA/AUTHOR/IPCP As1: Authorization succeeded
4d02h: AAA/AUTHOR/IPCP As1: Done. Her address 15.15.15.15, we want 15.15.15.15
4d02h: As1 IPCP: O CONFACK [ACKrcvd] id 3 len 16
4d02h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
4d02h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
4d02h: As1 IPCP: State is Open
%LINEPROTO-5-UPDOWN: Line protocol on Interface Async1, changed state to up
4d02h: As1 IPCP: Install route to 15.15.15.15
rtpkrb#
```

调试命令

下列 debug 命令用于生成本文档中的调试输出示例。

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 身份验证的信息。
- debug aaa authorization - 显示有关 AAA 授权的信息。
- debug radius - 显示与远程身份验证拨入用户服务器 (RADIUS) 相关的详细调试信息。

- 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。

相关信息

- [RADIUS 支持页](#)
- [技术支持 - Cisco Systems](#)