

Configurazione del client PPPoE su Cisco 2600 per la connessione a un CPE DSL non Cisco

Sommario

[Introduzione](#)

[Prerequisiti](#)

[Requisiti](#)

[Componenti usati](#)

[Convenzioni](#)

[Configurazione](#)

[Esempio di rete](#)

[Configurazioni](#)

[Verifica](#)

[Risoluzione dei problemi](#)

[Comandi per la risoluzione dei problemi](#)

[Informazioni correlate](#)

[Introduzione](#)

Questo documento spiega come supportare un client PPPoE (Point-to-Point Protocol over Ethernet) su router Cisco IOS® connessi tramite un'interfaccia Ethernet a un modem DSL o alle apparecchiature DSL della sede del cliente (CPE) di un altro fornitore.

Gli ISP spesso forniscono ai clienti un modem DSL dotato di un'interfaccia Ethernet per il collegamento al segmento Ethernet del cliente e di un'altra interfaccia per la connettività della linea DSL. In questo caso, il modem DSL funge da bridge solo se il CPE non è configurabile per alcuna connettività IP o funzionalità avanzate tramite DSL. Ciò limita la connettività a un solo PC client PPPoE. Con l'aggiunta di un router Cisco IOS connesso all'interfaccia Ethernet del modem DSL, è possibile eseguire la funzione PPPoE Client IOS sul router Cisco. In questo modo è possibile connettere più PC sul segmento Ethernet collegato al router Cisco IOS. Con l'uso del router Cisco IOS, è possibile migliorare le connettività DSL e tutte le funzionalità di IOS, ad esempio la sicurezza, NAT (Network Address Translation) e DHCP (Dynamic Host Configuration Protocol), per gli host interni.

La funzionalità PPPoE consente di avviare una sessione PPP su un client Ethernet di bridging semplice. La sessione viene trasportata sul collegamento ATM tramite frame Ethernet con bridge incapsulati. È possibile terminare la sessione presso un ufficio centrale del vettore di scambio locale o presso un punto di presenza dell'ISP.

[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 827-4V CPE IOS release 12.1(1)XB
- Router Cisco 2611 con software Cisco IOS versione 12.2(2)T1
- Cisco 6400 Universal Access Concentrator (UAC) con software Cisco IOS versione 12.1(5)DC1 image

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](#).

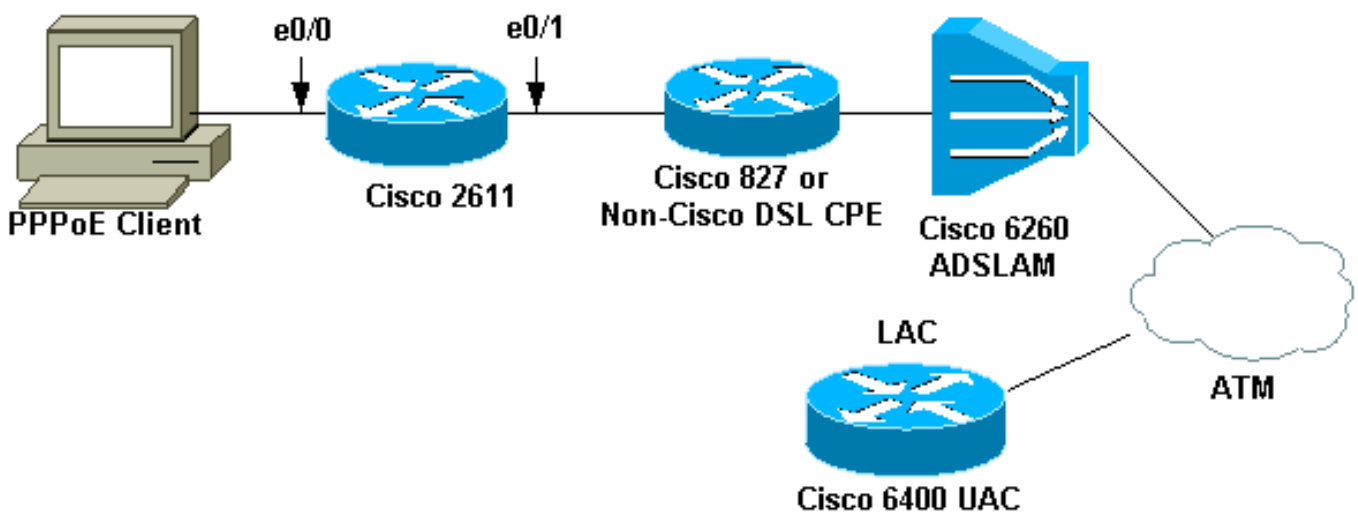
Configurazione

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

Nel documento viene usata l'impostazione di rete mostrata nel diagramma.



Nota: in questo documento, la connessione del client PPPoE viene avviata dal router Cisco. Questo è il router Cisco 2611 in questa configurazione. Il router Cisco 827 nel diagramma

rappresenta il CPE DSL non Cisco.

Configurazioni

Nel documento vengono usate queste configurazioni.

- [2611 Router](#)
- [Cisco DSL 827 Router](#)
- [Cisco 6400 Router](#)

2611 Router

```
!  
hostname pooh  
ip host rund 172.17.247.195  
!  
ip subnet-zero  
no ip domain-lookup  
!  
vpdn enable  
no vpdn logging  
!  
vpdn-group 1  
request-dialin  
protocol pppoe  
!  
!  
!  
!  
interface Ethernet0/0  
ip address 10.200.56.22 255.255.255.0  
ip nat inside  
no ip mroute-cache  
!  
!  
!  
!  
interface Ethernet0/1  
no ip address  
pppoe enable  
pppoe-client dial-pool-number 1  
!  
interface Dialer1  
ip address negotiated  
ip nat outside  
ip mtu 1492  
encapsulation ppp  
no ip mroute-cache  
dialer pool 1  
dialer-group 1  
ppp authentication pap  
ppp pap sent-username cisco password cisco1  
!  
ip classless  
no ip http server  
!  
dialer-list 1 protocol ip permit  
ip nat inside source list 1 interface Dialer1 overload  
ip route 0.0.0.0 0.0.0.0 dialer1  
access-list 1 permit 10.200.56.0 0.0.0.255
```

```
!  
line con 0  
exec-timeout 0 0  
transport input none  
line vty 0 4  
login  
password ww  
!  
end
```

Cisco DSL 827 Router

```
Building configuration...  
Current configuration : 821 bytes  
!  
version 12.2  
no service pad  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname Chansey  
!  
!  
ip subnet-zero  
no ip domain-lookup  
!  
!  
!  
interface Ethernet0  
no ip address  
bridge-group 1  
!  
interface ATM0  
no ip address  
no atm ilmi-keepalive  
bundle-enable  
bridge-group 1  
dsl operating-mode auto  
!  
interface ATM0.1 point-to-point  
pvc 53/53  
!--- vpi/vci given by the ISP  
!  
!  
ip classless  
ip http server  
!  
bridge 1 protocol ieee  
!  
line con 0  
exec-timeout 0 0  
stopbits 1  
line vty 0 4  
exec-timeout 0 0  
password ww  
login local  
!  
scheduler max-task-time 5000  
end
```

Cisco 6400 Router

```
Current configuration : 3231 bytes
!
version 12.1
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname alyssa_nrpl
!
logging rate-limit console 10 except errors
aaa new-model
aaa authentication ppp default local
enable password ww
!
username cisco password cisco1
redundancy
main-cpu
auto-sync standard
no secondary console enable
ip subnet-zero
ip cef
vpdn enable
no vpdn logging
!
vpdn-group cisco
accept-dialin
protocol pppoe
virtual-template 2
!
!
!
!
!
!
!
!
!
interface Loopback5
ip address 212.93.195.100 255.255.255.0
!
!
interface ATM0/0/0
no ip address
no ip mroute-cache
load-interval 30
atm pvc 16 0 16 ilmi
no atm ilmi-keepalive
pvc 10/100
!
hold-queue 1000 in
!
interface ATM0/0/0.60 multipoint
pvc 6/60
encapsulation aal5snap
protocol pppoe
!
!
interface Ethernet0/0/1
no ip address
!
interface Ethernet0/0/0
ip address 10.200.56.8 255.255.255.0
!
interface FastEthernet0/0/0
no ip address
```

```

full-duplex
!
!
interface Virtual-Template2
ip unnumbered Loopback5
ip mtu 1492
no ip route-cache cef
peer default ip address pool nrp1
ppp authentication pap
!
ip local pool nrp1 212.93.198.1
ip classless
!
!
line con 0
exec-timeout 0 0
password ww
transport input none
line aux 0
line vty 0 4
exec-timeout 0 0
password ww
!
!
end

```

Verifica

Le informazioni contenute in questa sezione permettono di verificare che la configurazione funzioni correttamente.

Alcuni comandi **show** sono supportati dallo [strumento Output Interpreter \(solo utenti registrati\)](#); lo strumento permette di visualizzare un'analisi dell'output del comando **show**.

- **show vpdn session all**: visualizza le informazioni sulla sessione VPDN. Queste informazioni includono le statistiche relative a interfaccia, tunnel, nome utente, pacchetti, stato e finestra.
- **show interface ethernet 0/1**: visualizza le informazioni sull'interfaccia Ethernet sul router.
- **show interfaces dialer 1**: visualizza le informazioni sulla dialer sul router.
- **show ip local pool nrp1**: visualizza le informazioni sul pool locale ip.
- **show ip route**: visualizza le informazioni sul router IP.

Questo è l'output del comando **show vpdn session all** su Cisco 2611.

```

pooh#show vpdn session all
%No active L2TP tunnels
%No active L2F tunnels
%No active PPTP tunnels
PPPoE Session Information Total tunnels 1 sessions 1
session id: 1
!--- Local MAC address. local MAC address: 0030.9424.af21, remote MAC address: 0050.736f.4c37
virtual access interface: Vi1, outgoing interface: Et0/1 599 packets sent, 599 received 9202
bytes sent, 8154 received !--- Verify that the outgoing interface for the PPPoE session !--- is
Ethernet0/1 and the local MAC address that displays is the !--- MAC address of Ethernet0/1. The
remote MAC address that displays !--- is the MAC address of the Aggregator device (6400). !---
You can see it on the 6400 as the local MAC address in the !--- show vpdn session on the 6400.

```

Questo è l'output del comando **show interface ethernet 0/1** su Cisco 2611.

```
pooh#show interface ethernet 0/1
Ethernet0/1 is up, line protocol is up
Hardware is AmdP2, address is 0030.9424.af21 (bia 0030.9424.af21)
MTU 1500 bytes, BW 10000 Kbit, DLY 1000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, loopback not set
Keepalive set (10 sec)
ARP type: ARPA, ARP Timeout 04:00:00
Last input 00:00:40, output 00:00:01, output hang never
Last clearing of "show interface" counters never
Queueing strategy: fifo
Output queue 0/40, 0 drops; input queue 0/75, 0 drops
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
739 packets input, 64127 bytes, 0 no buffer
Received 57 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored
0 input packets with dribble condition detected
1153 packets output, 89766 bytes, 0 underruns(1/0/0)
0 output errors, 1 collisions, 1 interface resets
0 babbles, 0 late collision, 2 deferred
0 lost carrier, 0 no carrier
0 output buffer failures, 0 output buffers swapped out
```

Questo è l'output del comando **show interfaces dialer 1** su Cisco 2611.

```
pooh#show interfaces dialer 1
Dialer1 is up, line protocol is up (spoofing)
Hardware is Unknown
Internet address is 212.93.198.1/32
MTU 1500 bytes, BW 56 Kbit, DLY 20000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
DTR is pulsed for 1 seconds on reset
Interface is bound to Vi1
Last input never, output never, output hang never
Last clearing of "show interface" counters 01:38:43
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
Conversations 0/0/16 (active/max active/max total)
Reserved Conversations 0/0 (allocated/max allocated)
Available Bandwidth 42 kilobits/sec
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
403 packets input, 6082 bytes
403 packets output, 6978 bytes
Bound to:
Virtual-Access1 is up, line protocol is up
Hardware is Virtual Access interface
MTU 1500 bytes, BW 100000 Kbit, DLY 100000 usec,
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
Keepalive set (10 sec)
Interface is bound to Di1 (Encapsulation PPP)
LCP Open
Listen: CDPCP
Open: IPCP
Last input 00:00:09, output never, output hang never
```

```
Last clearing of "show interface" counters 00:35:16
Queueing strategy: fifo
Output queue 0/40, 0 drops; input queue 0/75, 0 drops
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
430 packets input, 6453 bytes, 0 no buffer
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
430 packets output, 7400 bytes, 0 underruns
0 output errors, 0 collisions, 0 interface resets
0 output buffer failures, 0 output buffers swapped out
0 carrier transitions
```

Questo è l'output del comando **show vpdn session all** su Cisco 6400.

```
alyssa_nrpl#show vpdn session all
%No active L2TP tunnels
%No active L2F tunnels
%No active PPTP tunnels
PPPoE Session Information Total tunnels 1 sessions 1
session id: 1
local MAC address: 0050.736f.4c37, remote MAC address: 0030.9424.af21
virtual access interface: Vi3, outgoing interface: AT0/0/0, vc: 6/60
495 packets sent, 494 received
7369 bytes sent, 7346 received
```

Questo è l'output del comando **show ip local pool nrp1** su Cisco 6400.

```
alyssa_nrpl#show ip local pool nrp1
Pool          Begin          End          Free   In use
nrp1          212.93.198.1  212.93.198.1  0      1
Available addresses:
None
Inuse addresses:
212.93.198.1    Vi3          nrp1
```

Questo è l'output del comando **show ip route** su Cisco 6400.

```
alyssa_nrpl#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route
Gateway of last resort is 0.0.0.0 to network 0.0.0.0
212.93.198.0/32 is subnetted, 1 subnets
C      212.93.198.1 is directly connected, Virtual-Access3
!--- You have to see the installed route for the remote PPPoE session. C 212.93.195.0/24 is
directly connected, Loopback5 10.0.0.0/8 is variably subnetted, 3 subnets, 2 masks C
10.200.56.0/24 is directly connected, Ethernet0/0/0
```

[Risoluzione dei problemi](#)

Le informazioni contenute in questa sezione permettono di risolvere i problemi relativi alla configurazione.

[Comandi per la risoluzione dei problemi](#)

Alcuni comandi **show** sono supportati dallo [strumento Output Interpreter \(solo utenti registrati\)](#); lo strumento permette di visualizzare un'analisi dell'output del comando **show**.

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

- **show debugging:** visualizza le informazioni di debug sul router.

Questo è l'output del comando **show debugging** su Cisco 2611.

```
pooh#show debugging
PPP:
PPP protocol negotiation debugging is on
VPN:
PPPoE protocol events debugging is on
PPPoE control packets debugging is on
01:54:21: Sending PADI: Interface = Ethernet0/1
01:54:21: pppoe_send_padi:
FF FF FF FF FF FF 00 30 94 24 AF 21 88 63 11 09
00 00 00 0C 01 01 00 00 01 03 00 04 82 2E 39 F0
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...
01:54:21: PPPoE 0: I PADO L:0030.9424.af21 R:0050.736f.4c37 Et0/1
00 30 94 24 AF 21 00 50 73 6F 4C 37 88 63 11 07
00 00 00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0
01 02 00 0B 61 6C 79 73 73 61 5F 6E 72 70 31 ...
01:54:23: PPPOE: we've got our pado and the pado timer went off
01:54:23: OUT PADR from PPPoE tunnel
00 50 73 6F 4C 37 00 30 94 24 AF 21 88 63 11 19
00 00 00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0
01 02 00 0B 61 6C 79 73 73 61 5F 6E 72 70 31 ...
01:54:23: PPPoE 1: I PADS L:0030.9424.af21 R:0050.736f.4c37 Et0/1
00 30 94 24 AF 21 00 50 73 6F 4C 37 88 63 11 65
00 01 00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0
01 02 00 0B 61 6C 79 73 73 61 5F 6E 72 70 31 ...
01:54:23: IN PADS from PPPoE tunnel
01:54:23: Vi1 Debug: Condition 1, interface Di1 triggered, count 1
01:54:23: %DIALER-6-BIND: Interface Vi1 bound to profile Di1
01:54:23: PPPoE: Virtual Access interface obtained.
01:54:23: %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up
01:54:23: Vi1 PPP: Treating connection as a callout
01:54:23: Vi1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load]
01:54:23: Vi1 PPP: No remote authentication for call-out
01:54:23: Vi1 LCP: O CONFREQ [Closed] id 1 len 10
01:54:23: Vi1 LCP: MagicNumber 0x30FCDE42 (0x050630FCDE42)
01:54:23: Vi1 LCP: I CONFACK [REQsent] id 1 len 10
01:54:23: Vi1 LCP: MagicNumber 0x30FCDE42 (0x050630FCDE42)
01:54:25: Vi1 LCP: I CONFREQ [ACKrcvd] id 2 len 18
01:54:25: Vi1 LCP: MRU 1492 (0x010405D4)
01:54:25: Vi1 LCP: AuthProto PAP (0x0304C023)
01:54:25: Vi1 LCP: MagicNumber 0x5C799D85 (0x05065C799D85)
01:54:25: Vi1 LCP: O CONFNAK [ACKrcvd] id 2 len 8
01:54:25: Vi1 LCP: MRU 1500 (0x010405DC)
01:54:25: Vi1 LCP: TIMEOUT: State ACKrcvd
01:54:25: Vi1 LCP: O CONFREQ [ACKrcvd] id 2 len 10
01:54:25: Vi1 LCP: MagicNumber 0x30FCDE42 (0x050630FCDE42)
01:54:25: Vi1 LCP: I CONFREQ [REQsent] id 3 len 18
01:54:25: Vi1 LCP: MRU 1500 (0x010405DC)
01:54:25: Vi1 LCP: AuthProto PAP (0x0304C023)
01:54:25: Vi1 LCP: MagicNumber 0x5C799D85 (0x05065C799D85)
01:54:25: Vi1 LCP: O CONFACK [REQsent] id 3 len 18
01:54:25: Vi1 LCP: MRU 1500 (0x010405DC)
```

```

01:54:25: Vi1 LCP: AuthProto PAP (0x0304C023)
01:54:25: Vi1 LCP: MagicNumber 0x5C799D85 (0x05065C799D85)
01:54:25: Vi1 LCP: I CONFACK [ACKsent] id 2 len 10
01:54:25: Vi1 LCP: MagicNumber 0x30FCDE42 (0x050630FCDE42)
01:54:25: Vi1 LCP: State is Open
01:54:25: Vi1 PPP: Phase is AUTHENTICATING, by the peer [0 sess, 0 load]
01:54:25: Vi1 PAP: O AUTH-REQ id 4 len 18 from "cisco"
01:54:25: Vi1 PAP: I AUTH-ACK id 4 len 5
01:54:25: Vi1 PPP: Phase is UP [0 sess, 0 load]
01:54:25: Vi1 IPCP: O CONFREQ [Closed] id 1 len 10
01:54:25: Vi1 IPCP: Address 0.0.0.0 (0x030600000000)
01:54:25: Vi1 CDPCP: O CONFREQ [Closed] id 1 len 4
01:54:25: Vi1 IPCP: I CONFREQ [REQsent] id 1 len 10
01:54:25: Vi1 IPCP: Address 212.93.195.100 (0x0306D45DC364)
01:54:25: Vi1 IPCP: O CONFACK [REQsent] id 1 len 10
01:54:25: Vi1 IPCP: Address 212.93.195.100 (0x0306D45DC364)
01:54:25: Vi1 IPCP: I CONFNAK [ACKsent] id 1 len 10
01:54:25: Vi1 IPCP: Address 212.93.198.1 (0x0306D45DC601)
01:54:25: Vi1 IPCP: O CONFREQ [ACKsent] id 2 len 10
01:54:25: Vi1 IPCP: Address 212.93.198.1 (0x0306D45DC601)
01:54:25: Vi1 LCP: I PROTREJ [Open] id 4 len 10 protocol CDPCP
(0x820701010004)
01:54:25: Vi1 CDPCP: State is Closed
01:54:25: Vi1 IPCP: I CONFACK [ACKsent] id 2 len 10
01:54:25: Vi1 IPCP: Address 212.93.198.1 (0x0306D45DC601)
01:54:25: Vi1 IPCP: State is Open
01:54:25: Di1 IPCP: Install negotiated IP interface address 212.93.198.1
01:54:25: Di1 IPCP: Install route to 212.93.195.100
01:54:26: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1,
changed state to up

```

Questo è l'output del comando show debug su Cisco 6400.

```

*Aug 16 15:58:51.346: PPPoE: IN PADI discovery packet
*Aug 16 15:58:51.346: PPPoE: LMAC:ffff.ffff.ffff RMAC:0030.9424.af21 6/60
AT0/0/0.60
FF FF FF FF FF FF 00 30 94 24 AF 21 88 63 11 09
00 00 00 0C 01 01 00 00 01 03 00 04 82 2E 39 F0
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 ...
*Aug 16 15:58:51.346: PPPoE: PADO OUT from PPPoE tunnel
*Aug 16 15:58:51.346: PPPoE: LMAC:0050.736f.4c37 RMAC:0030.9424.af21 6/60
AT0/0/0.60
00 05 09 00 AA AA 03 00 80 C2 00 07 00 00 00 30
94 24 AF 21 00 50 73 6F 4C 37 88 63 11 07 00 00
00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0 01 ...
*Aug 16 15:58:53.390: PPPoE: IN PADR discovery packet
*Aug 16 15:58:53.390: PPPoE: LMAC:0050.736f.4c37 RMAC:0030.9424.af21 6/60
AT0/0/0.60
00 50 73 6F 4C 37 00 30 94 24 AF 21 88 63 11 19
00 00 00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0
01 02 00 0B 61 6C 79 73 73 61 5F 6E 72 70 31 ...
*Aug 16 15:58:53.394: Vi3 PPP: Phase is DOWN, Setup [0 sess, 0 load]
*Aug 16 15:58:53.418: PPPoE: Create session: 1
*Aug 16 15:58:53.418: PPPoE: 1: Created
*Aug 16 15:58:53.418: PPPoE: LMAC:0050.736f.4c37 RMAC:0030.9424.af21 6/60
AT0/0/0.60
*Aug 16 15:58:53.418: PPPoE: PADS OUT from PPPoE tunnel
*Aug 16 15:58:53.418: PPPoE: LMAC:0050.736f.4c37 RMAC:0030.9424.af21 6/60
AT0/0/0.60
00 05 09 00 AA AA 03 00 80 C2 00 07 00 00 00 30
94 24 AF 21 00 50 73 6F 4C 37 88 63 11 65 00 01
00 2F 01 01 00 00 01 03 00 04 82 2E 39 F0 01 ...
2d08h: %LINK-3-UPDOWN: Interface Virtual-Access3, changed state to up

```

```

*Aug 16 15:58:53.426: Vi3 PPP: Treating connection as a dedicated line
*Aug 16 15:58:53.426: Vi3 PPP: Phase is ESTABLISHING, Active Open [0 sess,
0 load]
*Aug 16 15:58:53.426: Vi3 LCP: O CONFREQ [Closed] id 1 len 18
*Aug 16 15:58:53.426: Vi3 LCP: MRU 1492 (0x010405D4)
*Aug 16 15:58:53.426: Vi3 LCP: AuthProto PAP (0x0304C023)
*Aug 16 15:58:53.426: Vi3 LCP: MagicNumber 0x5C7E3144 (0x05065C7E3144)
*Aug 16 15:58:53.466: Vi3 LCP: I CONFREQ [REQsent] id 1 len 10
*Aug 16 15:58:53.466: Vi3 LCP: MagicNumber 0x31017223 (0x050631017223)
*Aug 16 15:58:53.466: Vi3 LCP: O CONFACK [REQsent] id 1 len 10
*Aug 16 15:58:53.466: Vi3 LCP: MagicNumber 0x31017223 (0x050631017223)
*Aug 16 15:58:53.470: Vi3 LCP: I CONFNAK [ACKsent] id 1 len 8
*Aug 16 15:58:53.470: Vi3 LCP: MRU 1500 (0x010405DC)
*Aug 16 15:58:53.470: Vi3 LCP: O CONFREQ [ACKsent] id 2 len 18
*Aug 16 15:58:53.470: Vi3 LCP: MRU 1500 (0x010405DC)
*Aug 16 15:58:53.470: Vi3 LCP: AuthProto PAP (0x0304C023)
*Aug 16 15:58:53.470: Vi3 LCP: MagicNumber 0x5C7E3144 (0x05065C7E3144)
*Aug 16 15:58:53.510: Vi3 LCP: I CONFACK [ACKsent] id 2 len 18
*Aug 16 15:58:53.510: Vi3 LCP: MRU 1500 (0x010405DC)
*Aug 16 15:58:53.510: Vi3 LCP: AuthProto PAP (0x0304C023)
*Aug 16 15:58:53.510: Vi3 LCP: MagicNumber 0x5C7E3144 (0x05065C7E3144)
*Aug 16 15:58:53.510: Vi3 LCP: State is Open
*Aug 16 15:58:53.510: Vi3 PPP: Phase is AUTHENTICATING, by this end [0
sess, 0 load]
*Aug 16 15:58:53.514: Vi3 PAP: I AUTH-REQ id 5 len 18 from "cisco"
*Aug 16 15:58:53.514: Vi3 PPP: Phase is FORWARDING [0 sess, 0 load]
*Aug 16 15:58:53.514: Vi3 PPP: Phase is AUTHENTICATING [0 sess, 0 load]
*Aug 16 15:58:53.514: Vi3 PAP: Authenticating peer cisco
*Aug 16 15:58:53.514: Vi3 PAP: O AUTH-ACK id 5 len 5
*Aug 16 15:58:53.514: Vi3 PPP: Phase is UP [0 sess, 0 load]
*Aug 16 15:58:53.514: Vi3 IPCP: O CONFREQ [Closed] id 1 len 10
*Aug 16 15:58:53.514: Vi3 IPCP: Address 212.93.195.100 (0x0306D45DC364)
*Aug 16 15:58:53.574: Vi3 IPCP: I CONFREQ [REQsent] id 1 len 10
*Aug 16 15:58:53.574: Vi3 IPCP: Address 0.0.0.0 (0x030600000000)
*Aug 16 15:58:53.574: Vi3 IPCP: Pool returned 212.93.198.1
*Aug 16 15:58:53.574: Vi3 IPCP: O CONFNAK [REQsent] id 1 len 10
*Aug 16 15:58:53.574: Vi3 IPCP: Address 212.93.198.1 (0x0306D45DC601)
*Aug 16 15:58:53.574: Vi3 CDPCP: I CONFREQ [Not negotiated] id 1 len 4
*Aug 16 15:58:53.574: Vi3 LCP: O PROTREJ [Open] id 3 len 10 protocol CDPCP
(0x820701010004)
*Aug 16 15:58:53.574: Vi3 IPCP: I CONFACK [REQsent] id 1 len 10
*Aug 16 15:58:53.574: Vi3 IPCP: Address 212.93.195.100 (0x0306D45DC364)
*Aug 16 15:58:53.618: Vi3 IPCP: I CONFREQ [ACKrcvd] id 2 len 10
*Aug 16 15:58:53.618: Vi3 IPCP: Address 212.93.198.1 (0x0306D45DC601)
*Aug 16 15:58:53.618: Vi3 IPCP: O CONFACK [ACKrcvd] id 2 len 10
*Aug 16 15:58:53.618: Vi3 IPCP: Address 212.93.198.1 (0x0306D45DC601)
*Aug 16 15:58:53.618: Vi3 IPCP: State is Open
*Aug 16 15:58:53.622: Vi3 IPCP: Install route to 212.93.198.1
2d08h: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access3,
changed state to up

```

[Informazioni correlate](#)

- [Configurazione del router Cisco 827](#)
- [Informazioni di supporto sulla tecnologia Cisco DSL](#)
- [Supporto tecnico – Cisco Systems](#)