

調試TACACS+、PAP和CHAP時的常見問題

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簡介

注意：本檔案中的資訊是根據Cisco IOS[®]軟體版本11.2及更新版本。

本檔案將檢視使用密碼驗證通訊協定(PAP)或詢問交握驗證通訊協定(CHAP)時TACACS+的常見偵錯問題。提供了Microsoft Windows 95、Windows NT、Windows 98和Windows 2000的常見PC設定，以及配置示例和良好及不良調試示例。

必要條件

需求

本文件沒有特定需求。

採用元件

本文件所述內容不限於特定軟體和硬體版本。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

慣例

如需文件慣例的詳細資訊，請參閱[思科技術提示慣例](#)。

常見PC設定

Windows 95

請完成以下步驟：

1. 在「撥號網路」視窗中，選擇連線名稱，然後選擇「檔案」>「屬性」。
2. 在「Server Type」頁籤上，檢視是否選中了「Type of Dial-up Server」下的**Require Encrypted Password**框。如果選中此框，則PC僅接受CHAP身份驗證。如果未選中此框，則PC接受PAP或CHAP身份驗證。

Windows NT

請完成以下步驟：

1. 在「撥號網路」視窗中，選擇連線名稱，然後選擇**檔案>屬性**。
2. 檢查Security頁籤上的設定：如果選中**Accept any authentication including clear text**框，則PC接受PAP或CHAP。如果選中**Accept only encrypted authentication**框，則PC僅接受CHAP身份驗證。

Windows 98

請完成以下步驟：

1. 在「撥號網路」視窗中，選擇連線名稱，然後選擇**屬性**。
2. 在「伺服器型別」頁籤上，檢查「高級選項」區域中的設定：如果未選中**Require encrypted password**框，則PC接受PAP或CHAP身份驗證。如果選中**Require encrypted password**框，則PC僅接受CHAP身份驗證。

Windows 2000

請完成以下步驟：

1. 在「網路和撥號連線」中，選擇連線名稱，然後選擇**屬性**。
2. 在Security頁籤的**Advanced > Settings > Allow these protocols**區域中：如果選中**Unencrypted password(PAP)**框，則PC接受PAP。如果選中**Challenge Handshake Authentication Protocol(CHAP)**框，PC將根據RFC 1994接受CHAP。如果選中**Microsoft CHAP(MS-CHAP)**框，則根據RFC 1994,PC接受MS-CHAP版本1且不接受CHAP。

配置和調試示例

組態 — TACACS+和PAP

Current configuration:

```
!  
version 11.2  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
service udp-small-servers  
service tcp-small-servers  
!  
hostname rtpkrb  
!  
aaa new-model  
!  
!--- The following four lines of the !--- configuration  
are specific to !--- Cisco IOS 11.2 and later, until  
11.3.3.T. !--- See below this configuration !--- for  
commands for other Cisco IOS releases. ! aaa  
authentication login default tacacs+ local  
aaa authentication ppp default if-needed tacacs+ local  
aaa authorization exec tacacs+ if-authenticated  
aaa authorization network tacacs+ 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  
!  
tacacs-server host 171.68.118.101  
tacacs-server key cisco  
snmp-server community public RW
```

```
snmp-server host 171.68.118.100 traps public
!
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
password ww
!
end
```

[其他Cisco IOS版本的命令](#)

注意：若要使用這些命令，請從配置中刪除粗體命令，然後按照Cisco IOS版本的要求將這些命令貼上到中。

[Cisco IOS 11.3.3.T至12.0.5.T](#)

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

[Cisco IOS 12.0.5.T及更高版本](#)

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

[調試示例 — TACACS+和PAP](#)

注意：在調試輸出中，粗體文本突出顯示調試中的問題。純文字檔案表示良好的調試。

```
rtpkrb#show debug
General OS:
TACACS access control debugging is on
AAA Authentication debugging is on
AAA Authorization debugging is on
PPP:
PPP authentication debugging is on
PPP protocol negotiation debugging is on
rtpkrb#
```

```
3d22h: %LINK-3-UPDOWN: Interface Async1, changed state to up
3d22h: As1 PPP: Treating connection as a dedicated line
3d22h: As1 PPP: Phase is ESTABLISHING, Active Open
3d22h: As1 LCP: O CONFREQ [Closed] id 14 len 24
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto PAP (0x0304C023)
3d22h: As1 LCP: MagicNumber 0xF45FB7A7 (0x0506F45FB7A7)
3d22h: As1 LCP: PFC (0x0702)
3d22h: 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 27 len 12
As1 LCP: AuthProto 0xC123 (0x0308C12301000001)
As1 PPP: Closing connection because remote won't authenticate

3d22h: As1 LCP: Interface transitioned, discarding packet
3d22h: As1 LCP: I CONFACK [REQsent] id 14 len 24
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto PAP (0x0304C023)
3d22h: As1 LCP: MagicNumber 0xF45FB7A7 (0x0506F45FB7A7)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: TIMEOUT: Time 0x14417CC4 State ACKrcvd
3d22h: As1 LCP: O CONFREQ [ACKrcvd] id 15 len 24
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto PAP (0x0304C023)
3d22h: As1 LCP: MagicNumber 0xF45FB7A7 (0x0506F45FB7A7)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: I CONFACK [REQsent] id 15 len 24
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto PAP (0x0304C023)
3d22h: As1 LCP: MagicNumber 0xF45FB7A7 (0x0506F45FB7A7)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: I CONFREQ [ACKrcvd] id 0 len 20
3d22h: As1 LCP: ACCM 0x00000000 (0x020600000000)
3d22h: As1 LCP: MagicNumber 0x000030A3 (0x0506000030A3)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: O CONFACK [ACKrcvd] id 0 len 20
3d22h: As1 LCP: ACCM 0x00000000 (0x020600000000)
3d22h: As1 LCP: MagicNumber 0x000030A3 (0x0506000030A3)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: State is Open
3d22h: As1 PPP: Phase is AUTHENTICATING, by this end
3d22h: As1 PAP: I AUTH-REQ id 4 len 20 from "papuser"
3d22h: As1 PAP: Authenticating peer papuser
3d22h: AAA/AUTHEN: create_user (0x16DAC0) user='papuser'
ruser='' port='Async1' rem_addr='async' authen_type=PAP
service=PPP priv=1
3d22h: AAA/AUTHEN/START (1190231344): port='Async1' list=''
action=LOGIN service=PPP
3d22h: AAA/AUTHEN/START (1190231344): using "default" list
3d22h: AAA/AUTHEN (1190231344): status = UNKNOWN
3d22h: AAA/AUTHEN/START (1190231344): Method=TACACS+
3d22h: TAC+: send AUTHEN/START packet ver=193 id=1190231344
3d22h: TAC+: Using default tacacs server list.
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5

!--- The TAC+ server is down, producing an error. !--- Since the user is not in the local
database, !--- the failover to local fails. TAC+: TCP/IP open to 171.68.118.101/49 failed --
Connection refused by remote host
AAA/AUTHEN (866823886): status = ERROR
```

AAA/AUTHEN/START (866823886): Method=LOCAL

AAA/AUTHEN (866823886): status = FAIL

3d22h: TAC+: Opened TCP/IP handle 0x16C1F8 to 171.68.118.101/49

3d22h: TAC+: 171.68.118.101 (1190231344) AUTHEN/START/LOGIN/PAP queued

3d22h: TAC+: (1190231344) AUTHEN/START/LOGIN/PAP processed

!--- The key in the router does not match that of the server. TAC+: received bad AUTHEN packet: length = 68, expected 67857

TAC+: Invalid AUTHEN/START packet (check keys)

AAA/AUTHEN (1771887965): status = ERROR

3d22h: TAC+: ver=192 id=1190231344 received AUTHEN status = GETPASS

3d22h: TAC+: Closing TCP/IP 0x16C1F8 connection to 171.68.118.101/49

3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5

3d22h: TAC+: Opened TCP/IP handle 0x16EF4C to 171.68.118.101/49

3d22h: TAC+: Opened 171.68.118.101 index=1

3d22h: AAA/AUTHEN: create_user (0x16C5EC) user='papuser' ruser=''
port='Async1' rem_addr='async' authen_type=PAP service=PPP priv=1

3d22h: TAC+: rev0 inbound pap login for id=1190231344 using id=3112896669

3d22h: TAC+: 171.68.118.101 (3112896669) AUTHEN/START/LOGIN/PAP queued

3d22h: TAC+: (3112896669) AUTHEN/START/LOGIN/PAP processed

3d22h: TAC+: ver=192 id=3112896669 received AUTHEN status = GETPASS

3d22h: TAC+: send AUTHEN/CONT packet

3d22h: TAC+: 171.68.118.101 (3112896669) AUTHEN/CONT queued

3d22h: TAC+: (3112896669) AUTHEN/CONT processed

!--- The NT client sends the "DOMAIN\user" !--- and the TAC+ server expects "user". TAC+: ver=192 id=260507389 received AUTHEN status = FAIL

TAC+: rev0 inbound pap completed for 1139034411 status=FAIL

AAA/AUTHEN: free_user (0x16CDD4) user='CISCO\papuser' ruser=''

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

!--- The TAC+ server refuses the user !--- because the user is set up for PAP. !--- The user enters a bad password, !--- or both the username and password are bad. TAC+: ver=192

id=691012958 received AUTHEN status = FAIL

TAC+: rev0 inbound pap completed for 3917384959 status=FAIL

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

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

3d22h: TAC+: ver=192 id=3112896669 received AUTHEN status = PASS

3d22h: TAC+: rev0 inbound pap completed for 1190231344 status=PASS

3d22h: AAA/AUTHEN: free_user (0x16C5EC) user='papuser' ruser=''

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

3d22h: TAC+: Closing TCP/IP 0x16EF4C connection to 171.68.118.101/49

3d22h: AAA/AUTHEN (1190231344): status = PASS

3d22h: AAA/AUTHOR/LCP As1: Authorize LCP

3d22h: AAA/AUTHOR/LCP: Async1: (1061976769): user='papuser'

3d22h: AAA/AUTHOR/LCP: Async1: (1061976769): send AV service=ppp

3d22h: AAA/AUTHOR/LCP: Async1: (1061976769): send AV protocol=lcp

3d22h: AAA/AUTHOR/LCP: Async1: (1061976769): Method=TACACS+

3d22h: AAA/AUTHOR/TAC+: (1061976769): user=papuser

3d22h: AAA/AUTHOR/TAC+: (1061976769): send AV service=ppp

3d22h: AAA/AUTHOR/TAC+: (1061976769): send AV protocol=lcp

3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5

3d22h: TAC+: Opened TCP/IP handle 0x16C9E0 to 171.68.118.101/49

3d22h: TAC+: Opened 171.68.118.101 index=1

3d22h: TAC+: 171.68.118.101 (1061976769) AUTHOR/START queued

3d22h: TAC+: (1061976769) AUTHOR/START processed

!--- The user passes authentication !--- (the username/password is good) !--- but fails authorization !--- (the profile is not set up to authorize PPP). TAC+: (1793875816): received author response status = FAIL

TAC+: Closing TCP/IP 0x17054C connection to 171.68.118.101/49

AAA/AUTHOR (1793875816): Post authorization status = FAIL
AAA/AUTHOR/LCP As1: Denied

```
3d22h: TAC+: (1061976769): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x16C9E0 connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (1061976769): Post authorization status = PASS_ADD
3d22h: As1 PAP: O AUTH-ACK id 4 len 5
3d22h: As1 PPP: Phase is UP
3d22h: AAA/AUTHOR/FSM As1: (0): Can we start IPCP?
3d22h: AAA/AUTHOR/FSM: Async1: (3602788894): user='papuser'
3d22h: AAA/AUTHOR/FSM: Async1: (3602788894): send AV service=ppp
3d22h: AAA/AUTHOR/FSM: Async1: (3602788894): send AV protocol=ip
3d22h: AAA/AUTHOR/FSM: Async1: (3602788894): Method=TACACS+
3d22h: AAA/AUTHOR/TAC+: (3602788894): user=papuser
3d22h: AAA/AUTHOR/TAC+: (3602788894): send AV service=ppp
3d22h: AAA/AUTHOR/TAC+: (3602788894): send AV protocol=ip
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1,
changed state to up
3d22h: TAC+: Opened TCP/IP handle 0x17054C to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: TAC+: 171.68.118.101 (3602788894) AUTHOR/START queued
3d22h: As1 IPCP: I CONFREQ [Closed] id 1 len 34
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: TAC+: (3602788894) AUTHOR/START processed
3d22h: TAC+: (3602788894): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x17054C connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (3602788894): Post authorization status = PASS_ADD
3d22h: AAA/AUTHOR/FSM As1: We can start IPCP
3d22h: As1 IPCP: O CONFREQ [Closed] id 10 len 10
3d22h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
3d22h: As1 IPCP: I CONFACK [REQsent] id 10 len 10
3d22h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 1 len 34
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0,
we want 0.0.0.0
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0,
we want 0.0.0.0
3d22h: As1 IPCP: Using pool 'async'
3d22h: As1 IPCP: Pool returned 15.15.15.15
3d22h: As1 IPCP: O CONFREQ [ACKrcvd] id 1 len 22
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 2 len 16
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0,
we want 15.15.15.15
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
```

```

3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0,
we want 15.15.15.15
3d22h: As1 IPCP: O CONFNAK [ACKrcvd] id 2 len 16
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 3 len 16
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 15.15.15.15,
we want 15.15.15.15
3d22h: AAA/AUTHOR/IPCP: Async1: (3654974050): user='papuser'
3d22h: AAA/AUTHOR/IPCP: Async1: (3654974050): send AV service=ppp
3d22h: AAA/AUTHOR/IPCP: Async1: (3654974050): send AV protocol=ip
3d22h: AAA/AUTHOR/IPCP: Async1: (3654974050): send AV addr*15.15.15.15
3d22h: AAA/AUTHOR/IPCP: Async1: (3654974050): Method=TACACS+
3d22h: AAA/AUTHOR/TAC+: (3654974050): user=papuser
3d22h: AAA/AUTHOR/TAC+: (3654974050): send AV service=ppp
3d22h: AAA/AUTHOR/TAC+: (3654974050): send AV protocol=ip
3d22h: AAA/AUTHOR/TAC+: (3654974050): send AV addr*15.15.15.15
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: TAC+: Opened TCP/IP handle 0x16EF4C to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: TAC+: 171.68.118.101 (3654974050) AUTHOR/START queued
3d22h: TAC+: (3654974050) AUTHOR/START processed
3d22h: TAC+: (3654974050): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x16EF4C connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (3654974050): Post authorization status = PASS_ADD
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Processing AV addr*15.15.15.15
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 15.15.15.15,
we want 15.15.15.15
3d22h: As1 IPCP: O CONFACK [ACKrcvd] id 3 len 16
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: As1 IPCP: State is Open
3d22h: As1 IPCP: Install route to 15.15.15.15

```

rtpkrb#

配置 — TACACS+和CHAP

```

Current configuration:
!
version 11.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
service udp-small-servers
service tcp-small-servers
!
hostname rtpkrb
!
aaa new-model
!
!--- The following four lines of the configuration !--
are specific to Cisco IOS 11.2 and later, until
11.3.3.T. !--- See below this configuration !--- for
commands for other Cisco IOS releases. ! aaa
authentication login default tacacs+ local
aaa authentication ppp default if-needed tacacs+ local
aaa authorization exec tacacs+ if-authenticated
aaa authorization network tacacs+ 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
!
tacacs-server host 171.68.118.101
tacacs-server key cisco
snmp-server community public RW
snmp-server host 171.68.118.100 traps public
!
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
password ww
!
end
```

[其他Cisco IOS版本的命令](#)

附註：附註：若要使用這些命令，請從配置中刪除粗體命令，然後按照Cisco IOS版本的要求將這些命令貼上到。

[Cisco IOS 11.3.3.T至12.0.5.T](#)

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

[Cisco IOS 12.0.5.T及更高版本](#)

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

[調試示例 — TACACS+和CHAP](#)

注意：在調試輸出中，粗體文本突出顯示調試中的問題。純文字檔案表示良好的調試。

```
General OS:
TACACS access control debugging is on
AAA Authentication debugging is on
AAA Authorization debugging is on
PPP:
PPP authentication debugging is on
PPP protocol negotiation debugging is on
rtpkrb#
3d22h: As1 LCP: I CONFREQ [Closed] id 0 len 20
3d22h: As1 LCP: ACCM 0x00000000 (0x020600000000)
3d22h: As1 LCP: MagicNumber 0x000042C5 (0x0506000042C5)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: Lower layer not up, discarding packet
3d22h: %LINK-3-UPDOWN: Interface Async1, changed state to up
3d22h: As1 PPP: Treating connection as a dedicated line
3d22h: As1 PPP: Phase is ESTABLISHING, Active Open
3d22h: As1 LCP: O CONFREQ [Closed] id 12 len 25
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto CHAP (0x0305C22305)
3d22h: As1 LCP: MagicNumber 0xF45D776F (0x0506F45D776F)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: I CONFACK [REQsent] id 12 len 25
3d22h: As1 LCP: ACCM 0x000A0000 (0x0206000A0000)
3d22h: As1 LCP: AuthProto CHAP (0x0305C22305)
3d22h: As1 LCP: MagicNumber 0xF45D776F (0x0506F45D776F)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: I CONFREQ [ACKrcvd] id 0 len 20
3d22h: As1 LCP: ACCM 0x00000000 (0x020600000000)
3d22h: As1 LCP: MagicNumber 0x000042C5 (0x0506000042C5)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
```

3d22h: As1 LCP: O CONFACK [ACKrcvd] id 0 len 20
3d22h: As1 LCP: ACCM 0x00000000 (0x020600000000)
3d22h: As1 LCP: MagicNumber 0x000042C5 (0x0506000042C5)
3d22h: As1 LCP: PFC (0x0702)
3d22h: As1 LCP: ACFC (0x0802)
3d22h: As1 LCP: State is Open
3d22h: As1 PPP: Phase is AUTHENTICATING, by this end
3d22h: As1 CHAP: O CHALLENGE id 3 len 27 from "rtplib"
3d22h: As1 CHAP: I RESPONSE id 3 len 29 from "chapuser"
3d22h: AAA/AUTHEN: create_user (0x15B394) user='chapuser'
ruser='' port='Async1' rem_addr='async' authen_type=CHAP
service=PPP priv=1
3d22h: AAA/AUTHEN/START (2183639772): port='Async1' list=''
action=LOGIN service=PPP
3d22h: AAA/AUTHEN/START (2183639772): using "default" list
3d22h: AAA/AUTHEN (2183639772): status = UNKNOWN
3d22h: AAA/AUTHEN/START (2183639772): Method=TACACS+
3d22h: TAC+: send AUTHEN/START packet ver=193 id=2183639772
3d22h: TAC+: Using default tacacs server list.
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5

!--- The TAC+ server is down, producing an error. !--- Since the user is not in the local database, !--- the failover to local fails. TAC+: TCP/IP open to 171.68.118.101/49 failed --

Connection refused by remote host

AAA/AUTHEN (2546660185): status = ERROR

AAA/AUTHEN/START (2546660185): Method=LOCAL

AAA/AUTHEN (2546660185): status = FAIL

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

3d22h: TAC+: Opened TCP/IP handle 0x17054C to 171.68.118.101/49
3d22h: TAC+: 171.68.118.101 (2183639772) AUTHEN/START/LOGIN/CHAP queued
3d22h: TAC+: (2183639772) AUTHEN/START/LOGIN/CHAP processed

!--- The key in the router does not match that of the server. TAC+: received bad AUTHEN packet: length = 68, expected 67857

TAC+: Invalid AUTHEN/START packet (check keys)

AAA/AUTHEN (1771887965): status = ERROR

3d22h: TAC+: ver=192 id=2183639772 received AUTHEN status = GETPASS
3d22h: TAC+: Closing TCP/IP 0x17054C connection to 171.68.118.101/49
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: TAC+: Opened TCP/IP handle 0x16EF4C to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: AAA/AUTHEN: create_user (0x170940) user='chapuser' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
3d22h: TAC+: rev0 inbound chap for id=2183639772 using id=166703029
3d22h: TAC+: 171.68.118.101 (166703029) AUTHEN/START/SENDPASS/CHAP queued
3d22h: TAC+: (166703029) AUTHEN/START/SENDPASS/CHAP processed

!--- The NT client sends the "DOMAIN\user" !--- and the TAC+ server expects "user". TAC+: ver=192 id=3373385106 received AUTHEN status = FAIL

TAC+: rev0 inbound chap FAIL for id=2082151566

AAA/AUTHEN: free_user (0x170940) user='CISCO\chapuser' ruser=''

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

!--- The TAC+ server refuses the user !--- because the user is set up for PAP. !--- The user enters a bad password, !--- or both the username and password are bad. TAC+: ver=192 id=1989464562 received AUTHEN status = PASS

TAC+: rev0 inbound chap SENDPASS status=PASS for id=3657266965

TAC+: rev0 inbound chap MD5 compare FAILED

AAA/AUTHEN: free_user (0x170940) user='chapuser' ruser=''

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

TAC+: Closing TCP/IP 0x16EF4C connection to 171.68.118.101/49

AAA/AUTHEN (2082151566): status = FAIL

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

3d22h: TAC+: ver=192 id=166703029 received AUTHEN status = PASS
3d22h: TAC+: rev0 inbound chap SENDPASS status=PASS for id=2183639772
3d22h: TAC+: rev0 inbound chap MD5 compare OK
3d22h: AAA/AUTHEN: free_user (0x170940) user='chapuser' ruser=''
port='Async1' rem_addr='async' authen_type=CHAP service=PPP priv=1
3d22h: TAC+: Closing TCP/IP 0x16EF4C connection to 171.68.118.101/49
3d22h: AAA/AUTHEN (2183639772): status = PASS
3d22h: AAA/AUTHOR/LCP As1: Authorize LCP
3d22h: AAA/AUTHOR/LCP: Async1: (683360936): user='chapuser'
3d22h: AAA/AUTHOR/LCP: Async1: (683360936): send AV service=ppp
3d22h: AAA/AUTHOR/LCP: Async1: (683360936): send AV protocol=lcp
3d22h: AAA/AUTHOR/LCP: Async1: (683360936): Method=TACACS+
3d22h: AAA/AUTHOR/TAC+: (683360936): user=chapuser
3d22h: AAA/AUTHOR/TAC+: (683360936): send AV service=ppp
3d22h: AAA/AUTHOR/TAC+: (683360936): send AV protocol=lcp
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: TAC+: Opened TCP/IP handle 0x16C1F8 to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: TAC+: 171.68.118.101 (683360936) AUTHOR/START queued
3d22h: TAC+: (683360936) AUTHOR/START processed

!--- The user passes authentication !--- (the username/password is good) !--- but fails authorization !--- (the profile is not set up to authorize PPP). TAC+: (3803447096): received author response status = FAIL

TAC+: Closing TCP/IP 0x16C2A4 connection to 171.68.118.101/49
AAA/AUTHOR (3803447096): Post authorization status = FAIL
AAA/AUTHOR/LCP As1: Denied
AAA/AUTHEN: free_user (0x15B2E8) user='noauth' ruser='' port='Async1'
rem_addr='async' authen_type=CHAP service=PPP priv=1
As1 CHAP: O FAILURE id 9 len 24 msg is "Authorization failed"

3d22h: TAC+: (683360936): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x16C1F8 connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (683360936): Post authorization status = PASS_ADD
3d22h: As1 CHAP: O SUCCESS id 3 len 4
3d22h: As1 PPP: Phase is UP
3d22h: AAA/AUTHOR/FSM As1: (0): Can we start IPCP?
3d22h: AAA/AUTHOR/FSM: Async1: (977509495): user='chapuser'
3d22h: AAA/AUTHOR/FSM: Async1: (977509495): send AV service=ppp
3d22h: AAA/AUTHOR/FSM: Async1: (977509495): send AV protocol=ip
3d22h: AAA/AUTHOR/FSM: Async1: (977509495): Method=TACACS+
3d22h: AAA/AUTHOR/TAC+: (977509495): user=chapuser
3d22h: AAA/AUTHOR/TAC+: (977509495): send AV service=ppp
3d22h: AAA/AUTHOR/TAC+: (977509495): send AV protocol=ip
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: TAC+: Opened TCP/IP handle 0x16EF4C to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: TAC+: 171.68.118.101 (977509495) AUTHOR/START queued
3d22h: As1 IPCP: I CONFREQ [Closed] id 1 len 34
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: TAC+: (977509495) AUTHOR/START processed
3d22h: TAC+: (977509495): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x16EF4C connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (977509495): Post authorization status = PASS_ADD
3d22h: AAA/AUTHOR/FSM As1: We can start IPCP
3d22h: As1 IPCP: O CONFREQ [Closed] id 8 len 10
3d22h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
3d22h: As1 IPCP: I CONFACK [REQsent] id 8 len 10

```
3d22h: As1 IPCP: Address 10.31.1.5 (0x03060A1F0105)
3d22h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async1,
changed state to up
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 1 len 34
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0,
we want 0.0.0.0
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0,
we want 0.0.0.0
3d22h: As1 IPCP: Using pool 'async'
3d22h: As1 IPCP: Pool returned 15.15.15.15
3d22h: As1 IPCP: O CONFREQ [ACKrcvd] id 1 len 22
3d22h: As1 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
3d22h: As1 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
3d22h: As1 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 2 len 16
3d22h: As1 IPCP: Address 0.0.0.0 (0x030600000000)
3d22h: As1 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 0.0.0.0,
we want 15.15.15.15
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 0.0.0.0,
we want 15.15.15.15
3d22h: As1 IPCP: O CONFNAK [ACKrcvd] id 2 len 16
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: As1 IPCP: I CONFREQ [ACKrcvd] id 3 len 16
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: AAA/AUTHOR/IPCP As1: Start. Her address 15.15.15.15,
we want 15.15.15.15
3d22h: AAA/AUTHOR/IPCP: Async1: (3918374858): user='chapuser'
3d22h: AAA/AUTHOR/IPCP: Async1: (3918374858): send AV service=ppp
3d22h: AAA/AUTHOR/IPCP: Async1: (3918374858): send AV protocol=ip
3d22h: AAA/AUTHOR/IPCP: Async1: (3918374858): send AV addr*15.15.15.15
3d22h: AAA/AUTHOR/IPCP: Async1: (3918374858): Method=TACACS+
3d22h: AAA/AUTHOR/TAC+: (3918374858): user=chapuser
3d22h: AAA/AUTHOR/TAC+: (3918374858): send AV service=ppp
3d22h: AAA/AUTHOR/TAC+: (3918374858): send AV protocol=ip
3d22h: AAA/AUTHOR/TAC+: (3918374858): send AV addr*15.15.15.15
3d22h: TAC+: Opening TCP/IP to 171.68.118.101/49 timeout=5
3d22h: TAC+: Opened TCP/IP handle 0x16C9E0 to 171.68.118.101/49
3d22h: TAC+: Opened 171.68.118.101 index=1
3d22h: TAC+: 171.68.118.101 (3918374858) AUTHOR/START queued
3d22h: TAC+: (3918374858) AUTHOR/START processed
3d22h: TAC+: (3918374858): received author response status = PASS_ADD
3d22h: TAC+: Closing TCP/IP 0x16C9E0 connection to 171.68.118.101/49
3d22h: AAA/AUTHOR (3918374858): Post authorization status = PASS_ADD
3d22h: AAA/AUTHOR/IPCP As1: Processing AV service=ppp
3d22h: AAA/AUTHOR/IPCP As1: Processing AV protocol=ip
3d22h: AAA/AUTHOR/IPCP As1: Processing AV addr*15.15.15.15
3d22h: AAA/AUTHOR/IPCP As1: Authorization succeeded
3d22h: AAA/AUTHOR/IPCP As1: Done. Her address 15.15.15.15,
we want 15.15.15.15
3d22h: As1 IPCP: O CONFACK [ACKrcvd] id 3 len 16
```

```
3d22h: As1 IPCP: Address 15.15.15.15 (0x03060F0F0F0F)
3d22h: As1 IPCP: PrimaryDNS 171.68.118.103 (0x8106AB447667)
3d22h: As1 IPCP: State is Open
3d22h: As1 IPCP: Install route to 15.15.15.15
rtpkrb#
```

debug指令

這些debug命令用於生成本文檔中的調試輸出示例。

註：發出debug命令之前，請參閱[有關Debug命令的重要資訊](#)。

- `debug aaa authentication` — 顯示有關AAA身份驗證的資訊。
- `debug aaa authorization` — 顯示有關AAA授權的資訊。
- `debug tacacs+` — 顯示與TACACS+關聯的詳細調試資訊。
- `debug ppp negotiation` — 顯示在PPP啟動期間傳輸的PPP資料包，其中協商了PPP選項。

相關資訊

- [IOS 文件中的 TACACS+](#)
- [TACACS+支援頁面](#)
- [技術支援與文件 - Cisco Systems](#)