使用BRI和備份介面命令進行DDR備份

目錄

簡介

此組態示範了使用整合服務數位網路(ISDN)基本速率介面(BRI)線路備份租用線路連線。**backup interface**命令將指定的介面置於*standby*模式，直到主介面關閉為止。有關備份介面功能的詳細資訊，請參閱評估備份介面、浮動靜態路由和DDR備份的撥號器監視。

必要條件

需求

有關詳細資訊，建議您參閱配置和故障排除DDR備份文檔。

採用元件

在此場景中，Cisco 1604路由器通過串列連線連線到Cisco 3640路由器。兩台路由器還都配備了BRI介面，用於備份鏈路。Cisco 1604運行Cisco IOS®軟體版本12.1(5)T，Cisco 3640使用Cisco IOS 12.1(2)。

注意：此配置中的概念可用於具有BRI和WAN介面的任何路由器。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設

）的組態來啟動。如果您在即時網路中工作，請確保在使用任何命令之前瞭解其潛在影響。

背景理論

本示例使用傳統按需撥號路由(DDR)，它對BRI連線使用**dialer map**命令。您還可以使用撥號程式設定檔，而不是舊式DDR。有關撥號程式配置檔案的詳細資訊，請參閱使用撥號程式配置檔案配置ISDN DDR。

配置DDR備份包括兩個不同的步驟：

1. 使用傳統DDR或撥號程式配置檔案配置DDR。在實施備份配置之前，請驗證DDR連線是否正常工作。
2. 配置路由器，使其在主鏈路出現故障時啟動DDR連線。此配置使用備份介面觸發撥出。有關其他選項的詳細資訊，請參閱評估備份介面、浮動靜態路由和Dialer Watch for DDR Backup。

慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

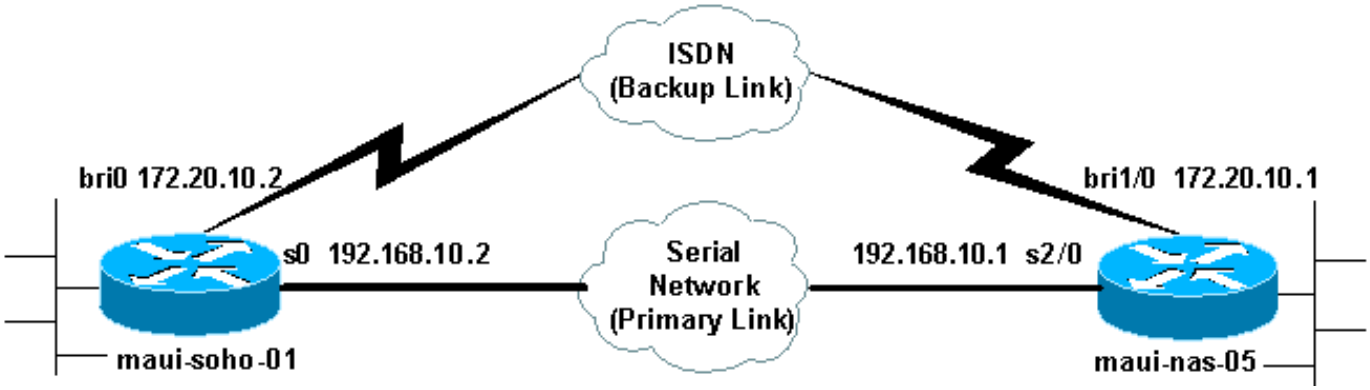
設定

本節提供用於設定本文件中所述功能的資訊。

注意：要查詢有關本文檔中使用的命令的其他資訊，請使用命令查詢工具

網路圖表

本文檔使用下圖所示的網路設定。



組態

本文檔使用如下所示的配置。

- maui-soho-01(1600)
- maui-nas-05(3640)

此配置使用BRI電路備份串列鏈路。此配置還在兩台路由器之間使用開放最短路徑優先(OSPF)路由協定。啟用備份連線後，必須確保更新路由表以使用新的備份路由。

附註： 如需命令慣例的詳細資訊，請參閱思科技術提示慣例。

maui-soho-01(1600)

```
maui-soho-01#show running-config
Building configuration...

Current configuration : 1720 bytes
!
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname maui-soho-01
!
aaa new-model
aaa authentication login default local
aaa authentication login NO_AUTHEN none
aaa authentication ppp default if-needed local
!--- This is basic aaa configuration for PPP calls.
enable secret 5 <deleted> ! username admin password 7
<deleted> username maui-nas-05 password 7 <deleted> !---
Username for remote router (maui-nas-05) and shared
secret !--- (used for CHAP authentication). Shared
secret must be the same on both sides. ip subnet-zero no
ip finger ! isdn switch-type basic-ni ! interface
Loopback0 ip address 172.17.1.1 255.255.255.0 !
interface Ethernet0 ip address 172.16.1.1 255.255.255.0
! interface Serial0 backup delay 10 30 !--- Backup link
is activated 10 seconds after primary link goes down. !-
-- Backup link is deactivated 30 seconds after primary
link is restored. backup interface BRI0 !--- BRI0 will
backup interface serial 0. ip address 192.168.10.2
255.255.255.252 encapsulation ppp no ip mroute-cache no
fair-queue ! interface BRI0 ip address 172.20.10.2
255.255.255.0 !--- IP address for the BRI interface
(backup link). encapsulation ppp dialer idle-timeout 900
!--- Idle timeout(in seconds)for this link. dialer map
ip 172.20.10.1 name maui-nas-05 broadcast 5551111 dialer
map ip 172.20.10.1 name maui-nas-05 broadcast 5551112 !-
-- Dialer maps for remote destination. !--- The 2
different phone numbers correspond to the b-channels of
the remote side. dialer load-threshold 1 outbound !---
Load level for traffic at which additional connections
!--- will be added to the MPPP bundle. !--- Load level
values range from 1 (unloaded) to 255 (fully loaded).
dialer-group 1 !--- Apply interesting traffic definition
from dialer-list 1. isdn switch-type basic-ni isdn spid1
51299699380101 9969938 isdn spid2 51299699460101 9969946
ppp authentication chap !--- Use CHAP authentication.
ppp multilink !--- Use multilink to bring up both BRI
channels. ! router ospf 5 !--- OSPF configuration. If
you use a different protocol !--- configure that here.
Make sure to include the BRI network in the RP. log-
adjacency-changes network 172.16.0.0 0.0.255.255 area 0
network 172.17.0.0 0.0.255.255 area 0 network
172.20.10.0 0.0.0.255 area 0 network 192.168.10.0
0.0.0.3 area 0 ! ip classless no ip http server !
access-list 101 remark Interesting traffic definition
for backup link access-list 101 permit ip any any !---
Interesting traffic definition. If you do not want OSPF
```

```
to bring up !--- the link, then mark it uninteresting.
dialer-list 1 protocol ip list 101 !--- Interesting
traffic is applied to BRI0 using dialer-group 1. ! line
con 0 exec-timeout 0 0 login authentication NO_AUTHEN
transport input none line vty 0 4 ! end !
```

驗證客戶端maui-soho-01(1600)的配置中的以下點：

- 使用環回地址。這樣使用OSPF的路由器ID將不會更改，並且備用鏈路可以在啟用後建立對等體。
- 撥號器負載閾值設定為低。如果不需要128k多鏈路備份連線，可以更改此值。
- 任何IP流量都會觸發撥號(基於**dialer-list 1**和**dialer-group 1**)。 由於備份鏈路需要相關流量來撥號備份鏈路，因此請確認您確實有生成相關流量的流量源。在此示例中，OSPF hello資料包將觸發撥號。如果不使用路由協定，可以使用ICMP ping撥號備份鏈路。根據需要調整感興趣的流量。
- 使用OSPF。您可以使用任何所需的路由協定。只需確保路由協定中包含主介面網路和備用介面網路。如果您希望使用靜態路由而不是路由協定，請建立一個靜態路由，其中下一跳是遠端bri介面（根據場景，您可能必須將它設定為浮動靜態路由）。

maui-nas-05(3640)

```
maui-nas-05#show running-config
Building configuration...

Current configuration:
!
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
!
hostname maui-nas-05
!
aaa new-model
aaa authentication login default local
aaa authentication login NO_AUTHEN none
aaa authentication ppp default if-needed local
!--- Basic AAA configuration for PPP calls. enable
secret 5 <deleted> ! username admin password 7 <deleted>
username maui-soho-01 password 7 <deleted> !--- Username
for remote router (maui-soho-01) and shared secret !---
(used for CHAP authentication). The shared secret must
be the same on both sides. ! ip subnet-zero ! isdn
switch-type basic-ni ! interface Loopback0 ip address
172.22.1.1 255.255.255.0 ! interface Ethernet0/0 no ip
address shutdown ! interface Ethernet0/1 no ip address
shutdown ! interface BRI1/0 ip address 172.20.10.1
255.255.255.0 !--- IP address for the BRI interface
(backup link). encapsulation ppp dialer idle-timeout 900
dialer map ip 172.20.10.2 name maui-soho-01 broadcast !-
-- Dialer map for remote destination. !--- The name
should match the authentication username provided by the
remote side. !--- Even though this router is not dialing
out, the dialer map statement !--- should be used.
dialer-group 1 !--- Apply interesting traffic defined in
dialer-list 1. isdn switch-type basic-ni isdn spid1
51255511110101 5551111 isdn spid2 51255511120101 5551112
ppp authentication chap ppp multilink !--- Use multilink
to bring up both B-channels. ! !--- Output removed. !
```

```
interface Serial2/0 ip address 192.168.10.1
255.255.255.252 encapsulation ppp no fair-queue
clockrate 64000 ! !--- Output removed. ! router ospf 5
network 172.20.10.0 0.0.0.255 area 0 network 172.22.1.0
0.0.0.255 area 0 network 192.168.10.0 0.0.0.3 area 0 !
ip classless no ip http server ! dialer-list 1 protocol
ip any !--- This defines all IP traffic as interesting.
! Line con 0 login authentication NO_AUTHEN transport
input none line 97 102 line AUX 0 line vty 0 4 ! end
```

驗證伺服器maui-nas-05(3640)的配置中的以下點：

- 為遠端站點配置撥號器對映語句。錯誤的撥號器對映語句可能導致連線的備份鏈路出現路由問題。
- 所有IP流量均定義為關注流量。這將重置空閒超時並保持連線，直到主裝置恢復運行。如果您不需要釘住備份鏈路，則可以更改此情況。

驗證

本節提供的資訊可用於確認您的組態是否正常運作。

輸出直譯器工具支援某些**show**命令，該工具允許您檢視**show**命令輸出的分析。

- **show interface bri0** — 這表示BRI介面是否啟動。如果主鏈路為up，則BRI介面將處於*standby*。只有當主鏈路關閉時，BRI介面才會啟動。
- **show isdn status** — 使用此入口以確保路由器與ISDN交換機正確通訊。在輸出中，驗證第1層狀態是否為ACTIVE，以及是否顯示第2層狀態狀態= MULTIPLE_FRAME_ESTABLISHED。此命令還顯示活動呼叫的數量。

show ip route輸出示例

主鏈路正常運行的客戶端maui-soho-01(1600)的路由表如下所示：

```
maui-soho-01#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

     192.168.10.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.10.0/30 is directly connected, Serial0
C       192.168.10.1/32 is directly connected, Serial0
     172.17.0.0/24 is subnetted, 1 subnets
C       172.17.1.0 is directly connected, Loopback0
     172.16.0.0/24 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Ethernet0
     172.20.0.0/24 is subnetted, 1 subnets
O       172.20.10.0 [110/1626] via 192.168.10.1, 00:00:22, Serial0
     172.22.0.0/32 is subnetted, 1 subnets
O       172.22.1.1 [110/65] via 192.168.10.1, 00:00:23, Serial0
```

上面顯示的**show ip route**輸出顯示了使用主鏈路(serial 0)從對等體獲取的OSPF路由。 現在，我們關閉主連結並啟用備份連結。

注意：在主介面上發出**shutdown**命令不會導致備份BRI進行撥號。如果您發出**shutdown**命令來關閉主連線，則Cisco IOS軟體不會自動啟動備份連線。您必須通過拔下電纜或某種等效的方法來物理關閉主連線，才能啟用備用介面。

啟用備份鏈路後，將交換OSPF表並安裝使用備份鏈路的新路由。流量現在通過備份鏈路傳輸。下面是一個示例：

```
maui-soho-01#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

     172.17.0.0/24 is subnetted, 1 subnets
C       172.17.1.0 is directly connected, Loopback0
     172.16.0.0/24 is subnetted, 1 subnets
C       172.16.1.0 is directly connected, Ethernet0
     172.20.0.0/16 is variably subnetted, 2 subnets, 2 masks
C       172.20.10.0/24 is directly connected, BRI0
C       172.20.10.1/32 is directly connected, BRI0
     172.22.0.0/32 is subnetted, 1 subnets
O       172.22.1.1 [110/1563] via 172.20.10.1, 00:00:22, BRI0
```

Show interface輸出示例

show interface命令用於驗證LCP、ICP和PPP的多鏈路階段是否成功通過。

```
maui-soho-01#show interface BRI 0
    BRI0 is up, line protocol is up
     Hardware is BRI with U interface and external S bus interface
     Internet address is 172.20.10.2, subnet mask is 255.255.255.0
     MTU 1500 bytes, BW 256 Kbit, DLY 100000 usec,
     reliability 255/255, txload 1/255, rxload 1/255
     Encapsulation PPP, loopback not set
     DTR is pulsed for 5 seconds on reset
     LCP Open, multilink Open
     Open: IPCP
   ........................
```

疑難排解

本節提供的資訊可用於對組態進行疑難排解。

疑難排解指令

輸出直譯器工具支援某些**show**命令，該工具允許您檢視**show**命令輸出的分析。

注意：發出**debug**指令之前，**請先參閱**有關Debug指令的重要資訊。

- **debug dialer** — 用於檢視按需撥號路由資訊。
- **debug isdn events** — 用於檢視ISDN介面使用者端發生的ISDN活動。
- **debug isdn q931** — 這顯示呼叫建立和ISDN網路連線（第3層）的斷開，可用於隔離問題。
- **debug ppp negotiation** — 此命令顯示協商PPP元件(包括鏈路控制協定(LCP)、身份驗證和網路控制協定(NCP))時有關PPP流量和交換的資訊。成功的PPP協商將首先開啟LCP狀態，然後進行身份驗證，最後協商NCP。
- **debug ppp authentication** — 顯示PPP身份驗證協定消息，包括質詢身份驗證協定(CHAP)資料包交換和口令身份驗證協定(PAP)交換。如果發現故障，請驗證chap使用者名稱和密碼是否配置正確。
- **debug ppp error** — 顯示與PPP連線協商和操作相關的協定錯誤和錯誤統計資訊。

調試輸出示例

有關排除DDR備份故障的資訊，請參閱配置和排除DDR備份故障的檔案。

以下調試輸出是使用前面介紹的調試生成的。輸出顯示主鏈路發生故障且備用鏈路處於啟用狀態：

```
*Mar  1 03:37:42.350: %LINK-3-UPDOWN: Interface Serial0, changed state to down
!--- Primary Link is unplugged. *Mar 1 03:37:42.358: Se0 IPCP: State is Closed *Mar 1
03:37:42.362: Se0 CDPCP: State is Closed *Mar 1 03:37:42.366: Se0 PPP: Phase is TERMINATING [0
sess, 1 load] *Mar 1 03:37:42.370: Se0 LCP: State is Closed *Mar 1 03:37:42.370: Se0 PPP: Phase
is DOWN [0 sess, 1 load] *Mar 1 03:37:42.386: Se0 IPCP: Remove route to 192.168.10.1 *Mar 1
03:37:42.394: %OSPF-5-ADJCHG: Process 5, Nbr 172.22.1.1 on Serial0 from FULL to DOWN, Neighbor
Down: Interface down or detached *Mar 1 03:37:43.358: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Serial0, changed state to down *Mar 1 03:37:52.302: %LINK-3-UPDOWN: Interface BRI0:1,
changed state to down
!--- The backup interface is changed to from "standby" to "down". !--- The backup interface was
activated 10 seconds after the primary link !--- went down. !--- This interval was defined with
the backup delay command in maui-soho-01 !--- (the 1600). *Mar 1 03:37:52.306: BR0:1 LCP: State
is Closed *Mar 1 03:37:52.310: BR0:1 DDR: disconnecting call *Mar 1 03:37:52.314: %LINK-3-
UPDOWN: Interface BRI0:2, changed state to down *Mar 1 03:37:52.318: BR0:2 LCP: State is Closed
*Mar 1 03:37:52.322: BR0:2 DDR: disconnecting call *Mar 1 03:37:52.417: %LINK-3-UPDOWN:
Interface BRI0, changed state to up *Mar 1 03:37:52.477: ISDN BR0: Event: Syncing Discards: L2
Discards 4, L2D_Task Counter 2 *Mar 1 03:37:52.489: BR0 DDR: Dialing cause ip (s=172.20.10.2,
d=224.0.0.5)
!--- OSPF hellos cause the router to dial. *Mar 1 03:37:52.493: BR0 DDR: Attempting to dial
5551111 !--- This is the phone number of the remote router that is dialed. *Mar 1 03:37:54.477:
ISDN BR0: Event: Syncing Discards: L2 Discards 4, L2D_Task Counter 3 *Mar 1 03:37:56.528: %ISDN-
6-LAYER2UP: Layer 2 for Interface BR0, TEI 112 changed to up *Mar 1 03:37:56.556: ISDN BR0: TX -
> INFORMATION pd = 8 callref = (null) SPID Information i = '51299699380101' *Mar 1 03:37:56.627:
ISDN BR0: TX -> SETUP pd = 8 callref = 0x1F *Mar 1 03:37:56.635: Bearer Capability i = 0x8890
*Mar 1 03:37:56.643: Channel ID i = 0x83 *Mar 1 03:37:56.651: Keypad Facility i = '5551111' *Mar
1 03:37:56.667: ISDN BR0: RX <- INFORMATION pd = 8 callref = (null) ENDPOINT IDent i = 0x8081
*Mar 1 03:37:56.703: ISDN BR0: Received EndPoint ID *Mar 1 03:37:56.738: ISDN BR0: RX <-
INFORMATION pd = 8 callref = (null) Locking Shift to Codeset 5 *Mar 1 03:37:56.750: Codeset 5 IE
0x2A i = 0x808001, 'P' *Mar 1 03:37:56.857: %ISDN-6-LAYER2UP: Layer 2 for Interface BR0, TEI 65
changed to up *Mar 1 03:37:56.881: ISDN BR0: TX -> INFORMATION pd = 8 callref = (null) SPID
Information i = '51299699460101' *Mar 1 03:37:56.917: ISDN BR0: RX <- CALL_PROC pd = 8 callref =
0x9F *Mar 1 03:37:56.925: Channel ID i = 0x89 *Mar 1 03:37:56.949: ISDN BR0: RX <- INFORMATION
pd = 8 callref = (null) ENDPOINT IDent i = 0x8181 *Mar 1 03:37:56.984: ISDN BR0: Received
Endpoint ID *Mar 1 03:37:57.175: ISDN BR0: RX <-  CONNECT pd = 8  callref = 0x9F
!--- The call is connected. *Mar 1 03:37:57.199: %LINK-3-UPDOWN: Interface BRI0:1, changed state
```

to up *Mar 1 03:37:57.218: BR0:1 PPP: Treating connection as a callout *!--- PPP negotiation begins.* *Mar 1 03:37:57.222: BR0:1 **PPP**: Phase is ESTABLISHING, Active Open
[0 sess, 1 load]
*Mar 1 03:37:57.230: BR0:1 LCP: O CONFREQ [Closed] id 18 len 34
*Mar 1 03:37:57.234: BR0:1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 03:37:57.242: BR0:1 LCP: MagicNumber 0x1144F392 (0x05061144F392)
*Mar 1 03:37:57.246: BR0:1 LCP: MRRU 1524 (0x110405F4)
*Mar 1 03:37:57.250: BR0:1 LCP: EndpointDisc 1 Local
(0x130F016D6175692D736F686F2D3031)
*Mar 1 03:37:57.262: ISDN BR0: TX -> CONNECT_ACK pd = 8 callref = 0x1F
*Mar 1 03:37:57.282: BR0:1 LCP: I CONFREQ [REQsent] id 43 Len 33
*Mar 1 03:37:57.286: BR0:1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 03:37:57.294: BR0:1 LCP: MagicNumber 0x363030C5 (0x0506363030C5)
*Mar 1 03:37:57.298: BR0:1 LCP: MRRU 1524 (0x110405F4)
*Mar 1 03:37:57.302: BR0:1 LCP: EndpointDisc 1 Local
(0x130E016D6175692D6E61732D3035)
*Mar 1 03:37:57.310: BR0:1 LCP: O CONFACK [REQsent] id 43 Len 33
*Mar 1 03:37:57.314: BR0:1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 03:37:57.318: BR0:1 LCP: MagicNumber 0x363030C5 (0x0506363030C5)
*Mar 1 03:37:57.326: BR0:1 LCP: MRRU 1524 (0x110405F4)
*Mar 1 03:37:57.330: BR0:1 LCP: EndpointDisc 1 Local
(0x130E016D6175692D6E61732D3035)
*Mar 1 03:37:57.341: BR0:1 LCP: I CONFACK [ACKsent] id 18 Len 34
*Mar 1 03:37:57.345: BR0:1 LCP: AuthProto CHAP (0x0305C22305)
*Mar 1 03:37:57.349: BR0:1 LCP: MagicNumber 0x1144F392 (0x05061144F392)
*Mar 1 03:37:57.353: BR0:1 LCP: MRRU 1524 (0x110405F4)
*Mar 1 03:37:57.361: BR0:1 LCP: EndpointDisc 1 Local
(0x130F016D6175692D736F686F2D3031)
*Mar 1 03:37:57.365: BR0:1 LCP: State is Open
*Mar 1 03:37:57.369: BR0:1 PPP: Phase is AUTHENTICATING, by both
[0 sess, 1 load]
!--- PPP authentication begins. *Mar 1 03:37:57.373: BR0:1 CHAP: O CHALLENGE id 17 Len 33 from "**maui-soho-01**"
!--- The username for CHAP is challenge. The remote router must have this !--- username configured along with it's shared secret password. *Mar 1 03:37:57.381: BR0:1 CHAP: I CHALLENGE id 30 Len 32 from "maui-nas-05" *!--- The incoming username for CHAP is challenge. !--- This username must be locally configured.* *Mar 1 03:37:57.397: BR0:1 CHAP: O RESPONSE id 30 Len 33 from "maui-soho-01" *Mar 1 03:37:57.425: BR0:1 CHAP: I SUCCESS id 30 Len 4 *Mar 1 03:37:57.433: BR0:1 CHAP: I RESPONSE id 17 Len 32 from "maui-nas-05" *Mar 1 03:37:57.445: BR0:1 CHAP: O SUCCESS id 17 Len 4 *!--- CHAP authentication is successful.* *Mar 1 03:37:57.453: BR0:1 PPP: Phase is VIRTUALIZED [0 sess, 1 load] *Mar 1 03:37:57.460: Vi1 PPP: Phase is DOWN, Setup [0 sess, 1 load] *Mar 1 03:37:57.480: BR0:1 IPCP: Packet buffered while building MLP bundle interface *Mar 1 03:37:57.484: BR0:1 CDPCP: Packet buffered while building MLP bundle interface *Mar 1 03:37:57.488: %LINK-3-UPDOWN: Interface **Virtual-Access1**,
changed state to up
!--- Virtual Access Interface is created for the multilink !--- (2 b-channel) connection. *Mar 1 03:37:57.496: Vi1 DDR: Dialer statechange to up *Mar 1 03:37:57.500: Vi1 DDR: Dialer call has been placed *Mar 1 03:37:57.504: Vi1 PPP: Treating connection as a callout *Mar 1 03:37:57.508: Vi1 PPP: Phase is ESTABLISHING, Active Open [0 sess, 1 load] *Mar 1 03:37:57.516: Vi1 LCP: O CONFREQ [Closed] id 1 Len 34 *Mar 1 03:37:57.520: Vi1 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 03:37:57.524: Vi1 LCP: MagicNumber 0x1144F4B0 (0x05061144F4B0) *Mar 1 03:37:57.528: Vi1 LCP: MRRU 1524 (0x110405F4) *Mar 1 03:37:57.536: Vi1 LCP: EndpointDisc 1 Local (0x130F016D6175692D736F686F2D3031) *Mar 1 03:37:57.548: Vi1 PPP: Phase is UP [0 sess, 1 load] *Mar 1 03:37:57.556: Vi1 IPCP: O CONFREQ [Closed] id 1 Len 10 *Mar 1 03:37:57.560: Vi1 IPCP: Address 172.20.10.2 (0x0306AC140A02) *Mar 1 03:37:57.572: Vi1 CDPCP: O CONFREQ [Closed] id 1 Len 4 *Mar 1 03:37:57.576: BR0:1 MLP: maui-nas-05, multilink up, first link *Mar 1 03:37:57.580: Vi1 PPP: Pending ncpQ size is 2 *Mar 1 03:37:57.583: BR0:1 IPCP: Redirect packet to Vi1 *Mar 1 03:37:57.587: Vi1 IPCP: I CONFREQ [REQsent] id 1 Len 10 *Mar 1 03:37:57.591: Vi1 IPCP: Address 172.20.10.1 (0x0306AC140A01) *Mar 1 03:37:57.599: Vi1 IPCP: O CONFACK [REQsent] id 1 Len 10 *Mar 1 03:37:57.603: Vi1 IPCP: Address 172.20.10.1 (0x0306AC140A01) *Mar 1 03:37:57.607: BR0:1 CDPCP: Redirect packet to Vi1 *Mar 1 03:37:57.611: Vi1 CDPCP: I CONFREQ [REQsent] id 1 Len 4 *Mar 1 03:37:57.615: Vi1 CDPCP: O CONFACK [REQsent] id 1 Len 4 *Mar 1 03:37:57.623: Vi1 IPCP: I CONFACK [ACKsent] id 1 Len 10 *Mar 1 03:37:57.631: Vi1 IPCP: Address 172.20.10.2 (0x0306AC140A02) *Mar 1 03:37:57.635: **Vi1 IPCP: State is Open**

!--- IPCP state is open and route will be installed. *Mar 1 03:37:57.643: Vi1 CDPCP: I CONFACK [ACKsent] id 1 Len 4 *Mar 1 03:37:57.643: Vi1 CDPCP: State is Open *Mar 1 03:37:57.651: Vi1 DDR: dialer protocol up *Mar 1 03:37:57.663: BR0 IPCP: Install route to 172.20.10.1 *Mar 1 03:37:58.072: BR0 DDR: **Attempting to dial 5551111**
!--- Router is dialing. *Mar 1 03:37:58.199: ISDN BR0: TX -> SETUP pd = 8 callref = 0x20 *Mar 1 03:37:58.206: Bearer Capability i = 0x8890 *Mar 1 03:37:58.218: Channel ID i = 0x83 *Mar 1 03:37:58.226: Keypad Facility i = '5551111' *Mar 1 03:37:58.445: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0:1, changed state to up *Mar 1 03:37:58.512: ISDN BR0: RX <- CALL_PROC pd = 8 callref = 0xA0 *Mar 1 03:37:58.524: Channel ID i = 0x8A *Mar 1 03:37:58.548: %LINEPROTO-5-UPDOWN: Line protocol on Interface Virtual-Access1, changed state to up *Mar 1 03:37:58.599: BR0:1 LCP: I ECHOREQ [Open] id 1 Len 12 magic 0x363030C5 *Mar 1 03:37:58.603: BR0:1 LCP: O ECHOREP [Open] id 1 Len 12 magic 0x1144F392 *Mar 1 03:37:58.746: ISDN BR0: RX <- CONNECT pd = 8 callref = 0xA0 *Mar 1 03:37:58.774: %LINK-3-UPDOWN: Interface BRI0:2, changed state to up *Mar 1 03:37:58.786: %ISDN-6-CONNECT: Interface BRI0:1 is now connected to 5551111 maui-nas-05 *Mar 1 03:37:58.794: BR0:2 PPP: Treating connection as a callout *Mar 1 03:37:58.798: BR0:2 PPP: Phase is ESTABLISHING, Active Open [0 sess, 0 load] *Mar 1 03:37:58.810: BR0:2 LCP: O CONFREQ [Closed] id 16 Len 34 *Mar 1 03:37:58.814: BR0:2 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 03:37:58.818: BR0:2 LCP: MagicNumber 0x1144F9C9 (0x05061144F9C9) *Mar 1 03:37:58.821: BR0:2 LCP: MRRU 1524 (0x110405F4) *Mar 1 03:37:58.825: BR0:2 LCP: EndpointDisc 1 Local (0x130F016D6175692D736F686F2D3031) *Mar 1 03:37:58.837: ISDN BR0: TX -> CONNECT_ACK pd = 8 callref = 0x20 *Mar 1 03:37:58.861: BR0:2 LCP: I CONFREQ [REQsent] id 33 Len 33 *Mar 1 03:37:58.865: BR0:2 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 03:37:58.869: BR0:2 LCP: MagicNumber 0x363036F1 (0x0506363036F1) *Mar 1 03:37:58.873: BR0:2 LCP: MRRU 1524 (0x110405F4) *Mar 1 03:37:58.877: BR0:2 LCP: EndpointDisc 1 Local (0x130E016D6175692D6E61732D3035) *Mar 1 03:37:58.889: BR0:2 LCP: O CONFACK [REQsent] id 33 Len 33 *Mar 1 03:37:58.893: BR0:2 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 03:37:58.897: BR0:2 LCP: MagicNumber 0x363036F1 (0x0506363036F1) *Mar 1 03:37:58.901: BR0:2 LCP: MRRU 1524 (0x110405F4) *Mar 1 03:37:58.905: BR0:2 LCP: EndpointDisc 1 Local (0x130E016D6175692D6E61732D3035) *Mar 1 03:37:58.917: BR0:2 LCP: I CONFACK [ACKsent] id 16 Len 34 *Mar 1 03:37:58.921: BR0:2 LCP: AuthProto CHAP (0x0305C22305) *Mar 1 03:37:58.929: BR0:2 LCP: MagicNumber 0x1144F9C9 (0x05061144F9C9) *Mar 1 03:37:58.933: BR0:2 LCP: MRRU 1524 (0x110405F4) *Mar 1 03:37:58.937: BR0:2 LCP: EndpointDisc 1 Local (0x130F016D6175692D736F686F2D3031) *Mar 1 03:37:58.941: BR0:2 LCP: State is Open *Mar 1 03:37:58.945: BR0:2 PPP: Phase is AUTHENTICATING, by both [0 sess, 0 load] *Mar 1 03:37:58.952: BR0:2 CHAP: O CHALLENGE id 15 Len 33 from "maui-soho-01" *Mar 1 03:37:58.956: BR0:2 CHAP: I CHALLENGE id 22 Len 32 from "maui-nas-05" *Mar 1 03:37:58.976: BR0:2 CHAP: O RESPONSE id 22 Len 33 from "maui-soho-01" *Mar 1 03:37:59.008: BR0:2 **CHAP: I SUCCESS** id 22 Len 4
*Mar 1 03:37:59.012: BR0:2 CHAP: I RESPONSE id 15 Len 32 from "maui-nas-05"
*Mar 1 03:37:59.028: BR0:2 **CHAP: O SUCCESS** id 15 Len 4
!--- Authentication (for the 2nd call) is successful. *Mar 1 03:37:59.036: BR0:2 PPP: Phase is VIRTUALIZED [0 sess, 0 load] *Mar 1 03:37:59.044: BR0:2 MLP: maui-nas-05, multilink up *Mar 1 03:38:00.036: %LINEPROTO-5-UPDOWN: Line protocol on Interface BRI0:2, changed state to up *Mar 1 03:38:02.555: %OSPF-5-ADJCHG: Process 5, Nbr 172.22.1.1 on BRI0 from LOADING to FULL, Loading Done *Mar 1 03:38:04.742: **%ISDN-6-CONNECT: Interface BRI0:2 is now connected to 5551111 maui-nas-05**
!--- Second B-channel (BRI0:2) is connected. *Mar 1 03:38:08.599: BR0:1 LCP: I ECHOREQ [Open] id 2 Len 12 magic 0x363030C5 *Mar 1 03:38:08.603: BR0:1 LCP: O ECHOREP [Open] id 2 Len 12 magic 0x1144F392 maui-soho-01#

相關資訊

- DDR備份的配置與故障排除
- 評估備份介面、浮動靜態路由和撥號器監視DDR備份
- 使用show isdn status命令進行BRI故障排除
- 技術支援 - Cisco Systems