إرتباط متعدد عبر القالب الظاهري على واجهتين تسلسليتين

المحتويات

المقدمة

يقوم بروتوكول PPP متعدد الارتباطات (MLP) بموازنة الحمل عبر واجهات المتصل، مثل الواجهات ISDN والمزامنة وغير المتزامنة. يقوم MLP بتقسيم الحزم وإرسال الأجزاء عبر الدوائر المتوازية. بهذه الطريقة، تعمل ميزة التحويل متعدد الطبقات (MLP) على تحسين الإنتاجية وتقليل زمن الوصول بين الأنظمة. يوفر MLP طريقة لتقسيم مخططات البيانات وإعادة تجميعها وتسلسلها عبر إرتباطات بيانات منطقية متعددة. يسمح MLP بتجزئة الحزم، ويتم إرسال الأجزاء في نفس الوقت عبر إرتباطات متعددة من نقطة إلى نقطة إلى نفس العنوان البعيد.

يوضح هذا المستند اتصال متعدد الارتباطات بين الواجهات التسلسلية من خلال تكوين القالب الظاهري.

المتطلبات الأساسية

المتطلبات

لا توجد متطلبات خاصة لهذا المستند.

المكونات المستخدمة

تستند المعلومات الواردة في هذا المستند إلى إصدارات البرامج والمكونات المادية التالية:

- برنامج IOS® الإصدار 11.2 أو إصدار أحدث من Cisco.
- موجهات Cisco 2503، والتي تحتوي على واجهتين تسلسليتين WAN لكل منهما. تقوم هذه الموجهات بتشغيل برنامج Cisco IOS الإصدار 12.2(7b).

تم إنشاء المعلومات الواردة في هذا المستند من الأجهزة الموجودة في بيئة معملية خاصة. بدأت جميع الأجهزة المستخدمة في هذا المستند بتكوين ممسوح (افتراضي). إذا كانت شبكتك مباشرة، فتأكد من فهمك للتأثير المحتمل لأي أمر.

المنتجات ذات الصلة

كما يمكن إستخدام هذا التكوين مع إصدارات الأجهزة والبرامج هذه.

- أي موجهين لهما واجهات WAN تسلسلية. يمكنك إستخدام الواجهات التسلسلية WIC-1T و WIC-2T و WAN الثابتة.

الاصطلاحات

راجع اصطلاحات تلميحات Cisco التقنية للحصول على مزيد من المعلومات حول اصطلاحات المستندات.

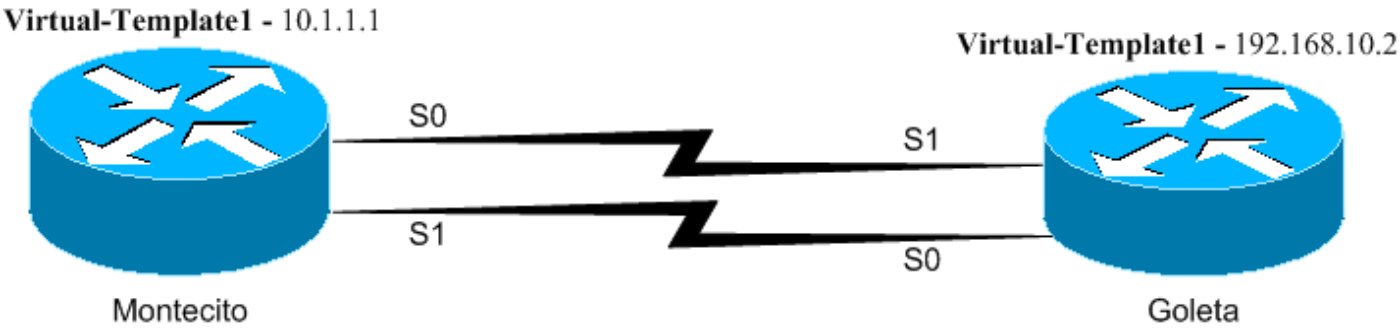
التكوين

في هذا القسم، تُقدّم لك معلومات تكوين الميزات الموضحة في هذا المستند.

ملاحظة: أستخدم أداة بحث الأوامر (للعملاء المسجلين فقط) للعثور على مزيد من المعلومات حول الأوامر المستخدمة في هذا المستند.

الرسم التخطيطي للشبكة

يستخدم هذا المستند إعداد الشبكة التالي:



يتم توصيل الموجهين Montecito و Goleta مباشرة من خلال الواجهات Serial0 و Serial1. يستخدم هذا التكوين قالبا ظاهريا على كل جانب، وبروتوكول نقطة إلى نقطة متعدد الارتباطات (PPP)، والجسور والموجهات IP و IPX بين الموجهات.

التكوينات

يستخدم هذا المستند التكوينات التالية:

- مونتيسيتو
- غوليتا

مونتيسيتو

```
Montecito#write terminal
...Building configuration
Current configuration : 945 bytes
!
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Montecito
!
boot system flash c2500-d-l.122-7b.bin
no logging buffered
!
ip subnet-zero
no ip domain-lookup
!
!
multilink virtual-template 1
    Applies the virtual interface template to the ---!
multilink bundle. !--- All multilink calls have virtual-
access interfaces cloned !--- from virtual-template 1. !
    ipx routing 0000.0c31.aac2 ! interface Loopback0 ip
 address 10.1.1.1 255.0.0.0 ipx network BEEF ! interface
     Ethernet0 no ip address shutdown ! ! !--- Virtual-
   template is a logical interface that creates virtual
 access !--- interfaces dynamically, and applies them to
 physical serial interfaces. interface Virtual-Template1
     !--- Assumes the IP & IPX address of Loopback0. ip
      unnumbered Loopback0 ipx ppp-client Loopback0 ppp
  multilink !--- Enables Multilink PPP on the interface.
       bridge-group 1 ! interface Serial0 no ip address
  encapsulation ppp no ip route-cache no ip mroute-cache
        no fair-queue !--- Enables Multilink PPP on the
      interface. ppp multilink ! interface Serial1 no ip
       address encapsulation ppp no ip route-cache no ip
mroute-cache no fair-queue !--- Enables Multilink PPP on
     the interface. ppp multilink ! interface BRI0 no ip
  address shutdown ! no ip classless ! bridge 1 protocol
    ieee ! line con 0 line aux 0 line vty 0 4 login ! end
```

غوليتا

```
Goleta#write terminal
...Building configuration
Current configuration : 960 bytes
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Goleta
!
!
ip subnet-zero
no ip domain-lookup
!
!
    Applies the virtual interface template to the ---!
multilink bundle. !--- Skip this step for ISDN or dialer
    interfaces. multilink virtual-template 1 ipx routing
```

```
0000.0c47.4e9a ! ! ! interface Loopback0 ip address
192.168.10.2 255.255.255.0 ipx network BEEF ! interface
Ethernet0 no ip address shutdown ! !--- Virtual-template
is a logical interface that Creates virtual access !---
interfaces dynamically and applies them to physical
serial interfaces. interface Virtual-Template1 !---
Assumes the IP & IPX address of Loopback0. ip unnumbered
Loopback0 ipx ppp-client Loopback0 ! !--- Enables
Multilink PPP on the interface. ppp multilink bridge-
group 1 ! interface Serial0 no ip address encapsulation
ppp no fair-queue clockrate 1000000 ! !--- Enables
Multilink PPP on the interface. ppp multilink !
interface Serial1 no ip address encapsulation ppp no
fair-queue clockrate 1000000 ! !--- Enables Multilink
PPP on the interface. ppp multilink ! interface BRI0 no
ip address shutdown ! ip classless ! bridge 1 protocol
ieee ! line con 0 line aux 0 line vty 0 4 ! end
```

التحقق من الصحة

استخدم هذا القسم لتأكيد عمل التكوين بشكل صحيح.

تدعم أداة مترجم الإخراج (للعملاءالمسجلين فقط) بعض أوامر **show**. استخدم أداة مترجم الإخراج (OIT) لعرض تحليل مُخرَج الأمر **show** .

- **show ppp multilink**— يعرض معلومات عن حزم متعددة الارتباطات النشطة. أستخدم هذا الأمر للتحقق من الاتصال متعدد الارتباطات.
- **show interface virtual-access**—يعرض الحالة وبيانات حركة مرور البيانات ومعلومات التكوين حول واجهة وصول افتراضية معينة.
- **show interface serial**— يمكنك من أستكشاف أخطاء الواجهة التسلسلية وإصلاحها

نموذج عرض الإخراج

إظهار الأوامر على Montecito بعد إجراء الاتصال

```
Montecito#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 (10.1.1.1
,MTU 1500 bytes, BW 3088 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: BRIDGECP, IPCP, IPXCP
Last input 00:00:00, output never, output hang never
Last clearing of "show interface" counters 00:02:09
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
(Output queue :0/40 (size/max
minute input rate 0 bits/sec, 0 packets/sec 5
minute output rate 0 bits/sec, 0 packets/sec 5
packets input, 743 bytes, 0 no buffer 22
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
```

```
                                packets output, 124 bytes, 0 underruns 8
                            output errors, 0 collisions, 0 interface resets 0
                        output buffer failures, 0 output buffers swapped out 0
                                                carrier transitions 0

                                             Montecito#show interface serial 0
                                            Serial0 is up, line protocol is up
                                                        Hardware is HD64570
                                    ,MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec
                                reliability 255/255, txload 1/255, rxload 1/255
                                            Encapsulation PPP, loopback not set
                                                        (Keepalive set (10 sec
                                                    LCP Open, multilink Open
                        Last input 00:00:00, output 00:00:06, output hang never
                            Last clearing of "show interface" counters 02:04:30
    Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
                                                    Queueing strategy: fifo
                                                (Output queue :0/40 (size/max
                                    minute input rate 0 bits/sec, 0 packets/sec 5
                                   minute output rate 0 bits/sec, 0 packets/sec 5
                                    packets input, 107170 bytes, 0 no buffer 3320
                         Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
               input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
                                    packets output, 24622 bytes, 0 underruns 1483
                                output errors, 0 collisions, 6 interface resets 0
                        output buffer failures, 0 output buffers swapped out 0
                                                carrier transitions 8
                                    DCD=up DSR=up DTR=up RTS=up CTS=up

                                             Montecito#show interface serial 1
                                            Serial1 is up, line protocol is up
                                                        Hardware is HD64570
                                    ,MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec
                                reliability 255/255, txload 1/255, rxload 1/255
                                            Encapsulation PPP, loopback not set
                                                        (Keepalive set (10 sec
                                                    LCP Open, multilink Open
                        Last input 00:00:00, output 00:00:00, output hang never
                            Last clearing of "show interface" counters 02:04:32
    Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
                                                    Queueing strategy: fifo
                                                (Output queue :0/40 (size/max
                                    minute input rate 0 bits/sec, 0 packets/sec 5
                                   minute output rate 0 bits/sec, 0 packets/sec 5
                                    packets input, 107161 bytes, 0 no buffer 3320
                         Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
               input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
                                    packets output, 24646 bytes, 0 underruns 1482
                                output errors, 0 collisions, 6 interface resets 0
                        output buffer failures, 0 output buffers swapped out 0
                                                carrier transitions 8
                                    DCD=up DSR=up DTR=up RTS=up CTS=up

                                                 Montecito#show ppp multilink
                                        Virtual-Access1, bundle name is Goleta
                                                        Bundle up for 00:01:39
                                  lost fragments, 0 reordered, 0 unassigned 0
                                     discarded, 0 lost received, 1/255 load 0
                                      0x3D received sequence, 0xB sent sequence
                                    (Member links: 2 (max not set, min not set
                                    Serial1, since 00:01:40, last rcvd seq 00003C
                                    Serial0, since 00:01:39, last rcvd seq 00003B

                                                 Montecito#show bridge group
```

```
Bridge Group 1 is running the IEEE compatible Spanning Tree protocol
           Port 10 (Virtual-Access1) of bridge group 1 is forwarding
                Port 9 (Virtual-Template1) of bridge group 1 is down
                                                          #Montecito
```

إظهار الأوامر على Goleta بعد إجراء الاتصال

```
                                    Goleta#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 (192.168.10.2
                       ,MTU 1500 bytes, BW 3088 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: BRIDGECP, IPCP, IPXCP
                     Last input 00:00:10, output never, output hang never
                      Last clearing of "show interface" counters 00:02:18
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
                                               Queueing strategy: fifo
                                          (Output queue :0/40 (size/max
                               minute input rate 0 bits/sec, 0 packets/sec 5
                              minute output rate 0 bits/sec, 0 packets/sec 5
                                      packets input, 52 bytes, 0 no buffer 4
                    Received 0 broadcasts, 0 runs, 0 giants, 0 throttles
          input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
                                 packets output, 892 bytes, 0 underruns 28
                       output errors, 0 collisions, 0 interface resets 0
                    output buffer failures, 0 output buffers swapped out 0
                                               carrier transitions 0

                                        Goleta#show interface serial 0
                                     Serial0 is up, line protocol is up
                                                   Hardware is HD64570
                       ,MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec
                   reliability 255/255, txload 1/255, rxload 1/255
                                  Encapsulation PPP, loopback not set
                                               (Keepalive set (10 sec
                                     LCP Open, multilink Open
                  Last input 01:52:28, output 00:00:00, output hang never
                      Last clearing of "show interface" counters 02:55:09
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
                                               Queueing strategy: fifo
                                          (Output queue :0/40 (size/max
                               minute input rate 0 bits/sec, 0 packets/sec 5
                              minute output rate 0 bits/sec, 0 packets/sec 5
                                 packets input, 41972 bytes, 0 no buffer 2364
                    Received 0 broadcasts, 0 runs, 0 giants, 0 throttles
          input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
                               packets output, 134689 bytes, 0 underruns 4465
                      output errors, 0 collisions, 148 interface resets 0
                    output buffer failures, 0 output buffers swapped out 0
                                               carrier transitions 294
                                 DCD=up DSR=up DTR=up RTS=up CTS=up

                                        Goleta#show interface serial 1
                                     Serial1 is up, line protocol is up
                                                   Hardware is HD64570
                       ,MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec
                   reliability 255/255, txload 1/255, rxload 1/255
                                  Encapsulation PPP, loopback not set
```

```
(Keepalive set (10 sec
LCP Open, multilink Open
Last input 01:52:38, output 00:00:00, output hang never
Last clearing of "show interface" counters 02:55:18
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 0
Queueing strategy: fifo
(Output queue :0/40 (size/max
minute input rate 0 bits/sec, 0 packets/sec 5
minute output rate 0 bits/sec, 0 packets/sec 5
packets input, 42030 bytes, 0 no buffer 2366
Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort 0
packets output, 134930 bytes, 0 underruns 4472
output errors, 0 collisions, 147 interface resets 0
output buffer failures, 0 output buffers swapped out 0
carrier transitions 289
DCD=up DSR=up DTR=up RTS=up CTS=up

Goleta#sh ppp multilink
Virtual-Access1, bundle name is Montecito
Bundle up for 00:01:35
lost fragments, 0 reordered, 0 unassigned 0
discarded, 0 lost received, 1/255 load 0
0xB received sequence, 0x3B sent sequence
(Member links: 2 (max not set, min not set
Serial0, since 00:01:36, last rcvd seq 00000A
Serial1, since 00:01:35, last rcvd seq 000009

Goleta#show bridge group
Bridge Group 1 is running the IEEE compatible Spanning Tree protocol
Port 10 (Virtual-Access1) of bridge group 1 is forwarding
Port 9 (Virtual-Template1) of bridge group 1 is down
```

استكشاف الأخطاء وإصلاحها

أستخدم هذا القسم لاستكشاف أخطاء التكوين وإصلاحها.

موارد أستكشاف الأخطاء وإصلاحها

أستخدم موارد أستكشاف الأخطاء وإصلاحها هذه كما هو مطلوب:

- أستكشاف أخطاء الخط التسلسلي وإصلاحها
- توصيلات HDLC من الخلف إلى الخلف
- أستكشاف أخطاء الخطوط المؤجرة وإصلاحها

أوامر استكشاف الأخطاء وإصلاحها

تدعم أداة مترجم الإخراج (للعملاءالمسجلين فقط) بعض أوامر **show**. استخدم أداة مترجم الإخراج (OIT) لعرض تحليل مُخرَج الأمر **show** .

ملاحظة: ارجع إلى معلومات مهمة حول أوامر التصحيح قبل إستخدام أوامر **debug**.

- **debug ppp negotiation**—يشير إلى ما إذا كان العميل يجتاز تفاوض PPP. تحقق أيضا من تفاوض العنوان.
- **debug ppp authentication**—يشير إلى ما إذا كان العميل يجتاز المصادقة. أستخدم هذا الأمر إذا كنت تستخدم برنامج Cisco IOS الإصدار 11.2 أو الإصدارات الأحدث.
- **debug ppp chap**—يشير إلى ما إذا كان العميل يجتاز المصادقة. أستخدم هذا الأمر إذا كنت تستخدم إصدار من

برنامج Cisco IOS Software أقدم من الإصدار 11.2.

- **تصحيح أخطاء PPP**—يعرض أخطاء البروتوكول وإحصائيات الخطأ المرتبطة بالتفاوض حول اتصال PPP وتشغيله.
- **debug vtemplate**—يتيح لك إمكانية الاطلاع على تكوينات القالب الظاهري المستخدمة.
- **debug vprofile**— يمكنك من الاطلاع على خيارات التكوين التي يتم تطبيقها على واجهة الوصول الظاهري.

إخراج تصحيح الأخطاء للعينة

فيما يلي بعض مخرجات تصحيح الأخطاء للمكالمات الناجحة. انتبه إلى المقاطع بالخط **الغامق**. قارن المخرجات التي تحصل عليها بالنتيجة الموضحة هنا:

تصحيح أخطاء PPP على Montecito

```
Montecito#debug ppp negotiation
PPP protocol negotiation debugging is on
#Montecito
LINK-3-UPDOWN: Interface Serial1, changed state to up% :00:07:30
Se1 PPP: Treating connection as a dedicated line :00:07:30
[Se1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 2 load :00:07:30
Se1 LCP: O CONFREQ [Closed] id 4 len 26 :00:07:30
(Se1 LCP: MagicNumber 0x6063D57E (0x05066063D57E :00:07:30
(Se1 LCP: MRRU 1524 (0x110405F4 :00:07:30
(Se1 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :00:07:30
Se1 LCP: I CONFREQ [REQsent] id 101 len 23 :00:07:30
(Se1 LCP: MagicNumber 0x60944B81 (0x050660944B81 :00:07:30
(Se1 LCP: MRRU 1524 (0x110405F4 :00:07:30
(Se1 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :00:07:30
Se1 LCP: O CONFACK [REQsent] id 101 len 23 :00:07:30
(Se1 LCP: MagicNumber 0x60944B81 (0x050660944B81 :00:07:30
(Se1 LCP: MRRU 1524 (0x110405F4 :00:07:30
(Se1 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :00:07:30
Se1 LCP: I CONFACK [ACKsent] id 4 len 26 :00:07:30
(Se1 LCP: MagicNumber 0x6063D57E (0x05066063D57E :00:07:30
(Se1 LCP: MRRU 1524 (0x110405F4 :00:07:30
(Se1 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :00:07:30
Se1 LCP: State is Open :00:07:30
[Se1 PPP: Phase is VIRTUALIZED [0 sess, 1 load :00:07:30
[Vi1 PPP: Phase is DOWN, Setup [0 sess, 0 load :00:07:31
[Vi1 PPP: Phase is ESTABLISHING [0 sess, 0 load :00:07:31
LINK-3-UPDOWN: Interface Serial0, changed state to up% :00:07:31
Se0 PPP: Treating connection as a dedicated line :00:07:31
[Se0 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load :00:07:31
Se0 LCP: O CONFREQ [Closed] id 4 len 26 :00:07:31
(Se0 LCP: MagicNumber 0x6063D8DC (0x05066063D8DC :00:07:31
(Se0 LCP: MRRU 1524 (0x110405F4 :00:07:31
(Se0 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :00:07:31
LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up% :00:07:31
Vi1 PPP: Treating connection as a dedicated line :00:07:31
Vi1 LCP: O CONFREQ [Closed] id 1 len 26 :00:07:31
(Vi1 LCP: MagicNumber 0x6063D8F9 (0x05066063D8F9 :00:07:31
(Vi1 LCP: MRRU 1524 (0x110405F4 :00:07:31
(Vi1 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :00:07:31
[Vi1 PPP: Phase is UP [0 sess, 0 load :00:07:31
Vi1 BNCP: O CONFREQ [Closed] id 1 len 4 :00:07:31
Vi1 IPCP: O CONFREQ [Closed] id 1 len 10 :00:07:31
(Vi1 IPCP: Address 10.1.1.1 (0x03060A010101 :00:07:31
Vi1 IPXCP: O CONFREQ [Closed] id 1 len 18 :00:07:31
(Vi1 IPXCP: Network 0x0000BEEF (0x01060000BEEF :00:07:31
```

```
(Vi1 IPXCP:    Node 0000.0c31.aac2 (0x020800000C31AAC2 :00:07:31
        Vi1 MLP: Added first link Se1 to bundle Goleta :00:07:31
            Se0 LCP: I CONFREQ [REQsent] id 101 len 23 :00:07:31
   (Se0 LCP:    MagicNumber 0x60944EF7 (0x050660944EF7 :00:07:31
                    (Se0 LCP:    MRRU 1524 (0x110405F4 :00:07:31
(Se0 LCP:    EndpointDisc 1 Goleta (0x130901476F6C657461 :00:07:31
            Se0 LCP: O CONFACK [REQsent] id 101 len 23 :00:07:31
   (Se0 LCP:    MagicNumber 0x60944EF7 (0x050660944EF7 :00:07:31
                    (Se0 LCP:    MRRU 1524 (0x110405F4 :00:07:31
(Se0 LCP:    EndpointDisc 1 Goleta (0x130901476F6C657461 :00:07:31
Se1 BNCP: MLP bundle interface is built, process packets now :00:07:31
                      Se1 BNCP: Redirect packet to Vi1 :00:07:31
                 Vi1 BNCP: I CONFREQ [REQsent] id 1 len 4 :00:07:31
                 Vi1 BNCP: O CONFACK [REQsent] id 1 len 4 :00:07:31
                Vi1 IPCP: I CONFREQ [REQsent] id 1 len 10 :00:07:31
    (Vi1 IPCP:    Address 192.168.10.2 (0x0306C0A80A02 :00:07:31
                Vi1 IPCP: O CONFACK [REQsent] id 1 len 10 :00:07:31
    (Vi1 IPCP:    Address 192.168.10.2 (0x0306C0A80A02 :00:07:31
            Vi1 IPXCP: I CONFREQ [REQsent] id 1 len 18 :00:07:31
     (Vi1 IPXCP:    Network 0x0000BEEF (0x01060000BEEF :00:07:31
(Vi1 IPXCP:    Node 0000.0c47.4e9a (0x020800000C474E9A :00:07:31
            Vi1 IPXCP: O CONFACK [REQsent] id 1 len 18 :00:07:31
     (Vi1 IPXCP:    Network 0x0000BEEF (0x01060000BEEF :00:07:31
(Vi1 IPXCP:    Node 0000.0c47.4e9a (0x020800000C474E9A :00:07:31
,LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1% :00:07:31
                                                changed state to up
                 Se0 LCP: I CONFACK [ACKsent] id 4 len 26 :00:07:31
   (Se0 LCP:    MagicNumber 0x6063D8DC (0x05066063D8DC :00:07:31
                    (Se0 LCP:    MRRU 1524 (0x110405F4 :00:07:31
(Se0 LCP:    EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :00:07:31
                                     Se0 LCP: State is Open :00:07:31
            [Se0 PPP: Phase is VIRTUALIZED [0 sess, 2 load :00:07:31
                 Vi1 MLP: Added link Se0 to bundle Goleta :00:07:31
                 Vi1 BNCP: I CONFACK [ACKsent] id 1 len 4 :00:07:31
                                   Vi1 BNCP: State is Open :00:07:31
                Vi1 IPCP: I CONFACK [ACKsent] id 1 len 10 :00:07:31
            (Vi1 IPCP:    Address 10.1.1.1 (0x03060A010101 :00:07:31
                                   Vi1 IPCP: State is Open :00:07:31
                 Vi1 IPXCP: I CONFACK [ACKsent] id 1 len 18 :00:07:31
     (Vi1 IPXCP:    Network 0x0000BEEF (0x01060000BEEF :00:07:31
(Vi1 IPXCP:    Node 0000.0c31.aac2 (0x020800000C31AAC2 :00:07:31
                                 Vi1 IPXCP: State is Open :00:07:31
                  Vi1 IPCP: Install route to 192.168.10.2 :00:07:31
,LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1% :00:07:32
                                                changed state to up
,LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0% :00:07:32
                                                changed state to up
                                                        #Montecito

                                          Montecito#ping  192.168.10.2
                                        .Type escape sequence to abort
:Sending 5, 100-byte ICMP Echos to 192.168.10.2, timeout is 2 seconds
                                                              !!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/9/12 ms

                                                    Montecito#ping ipx
                                     Target IPX address: BEEF.0000.0c47.4e9a
                                                     :[Repeat count [5
                                                  :[Datagram size [100
                                               :[Timeout in seconds [2
                                                           :[Verbose [n
                                          .Type escape sequence to abort
                ,Sending 5, 100-byte IPX Novell Echoes to BEEF.0000.0c47.4e9a
                                                    :timeout is 2 seconds
```

```
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/10/12 ms
#Montecito
```

تصحيح أخطاء PPP على Goleta

```
Goleta#debug ppp negotiation
PPP protocol negotiation debugging is on

#Goleta
Se0 PPP: Treating connection as a dedicated line :01:00:26
[Se0 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load :01:00:26
Se0 LCP: O CONFREQ [Closed] id 101 len 23 :01:00:26
(Se0 LCP: MagicNumber 0x60944B81 (0x050660944B81 :01:00:26
(Se0 LCP: MRRU 1524 (0x110405F4 :01:00:26
(Se0 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :01:00:26
Se0 LCP: I CONFREQ [REQsent] id 4 len 26 :01:00:26
(Se0 LCP: MagicNumber 0x6063D57E (0x05066063D57E :01:00:26
(Se0 LCP: MRRU 1524 (0x110405F4 :01:00:26
(Se0 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :01:00:26
Se0 LCP: O CONFACK [REQsent] id 4 len 26 :01:00:26
(Se0 LCP: MagicNumber 0x6063D57E (0x05066063D57E :01:00:26
(Se0 LCP: MRRU 1524 (0x110405F4 :01:00:26
(Se0 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :01:00:26
Se0 LCP: I CONFACK [ACKsent] id 101 len 23 :01:00:26
(Se0 LCP: MagicNumber 0x60944B81 (0x050660944B81 :01:00:26
(Se0 LCP: MRRU 1524 (0x110405F4 :01:00:26
(Se0 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :01:00:26
Se0 LCP: State is Open :01:00:26
[Se0 PPP: Phase is VIRTUALIZED [0 sess, 0 load :01:00:26
[Vi1 PPP: Phase is DOWN, Setup [0 sess, 0 load :01:00:26
[Vi1 PPP: Phase is ESTABLISHING [0 sess, 0 load :01:00:26
LINK-3-UPDOWN: Interface Serial1, changed state to up% :01:00:27
Se1 PPP: Treating connection as a dedicated line :01:00:27
[Se1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load :01:00:27
Se1 LCP: O CONFREQ [Closed] id 101 len 23 :01:00:27
(Se1 LCP: MagicNumber 0x60944EF7 (0x050660944EF7 :01:00:27
(Se1 LCP: MRRU 1524 (0x110405F4 :01:00:27
(Se1 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :01:00:27
LINK-3-UPDOWN: Interface Virtual-Access1, changed state to up% :01:00:27
Vi1 PPP: Treating connection as a dedicated line :01:00:27
Vi1 LCP: O CONFREQ [Closed] id 1 len 23 :01:00:27
(Vi1 LCP: MagicNumber 0x60944F10 (0x050660944F10 :01:00:27
(Vi1 LCP: MRRU 1524 (0x110405F4 :01:00:27
(Vi1 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :01:00:27
[Vi1 PPP: Phase is UP [0 sess, 0 load :01:00:27
Vi1 BNCP: O CONFREQ [Closed] id 1 len 4 :01:00:27
Vi1 IPCP: O CONFREQ [Closed] id 1 len 10 :01:00:27
(Vi1 IPCP: Address 192.168.10.2 (0x0306C0A80A02 :01:00:27
Vi1 IPXCP: O CONFREQ [Closed] id 1 len 18 :01:00:27
(Vi1 IPXCP: Network 0x0000BEEF (0x01060000BEEF :01:00:27
(Vi1 IPXCP: Node 0000.0c47.4e9a (0x020800000C474E9A :01:00:27
Vi1 MLP: Added first link Se0 to bundle Montecito :01:00:27
Se1 LCP: I CONFREQ [REQsent] id 4 len 26 :01:00:27
(Se1 LCP: MagicNumber 0x6063D8DC (0x05066063D8DC :01:00:27
(Se1 LCP: MRRU 1524 (0x110405F4 :01:00:27
(Se1 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :01:00:27
Se1 LCP: O CONFACK [REQsent] id 4 len 26 :01:00:27
(Se1 LCP: MagicNumber 0x6063D8DC (0x05066063D8DC :01:00:27
(Se1 LCP: MRRU 1524 (0x110405F4 :01:00:27
(Se1 LCP: EndpointDisc 1 Montecito (0x130C014D6F6E74656369746F :01:00:27
Se0 BNCP: MLP bundle interface is built, process packets now :01:00:27
Se0 BNCP: Redirect packet to Vi1 :01:00:27
```

```
Vi1 BNCP: I CONFREQ [REQsent] id 1 len 4 :01:00:27
Vi1 BNCP: O CONFACK [REQsent] id 1 len 4 :01:00:27
Se0 IPCP: MLP bundle interface is built, process packets now :01:00:27
Se0 IPCP: Redirect packet to Vi1 :01:00:27
Vi1 IPCP: I CONFREQ [REQsent] id 1 len 10 :01:00:27
(Vi1 IPCP: Address 10.1.1.1 (0x03060A010101 :01:00:27
Vi1 IPCP: O CONFACK [REQsent] id 1 len 10 :01:00:27
(Vi1 IPCP: Address 10.1.1.1 (0x03060A010101 :01:00:27
Se0 IPXCP: MLP bundle interface is built, process packets now :01:00:27
Se0 IPXCP: Redirect packet to Vi1 :01:00:27
Vi1 IPXCP: I CONFREQ [REQsent] id 1 len 18 :01:00:27
(Vi1 IPXCP: Network 0x0000BEEF (0x01060000BEEF :01:00:27
(Vi1 IPXCP: Node 0000.0c31.aac2 (0x020800000C31AAC2 :01:00:27
Vi1 IPXCP: O CONFACK [REQsent] id 1 len 18 :01:00:27
(Vi1 IPXCP: Network 0x0000BEEF (0x01060000BEEF :01:00:27
(Vi1 IPXCP: Node 0000.0c31.aac2 (0x020800000C31AAC2 :01:00:27
,LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0% :01:00:27
changed state to up
Se1 LCP: I CONFACK [ACKsent] id 101 len 23 :01:00:27
(Se1 LCP: MagicNumber 0x60944EF7 (0x050660944EF7 :01:00:27
(Se1 LCP: MRRU 1524 (0x110405F4 :01:00:27
(Se1 LCP: EndpointDisc 1 Goleta (0x130901476F6C657461 :01:00:27
Se1 LCP: State is Open :01:00:27
[Se1 PPP: Phase is VIRTUALIZED [0 sess, 4 load :01:00:27
Vi1 BNCP: I CONFACK [ACKsent] id 1 len 4 :01:00:27
Vi1 BNCP: State is Open :01:00:27
Vi1 MLP: Added link Se1 to bundle Montecito :01:00:27
Vi1 IPCP: I CONFACK [ACKsent] id 1 len 10 :01:00:27
(Vi1 IPCP: Address 192.168.10.2 (0x0306C0A80A02 :01:00:27
Vi1 IPCP: State is Open :01:00:27
Vi1 IPXCP: I CONFACK [ACKsent] id 1 len 18 :01:00:27
(Vi1 IPXCP: Network 0x0000BEEF (0x01060000BEEF :01:00:27
(Vi1 IPXCP: Node 0000.0c47.4e9a (0x020800000C474E9A :01:00:27
Vi1 IPXCP: State is Open :01:00:27
Vi1 IPCP: Install route to 10.1.1.1 :01:00:27
,LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1% :01:00:28
changed state to up
,LINEPROTO-5-UPDOWN: Line protocol on Interface Serial1% :01:00:28
changed state to up
#Goleta

Goleta#ping 10.1.1.1
.Type escape sequence to abort
:Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 2 seconds
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/10/12 ms

Goleta#ping ipx
Target IPX address: BEEF.0000.0c31.aac2
:[Repeat count [5
:[Datagram size [100
:[Timeout in seconds [2
:[Verbose [n
.Type escape sequence to abort
,Sending 5, 100-byte IPX Novell Echoes to BEEF.0000.0c31.aac2
:timeout is 2 seconds
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 8/10/12 ms
```

معلومات ذات صلة

- صفحة دعم تقنية الوصول
- الدعم التقني والمستندات - Cisco Systems

حول هذه الترجمة
ترجمت Cisco هذا المستند باستخدام مجموعة من التقنيات الآلية والبشرية لتقديم محتوى دعم للمستخدمين في جميع أنحاء العالم بلغتهم الخاصة. يُرجى ملاحظة أن أفضل ترجمة آلية لن تكون دقيقة كما هو الحال مع الترجمة الاحترافية التي يقدمها مترجم محترف. تخلي Cisco Systems مسئوليتها عن دقة هذه الترجمات وتُوصي بالرجوع دائمًا إلى المستند الإنجليزي الأصلي (الرابط متوفر).