

# Configuración de muestra - Aplicación de MUX inversa usando el Multilink PPP

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## **[Introducción](#)**

En algunos entornos, puede ser necesario liar los links seriales múltiples para actuar como solo link con el ancho de banda agregado. Este documento describe cómo configurar routers Cisco 4500 para agrupar cuatro interfaces seriales mediante una plantilla de interfaz de plantilla virtual.

Esta configuración puede utilizarse para los routers conectados sobre líneas arrendadas o routers que tienen la Unidad de servicio de canales/Unidad de servicio de datos (CSU/DSU). Puede agregar funciones adicionales a esta configuración en función de sus necesidades.

## **[prerrequisitos](#)**

### **[Requisitos](#)**

No hay requisitos específicos para este documento.

### **[Componentes Utilizados](#)**

La información que contiene este documento se basa en las versiones de software y hardware indicadas a continuación.

- Cisco 4500 Router en un ambiente de laboratorio con las configuraciones despejadas.
- La versión 12.2(10b) de Cisco IOS® se ejecutaba en ambo Routers.

La información que se presenta en este documento se originó a partir de dispositivos dentro de un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si la red está funcionando, asegúrese de haber comprendido el impacto que puede tener un comando antes de ejecutarlo.

## Productos Relacionados

Esta configuración también puede ser usada con las siguientes versiones de hardware y software.

- Cualquier dos Routers con cuatro interfaces seriales cada uno.
- Se pueden utilizar las interfaces seriales WIC-1T y WIC-2T.

## Convenciones

Para obtener más información sobre las convenciones del documento, consulte [Convenciones de Consejos Técnicos de Cisco](#).

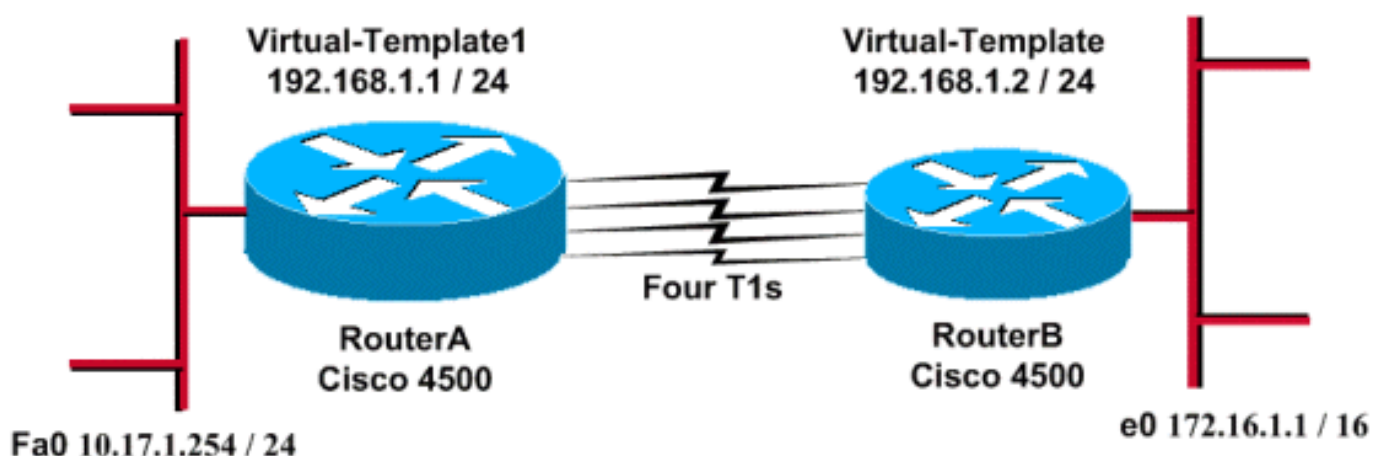
## Configurar

En esta sección encontrará la información para configurar las funciones descritas en este documento.

**Note:** Para obtener información adicional sobre los comandos que se utilizan en este documento, use la Command Lookup Tool (solo para clientes [registrados](#)).

## Diagrama de la red

Este documento utiliza la instalación de red que se muestra en el siguiente diagrama.



## Configuraciones

Esta configuración fue probada utilizando la versión 12.2(10b) del software Cisco IOS en routers de la serie 4500. Los conceptos de la misma configuración se aplican a una topología similar del

router o a otras versiones del Cisco IOS.

Este documento usa las configuraciones detalladas a continuación.

## RouterA

```
version 12.2
!
hostname RouterA
!
!
username RouterB password xxx
ip subnet-zero
multilink virtual-template 1
!
interface loopback 0
ip address 192.168.1.1 255.255.255.0
!
interface Virtual-Template1
 ip unnumbered loopback0
 ppp authentication chap
 ppp multilink
!
interface Serial0
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial1
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial2
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial3
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface FastEthernet0
 ip address 10.17.1.254 255.255.255.0
!
router rip
 network 10.0.0.0
 network 192.168.1.0
!
end
```

## RouterB

```

version 12.2
!
hostname RouterB
!
username RouterA password xxx
ip subnet-zero
multilink virtual-template 1
!
interface loopback 0
ip address 192.168.1.2 255.255.255.0
!
!
interface Virtual-Template1
 ip unnumbered loopback0
 ppp authentication chap
 ppp multilink
!
interface Serial0
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial1
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial2
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Serial3
 no ip address
 encapsulation ppp
 no fair-queue
 ppp multilink
 pulse-time 3
!
interface Ethernet0
 ip address 172.16.1.1 255.255.0.0
!
router rip
 network 172.16.0.0
 network 192.168.1.0
!
end

```

Configure el siguiente para implementar la configuración antedicha:

- plantilla virtual multilink
- virtual-plantilla de la interfaz
- Multilink PPP en cada uno de las interfaces seriales en las cuales el liar tiene que ser hecho.
- Un RIP como el IP Routing Protocol

Se configura el Interface Loopback 0 de modo que nunca falle, y el loopback0 innumerable del IP

incrementar de más de cinco interfaces seriales con la misma dirección IP.

Cuando todas las interfaces seriales están para arriba, y el tráfico de usuarios debe ser enviado, el Multilink PPP crea una interfaz de acceso virtual y la negociación PPP ocurre. La configuración para esta interfaz de acceso virtual está clonada de la plantilla virtual. La cantidad de interfaces seriales que están activas se agrupan en esta interfaz de acceso virtual y se crea un ancho de banda adicional.

## Verificación

En esta sección encontrará información que puede utilizar para confirmar que su configuración esté funcionando correctamente.

La herramienta [Output Interpreter](#) (sólo para clientes [registrados](#)) permite utilizar algunos comandos "show" y ver un análisis del resultado de estos comandos.

- **show ip route**
- **show ip rip database**
- **show ppp multilink**
- **show interface virtual-access 1**

```
RouterA#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 not set
```

```
R 172.16.0.0/16 [120/1] via 192.168.1.2, 00:00:19, Virtual-Access1
  10.0.0.0/24 is subnetted, 1 subnets
C 10.17.1.0 is directly connected, FastEthernet0
  192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.0/24 is directly connected, Loopback0
C 192.168.1.2/32 is directly connected, Virtual-Access1
```

```
RouterA#show ip route connected
```

```
  10.0.0.0/24 is subnetted, 1 subnets
C      10.17.1.0 is directly connected, FastEthernet0
  192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C      192.168.1.0/24 is directly connected, Loopback0
C      192.168.1.2/32 is directly connected, Virtual-Access1
```

```
RouterB#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 not set
```

```
C 172.16.0.0/16 is directly connected, Ethernet0
R 10.0.0.0/8 [120/1] via 192.168.1.1, 00:00:18, Virtual-Access1
  192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.1/32 is directly connected, Virtual-Access1
C 192.168.1.0/24 is directly connected, Loopback0
```

```
RouterB#show ip route connected
```

```
C 172.16.0.0/16 is directly connected, Ethernet0
  192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.1.1/32 is directly connected, Virtual-Access1
C 192.168.1.0/24 is directly connected, Loopback0
```

```
RouterA#show ip rip database
```

```
10.0.0.0/8 auto-summary
10.17.1.0/24 directly connected, FastEthernet0
172.16.0.0/16 auto-summary
172.16.0.0/16
  [1] via 192.168.1.2, 00:00:34, Virtual-Access1
192.168.1.0/24 auto-summary
192.168.1.0/24 directly connected, Loopback0
192.168.1.2/32 directly connected, Virtual-Access1
```

```
RouterB#show ip rip database
```

```
10.0.0.0/8 auto-summary
10.0.0.0/8
  [1] via 192.168.1.1, 00:00:13, Virtual-Access
1172.16.0.0/16 auto-summary
172.16.0.0/16 directly connected, Ethernet0
192.168.1.0/24 auto-summary
192.168.1.0/24 directly connected, Loopback0
192.168.1.1/32 directly connected, Virtual-Access1
```

```
RouterA#show ppp multilink
```

```
Virtual-Access1, bundle name is RouterB
Bundle up for 17:01:59
0 lost fragments, 0 reordered, 0 unassigned
0 discarded, 0 lost received, 1/255 load
0xD3C received sequence, 0x1180 sent sequence
Member links: 4 (max not set, min not set)
  Serial0, since 17:01:59, last rcvd seq 000D38
  Serial1, since 17:01:50, last rcvd seq 000D39
  Serial2, since 17:01:46, last rcvd seq 000D3A
  Serial3, since 17:01:41, last rcvd seq 000D3B
```

```
RouterB#show ppp multilink
```

```
Virtual-Access1, bundle name is RouterA
Bundle up for 12:47:33
0 lost fragments, 0 reordered, 0 unassigned
0 discarded, 0 lost received, 1/255 load
0x1186 received sequence, 0xD40 sent sequence
Member links: 4 (max not set, min not set)
  Serial0, since 12:47:33, last rcvd seq 001184
  Serial1, since 12:47:27, last rcvd seq 001185
  Serial2, since 12:47:23, last rcvd seq 001182
  Serial3, since 12:47:20, last rcvd seq 001183
```

```
RouterA#show interface virtual-access 1
```

```
Virtual-Access1 is up, line protocol is up
Hardware is Virtual Access interface
Interface is unnumbered. Using address of Loopback0 (192.168.1.1)
MTU 1500 bytes, BW 6176 Kbit, DLY 100000 usec,
```

```
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
Keepalive set (10 sec)
DTR is pulsed for 5 seconds on reset
LCP Open, multilink Open
Open: IPCP
Last input 00:00:00, output never, output hang never
Last clearing of "show interface" counters 17:05:41
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
  1711 packets input, 163898 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
  2256 packets output, 211897 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 output buffer failures, 0 output buffers swapped out
  0 carrier transitions
```

```
RouterB#show interface virtual-access 1
```

```
Virtual-Access1 is up, line protocol is up
```

```
Hardware is Virtual Access interface
Interface is unnumbered. Using address of Loopback0 (192.168.1.2)
MTU 1500 bytes, BW 6176 Kbit, DLY 100000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
Keepalive set (10 sec)
DTR is pulsed for 5 seconds on reset
LCP Open, multilink Open
Open: IPCP
Last input 00:00:20, output never, output hang never
Last clearing of "show interface" counters 12:54:17
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
Output queue :0/40 (size/max)
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
  2256 packets input, 216460 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
  1714 packets output, 160624 bytes, 0 underruns
  0 output errors, 0 collisions, 0 interface resets
  0 output buffer failures, 0 output buffers swapped out
  0 carrier transitions
```

## [Troubleshooting](#)

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

## [Comandos para resolución de problemas](#)

La herramienta [Output Interpreter](#) (sólo para clientes [registrados](#)) permite utilizar algunos comandos "show" y ver un análisis del resultado de estos comandos.

**Note:** Antes de ejecutar un comando debug, consulte [Información Importante sobre Comandos Debug](#).

- **haga el debug de la negociación ppp** - Para ver si un cliente está pasando la negociación PPP; se utiliza este comando de marcar para saber si hay negociación de dirección.
- **debug ppp authentication** – Para ver si un cliente se autentica correctamente. Si usted está utilizando una versión de Cisco IOS Software antes de 11.2, utilice el **comando debug ppp chap** en lugar de otro.
- **debug ppp error** - Para visualizar los errores del protocolo y la estadística de error se asoció a la negociación y a la operación de la conexión PPP.
- **debug vtemplate** – Para visualizar la clonación de plantilla virtual para formar una interfaz de acceso virtual.
- **debug ppp multilink events**: se utiliza para observar la depuración de los eventos de enlaces múltiples del PPP. Visualiza la información sobre los eventos que afectan a los grupos multilink.
- **show ppp multilink** - para ver a los miembros del agrupamiento de enlaces múltiples.

Los siguientes resultados se obtuvieron de los routers Cisco 4500. Presentan los routers que establecen una conexión de links múltiples PPP.

```
RouterA#debug vtemplate
```

```
Virtual Template debugging is on
```

```
*Dec 1 17:24:16.519: Vi1 VTEMPLATE: Reuse Vi1, recycle queue size 0
*Dec 1 17:24:16.519: Vi1 VTEMPLATE: Set default settings with ip unnumbered
*Dec 1 17:24:16.539: Vi1 VTEMPLATE: Hardware address 00d0.bbfa.f579
*Dec 1 17:24:16.543: Vi1 VTEMPLATE: Has a new cloneblk vtemplate,
now it has vtemplate
*Dec 1 17:24:16.543: Vi1 VTEMPLATE: ***** CLONE VACCESS1 *****
*Dec 1 17:24:16.543: Vi1 VTEMPLATE: Clone from Virtual-Templat1
interface Virtual-Access1
default ip address
no ip address
encap ppp
ip unnumbered loopback0
end
```

```
*Dec 1 17:24:16.595: %LINK-3-UPDOWN:
Interface Virtual-Access1, changed state to up
*Dec 1 17:24:17.515: %LINEPROTO-5-UPDOWN:
Line protocol on Interface Serial0, changed state to up
*Dec 1 17:24:17.595: %LINEPROTO-5-UPDOWN:
Line protocol on Interface Virtual-Access1, changed state to up
```

```
RouterA#debug ppp negotiation
```

```
PPP protocol negotiation debugging is on
```

```
Dec 11 19:39:14.523: %LINK-5-CHANGED: Interface Serial0, changed state to reset
Dec 11 19:39:14.523: Se0 LCP: State is Closed
Dec 11 19:39:14.627: %SYS-5-CONFIG_I: Configured from console by console
Dec 11 19:39:16.523: %LINK-3-UPDOWN: Interface Serial0, changed state to up
Dec 11 19:39:16.523: Se0 PPP: Treating connection as a dedicated line
Dec 11 19:39:16.523: Se0 PPP: Phase is ESTABLISHING, Active Open [0 sess, 1 load]
Dec 11 19:39:16.523: Se0 LCP: O CONFREQ [Closed] id 25 len 24
Dec 11 19:39:16.523: Se0 LCP: MagicNumber 0xD4CBA693 (0x0506D4CBA693)
Dec 11 19:39:16.523: Se0 LCP: MRRU 1524 (0x110405F4)
Dec 11 19:39:16.523: Se0 LCP: EndpointDisc 1 RouterA (0x130A01506F6D65726F6C)
Dec 11 19:39:16.535: Se0 LCP: I CONFREQ [REQsent] id 33 len 25
Dec 11 19:39:16.535: Se0 LCP: MagicNumber 0x03200E36 (0x050603200E36)
Dec 11 19:39:16.535: Se0 LCP: MRRU 1524 (0x110405F4)
Dec 11 19:39:16.539: Se0 LCP: EndpointDisc 1 RouterB (0x130B0150756C6C69676E79)
```



Dec 11 19:39:16.539: **Se0 LCP: O CONFACK [REQsent] id 33 len 25**  
Dec 11 19:39:16.539: Se0 LCP: MagicNumber 0x03200E36 (0x050603200E36)  
Dec 11 19:39:16.539: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:39:16.539: Se0 LCP: EndpointDisc 1 RouterB (0x130B0150756C6C69676E79)  
Dec 11 19:39:16.539: **Se0 LCP: I CONFACK [ACKsent] id 25 len 24**  
Dec 11 19:39:16.539: Se0 LCP: MagicNumber 0xD4CBA693 (0x0506D4CBA693)  
Dec 11 19:39:16.539: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:39:16.543: Se0 LCP: EndpointDisc 1 RouterA (0x130A01506F6D65726F6C)  
Dec 11 19:39:16.543: **Se0 LCP: State is Open**  
Dec 11 19:39:16.543: **Se0 PPP: Phase is VIRTUALIZED [0 sess, 1 load]**  
Dec 11 19:39:16.555: Vi1 PPP: Phase is DOWN, Setup [0 sess, 1 load]  
Dec 11 19:39:16.587: **%LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up**  
Dec 11 19:39:16.587: Vi1 PPP: Treating connection as a dedicated line  
Dec 11 19:39:16.587: **Vi1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 1 load]**  
Dec 11 19:39:16.587: Vi1 LCP: O CONFREQ [Closed] id 1 len 29  
Dec 11 19:39:16.587: Vi1 LCP: AuthProto CHAP (0x0305C22305)  
Dec 11 19:39:16.587: Vi1 LCP: MagicNumber 0xD4CBA6D4 (0x0506D4CBA6D4)  
Dec 11 19:39:16.587: Vi1 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:39:16.587: Vi1 LCP: EndpointDisc 1 RouterA (0x130A01506F6D65726F6C)  
Dec 11 19:39:16.587: **Vi1 PPP: Phase is UP [0 sess, 1 load]**  
Dec 11 19:39:16.591: Vi1 IPCP: O CONFREQ [Closed] id 1 len 10  
Dec 11 19:39:16.591: Vi1 IPCP: Address 192.168.1.1 (0x0306C0A80101)  
Dec 11 19:39:16.591: **Vi1 MLP: Added first link Se0 to bundle RouterB**  
Dec 11 19:39:16.623: Vi1 IPCP: I CONFREQ [REQsent] id 1 len 10  
Dec 11 19:39:16.623: Vi1 IPCP: Address 192.168.1.2 (0x0306C0A80102)  
Dec 11 19:39:16.623: Vi1 IPCP: O CONFACK [REQsent] id 1 len 10  
Dec 11 19:39:16.623: Vi1 IPCP: Address 192.168.1.2 (0x0306C0A80102)  
Dec 11 19:39:16.623: Vi1 IPCP: I CONFACK [ACKsent] id 1 len 10  
Dec 11 19:39:16.627: Vi1 IPCP: Address 192.168.1.1 (0x0306C0A80101)  
Dec 11 19:39:16.627: **Vi1 IPCP: State is Open**  
Dec 11 19:39:16.627: **Vi1 IPCP: Install route to 192.168.1.2**  
Dec 11 19:39:17.543: **%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0, changed state to up**  
Dec 11 19:39:17.587: **%LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1, changed state to up**

RouterB#debug ppp negotiation

PPP protocol negotiation debugging is on

Dec 11 19:38:08.975: **Se0 LCP: I CONFREQ [Closed] id 25 len 24**  
Dec 11 19:38:08.975: Se0 LCP: MagicNumber 0xD4CBA693 (0x0506D4CBA693)  
Dec 11 19:38:08.975: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:38:08.975: Se0 LCP: EndpointDisc 1 RouterA (0x130A01506F6D65726F6C)  
Dec 11 19:38:08.975: Se0 LCP: Lower layer not up, Fast Starting  
Dec 11 19:38:08.975: Se0 PPP: Treating connection as a dedicated line  
Dec 11 19:38:08.979: **Se0 PPP: Phase is ESTABLISHING, Active Open [0 sess, 1 load]**  
Dec 11 19:38:08.979: **Se0 LCP: O CONFREQ [Closed] id 33 len 25**  
Dec 11 19:38:08.979: Se0 LCP: MagicNumber 0x03200E36 (0x050603200E36)  
Dec 11 19:38:08.979: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:38:08.979: Se0 LCP: EndpointDisc 1 RouterB (0x130B0150756C6C69676E79)  
Dec 11 19:38:08.979: **Se0 LCP: O CONFACK [REQsent] id 25 len 24**  
Dec 11 19:38:08.979: Se0 LCP: MagicNumber 0xD4CBA693 (0x0506D4CBA693)  
Dec 11 19:38:08.979: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:38:08.979: Se0 LCP: EndpointDisc 1 RouterA (0x130A01506F6D65726F6C)  
Dec 11 19:38:08.979: **%LINK-3-UPDOWN: Interface Serial0, changed state to up**  
Dec 11 19:38:08.987: **Se0 LCP: I CONFACK [ACKsent] id 33 len 25**  
Dec 11 19:38:08.987: Se0 LCP: MagicNumber 0x03200E36 (0x050603200E36)  
Dec 11 19:38:08.987: Se0 LCP: MRRU 1524 (0x110405F4)  
Dec 11 19:38:08.987: Se0 LCP: EndpointDisc 1 RouterB (0x130B0150756C6C69676E79)  
Dec 11 19:38:08.987: **Se0 LCP: State is Open**  
Dec 11 19:38:08.987: Se0 PPP: Phase is VIRTUALIZED [0 sess, 1 load]  
Dec 11 19:38:08.999: Vi1 PPP: Phase is DOWN, Setup [0 sess, 1 load]  
Dec 11 19:38:09.039: Se0 IPCP: Packet buffered while building MLP bundle interface  
Dec 11 19:38:09.043: **%LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up**

```
Dec 11 19:38:09.043: Vi1 PPP: Treating connection as a dedicated line
Dec 11 19:38:09.043: Vi1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 1 load]
Dec 11 19:38:09.043: Vi1 LCP: O CONFREQ [Closed] id 1 len 30
Dec 11 19:38:09.043: Vi1 LCP:   AuthProto CHAP (0x0305C22305)
Dec 11 19:38:09.043: Vi1 LCP:   MagicNumber 0x03200E78 (0x050603200E78)
Dec 11 19:38:09.043: Vi1 LCP:   MRRU 1524 (0x110405F4)
Dec 11 19:38:09.043: Vi1 LCP:   EndpointDisc 1 RouterB (0x130B0150756C6C69676E79)
Dec 11 19:38:09.043: Vi1 PPP: Phase is UP [0 sess, 1 load]
Dec 11 19:38:09.043: Vi1 IPCP: O CONFREQ [Closed] id 1 len 10
Dec 11 19:38:09.043: Vi1 IPCP:   Address 192.168.1.2 (0x0306C0A80102)
Dec 11 19:38:09.047: Vi1 MLP: Added first link Se0 to bundle RouterA
Dec 11 19:38:09.047: Vi1 PPP: Pending ncpQ size is 1
Dec 11 19:38:09.047: Se0 IPCP: Redirect packet to Vi1
Dec 11 19:38:09.047: Vi1 IPCP: I CONFREQ [REQsent] id 1 len 10
Dec 11 19:38:09.047: Vi1 IPCP:   Address 192.168.1.1 (0x0306C0A80101)
Dec 11 19:38:09.047: Vi1 IPCP: O CONFACK [REQsent] id 1 len 10
Dec 11 19:38:09.047: Vi1 IPCP:   Address 192.168.1.1 (0x0306C0A80101)
Dec 11 19:38:09.051: Vi1 IPCP: I CONFACK [ACKsent] id 1 len 10
Dec 11 19:38:09.051: Vi1 IPCP:   Address 192.168.1.2 (0x0306C0A80102)
Dec 11 19:38:09.051: Vi1 IPCP: State is Open
Dec 11 19:38:09.051: Vi1 IPCP: Install route to 192.168.1.1
Dec 11 19:38:09.987: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0,
changed state to up
Dec 11 19:38:10.043: %LINEPROTO-5-UPDOWN:
Line protocol on Interface Virtual-Access1, changed state to up

RouterB#debug ppp multilink events
Multilink events debugging is on
Dec 11 19:41:30.239: %LINK-3-UPDOWN: Interface Serial0, changed state to up
Dec 11 19:41:30.243: Se0 MLP: Request add link to bundle
Dec 11 19:41:30.243: Se0 MLP: Adding link to bundle
Dec 11 19:41:30.255: Vi1 MLP: VP: Clone from Vtemplate 1 block=1
Dec 11 19:41:30.299: %LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up
Dec 11 19:41:30.299: Vi1 MLP: Added first link Se0 to bundle RouterA
Dec 11 19:41:31.243: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0,
changed state to up
Dec 11 19:41:31.243: Se0 MLP: cdp packet forwarded to wrong interface
Dec 11 19:41:31.299: %LINEPROTO-5-UPDOWN:
Line protocol on Interface Virtual-Access1, changed state to up
```

## [Información Relacionada](#)

- [Visualizar las estadísticas de la parte llamadora](#)
- [RFC 1717 del Multilink PPP](#)
- [Configuración de DDR par a par con perfiles del marcador](#)
- [Páginas de soporte de la tecnología de WAN](#)
- [Soporte Técnico - Cisco Systems](#)