

DSL : Guide de configuration PPPoE (Point to Point Protocol over Ethernet) sur ASR920

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Introduction

Ce document décrit la procédure de configuration du protocole PPPoE (Point to Point Protocol over Ethernet) sur le routeur de service d'agrégation Cisco ASR 920 agissant en tant que client.

Conditions préalables

Conditions requises

Cisco vous recommande de connaître la connectivité de bout en bout de la couche 1.

Components Used

Les informations de ce document sont basées sur le matériel Cisco ASR 920.

Les informations de ce document ont été créées à partir des périphériques d'un environnement de travaux pratiques spécifique. Tous les périphériques utilisés dans ce document ont démarré avec une configuration effacée (par défaut).

Note: Si votre réseau est en ligne, assurez-vous de bien comprendre l'incidence possible des commandes.

Configuration

Note: Utilisez l'[Outil de recherche de commande \(clients inscrits seulement\) pour obtenir plus d'informations sur les commandes utilisées dans cette section.](#)

La configuration sur les routeurs s'effectue de l'arrière vers l'arrière (client et serveur).

Configuration du client

Il est spécifique à la plate-forme ASR 920.

```
interface GigabitEthernet0/0/1
  no ip address
  no ip redirects
  no ip proxy-arp
  ip tcp adjust-mss 1452
  speed 1000
  no negotiation auto
  cdp enable
  ip virtual-reassembly
  service instance 10 ethernet
  encapsulation untagged etype pppoe-all
  bridge-domain 10
!
interface Dialer1
  ip address negotiated
  encapsulation ppp
  dialer pool 1
  dialer-group 1
  ppp authentication pap chap callin
  ppp chap hostname cisco
  ppp chap password 0 cisco123
  ppp pap sent-username cisco password 0 cisco123
end
!
interface BDI10
  no ip address
  pppoe enable group global
  pppoe-client dial-pool-number 1
!
ip route 0.0.0.0 0.0.0.0 Dialer1
```

Configuration du serveur

Cela reste le même dans tous les scénarios, quelle que soit la plate-forme utilisée côté client.

```
username cisco password 0 cisco123
!
bba-group pppoe global
  virtual-template 1
!
interface GigabitEthernet0/0
  ip address 192.168.1.1 255.255.255.0
  ip rip advertise 4
```

```

load-interval 30
duplex auto
speed auto
pppoe enable group global
!
interface Virtual-Template1
mtu 1492
ip unnumbered GigabitEthernet0/0
peer default ip address pool PPPoE_Pool
ppp authentication pap chap
!
ip local pool PPPoE_Pool 10.1.1.1 10.1.1.100

```

Vérification

Référez-vous à cette section pour vous assurer du bon fonctionnement de votre configuration.

Ces débogages sont activés sur le client et le serveur :

- debug ppp negotiation
- debug ppp authentication
- Erreur de débogage ppp
- Dialer de débogage

Journaux client :

```

*Jul 14 20:23:09.486: ppp13 PPP: Phase is ESTABLISHING
*Jul 14 20:23:09.486: Vi2 PPP: Using dialer call direction
*Jul 14 20:23:09.486: Vi2 PPP: Treating connection as a callout
*Jul 14 20:23:09.486: Vi2 PPP: Session handle[6300000D] Session id[13]
*Jul 14 20:23:09.486: Vi2 LCP: Event[OPEN] State[Initial to Starting]
*Jul 14 20:23:09.486: Vi2 PPP: No remote authentication for call-out
*Jul 14 20:23:09.486: Vi2 LCP: O CONFREQ [Starting] id 1 len 10
*Jul 14 20:23:09.486: Vi2 LCP:   MagicNumber 0xB07C8578 (0x0506B07C8578)
*Jul 14 20:23:09.486: Vi2 LCP: Event[UP] State[Starting to REQsent]
*Jul 14 20:23:09.488: Vi2 LCP: I CONFREQ [REQsent] id 1 len 18
*Jul 14 20:23:09.488: Vi2 LCP:   MRU 1492 (0x010405D4)
*Jul 14 20:23:09.488: Vi2 LCP:   AuthProto PAP (0x0304C023)
*Jul 14 20:23:09.488: Vi2 LCP:   MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 14 20:23:09.488: Vi2 LCP: O CONFNAK [REQsent] id 1 len 8
*Jul 14 20:23:09.488: Vi2 LCP:   MRU 1500 (0x010405DC)
*Jul 14 20:23:09.489: Vi2 LCP: Event[Receive ConfReq-] State[REQsent to REQsent]
*Jul 14 20:23:09.489: Vi2 LCP: I CONFACK [REQsent] id 1 len 10
*Jul 14 20:23:09.489: Vi2 LCP:   MagicNumber 0xB07C8578 (0x0506B07C8578)
*Jul 14 20:23:09.489: Vi2 LCP: Event[Receive ConfAck] State[REQsent to ACKrcvd]
*Jul 14 20:23:09.490: Vi2 LCP: I CONFREQ [ACKrcvd] id 2 len 18
*Jul 14 20:23:09.490: Vi2 LCP:   MRU 1500 (0x010405DC)
*Jul 14 20:23:09.490: Vi2 LCP:   AuthProto PAP (0x0304C023)
*Jul 14 20:23:09.490: Vi2 LCP:   MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 14 20:23:09.490: Vi2 LCP: O CONFACK [ACKrcvd] id 2 len 18
*Jul 14 20:23:09.490: Vi2 LCP:   MRU 1500 (0x010405DC)
*Jul 14 20:23:09.490: Vi2 LCP:   AuthProto PAP (0x0304C023)
*Jul 14 20:23:09.490: Vi2 LCP:   MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 14 20:23:09.490: Vi2 LCP: Event[Receive ConfReq+] State[ACKrcvd to Open]
*Jul 14 20:23:09.499: Vi2 PPP: No authorization without authentication
*Jul 14 20:23:09.499: Vi2 PPP: Phase is AUTHENTICATING, by the peer
*Jul 14 20:23:09.499: Vi2 PAP: Using hostname from interface PAP
*Jul 14 20:23:09.499: Vi2 PAP: Using password from interface PAP
*Jul 14 20:23:09.499: Vi2 PAP: O AUTH-REQ id 1 len 19 from "cisco"
*Jul 14 20:23:09.499: Vi2 LCP: State is Open

```

```

*Jul 14 20:23:09.530: Vi2 PAP: I AUTH-ACK id 1 len 5
*Jul 14 20:23:09.530: Vi2 PPP: Phase is FORWARDING, Attempting Forward
*Jul 14 20:23:09.530: Vi2 PPP: Queue IPCP code[1] id[1]
*Jul 14 20:23:09.532: Vi2 PPP: Phase is ESTABLISHING, Finish LCP
*Jul 14 20:23:09.532: Vi2 PPP: Phase is UP
*Jul 14 20:23:09.532: Vi2 IPCP: Protocol configured, start CP. state[Initial]
*Jul 14 20:23:09.532: Vi2 IPCP: Event[OPEN] State[Initial to Starting]
*Jul 14 20:23:09.532: Vi2 IPCP: O CONFREQ [Starting] id 1 len 10
*Jul 14 20:23:09.532: Vi2 IPCP:   Address 0.0.0.0 (0x030600000000)
*Jul 14 20:23:09.532: Vi2 IPCP: Event[UP] State[Starting to REQsent]
*Jul 14 20:23:09.532: Vi2 PPP: Process pending ncp packets
*Jul 14 20:23:09.532: Vi2 IPCP: Redirect packet to Vi2
*Jul 14 20:23:09.532: Vi2 IPCP: I CONFREQ [REQsent] id 1 len 10
*Jul 14 20:23:09.532: Vi2 IPCP:   Address 192.168.1.1 (0x0306C0A80101)
*Jul 14 20:23:09.533: Vi2 IPCP: O CONFACK [REQsent] id 1 len 10
*Jul 14 20:23:09.533: Vi2 IPCP:   Address 192.168.1.1 (0x0306C0A80101)
*Jul 14 20:23:09.533: Vi2 IPCP: Event[Receive ConfReq+] State[REQsent to ACKsent]
*Jul 14 20:23:09.535: Vi2 IPCP: I CONFNAK [ACKsent] id 1 len 10
*Jul 14 20:23:09.535: Vi2 IPCP:   Address 10.1.1.1 (0x03060A010101)
*Jul 14 20:23:09.535: Vi2 IPCP: O CONFREQ [ACKsent] id 2 len 10
*Jul 14 20:23:09.535: Vi2 IPCP:   Address 10.1.1.1 (0x03060A010101)
*Jul 14 20:23:09.536: Vi2 IPCP: Event[Receive ConfNak/Rej] State[ACKsent to ACKsent]
*Jul 14 20:23:09.537: Vi2 IPCP: I CONFACK [ACKsent] id 2 len 10
*Jul 14 20:23:09.537: Vi2 IPCP:   Address 10.1.1.1 (0x03060A010101)
*Jul 14 20:23:09.537: Vi2 IPCP: Event[Receive ConfAck] State[ACKsent to Open]
*Jul 14 20:23:09.562: Vi2 IPCP: State is Open
*Jul 14 20:23:09.562: Di1 IPCP: Install negotiated IP interface address 10.1.1.1
*Jul 14 20:23:09.565: PPPoE : ipfib_encapstr prepared
*Jul 14 20:23:09.566: Di1 Added to neighbor route AVL tree: topoid 0, address 192.168.1.1
*Jul 14 20:23:09.566: Di1 IPCP: Install route to 192.168.1.1
*Jul 14 20:23:09.567: Vi2 DDR: dialer protocol up
*Jul 14 20:23:09.567: PPPoE : ipfib_encapstr prepared
*Jul 14 20:23:09.567: Di1 DDR: dialer protocol up
*Jul 14 20:23:10.235: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access2, changed
state to up

```

```

Client#sh pppoe session
1 client session

```

Uniq ID	PPPoE	RemMAC	Port	VT	VA	State
	SID	LocMAC			VA-st	Type
N/A	1	a0ec.f9d8.9dd0 64f6.9d6e.dd3f	BD10	Di1	Vi2 UP	UP

Journaux du serveur :

```

* Jul 15 04:41:18.727: ppp1 PPP: Phase is ESTABLISHING
*Jul 15 04:41:18.727: ppp1 PPP: Using vpn set call direction
*Jul 15 04:41:18.727: ppp1 PPP: Treating connection as a callin
*Jul 15 04:41:18.727: ppp1 PPP: Session handle[BF000001] Session id[1]
*Jul 15 04:41:18.727: ppp1 LCP: Event[OPEN] State[Initial to Starting]
*Jul 15 04:41:18.727: ppp1 PPP LCP: Enter passive mode, state[Stopped]
*Jul 15 04:41:18.735: ppp1 LCP: I CONFREQ [Stopped] id 1 len 10
*Jul 15 04:41:18.735: ppp1 LCP:   MagicNumber 0xB07C8578 (0x0506B07C8578)
*Jul 15 04:41:18.735: ppp1 LCP: O CONFREQ [Stopped] id 1 len 18
*Jul 15 04:41:18.735: ppp1 LCP:   MRU 1492 (0x010405D4)
*Jul 15 04:41:18.735: ppp1 LCP:   AuthProto PAP (0x0304C023)
*Jul 15 04:41:18.735: ppp1 LCP:   MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 15 04:41:18.735: ppp1 LCP: O CONFACK [Stopped] id 1 len 10
*Jul 15 04:41:18.735: ppp1 LCP:   MagicNumber 0xB07C8578 (0x0506B07C8578)
*Jul 15 04:41:18.735: ppp1 LCP: Event[Receive ConfReq+] State[Stopped to ACKsent]

```

```

*Jul 15 04:41:18.735: ppp1 LCP: I CONFNAK [ACKsent] id 1 len 8
*Jul 15 04:41:18.735: ppp1 LCP: MRU 1500 (0x010405DC)
*Jul 15 04:41:18.735: ppp1 LCP: O CONFREQ [ACKsent] id 2 len 18
*Jul 15 04:41:18.735: ppp1 LCP: MRU 1500 (0x010405DC)
*Jul 15 04:41:18.735: ppp1 LCP: AuthProto PAP (0x0304C023)
*Jul 15 04:41:18.735: ppp1 LCP: MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 15 04:41:18.735: ppp1 LCP: Event[Receive ConfNak/Rej] State[ACKsent to ACKsent]
*Jul 15 04:41:18.739: ppp1 LCP: I CONFACK [ACKsent] id 2 len 18
*Jul 15 04:41:18.739: ppp1 LCP: MRU 1500 (0x010405DC)
*Jul 15 04:41:18.739: ppp1 LCP: AuthProto PAP (0x0304C023)
*Jul 15 04:41:18.739: ppp1 LCP: MagicNumber 0xED0582E9 (0x0506ED0582E9)
*Jul 15 04:41:18.739: ppp1 LCP: Event[Receive ConfAck] State[ACKsent to Open]
*Jul 15 04:41:18.747: ppp1 PPP: Queue PAP code[1] id[1]
*Jul 15 04:41:18.763: ppp1 PPP: Phase is AUTHENTICATING, by this end
*Jul 15 04:41:18.763: ppp1 PAP: Redirect packet to ppp1
*Jul 15 04:41:18.763: ppp1 PAP: I AUTH-REQ id 1 len 19 from "cisco"
*Jul 15 04:41:18.763: ppp1 PAP: Authenticating peer cisco
*Jul 15 04:41:18.763: ppp1 PPP: Phase is FORWARDING, Attempting Forward
*Jul 15 04:41:18.763: ppp1 LCP: State is Open
*Jul 15 04:41:18.763: ppp1 PPP: Phase is AUTHENTICATING, Unauthenticated User
*Jul 15 04:41:18.763: ppp1 PPP: Sent PAP LOGIN Request
*Jul 15 04:41:18.763: ppp1 PPP: Received LOGIN Response PASS
*Jul 15 04:41:18.763: ppp1 IPCP: Authorizing CP
*Jul 15 04:41:18.763: ppp1 IPCP: CP stalled on event[Authorize CP]
*Jul 15 04:41:18.763: ppp1 IPCP: CP unstall
*Jul 15 04:41:18.763: ppp1 PPP: Phase is FORWARDING, Attempting Forward
*Jul 15 04:41:18.775: Vi1.1 PPP: Phase is AUTHENTICATING, Authenticated User
*Jul 15 04:41:18.775: Vi1.1 PAP: O AUTH-ACK id 1 len 5
*Jul 15 04:41:18.775: Vi1.1 PPP: Phase is UP
*Jul 15 04:41:18.775: Vi1.1 IPCP: Protocol configured, start CP. state[Initial]
*Jul 15 04:41:18.775: Vi1.1 IPCP: Event[OPEN] State[Initial to Starting]
*Jul 15 04:41:18.775: Vi1.1 IPCP: O CONFREQ [Starting] id 1 len 10
*Jul 15 04:41:18.775: Vi1.1 IPCP: Address 192.168.1.1 (0x0306C0A80101)
*Jul 15 04:41:18.779: Vi1.1 IPCP: Event[UP] State[Starting to REQsent]
*Jul 15 04:41:18.779: Vi1.1 IPCP: I CONFREQ [REQsent] id 1 len 10
*Jul 15 04:41:18.779: Vi1.1 IPCP: Address 0.0.0.0 (0x030600000000)
*Jul 15 04:41:18.783: Vi1.1 IPCP AUTHOR: Start. Her address 0.0.0.0, we want 0.0.0.0
*Jul 15 04:41:18.783: Vi1.1 IPCP AUTHOR: Done. Her address 0.0.0.0, we want 0.0.0.0
*Jul 15 04:41:18.783: Vi1.1 IPCP: Pool returned 10.1.1.1
*Jul 15 04:41:18.783: Vi1.1 IPCP: O CONFNAK [REQsent] id 1 len 10
*Jul 15 04:41:18.783: Vi1.1 IPCP: Address 10.1.1.1 (0x03060A010101)
*Jul 15 04:41:18.783: Vi1.1 IPCP: Event[Receive ConfReq-] State[REQsent to REQsent]
*Jul 15 04:41:18.783: Vi1.1 IPCP: I CONFACK [REQsent] id 1 len 10
*Jul 15 04:41:18.783: Vi1.1 IPCP: Address 192.168.1.1 (0x0306C0A80101)
*Jul 15 04:41:18.783: Vi1.1 IPCP: Event[Receive ConfAck] State[REQsent to ACKrcvd]
*Jul 15 04:41:18.783: Vi1.1 IPCP: I CONFREQ [ACKrcvd] id 2 len 10
*Jul 15 04:41:18.783: Vi1.1 IPCP: Address 10.1.1.1 (0x03060A010101)
*Jul 15 04:41:18.783: Vi1.1 IPCP: O CONFACK [ACKrcvd] id 2 len 10
*Jul 15 04:41:18.783: Vi1.1 IPCP: Address 10.1.1.1 (0x03060A010101)
*Jul 15 04:41:18.783: Vi1.1 IPCP: Event[Receive ConfReq+] State[ACKrcvd to Open]
*Jul 15 04:41:18.795: Vi1.1 IPCP: State is Open
*Jul 15 04:41:18.795: Vi1.1 Added to neighbor route AVL tree: topoid 0, address 10.1.1.1
*Jul 15 04:41:18.795: Vi1.1 IPCP: Install route to 10.1.1.1

```

```
Server#show pppoe session
```

```
1 session in LOCALLY_TERMINATED (PTA) State
1 session total
```

Uniq ID	PPPoE SID	RemMAC LocMAC	Port	VT	VA VA-st	State Type
1	1	64f6.9d6e.dd3f a0ec.f9d8.9dd0	Gi0/0	1	Vi1.1 UP	PTA

Dépannage

Cette section fournit des informations que vous pouvez utiliser pour dépanner votre configuration.

Suivez les [étapes de dépannage](#) PPP standard.

Note: Si l'interface BDI n'est pas configurée et que la configuration du client PPPoE est appliquée sur l'interface Gigabit Ethernet, vous verrez que la session PPPoE n'est pas établie et affiche ce message d'erreur.

```
padi timer expired  
Sending PADI: Interface = GigabitEthernet0/0/1
```

Informations connexes

- [Configuration du client PPPoE](#)
- [Client PPP sur Ethernet](#)
- [Support et documentation techniques - Cisco Systems](#)