

Configurazione della richiamata PPP con TACACS+

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Introduzione

In questo documento vengono mostrati esempi di configurazione di un router e di un server AAA per eseguire il callback del protocollo PPP (Point-to-Point Protocol) con TACACS+. Sono inclusi due esempi che utilizzano il numero di richiamata specificato dal server AAA o dal client Windows 2000.

- Eseguire il test iniziale con l'autenticazione e la richiamata locali (rimuovere il comando `aaa new-model`). Se la richiamata non funziona con l'autenticazione locale, non funziona con TACACS+. Per un esempio sull'utilizzo dell'autenticazione locale, fare riferimento a [Configurazione della richiamata MS tra un router e un PC Windows](#).
- Eseguire ulteriori test di autenticazione PPP con TACACS+ senza callback. Se gli utenti non riescono a eseguire l'autenticazione e/o l'autorizzazione senza richiamata, l'autenticazione e l'autorizzazione non funzionano con la richiamata.
- Una volta eseguita l'autenticazione locale per la richiamata e l'autenticazione PPP con TACACS+, aggiungere le informazioni dell'utente locale sul router (ad esempio la stringa di connessione di richiamata) al profilo dell'utente sul server.

Nota: il client in questi test è un client Windows 2000 Professional, DUN, configurato come di consueto per una connessione PPP, con Microsoft Callback impostato su "Chiedi conferma

durante la composizione quando il server offre". Microsoft Callback è supportato nel software Cisco IOS® versione 11.3.2.T e successive.

Prerequisiti

Requisiti

Nessun requisito specifico previsto per questo documento.

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Software Cisco IOS release 12.1(7)AA
- Cisco Secure ACS UNIX 2.3(2)
- Cisco Secure ACS per Windows 3.3
- TACACS Freeware Daemon 4.0(3)

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Convenzioni

Per ulteriori informazioni sulle convenzioni usate, consultare il documento [Cisco sulle convenzioni nei suggerimenti tecnici](#).

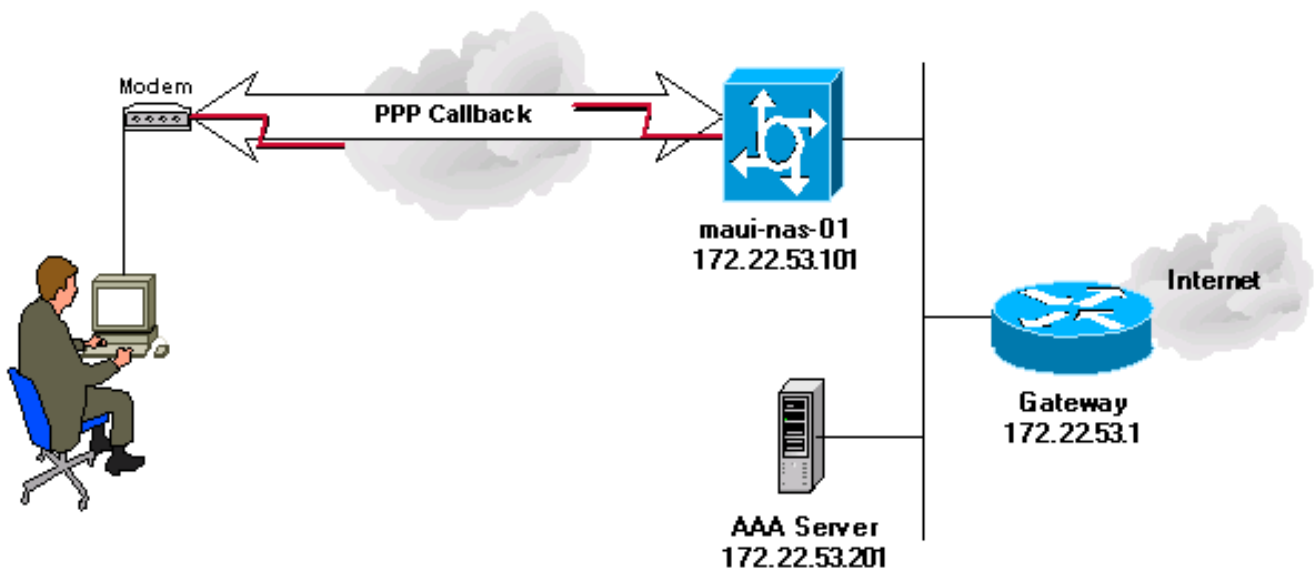
Configurazione

In questa sezione vengono presentate le informazioni necessarie per configurare le funzionalità descritte più avanti nel documento.

Nota: per ulteriori informazioni sui comandi menzionati in questo documento, usare lo [strumento di ricerca dei comandi](#) (solo utenti [registrati](#)).

Esempio di rete

Per la stesura di questo documento è stata utilizzata la configurazione di rete illustrata in questo diagramma.



Callback PPP con numero specificato dal server

Configurazioni server

Configurazioni del server AAA per la richiamata PPP con un numero di telefono specificato dal server AAA.

Configurazione server - Cisco Secure ACS per Windows

- Per abilitare l'opzione LCP per Utente e gruppo, andare alla schermata Configurazione interfaccia, selezionare TACACS+ (Cisco IOS), quindi verificare che le opzioni PPP IP e PPP LCP siano selezionate per Utente e Gruppo.
- È possibile configurare la richiamata automatica nelle impostazioni Gruppo o Utente.
 - Configurare un gruppo per la richiamata: nella schermata Configurazione gruppo, in Richiamata, selezionare l'opzione Usa impostazioni di richiamata del database di Windows (nella versione precedente di ACS questa opzione è nota come "Usa impostazioni di richiamata di Microsoft NT"). Quindi, controllare le opzioni per PPP IP e PPP LCP. Selezionare Linea di richiamata e digitare 84007 nel campo vuoto.

Per un utente membro del gruppo, andare alla schermata Configurazione utente e selezionare Usa impostazione gruppo in Richiamata. Fare clic su Invia + Riavvia.

- Configurare un singolo utente per la richiamata: nella schermata Configurazione utente, in Richiamata, selezionare Richiamata con questo numero e digitare 84007 nel campo vuoto. Quindi, controllare le opzioni per PPP IP e PPP LCP. Fare clic su Submit + Restart.

Configurazione server - Cisco Secure UNIX

```
<coachella>/export/home/brownr> ViewProfile -p 9900 -u callback_user
User Profile Information
user = callback_user{
profile_id = 113
profile_cycle = 15
member = ccie_study
password = chap "*****"
service=ppp {
protocol=ip {
}
protocol=lcp {
set callback-dialstring=84007
}
}
}
}
```

Configurazione server - TACACS+ Freeware

```
user = callback_user {
chap= cleartext "chapuser"
service = ppp protocol = lcp {
callback-dialstring=84007
}
service = ppp protocol = ip {
}
}
```

Callback PPP con numero specificato dall'utente

Gli esempi riportati in precedenza in questo documento sono relativi alla richiamata a un numero predefinito (specificato nel server AAA). È inoltre possibile eseguire il callback a un numero specificato dall'utente utilizzando il numero di callback e il valore specificato nel server AAA è null. In questo modo, il router chiederà all'utente un numero di richiamata. Il test iniziale deve essere eseguito con la richiamata locale specificata. Fare riferimento al [callback PPP asincrono tra un server di accesso e un PC](#) e notare che la "callback-dialstring" è specificata come virgolette ("").

Il client in questi test era un client Windows 2000 Professional, configurato come di consueto per una connessione PPP, con Microsoft Callback impostato come "Richiamami ai numeri seguenti".

Nota: il [diagramma di rete](#) e la [configurazione del router](#) visualizzati si applicano alle configurazioni di richiamata descritte di seguito.

Configurazioni server

Di seguito sono illustrate le configurazioni server AAA per la richiamata PPP con un numero di telefono specificato dall'utente.

Configurazione server - Cisco Secure for Windows

- Per abilitare l'opzione LCP per Utente e gruppo, andare alla schermata Configurazione interfaccia, selezionare TACACS+ (Cisco IOS), quindi verificare che le opzioni PPP IP e PPP LCP siano selezionate per Utente e Gruppo.
- È possibile configurare la richiamata automatica nelle impostazioni Gruppo o Utente.
 - Configurare un gruppo per la richiamata: nella schermata Configurazione gruppo, in Richiamata, selezionare l'opzione Callback number per client di connessione remota. Quindi, controllare le opzioni per PPP IP e PPP LCP.

Per un utente membro del gruppo, andare alla schermata Configurazione utente e selezionare Usa impostazione gruppo in Richiamata. Fare clic su Invia + Riavvia.

- Configurare un singolo utente per la richiamata: nella schermata Configurazione utente, in Richiamata, selezionare l'opzione Callback number per il client di connessione remota. Quindi, controllare le opzioni per PPP IP e PPP LCP. Fare clic su Submit + Restart.

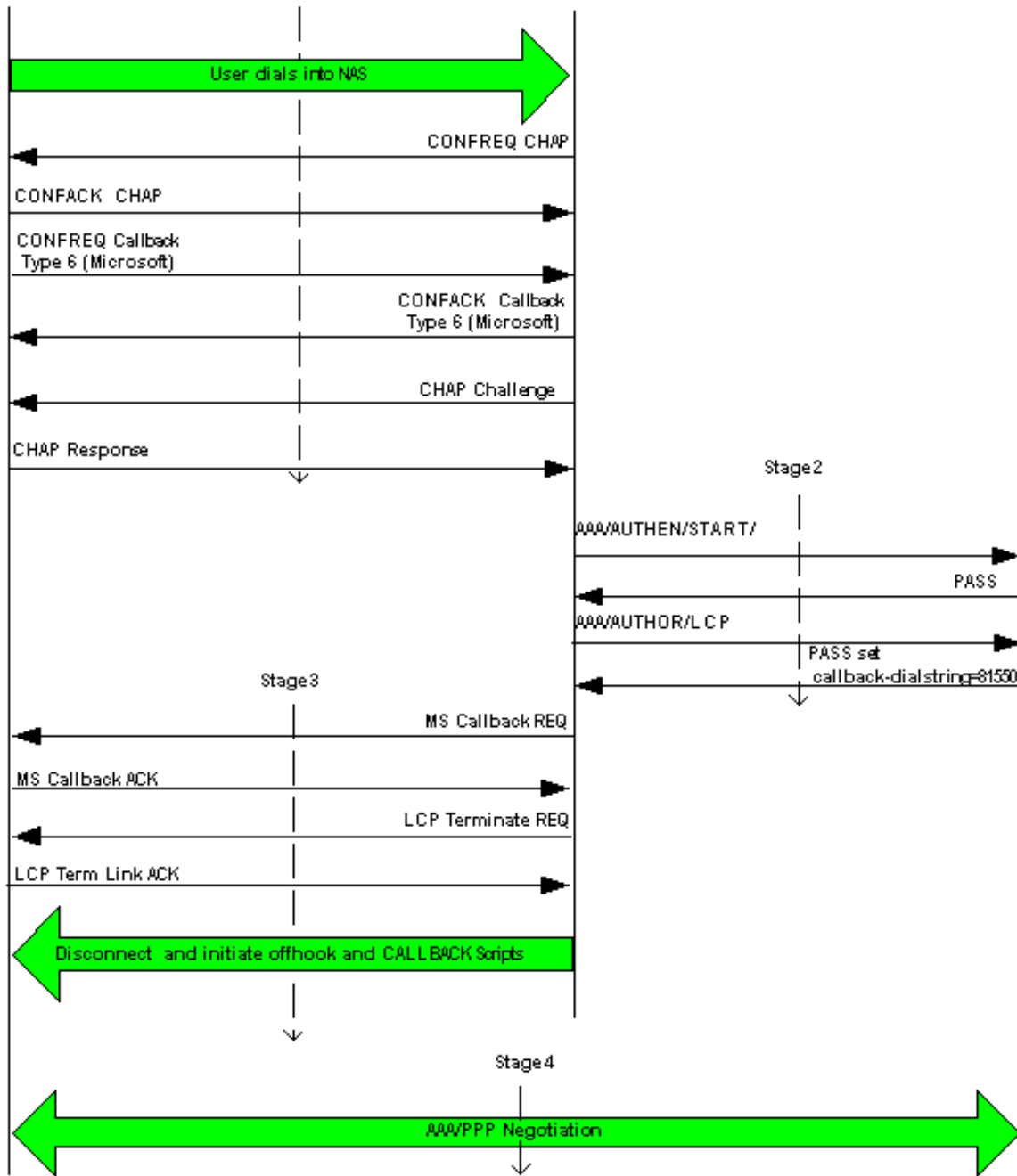
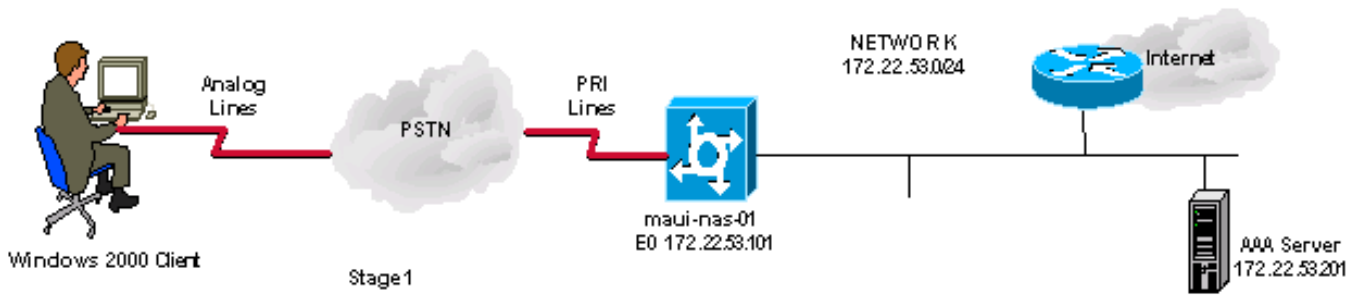
Configurazione server - Cisco Secure UNIX

```
<coachella>ViewProfile -p 9900 -u callback_user
User Profile Information
user = callback_user{
profile_id = 113
profile_cycle = 15
member = ccie_study
password = chap "*****"
service=ppp {
protocol=ip {
}
protocol=lcp {
set callback-dialstring=""
}
}
}
```

Configurazione server - TACACS+ Freeware

```
user = callback_user {
chap= cleartext "chapuser"
service = ppp protocol = lcp {
callback-dialstring=""
}
service = ppp protocol = ip {
```

}
}



Configurazioni router

Configurazione NA

```
<#root>
```

```
AS5200
```

```
maui-nas-01#
```

```
show run
```

```
Building configuration...
```

```
Current configuration : 2882 bytes
```

```
!
```

```
version 12.1
```

```
no service pad
```

```
service tcp-keepalives-in
```

```
service timestamps debug datetime msec localtime show-timezone
```

```
service timestamps log datetime msec localtime show-timezone
```

```
service password-encryption
```

```
!
```

```
hostname maui-nas-01
```

```
!
```

```
logging buffered 4096 debugging
```

```
no logging console guaranteed
```

```
no logging console
```

```
!--- Basic AAA configuration using TACACS+ as the primary method, !--- local if the ERROR is received
```

```
aaa new-model
```

```
aaa authentication login default group tacacs+ local
```

```
aaa authentication login NO_AUTHEN none
```

```
aaa authentication ppp default if-needed group tacacs+ local
```

```
aaa authorization exec default group tacacs+ local
```

```
aaa authorization exec NO_AUTHOR none
```

```
aaa authorization network default group tacacs+ local
```

```
enable secret <snipped>
```

```
!
```

```
username admin password <snipped>
```

```
spe 1/0 1/23
```

```
firmware location feature_card_flash
```

```
spe 2/0 2/4
```

```
!
```

```
resource-pool disable
```

```
!
```

```
clock timezone CST -6
```

```
clock summer-time CST recurring
```

```
modem recovery action none
```

```
ip subnet-zero
```

```
no ip source-route
```

```
no ip finger
```

```
no ip domain-lookup
```

```
ip name-server 172.22.53.210
```

```
!
```

```
no ip bootp server
```

```
isdn switch-type primary-ni
```

```
!
```

```
!--- Chat scripts "offhook" and "CALLBACK" !--- used intuitively to go offhook and callback clients.
```

```
chat-script CALLBACK ABORT ERROR ABORT BUSY "" "AT"
```

```
OK "ATDT \T" TIMEOUT 30 CONNECT \c
```

```
chat-script offhook "" "ATH1" OK \c
```

```
!  
controller T1 0  
framing esf  
clock source line primary  
linecode b8zs  
pri-group timeslots 1-24  
!  
interface Ethernet0  
ip address 172.22.53.101 255.255.255.0  
no ip route-cache  
no ip mroute-cache  
no cdp enable  
!  
interface Serial0:23  
no ip address  
encapsulation ppp  
no ip route-cache  
isdn switch-type primary-ni  
isdn incoming-voice modem  
isdn bchan-number-order ascending  
no cdp enable  
!  
interface Group-Async1  
ip unnumbered Ethernet0  
encapsulation ppp  
no ip route-cache  
ip tcp header-compression passive  
no ip mroute-cache  
async mode interactive  
peer default ip address pool IP_POOL  
no cdp enable  
  
!--- Allows "group-async 1" to accept PPP callback requests from clients. !--- Use Challenge Authentication  
  
ppp callback accept  
ppp authentication chap callin  
group-range 1 48  
!  
ip local pool IP_POOL 172.22.53.141 172.22.53.148  
ip default-gateway 172.22.53.1  
no ip http server  
ip classless  
ip route 0.0.0.0 0.0.0.0 172.22.53.1  
!  
no cdp run  
tacacs-server host 172.22.53.201 key <snipped>  
!  
line con 0  
authorization exec NO_AUTHOR  
login authentication NO_AUTHEN  
transport input none  
line 1 48  
  
!--- Specifies chat scripts used during callback to clients.  
  
script modem-off-hook offhook  
script callback CALLBACK  
modem InOut  
transport preferred none  
transport input all  
transport output none  
autoselect during-login
```



```
autoselect ppp
callback forced-wait 5
line aux 0
line vty 0 4
!
ntp server 172.22.53.1
end
```

Verifica

Attualmente non è disponibile una procedura di verifica per questa configurazione.

Risoluzione dei problemi

In questa sezione vengono fornite informazioni utili per risolvere i problemi di configurazione.

Comandi per la risoluzione dei problemi

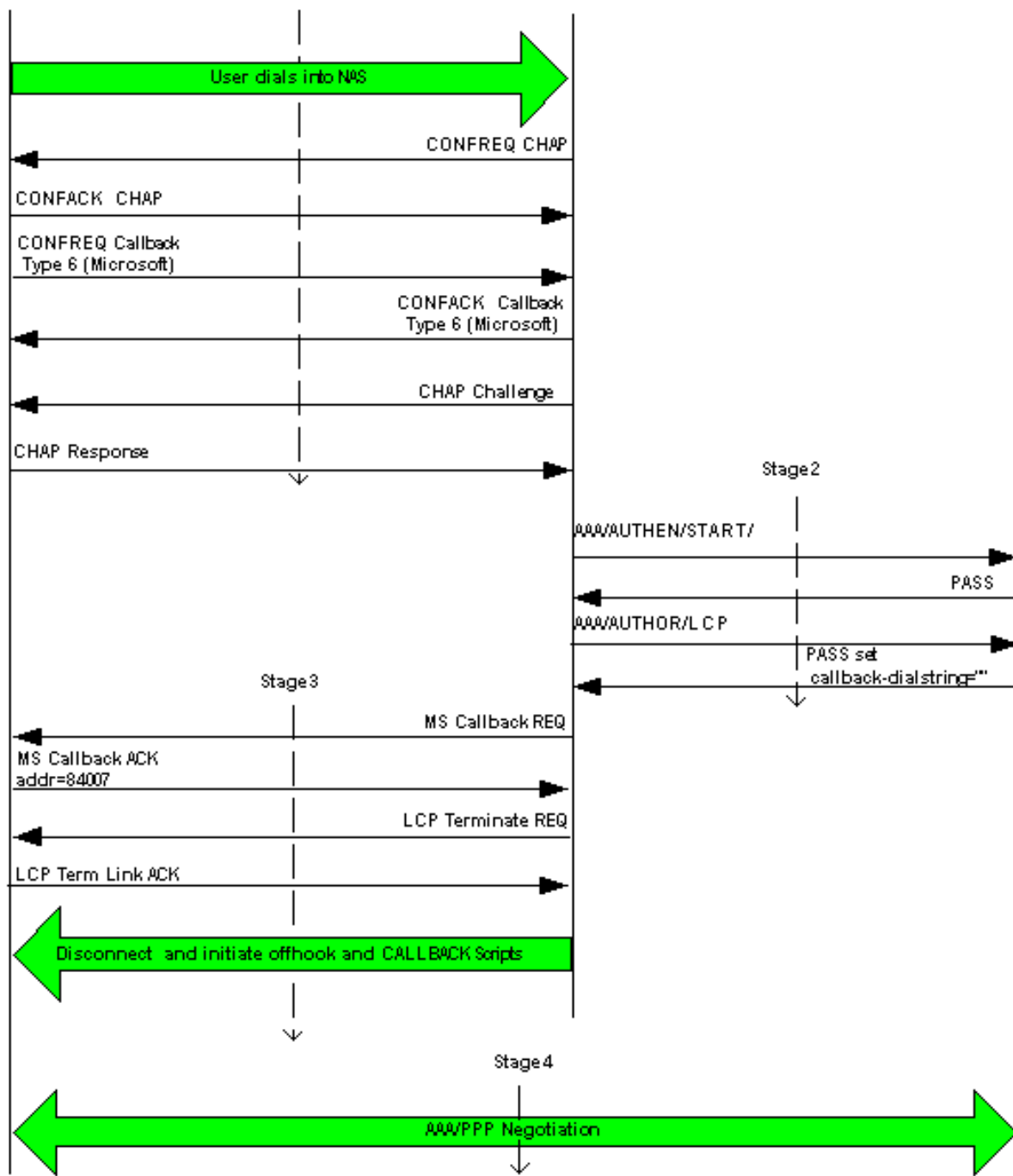
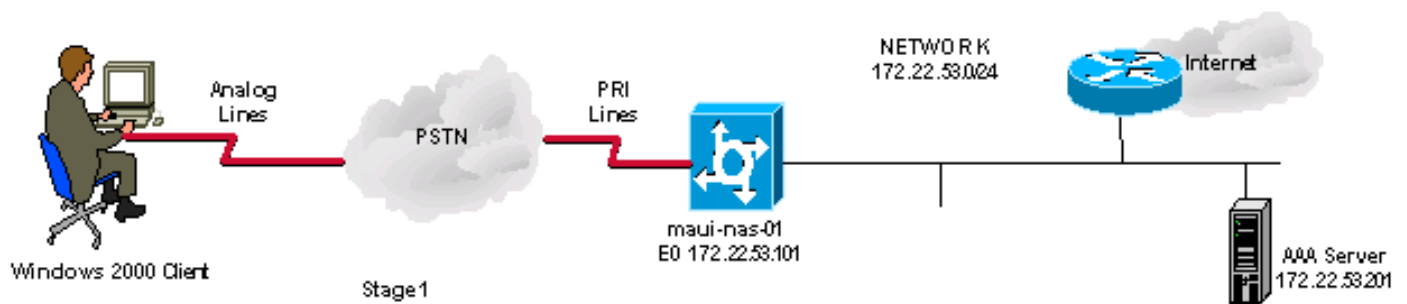
Nota: prima di usare i comandi di debug, consultare le [informazioni importanti sui comandi di debug](#).

- debug aaa authentication: visualizza le informazioni sull'autenticazione AAA.
- debug aaa authorization: visualizza le informazioni sull'autorizzazione AAA.
- debug callback: visualizza gli eventi di callback quando il router utilizza un modem e uno script di chat per richiamare una linea terminale.
- debug chat: visualizza i caratteri inviati tra il server di accesso alla rete (NAS) e il PC. Uno script di chat è un insieme di coppie di stringhe di invio previsto che definiscono la procedura di handshake tra dispositivi DTE (Data Terminal Equipment)-DTE o DCE (Data Communications Equipment).
- debug modem: visualizza l'attività della linea del modem su un server di accesso.
- debug ppp negotiation: visualizza i pacchetti PPP trasmessi durante l'avvio del protocollo PPP, in cui le opzioni PPP vengono negoziate.
- debug ppp authentication: visualizza i messaggi del protocollo di autenticazione, inclusi gli scambi di pacchetti Challenge Authentication Protocol (CHAP) e gli scambi PAP (Password Authentication Protocol).
- debug tacacs+: visualizza informazioni di debug dettagliate associate a TACACS+.

Output di esempio del comando debug

Le singole fasi di questo diagramma corrispondono all'output di debug effettivo visualizzato dopo il

diagramma. Si noti che per motivi di spazio alcuni output sono stati riportati su due righe.



Fase 1

<#root>

maui-nas-01#

debug aaa authentication

maui-nas-01#

debug aaa authorization

maui-nas-01#

show debug

General OS:

AAA Authentication debugging is on

AAA Authorization debugging is on

!--- AAA negotiation begins, aborted because PPP is autoselected.

Aug 1 09:23:53.320 CST: AAA: parse name=tty6 idb type=10 tty=6

Aug 1 09:23:53.320 CST: AAA: name=tty6 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=6 channel=0

Aug 1 09:23:53.324 CST: AAA: parse name=Serial0:4 idb type=12 tty=-1

Aug 1 09:23:53.328 CST: AAA: name=Serial0:4 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=4

Aug 1 09:23:53.332 CST: AAA/MEMORY: create_user (0x2A0AA0) user='' ruser=''
port='tty6' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1

Aug 1 09:23:53.336 CST: AAA/AUTHEN/START (2776623843): port='tty6' list=''
action=LOGIN service=LOGIN

Aug 1 09:23:53.340 CST: AAA/AUTHEN/START (2776623843): using "default" list

Aug 1 09:23:53.344 CST: AAA/AUTHEN/START (2776623843): Method=tacacs+ (tacacs+)

Aug 1 09:23:53.348 CST: TAC+: send AUTHEN/START packet ver=192 id=2776623843

Aug 1 09:23:53.572 CST: TAC+: ver=192 id=2776623843 received AUTHEN
status = GETUSER

Aug 1 09:23:53.576 CST: AAA/AUTHEN (2776623843): status = GETUSER

Aug 1 09:23:55.548 CST: AAA/AUTHEN/ABORT: (2776623843) because Autoselected.

Aug 1 09:23:55.552 CST: TAC+: send abort reason=Autoselected

Aug 1 09:23:55.668 CST: AAA/MEMORY: free_user (0x2A0AA0) user='' ruser=''
port='tty6' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1

Aug 1 09:23:58.124 CST: %LINK-3-UPDOWN: Interface Async6, changed state to up

Aug 1 09:23:58.148 CST: As6 AAA/AUTHOR/FSM: (0): LCP succeeds trivially

Aug 1 09:23:58.912 CST: AAA: parse name=Async6 idb type=10 tty=6

Aug 1 09:23:58.916 CST: AAA: name=Async6 flags=0x11 type=4 shelf=0 slot=0
adapter=0 port=6 channel=0

Aug 1 09:23:58.916 CST: AAA: parse name=Serial0:4 idb type=12 tty=-1

Aug 1 09:23:58.920 CST: AAA: name=Serial0:4 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=4

!--- AAA Authentication start packet is sent to AAA server.

Aug 1 09:23:58.924 CST: AAA/MEMORY: create_user (0x2984EC)
user='callback_user' ruser='' port='Async6' rem_addr='async/81560'
authen_type=CHAP service=PPP priv=1

Aug 1 09:23:58.932 CST: AAA/AUTHEN/START (3527356355): port='Async6' list=''
action=LOGIN service=PPP

Aug 1 09:23:58.936 CST: AAA/AUTHEN/START (3527356355): using "default" list

Aug 1 09:23:58.936 CST: AAA/AUTHEN (3527356355): status = UNKNOWN

Aug 1 09:23:58.940 CST: AAA/AUTHEN/START (3527356355): Method=tacacs+ (tacacs+)

!--- Receive PASS from AAA server.

Aug 1 09:23:58.944 CST: TAC+: send AUTHEN/START packet ver=193 id=3527356355

Aug 1 09:23:59.172 CST: TAC+: ver=193 id=3527356355 received AUTHEN
status = PASS

Aug 1 09:23:59.172 CST: AAA/AUTHEN (3527356355): status = PASS

!--- AAA Authorization request sent to AAA server for LCP.

Aug 1 09:23:59.180 CST: As6 AAA/AUTHOR/LCP: Authorize LCP

Aug 1 09:23:59.184 CST: As6 AAA/AUTHOR/LCP (1701401119): Port='Async6'
list='' service=NET

Aug 1 09:23:59.188 CST: AAA/AUTHOR/LCP: As6 (1701401119) user='callback_user'

Aug 1 09:23:59.192 CST: As6 AAA/AUTHOR/LCP (1701401119): send AV service=ppp

Aug 1 09:23:59.196 CST: As6 AAA/AUTHOR/LCP (1701401119): send AV protocol=lcp

Aug 1 09:23:59.196 CST: As6 AAA/AUTHOR/LCP (1701401119): found list "default"

Aug 1 09:23:59.200 CST: As6 AAA/AUTHOR/LCP (1701401119):
Method=tacacs+ (tacacs+)

!--- Receive PASS from AAA server, set the callback dialstring !--- via the "callback-dialstring" Attribute

Aug 1 09:23:59.204 CST: AAA/AUTHOR/TAC+: (1701401119): user=callback_user

Aug 1 09:23:59.208 CST: AAA/AUTHOR/TAC+: (1701401119): send AV service=ppp

Aug 1 09:23:59.212 CST: AAA/AUTHOR/TAC+: (1701401119): send AV protocol=lcp

Aug 1 09:23:59.440 CST: TAC+: (1701401119): received author response status
= PASS_ADD

Aug 1 09:23:59.448 CST: As6 AAA/AUTHOR (1701401119): Post authorization status
= PASS_ADD

Aug 1 09:23:59.452 CST: As6 AAA/AUTHOR/LCP: Processing AV service=ppp

Aug 1 09:23:59.456 CST: As6 AAA/AUTHOR/LCP: Processing AV protocol=lcp

Aug 1 09:23:59.456 CST: As6 AAA/AUTHOR/LCP: Processing AV
callback-dialstring=81550

Fase 2

<#root>

maui-nas-01#

debug aaa authentication

maui-nas-01#

debug aaa authorization

maui-nas-01#

show debug

General OS:

AAA Authentication debugging is on

AAA Authorization debugging is on

!--- AAA negotiation begins, aborted because PPP is autoselected.

Aug 1 09:23:53.320 CST: AAA: parse name=tty6 idb type=10 tty=6

Aug 1 09:23:53.320 CST: AAA: name=tty6 flags=0x11 type=4 shelf=0 slot=0
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adapter=0 port=0 channel=4

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port='tty6' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1

Aug 1 09:23:53.336 CST: AAA/AUTHEN/START (2776623843): port='tty6' list=''

```
action=LOGIN service=LOGIN
Aug 1 09:23:53.340 CST: AAA/AUTHEN/START (2776623843): using "default" list
Aug 1 09:23:53.344 CST: AAA/AUTHEN/START (2776623843): Method=tacacs+ (tacacs+)
Aug 1 09:23:53.348 CST: TAC+: send AUTHEN/START packet ver=192 id=2776623843
Aug 1 09:23:53.572 CST: TAC+: ver=192 id=2776623843 received AUTHEN
status = GETUSER
Aug 1 09:23:53.576 CST: AAA/AUTHEN (2776623843): status = GETUSER
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Aug 1 09:23:55.552 CST: TAC+: send abort reason=Autoselected
Aug 1 09:23:55.668 CST: AAA/MEMORY: free_user (0x2A0AA0) user='' ruser=''
port='tty6' rem_addr='async/81560' authen_type=ASCII service=LOGIN priv=1
Aug 1 09:23:58.124 CST: %LINK-3-UPDOWN: Interface Async6, changed state to up
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adapter=0 port=6 channel=0
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Aug 1 09:23:58.920 CST: AAA: name=Serial0:4 flags=0x51 type=1 shelf=0 slot=0
adapter=0 port=0 channel=4
```

!--- AAA Authentication start packet is sent to AAA server.

```
Aug 1 09:23:58.924 CST: AAA/MEMORY: create_user (0x2984EC)
user='callback_user' ruser='' port='Async6' rem_addr='async/81560'
authen_type=CHAP service=PPP priv=1
Aug 1 09:23:58.932 CST: AAA/AUTHEN/START (3527356355): port='Async6' list=''
action=LOGIN service=PPP
Aug 1 09:23:58.936 CST: AAA/AUTHEN/START (3527356355): using "default" list
Aug 1 09:23:58.936 CST: AAA/AUTHEN (3527356355): status = UNKNOWN
Aug 1 09:23:58.940 CST: AAA/AUTHEN/START (3527356355): Method=tacacs+ (tacacs+)
```

!--- Receive PASS from AAA Server.

```
Aug 1 09:23:58.944 CST: TAC+: send AUTHEN/START packet ver=193 id=3527356355
Aug 1 09:23:59.172 CST: TAC+: ver=193 id=3527356355 received AUTHEN
status = PASS
Aug 1 09:23:59.172 CST: AAA/AUTHEN (3527356355): status = PASS
```

!--- AAA Authorization request sent to AAA server for LCP.

```
Aug 1 09:23:59.180 CST: As6 AAA/AUTHOR/LCP: Authorize LCP
Aug 1 09:23:59.184 CST: As6 AAA/AUTHOR/LCP (1701401119): Port='Async6'
list='' service=NET
Aug 1 09:23:59.188 CST: AAA/AUTHOR/LCP: As6 (1701401119) user='callback_user'
Aug 1 09:23:59.192 CST: As6 AAA/AUTHOR/LCP (1701401119): send AV service=ppp
Aug 1 09:23:59.196 CST: As6 AAA/AUTHOR/LCP (1701401119): send AV protocol=lcp
Aug 1 09:23:59.196 CST: As6 AAA/AUTHOR/LCP (1701401119): found list "default"
Aug 1 09:23:59.200 CST: As6 AAA/AUTHOR/LCP (1701401119):
Method=tacacs+ (tacacs+)
```

!--- Receive PASS from AAA Server, set the callback dialstring !--- via the "callback-dialstring" Attri

```
Aug 1 09:23:59.204 CST: AAA/AUTHOR/TAC+: (1701401119): user=callback_user
Aug 1 09:23:59.208 CST: AAA/AUTHOR/TAC+: (1701401119): send AV service=ppp
Aug 1 09:23:59.212 CST: AAA/AUTHOR/TAC+: (1701401119): send AV protocol=lcp
Aug 1 09:23:59.440 CST: TAC+: (1701401119): received author response status
= PASS_ADD
Aug 1 09:23:59.448 CST: As6 AAA/AUTHOR (1701401119): Post authorization status
= PASS_ADD
Aug 1 09:23:59.452 CST: As6 AAA/AUTHOR/LCP: Processing AV service=ppp
Aug 1 09:23:59.456 CST: As6 AAA/AUTHOR/LCP: Processing AV protocol=lcp
Aug 1 09:23:59.456 CST: As6 AAA/AUTHOR/LCP: Processing AV
```

callback-dialstring=81550

Fase 3

<#root>

maui-nas-01#

show debug

General OS:

Modem control/process activation debugging is on

PPP:

PPP protocol negotiation debugging is on

Chat Scripts:

Chat scripts activity debugging is on

Callback:

Callback activity debugging is on

Aug 1 09:33:38.862 CST: As7 MCB: User callback_user Callback Number
- Server 81550

Aug 1 09:33:38.870 CST: Async7 PPP: 0 MCB Request(1) id 1 len 7

Aug 1 09:33:38.874 CST: Async7 MCB: 0 1 1 0 7 3 3 0

Aug 1 09:33:38.874 CST: As7 MCB: 0 Request Id 1 Callback Type
Server-Num delay 0

Aug 1 09:33:38.878 CST: As7 PPP: Phase is CBCP

Aug 1 09:33:39.018 CST: Async7 PPP: I MCB Response(2) id 1 len 7

Aug 1 09:33:39.022 CST: Async7 MCB: I 2 1 0 7 3 3 C

Aug 1 09:33:39.026 CST: As7 MCB: Received response

Aug 1 09:33:39.026 CST: As7 MCB: Response CBK-Server-Num 3 3 12

Aug 1 09:33:39.034 CST: Async7 PPP: 0 MCB Ack(3) id 2 len 7

Aug 1 09:33:39.034 CST: Async7 MCB: 0 3 2 0 7 3 3 C

Aug 1 09:33:39.038 CST: As7 MCB: 0 Ack Id 2 Callback Type Server-Num delay 12

Aug 1 09:33:39.042 CST: As7 MCB: Negotiated MCB with peer

!--- NAS sends LCP Terminate Request from client.

Aug 1 09:33:39.182 CST: As7 LCP: I TERMREQ [Open] id 6 len 16
(0x566260A7003CCD7400000000)

!--- NAS receives Terminate Acknowledge from client.

Aug 1 09:33:39.186 CST: As7 LCP: O TERMACK [Open] id 6 len 4

Aug 1 09:33:39.190 CST: As7 MCB: Peer terminating the link

Aug 1 09:33:39.194 CST: As7 MCB: Link terminated by peer, Callback Needed

Aug 1 09:33:39.198 CST: As7 MCB: Initiate Callback for callback_user
at 81550 using Async

Aug 1 09:33:39.202 CST: As7 MCB: Async-callback in progress

Aug 1 09:33:39.206 CST: As7 PPP: Phase is TERMINATING

!--- NAS disconnects and initiates offhook and CALLBACK chat scripts.

Aug 1 09:33:39.210 CST: TTY7 Callback PPP process creation

Aug 1 09:33:39.218 CST: TTY7 Callback process initiated, user: dialstring 81550

Aug 1 09:33:40.110 CST: %ISDN-6-DISCONNECT: Interface Serial0:5 disconnected
from unknown , call lasted 19 seconds

Aug 1 09:33:40.294 CST: TTY7: Async Int reset: Dropping DTR

Aug 1 09:33:41.210 CST: As7 LCP: TIMEOUT: State TERMsent

Aug 1 09:33:41.210 CST: As7 LCP: State is Closed

```
Aug 1 09:33:41.214 CST: As7 PPP: Phase is DOWN
Aug 1 09:33:41.218 CST: As7 PPP: Phase is ESTABLISHING, Passive Open
Aug 1 09:33:41.226 CST: As7 LCP: State is Listen
Aug 1 09:33:42.298 CST: %LINK-5-CHANGED: Interface Async7,
  changed state to reset
Aug 1 09:33:42.318 CST: As7 LCP: State is Closed
Aug 1 09:33:42.318 CST: As7 PPP: Phase is DOWN
Aug 1 09:33:45.302 CST: As7 IPCP: Remove route to 172.22.53.147
Aug 1 09:33:45.306 CST: TTY7 Callback forced wait = 5 seconds
Aug 1 09:33:47.302 CST: %LINK-3-UPDOWN: Interface Async7, changed state to down
Aug 1 09:33:47.322 CST: As7 LCP: State is Closed
Aug 1 09:33:50.310 CST: CHAT7: Matched chat script offhook to string offhook
Aug 1 09:33:50.314 CST: CHAT7: Asserting DTR
Aug 1 09:33:50.318 CST: CHAT7: Chat script offhook started
Aug 1 09:33:50.322 CST: CHAT7: Sending string: ATH1
Aug 1 09:33:50.322 CST: CHAT7: Expecting string: OK
Aug 1 09:33:50.634 CST: CHAT7: Completed match for expect: OK
Aug 1 09:33:50.638 CST: CHAT7: Sending string: \c
Aug 1 09:33:50.638 CST: CHAT7: Chat script offhook finished, status = Success
Aug 1 09:33:50.642 CST: CHAT7: Matched chat script CALLBACK to string CALLBACK
Aug 1 09:33:50.650 CST: CHAT7: Asserting DTR
Aug 1 09:33:50.650 CST: CHAT7: Chat script CALLBACK started
Aug 1 09:33:50.654 CST: CHAT7: Sending string: AT
Aug 1 09:33:50.658 CST: CHAT7: Expecting string: OK
Aug 1 09:33:50.686 CST: CHAT7: Completed match for expect: OK
Aug 1 09:33:50.686 CST: CHAT7: Sending string: ATDT \T<81550>
Aug 1 09:33:50.694 CST: CHAT7: Expecting string: CONNECT
Aug 1 09:34:04.051 CST: %ISDN-6-CONNECT: Interface Serial0:0 is now
  connected to 81550
Aug 1 09:34:17.543 CST: CHAT7: Completed match for expect: CONNECT
Aug 1 09:34:17.547 CST: CHAT7: Sending string: \c
Aug 1 09:34:17.547 CST: CHAT7: Chat script CALLBACK finished, status = Success
```

Fase 4

```
<#root>
```

```
maui-nas-01#debug aaa authentication
maui-nas-01#
```

```
debug aaa authorization
```

```
maui-nas-01#
```

```
debug ppp authentication
```

```
maui-nas-01#
```

```
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
```

```
!--- AAA/ PPP negotiation begins.
```

Aug 1 09:42:15.096 CST: TTY8: Callback starting PPP directly with
valid auth info

Aug 1 09:42:15.104 CST: TTY8: destroy timer type 1

Aug 1 09:42:15.104 CST: TTY8: destroy timer type 0

Aug 1 09:42:15.160 CST: As8 LCP: I CONFREQ [Closed] id 0 len 47

Aug 1 09:42:15.164 CST: As8 LCP: ACCM 0x00000000 (0x020600000000)

Aug 1 09:42:15.168 CST: As8 LCP: MagicNumber 0x5FA259DE (0x05065FA259DE)

Aug 1 09:42:15.172 CST: As8 LCP: PFC (0x0702)

Aug 1 09:42:15.172 CST: As8 LCP: ACFC (0x0802)

Aug 1 09:42:15.176 CST: As8 LCP: MRRU 1614 (0x1104064E)

Aug 1 09:42:15.180 CST: As8 LCP: EndpointDisc 1 Local

Aug 1 09:42:15.184 CST: As8 LCP: (0x131701DC57FC8B1CEA4CCEA064C0D958)

Aug 1 09:42:15.188 CST: As8 LCP: (0x82667300000000)

Aug 1 09:42:15.192 CST: As8 LCP: Lower layer not up, Fast Starting

Aug 1 09:42:15.196 CST: As8 PPP: Treating connection as a callout

Aug 1 09:42:15.200 CST: As8 PPP: Phase is ESTABLISHING, Active Open

Aug 1 09:42:15.204 CST: AAA/MEMORY: dup_user (0x4DDDF8) user='callback_user'
ruser='' port='Async8' rem_addr='async/81560' authen_type=CHAP service=PPP
priv=1 source='AAA dup lcp_reset'

Aug 1 09:42:15.212 CST: AAA/MEMORY: free_user (0x2F5418) user='callback_user'
ruser='' port='Async8' rem_addr='async/81560' authen_type=CHAP service=PPP
priv=1

Aug 1 09:42:15.216 CST: As8 AAA/AUTHEN: Method=IF-NEEDED: no authentication
needed. user='callback_user' port='Async8' rem_addr='async/81560'

Aug 1 09:42:15.224 CST: As8 AAA/AUTHOR/FSM: (0): LCP succeeds trivially

Aug 1 09:42:15.228 CST: As8 LCP: O CONFREQ [Closed] id 2 len 20

Aug 1 09:42:15.232 CST: As8 LCP: ACCM 0x000A0000 (0x0206000A0000)

Aug 1 09:42:15.236 CST: As8 LCP: MagicNumber 0x6530AEA5 (0x05066530AEA5)

Aug 1 09:42:15.240 CST: As8 LCP: PFC (0x0702)

Aug 1 09:42:15.240 CST: As8 LCP: ACFC (0x0802)

Aug 1 09:42:15.248 CST: As8 LCP: O CONFREQ [REQsent] id 0 len 8

Aug 1 09:42:15.252 CST: As8 LCP: MRRU 1614 (0x1104064E)

Aug 1 09:42:15.260 CST: %LINK-3-UPDOWN: Interface Async8, changed state to up

Aug 1 09:42:15.368 CST: As8 LCP: I CONFACK [REQsent] id 2 len 20

Aug 1 09:42:15.372 CST: As8 LCP: ACCM 0x000A0000 (0x0206000A0000)

Aug 1 09:42:15.376 CST: As8 LCP: MagicNumber 0x6530AEA5 (0x05066530AEA5)

Aug 1 09:42:15.380 CST: As8 LCP: PFC (0x0702)

Aug 1 09:42:15.384 CST: As8 LCP: ACFC (0x0802)

Aug 1 09:42:15.404 CST: As8 LCP: I CONFREQ [ACKrcvd] id 1 len 43

Aug 1 09:42:15.408 CST: As8 LCP: ACCM 0x00000000 (0x020600000000)

Aug 1 09:42:15.412 CST: As8 LCP: MagicNumber 0x5FA259DE (0x05065FA259DE)

Aug 1 09:42:15.412 CST: As8 LCP: PFC (0x0702)

Aug 1 09:42:15.416 CST: As8 LCP: ACFC (0x0802)

Aug 1 09:42:15.420 CST: As8 LCP: EndpointDisc 1 Local

Aug 1 09:42:15.424 CST: As8 LCP: (0x131701DC57FC8B1CEA4CCEA064C0D958)

Aug 1 09:42:15.428 CST: As8 LCP: (0x82667300000000)

Aug 1 09:42:15.432 CST: As8 LCP: O CONFACK [ACKrcvd] id 1 len 43

Aug 1 09:42:15.436 CST: As8 LCP: ACCM 0x00000000 (0x020600000000)

Aug 1 09:42:15.440 CST: As8 LCP: MagicNumber 0x5FA259DE (0x05065FA259DE)

Aug 1 09:42:15.444 CST: As8 LCP: PFC (0x0702)

Aug 1 09:42:15.448 CST: As8 LCP: ACFC (0x0802)

Aug 1 09:42:15.452 CST: As8 LCP: EndpointDisc 1 Local

Aug 1 09:42:15.456 CST: As8 LCP: (0x131701DC57FC8B1CEA4CCEA064C0D958)

Aug 1 09:42:15.460 CST: As8 LCP: (0x82667300000000)

Aug 1 09:42:15.460 CST: As8 LCP: State is Open

Aug 1 09:42:15.468 CST: As8 AAA/AUTHOR/LCP: Authorize LCP

Aug 1 09:42:15.468 CST: As8 AAA/AUTHOR/LCP (2679858087): Port='Async8' list=''
service=NET

Aug 1 09:42:15.472 CST: AAA/AUTHOR/LCP: As8 (2679858087) user='callback_user'

Aug 1 09:42:15.476 CST: As8 AAA/AUTHOR/LCP (2679858087): send AV service=ppp

Aug 1 09:42:15.480 CST: As8 AAA/AUTHOR/LCP (2679858087): send AV protocol=lcp

Aug 1 09:42:15.484 CST: As8 AAA/AUTHOR/LCP (2679858087): found list "default"

Aug 1 09:42:15.488 CST: As8 AAA/AUTHOR/LCP (2679858087): Method=tacacs+ (tacacs+)
Aug 1 09:42:15.492 CST: AAA/AUTHOR/TAC+: (2679858087): user=callback_user
Aug 1 09:42:15.492 CST: AAA/AUTHOR/TAC+: (2679858087): send AV service=ppp
Aug 1 09:42:15.496 CST: AAA/AUTHOR/TAC+: (2679858087): send AV protocol=lcp
Aug 1 09:42:15.724 CST: TAC+: (2679858087): received author response status
= PASS_ADD
Aug 1 09:42:15.732 CST: As8 AAA/AUTHOR (2679858087): Post authorization status
= PASS_ADD
Aug 1 09:42:15.736 CST: As8 AAA/AUTHOR/LCP: Processing AV service=ppp
Aug 1 09:42:15.740 CST: As8 AAA/AUTHOR/LCP: Processing AV protocol=lcp
Aug 1 09:42:15.740 CST: As8 AAA/AUTHOR/LCP: Processing AV
callback-dialstring=81550
Aug 1 09:42:15.748 CST: As8 PPP: Phase is UP
Aug 1 09:42:15.752 CST: As8 AAA/AUTHOR/FSM: (0): Can we start IPCP?
Aug 1 09:42:15.756 CST: As8 AAA/AUTHOR/FSM (3644410406): Port='Async8' list=''
service=NET
Aug 1 09:42:15.760 CST: AAA/AUTHOR/FSM: As8 (3644410406) user='callback_user'
Aug 1 09:42:15.764 CST: As8 AAA/AUTHOR/FSM (3644410406): send AV service=ppp
Aug 1 09:42:15.768 CST: As8 AAA/AUTHOR/FSM (3644410406): send AV protocol=ip
Aug 1 09:42:15.768 CST: As8 AAA/AUTHOR/FSM (3644410406): found list "default"
Aug 1 09:42:15.772 CST: As8 AAA/AUTHOR/FSM (3644410406): Method=tacacs+ (tacacs+)
Aug 1 09:42:15.776 CST: AAA/AUTHOR/TAC+: (3644410406): user=callback_user
Aug 1 09:42:15.780 CST: AAA/AUTHOR/TAC+: (3644410406): send AV service=ppp
Aug 1 09:42:15.784 CST: AAA/AUTHOR/TAC+: (3644410406): send AV protocol=ip
Aug 1 09:42:16.016 CST: TAC+: (3644410406): received author response status
= PASS_ADD
Aug 1 09:42:16.020 CST: As8 AAA/AUTHOR (3644410406): Post authorization status
= PASS_ADD
Aug 1 09:42:16.028 CST: As8 AAA/AUTHOR/FSM: We can start IPCP
Aug 1 09:42:16.032 CST: As8 IPCP: 0 CONFREQ [Closed] id 1 len 16
Aug 1 09:42:16.036 CST: As8 IPCP: CompressType VJ 15 slots (0x0206002D0F00)
Aug 1 09:42:16.040 CST: As8 IPCP: Address 172.22.53.101 (0x0306AC163565)
Aug 1 09:42:16.048 CST: As8 LCP: I IDENTIFY [Open] id 2 len 18 magic
0x5FA259DEMSRASV5.00
Aug 1 09:42:16.052 CST: As8 LCP: I IDENTIFY [Open] id 3 len 29 magic
0x5FA259DEMSRAS-1-RBROWN-LAPTOP
Aug 1 09:42:16.056 CST: As8 CCP: I CONFREQ [Not negotiated] id 4 len 10
Aug 1 09:42:16.060 CST: As8 CCP: MS-PPC supported bits 0x00000001
(0x120600000001)
Aug 1 09:42:16.068 CST: As8 LCP: 0 PROTREJ [Open] id 3 len 16 protocol CCP
(0x80FD0104000A120600000001)
Aug 1 09:42:16.080 CST: As8 IPCP: I CONFREQ [REQsent] id 5 len 40
Aug 1 09:42:16.084 CST: As8 IPCP: CompressType VJ 15 slots CompressSlotID
(0x0206002D0F01)
Aug 1 09:42:16.088 CST: As8 IPCP: Address 0.0.0.0 (0x030600000000)
Aug 1 09:42:16.092 CST: As8 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
Aug 1 09:42:16.096 CST: As8 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
Aug 1 09:42:16.100 CST: As8 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
Aug 1 09:42:16.104 CST: As8 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
Aug 1 09:42:16.108 CST: As8 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we
want 172.22.53.148
Aug 1 09:42:16.112 CST: As8 AAA/AUTHOR/IPCP: Processing AV service=ppp
Aug 1 09:42:16.116 CST: As8 AAA/AUTHOR/IPCP: Processing AV protocol=ip
Aug 1 09:42:16.120 CST: As8 AAA/AUTHOR/IPCP: Authorization succeeded
Aug 1 09:42:16.120 CST: As8 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want
172.22.53.148
Aug 1 09:42:16.128 CST: As8 IPCP: 0 CONFREQ [REQsent] id 5 len 22
Aug 1 09:42:16.132 CST: As8 IPCP: PrimaryWINS 0.0.0.0 (0x820600000000)
Aug 1 09:42:16.136 CST: As8 IPCP: SecondaryDNS 0.0.0.0 (0x830600000000)
Aug 1 09:42:16.144 CST: As8 IPCP: SecondaryWINS 0.0.0.0 (0x840600000000)
Aug 1 09:42:16.184 CST: As8 IPCP: I CONFACK [REQsent] id 1 len 16
Aug 1 09:42:16.188 CST: As8 IPCP: CompressType VJ 15 slots (0x0206002D0F00)

Aug 1 09:42:16.192 CST: As8 IPCP: Address 172.22.53.101 (0x0306AC163565)
Aug 1 09:42:16.680 CST: As8 IPCP: I CONFREQ [ACKrcvd] id 6 len 22
Aug 1 09:42:16.684 CST: As8 IPCP: CompressType VJ 15 slots CompressSlotID
(0x0206002D0F01)
Aug 1 09:42:16.688 CST: As8 IPCP: Address 0.0.0.0 (0x030600000000)
Aug 1 09:42:16.692 CST: As8 IPCP: PrimaryDNS 0.0.0.0 (0x810600000000)
Aug 1 09:42:16.696 CST: As8 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we
want 172.22.53.148
Aug 1 09:42:16.700 CST: As8 AAA/AUTHOR/IPCP: Processing AV service=ppp
Aug 1 09:42:16.704 CST: As8 AAA/AUTHOR/IPCP: Processing AV protocol=ip
Aug 1 09:42:16.708 CST: As8 AAA/AUTHOR/IPCP: Authorization succeeded
Aug 1 09:42:16.708 CST: As8 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we
want 172.22.53.148
Aug 1 09:42:16.716 CST: As8 IPCP: O CONFNAK [ACKrcvd] id 6 len 16
Aug 1 09:42:16.720 CST: As8 IPCP: Address 172.22.53.148 (0x0306AC163594)
Aug 1 09:42:16.724 CST: As8 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2)
Aug 1 09:42:16.748 CST: %LINEPROTO-5-UPDOWN: Line protocol on Interface Async8,
changed state to up
Aug 1 09:42:16.852 CST: As8 IPCP: I CONFREQ [ACKrcvd] id 7 len 22
Aug 1 09:42:16.856 CST: As8 IPCP: CompressType VJ 15 slots CompressSlotID
(0x0206002D0F01)
Aug 1 09:42:16.860 CST: As8 IPCP: Address 172.22.53.148 (0x0306AC163594)
Aug 1 09:42:16.864 CST: As8 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2)
Aug 1 09:42:16.868 CST: As8 AAA/AUTHOR/IPCP: Start. Her address 172.22.53.148,
we want 172.22.53.148
Aug 1 09:42:16.876 CST: As8 AAA/AUTHOR/IPCP (4022385425): Port='Async8'
list=''service=NET
Aug 1 09:42:16.880 CST: AAA/AUTHOR/IPCP: As8 (4022385425) user='callback_user'
Aug 1 09:42:16.884 CST: As8 AAA/AUTHOR/IPCP (4022385425): send AV service=ppp
Aug 1 09:42:16.888 CST: As8 AAA/AUTHOR/IPCP (4022385425): send AV protocol=ip
Aug 1 09:42:16.892 CST: As8 AAA/AUTHOR/IPCP (4022385425):
send AV addr*172.22.53.148
Aug 1 09:42:16.892 CST: As8 AAA/AUTHOR/IPCP (4022385425): found list "default"
Aug 1 09:42:16.896 CST: As8 AAA/AUTHOR/IPCP (4022385425): Method=tacacs+ (tacacs+)
Aug 1 09:42:16.900 CST: AAA/AUTHOR/TAC+: (4022385425): user=callback_user
Aug 1 09:42:16.904 CST: AAA/AUTHOR/TAC+: (4022385425): send AV service=ppp
Aug 1 09:42:16.908 CST: AAA/AUTHOR/TAC+: (4022385425): send AV protocol=ip
Aug 1 09:42:16.912 CST: AAA/AUTHOR/TAC+: (4022385425):
send AV addr*172.22.53.148
Aug 1 09:42:17.140 CST: TAC+: (4022385425): received author response status
= PASS_REPL
Aug 1 09:42:17.148 CST: As8 AAA/AUTHOR (4022385425): Post authorization status
= PASS_REPL
Aug 1 09:42:17.156 CST: As8 AAA/AUTHOR/IPCP: Reject 172.22.53.148,
using 172.22.53.148
Aug 1 09:42:17.164 CST: As8 AAA/AUTHOR/IPCP: Processing AV service=ppp
Aug 1 09:42:17.164 CST: As8 AAA/AUTHOR/IPCP: Processing AV protocol=ip
Aug 1 09:42:17.168 CST: As8 AAA/AUTHOR/IPCP: Processing AV addr*172.22.53.148
Aug 1 09:42:17.172 CST: As8 AAA/AUTHOR/IPCP: Authorization succeeded
Aug 1 09:42:17.176 CST: As8 AAA/AUTHOR/IPCP: Done. Her address 172.22.53.148,
we want 172.22.53.148
Aug 1 09:42:17.180 CST: As8 IPCP: O CONFACK [ACKrcvd] id 7 len 22
Aug 1 09:42:17.184 CST: As8 IPCP: CompressType VJ 15 slots CompressSlotID
(0x0206002D0F01)
Aug 1 09:42:17.192 CST: As8 IPCP: Address 172.22.53.148 (0x0306AC163594)
Aug 1 09:42:17.196 CST: As8 IPCP: PrimaryDNS 172.22.53.210 (0x8106AC1635D2)
Aug 1 09:42:17.200 CST: As8 IPCP: State is Open
Aug 1 09:42:17.220 CST: As8 IPCP: Install route to 172.22.53.148

Informazioni correlate

- [Pagina di supporto di Cisco Secure ACS per Windows](#)
- [Pagina di supporto TACACS+](#)
- [Documentazione relativa a TACACS+ in IOS](#)
- [Documentazione e supporto tecnico – Cisco Systems](#)

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