

# RADIUS、PAP およびCHAP のデバッグのよくある問題

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## 概要

このドキュメントでは、Password Authentication Protocol ( PAP; パスワード認証プロトコル ) あるいは Challenge Handshake Authentication Protocol ( CHAP; チャレンジ ハンドシェーク認証プロトコル ) を使用している場合の、RADIUS の一般的なデバッグの問題について検証します。Microsoft Windows 95、Windows NT、Windows 98、および Windows 2000 の一般的な PC の設定や、設定例、およびデバッグの正常な例と障害のある例について説明しています。

## [はじめに](#)

## [表記法](#)

ドキュメント表記の詳細は、『[シスコテクニカルティップスの表記法](#)』を参照してください。

## [前提条件](#)

このドキュメントに関する固有の要件はありません。

## 使用するコンポーネント

このドキュメントの情報は CiscoIOS<sup>®</sup> ソフトウェア リリース 11.2 以降に基づいています。

このドキュメントの情報は、特定のラボ環境にあるデバイスに基づいて作成されたものです。このドキュメントで使用するすべてのデバイスは、クリアな（デフォルト）設定で作業を開始しています。対象のネットワークが実稼働中である場合には、どのような作業についても、その潜在的な影響について確実に理解しておく必要があります。

## PC の一般的な設定

### Windows 95

次に示す手順に従ってください。

1. ダイアルアップネットワーキングウィンドウで、接続名を、そして **File > Properties** 選択して下さい。
2. [Server Type] タブで、[Type of Dial-up Server] の下にある [Require Encrypted Password] ボックスがチェックされているかどうかを確認します。このボックスがチェックされている場合、PC では、CHAP 認証だけが受け入れられていることを意味します。このボックスがチェックされていない場合、PC では PAP 認証または CHAP 認証が受け入れられていることを意味します。

### Windows NT

次に示す手順に従ってください。

1. Dial-up Networking ウィンドウで、接続名を選択し、次に File > Properties の順に選択して下さい。
2. Security タブで、設定を確認します。Accept any authentication including clear text ボックスがチェックされている場合、PC では PAP および CHAP が受け入れられていることを意味します。[Accept only encrypted authentication] ボックスがチェックされている場合、PC では CHAP 認証だけが受け入れられます。

### Windows 98

次に示す手順に従ってください。

1. Dial-Up Networking ウィンドウで、接続名を選択してから、Properties を選択します。
2. Server Types タブで、Advanced Options エリアの設定を確認します。Require encrypted password ボックスがチェックされていない場合、PC では PAP 認証または CHAP 認証が受け入れられていることを意味します。Require encrypted password ボックスがチェックされている場合、PC では CHAP 認証だけが受け入れられていることを意味します。

### Windows 2000

次に示す手順に従ってください。

1. Network and Dial-Up Connections で、接続名を選択してから、Properties を選択します。
2. Security タブで、高度の設定を > 設定 > 許可しますこれらのプロトコル エリアをチェックして下さい:[Unencrypted password (PAP)] ボックスがチェックされている場合、PC では PAP が受け入れられます。Challenge Handshake Authentication Protocol (CHAP) ボックスがチェックされている場合、PC では、[RFC 1994](#) の規定による CHAP が受け入れられています。[Microsoft CHAP (MS-CHAP)] ボックスがチェックされている場合、PC では MS-CHAP バージョン 1 が受け入れられますが、RFC 1994 の規定による CHAP は受け入れられません。

## 設定およびデバッグ例

### RADIUS およびPAP

#### 設定 - RADIUS と 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 route-
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
```

## 他の Cisco IOS リリース用のコマンド

**注:** 注 : これらのコマンドを使用する場合は、上記の設定から強調表示されているコマンドを削除し、使用している Cisco IOS リリースで規定されているように、該当コマンドをペーストしてください。

### Cisco IOS 11.3.3.T から 12.0.5.Tよりも前まで

```
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 以降

```
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
```

## デバッグの例- RADIUS およびPAP

**注:** 次のデバッグ出力では、デバッグの問題を太字で強調表示しています。プレーンテキストは、正常なデバッグを示しています。

```
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 CONFREQ [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 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='' port='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 15ADF0 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 CONFREQ [ACKrcvd] 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 CONFREQ [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 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: As1 IPCP: State is Open 4d02h: As1 IPCP: Install route to
15.15.15.15 rtpkrb#

```

## RADIUS およびCHAP

### 設定 - RADIUS と 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
```

## 他の Cisco IOS リリース用のコマンド

注: 注 : これらのコマンドを使用する場合は、上記の設定から強調表示されているコマンドを削除し、使用している Cisco IOS リリースで規定されているように、該当コマンドをペーストしてください。

## Cisco IOS 11.3.3.T から 12.0.5.T よりも前まで

```
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 以降

```
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
```

## デバッグの例- RADIUS およびCHAP

注: 次のデバッグ出力では、このデバッグの問題を太字で強調表示しています。プレーンテキストは、正常なデバッグを示しています。

```
rtplib#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 rtplib# 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 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 CONFREJ [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#
```

## [debug コマンド](#)

このドキュメントで使用したデバッグ出力例の作成には、次の debug コマンドを使用しました。

注: debug コマンドを使用する前に、『[debug コマンドに関する重要な情報](#)』を参照してください。

- debug aaa authentication - AAA 認証に関する情報を表示します。
- debug aaa authorization - AAA 許可に関する情報を表示します。
- debug radius - Remote Authentication Dial-In User Server ( RADIUS ) に関連付けられた詳細なデバッグ情報を表示します。
- debug ppp negotiation - PPP の開始時に送信される PPP パケットを表示します。PPP の開始時には PPP オプションがネゴシエートされます。

## [関連情報](#)

- [RADIUS に関するサポート ページ](#)
- [テクニカルサポート - Cisco Systems](#)