Dialer Watch를 사용하여 AUX-to-AUX 포트 비동기 백업 구성

목차

소개

이 문서에서는 다이얼러 감시 기능을 사용하여 직렬, WAN 또는 임대 회선 링크에 대한 DDR(Dial-on-Demand Routing) 백업을 구성하는 방법에 대한 정보를 제공합니다. 백업 링크는 두 라우터의 AUX 포트에서 모뎀을 사용합니다. 기본 링크가 다운되면 다이얼러 워치는 AUX 포트의 모뎀을 사용하여 백업 다이얼아웃을 시작합니다.

사전 요구 사항

요구 사항

이 문서에서는 AUX 포트의 모뎀과 관련된 다양한 문제를 잘 알고 있다고 가정합니다. 이러한 문제에 대한 자세한 내용은 모뎀 라우터 연결 가이드 및 AUX 포트에서 모뎀을 사용하여 전화 접속 구성 문서를 참조하여 본 문서를 계속 진행하십시오.

사용되는 구성 요소

이 문서의 정보는 다음 소프트웨어 및 하드웨어 버전을 기반으로 합니다.

- AUX 포트에 미국 로봇 모뎀이 연결된 Cisco 2600 2개 두 라우터 모두 Cisco IOS® Software 릴

리스 12.1(2)을 실행하고 있습니다.
다이얼러 워치에 영향을 주는 IOS 버그에 대한 수정 사항이 포함된 Cisco IOS 버전 12.1(7) 이상을 사용하는 것이 좋습니다.

이 문서의 정보는 특정 랩 환경의 디바이스를 토대로 작성되었습니다. 이 문서에 사용된 모든 디바이스는 초기화된(기본) 컨피그레이션으로 시작되었습니다. 라이브 네트워크에서 작업하는 경우, 사용하기 전에 모든 명령의 잠재적인 영향을 이해해야 합니다.

표기 규칙

문서 규칙에 대한 자세한 내용은 Cisco 기술 팁 표기 규칙을 참조하십시오.

배경 이론

이 시나리오에서는 AUX 포트의 모뎀을 사용하여 다이얼인과 다이얼아웃을 구성하고 다이얼러 워치로 DDR 백업을 구성하는 작업이 포함됩니다. 다이얼러 감시 기능에 대한 자세한 내용은 백업 인터페이스 평가, 부동 고정 경로 및 DDR 백업용 다이얼러 감시를 참조하십시오.

다이얼러 감시 구성 및 문제 해결 방법에 대한 자세한 내용은 BRI를 사용하여 DDR 백업 구성을 참조하십시오. 다이얼러 감시에 관련된 개념은 사용된 미디어와 별개입니다. 따라서 이 문서는 다이얼러 감시 문제에 유용합니다.

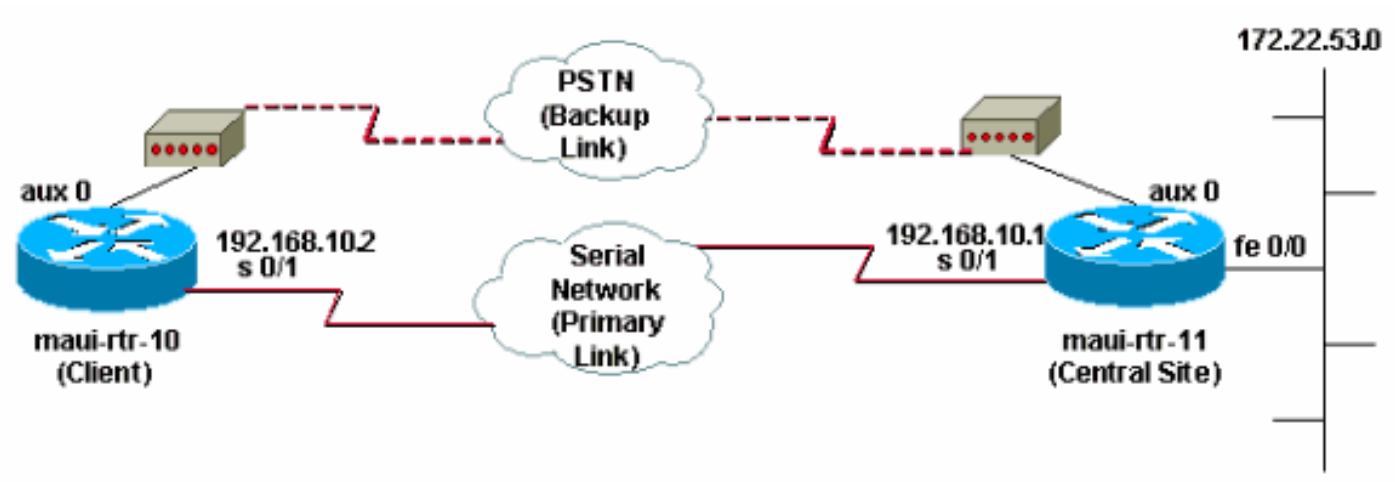
구성

이 섹션에는 이 문서에서 설명하는 기능을 구성하기 위한 정보가 표시됩니다.

참고: 이 문서에 사용된 명령에 대한 추가 정보를 찾으려면 명령 조회 도구(등록된 고객만 해당)를 사용합니다.

네트워크 다이어그램

이 문서에서는 다음 다이어그램에 표시된 네트워크 설정을 사용합니다.



구성

이 컨피그레이션에서는 마우이-rtr-10(클라이언트)이 마우이-rtr-11(중앙 사이트)에 대한 시리얼 링

크로 연결됩니다. 두 라우터 모두 AUX 포트에 연결되어 백업으로 사용되는 외부 US Robotics 모뎀도 있습니다. 기본 링크가 다운되면 다이얼러 워치는 백업 링크를 시작하고, 마우이-rtr-10은 중앙 사이트 라우터에 전화를 걸고, PPP를 연결하고, OSPF(Open Shortest Path First) 라우팅 정보를 교환합니다. 이제 라우터 간 모든 트래픽에서 백업 연결을 사용합니다. 기본 링크가 다시 설정되면 라우팅 테이블이 업데이트되고 모든 트래픽이 다시 기본 링크를 사용합니다. 백업 링크에서 트래픽이 플로우되지 않으므로 유휴 시간 제한이 만료되고 다이얼러가 백업 링크를 해제합니다.

maui-rtr-10(클라이언트)

```
maui-rtr-10#show running-config
Building configuration...

Current configuration:
!
version 12.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname maui-rtr-10
!
aaa new-model
aaa authentication login default local
aaa authentication login NO_AUTHEN none
aaa authentication ppp default local
!--- This is the basic AAA configuration for PPP calls.
enable secret 5 <deleted> ! username admin password 0
<deleted> username maui-rtr-11 password 0 cisco !---
Username for remote router (maui-rtr-11) and shared
secret !--- password. Shared secret (used for Challenge
Handshake Authentication !--- Protocol [CHAP]
authentication) must be the same on both sides. ! ip
subnet-zero ! chat-script Dialout ABORT ERROR ABORT BUSY
"" "AT" OK "ATDT \T" TIMEOUT 45 CONNECT \c !--- Chat
script named "Dialout" is used for the backup dialout.
modemcap entry MY_USR_MODEM:MSC=&F1S0;=1 !--- Modemcap
named "MY_USR_MODEM" will be applied to the AUX !---
port line interface. This modemcap was created with the
!--- modemcap edit MY_USR_MODEM miscellaneous &F1S0;=1
command !--- Refer to the Modem-Router Connection Guide
for more information. ! interface Loopback0 ip address
172.17.1.1 255.255.255.0 ! interface Ethernet0/0 ip
address 172.16.1.1 255.255.255.0 no keepalive !
interface Serial0/0 no ip address shutdown no fair-queue
! interface Serial0/1 !--- This is the primary link. ip
address 192.168.10.2 255.255.255.252 encapsulation ppp
clockrate 64000 ppp authentication chap ! interface
Async65 !--- Async interface corresponding to the AUX
Port (backup link). !--- This was determined using the
show line command.

 ip unnumbered Loopback0
!--- This assigns the Loopback 0 IP address to this
interface. !--- The central router will have a dialer
map to this loopback address. encapsulation ppp dialer
in-band !--- Allow DDR on this interface. dialer idle-
timeout 30 !--- Idle timeout (in seconds) for this link.
!--- Dialer watch checks the status of the primary link
!--- every time the idle-timeout expires. dialer watch-
disable 15 !--- Delays disconnection of the backup
interface (for 15 seconds) after !--- the primary
```

```
interface is found to be up. dialer map ip 172.22.1.1
name maui-rtr-11 broadcast 84007 !--- Dialer map for the
AUX Port interface of the central router. !--- Remember
that the central router's AUX port is unnumbered to its
Loopback 0. dialer map ip 172.22.53.0 name maui-rtr-11
broadcast 84007 !--- Map statement for the route or
network being watched. !--- Address must exactly match
the network configured with !--- the dialer watch-list
command. !--- Dials the phone number specified when the
watched route disappears.

 dialer watch-group 8
!--- Enable dialer watch on this backup interface. !---
Watch the route specified with dialer watch-list 8.

 dialer-group 1
!--- Apply interesting traffic defined in dialer-list 1.
async default routing !--- Permit routing over the async
interface. !--- This is required for a routing protocol
to run across the async link. async mode interactive ppp
authentication chap ! router ospf 5 network 172.16.1.0
0.0.0.255 area 0 network 172.17.1.0 0.0.0.255 area 0
network 192.168.10.0 0.0.0.3 area 0 ! ip classless no ip
http server ! access-list 101 remark Define Interesting
Traffic access-list 101 deny ospf any any !--- Mark OSPF
as uninteresting. !--- This prevents OSPF hellos from
keeping the link up. access-list 101 permit ip any any !
dialer watch-list 8 ip 172.22.53.0 255.255.255.0 !---
Define the route to be watched. !--- This exact route
(including subnet mask) must exist in the routing table.
dialer-list 1 protocol ip list 101 !--- Interesting
traffic is defined by access-list 101. !--- This is
applied to BRI0 using dialer-group 1.

!
line con 0
 login authentication NO_AUTHEN
 transport input none
line Aux 0
!--- Line configuration for the AUX port. exec-timeout 0
0 !--- Disable exec timeout on the interface. autoselect
ppp script dialer Dialout !--- Use the chat script named
"Dialout" for outgoing calls. modem InOut !--- Enable
incoming and outgoing calls. modem autoconfigure type
MY_USR_MODEM !--- Apply the modemcap MY_USR_MODEM
(configured previously) !--- to initialize the modem.
transport input all stopbits 1 !--- Improve throughput
by reducing async framing overhead. speed 115200 !---
AUX port on the 2600 supports a speed of 115200. !---
Note: If you are routing through the AUX port, each
character generates a !--- processor interrupt. This is
an abnormally high load on the CPU, which can be !---
resolved by using a lower AUX port speed. flowcontrol
hardware !--- This configures Ready To Send/Clear To
Send (RTS/CTS) flow control. line vty 0 4 ! no scheduler
allocate end
```

maui-rtr-11(중앙 사이트)

```
maui-rtr-11#show running-config
Building configuration...

Current configuration:
```

```
!
version 12.1
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname maui-rtr-11
!
aaa new-model
aaa authentication login default local
aaa authentication login NO_AUTHEN none
aaa authentication ppp default local
!--- This is the basic AAA configuration for PPP calls.
enable secret 5 <deleted> ! username admin password 0
<deleted> username maui-rtr-10 password 0 cisco !---
Username for remote router (maui-rtr-10) and shared
secret. !--- Shared secret (used for CHAP
authentication) must be the same on both sides. !
memory-size iomem 30 ! ip subnet-zero ! modemcap entry
MY_USR_MODEM:MSC=&F1S0;=1 !--- Modemcap (MY_USR_MODEM)
will be applied to the AUX port line interface. !---
This modemcap was created with the command !--- modemcap
edit MY_USR_MODEM miscellaneous &F1S0;=1 !--- Refer to
the Modem-Router Connection Guide for more information.
! interface Loopback0 ip address 172.22.1.1
255.255.255.0 ! interface FastEthernet0/0 !--- Interface
to corporate network. ip address 172.22.53.105
255.255.255.0 no keepalive duplex auto speed auto ! !---
Irrelevant output removed here. ! interface Serial0/1 !-
-- This is the primary link. ip address 192.168.10.1
255.255.255.252 encapsulation ppp ppp authentication
chap ! interface Serial0/2 no ip address shutdown !
interface Async65 !--- Async interface corresponding to
the AUX Port (backup link). !--- This was determined
using the show line command.

 ip unnumbered Loopback0
!--- Use Loopback 0 address for this interface. !--- The
remote router will have a dialer map to this loopback
address. encapsulation ppp dialer in-band dialer idle-
timeout 900 dialer map ip 172.17.1.1 name maui-rtr-10
broadcast !--- Dialer map for the AUX Port interface of
the remote router. !--- Remember that the remote router
AUX port is unnumbered to its Loopback 0. dialer-group 1
!--- Apply interesting traffic defined in dialer-list 1.
async default routing !--- Permit routing over the async
interface. !--- This is required for a routing protocol
to run across the async link. async mode interactive !--
- Requires autoselect PPP under the line configuration
PPP to be negotiated. !--- This command may be replaced
with async mode dedicated.

 no peer default ip address
!--- Do not assign the peer an IP address. ppp
authentication chap ! router ospf 5 network 172.22.1.0
0.0.0.255 area 0 network 172.22.53.0 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 permit !--- Mark
all IP traffic as interesting. !--- This interesting
traffic definition is applied to BRI0 !--- using dialer-
group 1.

!
!
```

```
line con 0
 login authentication NO_AUTHEN
 transport input none
line aux 0
!--- AUX Port line configuration. autoselect ppp !---
Launch PPP negotiation when PPP packets are received. !-
-- If the Async Interface has async mode dedicated, !---
this command is not needed.

 modem InOut
!--- Enable incoming and outgoing calls. modem
autoconfigure type MY_USR_MODEM !--- Apply the modemcap
MY_USR_MODEM that was configured previously. transport
input all stopbits 1 !--- Improve throughput by reducing
async framing overhead. speed 115200 !--- AUX port on
the 2600 supports a speed of 115200. flowcontrol
hardware !--- Configures RTS/CTS flow control. line vty
0 4 ! no scheduler allocate end
```

다음을 확인합니다.

이 섹션에서는 컨피그레이션이 제대로 작동하는지 확인하는 데 사용할 수 있는 정보를 제공합니다.

특정 **show** 명령은 Output Interpreter(등록된 고객만 해당) 툴에서 지원되므로 **show** 명령 출력의 분석을 볼 수 있습니다.

샘플 show 출력

기본 링크가 작동하는 클라이언트의 라우팅 테이블(maui-rtr-10)은 다음과 같습니다.

```
maui-rtr-10#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, Serial0/1
C       192.168.10.1/32 is directly connected, Serial0/1
     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, Ethernet0/0
     172.22.0.0/16 is variably subnetted, 2 subnets, 2 masks
O       172.22.53.0/24 [110/65] via 192.168.10.1, 00:00:57, Serial0/1
O       172.22.1.1/32 [110/65] via 192.168.10.1, 00:00:59, Serial0/1
```

위에 표시된 **show ip route** 명령 출력은 기본 링크(serial 0/1)를 사용하여 피어에서 학습한 OSPF 경로를 표시합니다. 감시 중인 경로(마스크 255.255.255.0이 있는 172.22.53.0)이 라우팅 테이블에 있음을 확인합니다. 다이얼러 감시 기능이 올바르게 작동하려면 이 내용을 확인해야 합니다.

이제 기본 링크가 중단되고 다이얼러 감시 기능이 백업 링크를 활성화합니다.

백업 링크가 활성화되면 OSPF 테이블이 교환되고 백업 링크를 사용하는 새 경로가 설치됩니다. 이제 트래픽이 백업 링크를 통과합니다. 이에 대한 예는 다음과 같습니다.

```
maui-rtr-10#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, Ethernet0/0
     172.22.0.0/16 is variably subnetted, 2 subnets, 2 masks
O       172.22.53.0/24 [110/870] via 172.22.1.1, 00:00:11, Async65
C       172.22.1.1/32 is directly connected, Async65
```

위의 출력에서는 라우팅 테이블이 업데이트되었으며 감시 네트워크의 모든 트래픽이 이제 백업 링크(Async 65)를 사용함을 보여줍니다.

문제 해결

이 섹션에서는 컨피그레이션 문제를 해결하는 데 사용할 수 있는 정보를 제공합니다.

문제 해결 명령

특정 **show** 명령은 Output Interpreter(등록된 고객만 해당) 툴에서 지원되므로 **show** 명령 출력의 분석을 볼 수 있습니다.

참고: debug 명령을 실행하기 전에 디버그 명령에 대한 중요 정보를 참조하십시오.

- **debug dialer** - 다이얼러 인터페이스에서 수신된 패킷에 대한 디버깅 정보를 표시합니다. 인터페이스에서 DDR이 활성화된 경우 통화 원인(전화 걸기 원인)에 대한 정보도 표시됩니다. 자세한 내용은 Debug Commands 설명서의 **디버그** 다이얼러 정보를 참조하십시오.
- **debug modem** — 라우터에 모뎀 회선 활동, 모뎀 제어 및 프로세스 활성화 메시지를 표시합니다.
- **debug chat** - async/POTS 다이얼링이 시작될 때 채팅 스크립트의 실행을 모니터링합니다. 전화 접속 기술 참조: 자세한 내용은 문제 해결 기술을 참조하십시오.
- **debug ppp negotiation** - LCP(Link Control Protocol), Authentication, NCP(Network Control Protocol)를 비롯한 PPP 구성 요소를 협상하는 동안 PPP 트래픽 및 교환에 대한 정보를 표시합니다. 성공적인 PPP 협상이 먼저 LCP 상태를 연 다음 Authentication(인증)하고 마지막으로 NCP를 협상합니다.
- **debug ppp authentication**—CHAP(Challenge Authentication Protocol) 패킷 교환 및 PAP(Password Authentication Protocol) 교환을 비롯한 PPP 인증 프로토콜 메시지를 표시합니다.

디버그 출력 샘플

아래의 디버그 출력에는 기본 링크 실패 및 손실된 경로를 인식하는 다이얼러 감시 기능이 표시됩니다. 그런 다음 라우터가 백업 링크를 시작합니다. 다이얼러 유휴 시간 제한이 만료된 후 라우터는 기본 링크가 다운되었는지 확인합니다. 기본 링크가 다시 설정되면, 비활성화 타이머가 만료된 후 다이얼러 감시 기능이 백업 링크의 연결을 해제합니다. 디버그를 볼 때 각 메시지의 타임스탬프에 주의하십시오. 그러면 활성화된 다양한 타이머 및 유휴 시간 제한에 대한 정보를 제공할 수 있습니다.

```
maui-rtr-10#debug dialer
Dial on demand events debugging is on
maui-rtr-10#debug chat
Chat scripts activity debugging is on
maui-rtr-10#debug modem
Modem control/process activation debugging is on
maui-rtr-10#debug ppp negotiation
PPP protocol negotiation debugging is on
maui-rtr-10#debug ppp authentication
PPP authentication debugging is on
maui-rtr-10#
maui-rtr-10#
maui-rtr-10#
maui-rtr-10#
maui-rtr-10#
*Mar  3 17:00:28.136: %LINK-3-UPDOWN: Interface Serial0/1,
changed state to down
!--- Primary link is brought down. *Mar 3 17:00:28.140: Se0/1 IPCP: State is Closed *Mar 3
17:00:28.140: Se0/1 CDPCP: State is Closed *Mar 3 17:00:28.140: Se0/1 PPP: Phase is TERMINATING
*Mar 3 17:00:28.140: Se0/1 LCP: State is Closed *Mar 3 17:00:28.140: Se0/1 PPP: Phase is DOWN
*Mar 3 17:00:28.144: Se0/1 IPCP: Remove route to 192.168.10.1 *Mar 3 17:00:28.252: DDR: Dialer
Watch: watch-group = 8
!--- Use dialer watch-group 8. *Mar 3 17:00:28.252: DDR: network 172.22.53.0/255.255.255.0 DOWN,
*Mar 3 17:00:28.252: DDR: primary DOWN
!--- The primary network is down. *Mar 3 17:00:28.252: DDR: Dialer Watch: Dial Reason: Primary
of group 8 DOWN
!--- Dial reason is that the primary route is down. *Mar 3 17:00:28.252: DDR: Dialer Watch:
watch-group = 8, *Mar 3 17:00:28.252: DDR: dialing secondary by dialer map 172.22.53.0 on As65
!--- Indicates which dialer map statement is used for the dialout. !--- Dialout will occur on AS
65 (the AUX Port). *Mar 3 17:00:28.252: As65 DDR: Attempting to dial 84007
!--- Number being dialed for the backup link. *Mar 3 17:00:28.252: CHAT65: Attempting async line
dialer script *Mar 3 17:00:28.256: CHAT65: Dialing using Modem script: Dialout
 & System script: none
 !--- Using chat script "Dialout". *Mar 3 17:00:28.268: CHAT65: process started *Mar 3
17:00:28.273: CHAT65: Asserting DTR *Mar 3 17:00:28.273: TTY65: Set DTR to 1 *Mar 3
17:00:28.273: CHAT65: Chat script Dialout started
!--- Chat script "Dialout" starts. *Mar 3 17:00:28.273: CHAT65: Sending string: AT *Mar 3
17:00:28.273: CHAT65: Expecting string: OK *Mar 3 17:00:28.433: CHAT65: Completed match for
expect: OK *Mar 3 17:00:28.433: CHAT65: Sending string: ATDT \T<84007> *Mar 3 17:00:28.433:
CHAT65: Expecting string: CONNECT *Mar 3 17:00:29.138: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Serial0/1, changed state to down *Mar 3 17:00:42.560: CHAT65: Completed match for
expect: CONNECT *Mar 3 17:00:42.560: CHAT65: Sending string: \c *Mar 3 17:00:42.560: CHAT65:
Chat script
Dialout finished, status = Success
!--- Chat script is successful. !--- Notice the Expect/Send Attributes and the time elapsed.
*Mar 3 17:00:42.564: TTY65: destroy timer type 1 *Mar 3 17:00:42.564: TTY65: destroy timer type
0 *Mar 3 17:00:42.568: As65 IPCP: Install route to 172.22.53.0 *Mar 3 17:00:44.567: %LINK-3-
UPDOWN: Interface Async65, changed state to up Dialer statechange to up Async65 *Mar 3
17:00:44.571: As65 DDR: Dialer Watch: resetting call in progress Dialer call has been placed
Async65 *Mar 3 17:00:44.571: As65 PPP: Treating connection as a callout !--- PPP negotiation
begins. *Mar 3 17:00:44.571: As65 PPP: Phase is ESTABLISHING, Active Open *Mar 3 17:00:44.571:
As65 LCP: O CONFREQ [Closed] id 11 len 25 *Mar 3 17:00:44.571: As65 LCP: ACCM 0x000A0000
(0x0206000A0000) *Mar 3 17:00:44.575: As65 LCP: AuthProto CHAP (0x0305C22305) *Mar 3
17:00:44.575: As65 LCP: MagicNumber 0x103EC1ED (0x0506103EC1ED) *Mar 3 17:00:44.575: As65 LCP:
```

PFC (0x0702) *Mar 3 17:00:44.575: As65 LCP: ACFC (0x0802) *Mar 3 17:00:46.575: As65 LCP: TIMEout: State REQsent *Mar 3 17:00:46.575: As65 LCP: O CONFREQ [REQsent] id 12 Len 25 *Mar 3 17:00:46.575: As65 LCP: ACCM 0x000A0000 (0x0206000A0000) *Mar 3 17:00:46.575: As65 LCP: AuthProto CHAP (0x0305C22305) *Mar 3 17:00:46.575: As65 LCP: MagicNumber 0x103EC1ED (0x0506103EC1ED) *Mar 3 17:00:46.575: As65 LCP: PFC (0x0702) *Mar 3 17:00:46.575: As65 LCP: ACFC (0x0802) *Mar 3 17:00:46.703: As65 LCP: I CONFACK [REQsent] id 12 Len 25 *Mar 3 17:00:46.707: As65 LCP: ACCM 0x000A0000 (0x0206000A0000) *Mar 3 17:00:46.707: As65 LCP: AuthProto CHAP (0x0305C22305) *Mar 3 17:00:46.707: As65 LCP: MagicNumber 0x103EC1ED (0x0506103EC1ED) *Mar 3 17:00:46.707: As65 LCP: PFC (0x0702) *Mar 3 17:00:46.707: As65 LCP: ACFC (0x0802) *Mar 3 17:00:46.715: As65 LCP: I CONFREQ [ACKrcvd] id 21 Len 25 *Mar 3 17:00:46.715: As65 LCP: ACCM 0x000A0000 (0x0206000A0000) *Mar 3 17:00:46.715: As65 LCP: AuthProto CHAP (0x0305C22305) *Mar 3 17:00:46.719: As65 LCP: MagicNumber 0x30CB092E (0x050630CB092E) *Mar 3 17:00:46.719: As65 LCP: PFC (0x0702) *Mar 3 17:00:46.719: As65 LCP: ACFC (0x0802) *Mar 3 17:00:46.719: As65 LCP: O CONFACK [ACKrcvd] id 21 Len 25 *Mar 3 17:00:46.719: As65 LCP: ACCM 0x000A0000 (0x0206000A0000) *Mar 3 17:00:46.719: As65 LCP: AuthProto CHAP (0x0305C22305) *Mar 3 17:00:46.723: As65 LCP: MagicNumber 0x30CB092E (0x050630CB092E) *Mar 3 17:00:46.723: As65 LCP: PFC (0x0702) *Mar 3 17:00:46.723: As65 LCP: ACFC (0x0802) *Mar 3 17:00:46.723: As65 LCP: State is Open *Mar 3 17:00:46.723: As65 PPP: **Phase is AUTHENTICATING, by both**
!--- Two-way PPP CHAP authentication begins. *Mar 3 17:00:46.723: As65 CHAP: O CHALLENGE id 7 Len 32 from "maui-rtr-10" *Mar 3 17:00:46.847: As65 CHAP: I CHALLENGE id 7 Len 32 from "maui-rtr-11" *Mar 3 17:00:46.851: As65 CHAP: O RESPONSE id 7 Len 32 from "maui-rtr-10" *Mar 3 17:00:46.967: As65 **CHAP: I SUCCESS** id 7 Len 4
*Mar 3 17:00:46.971: As65 CHAP: I RESPONSE id 7 Len 32 from "maui-rtr-11"
*Mar 3 17:00:46.975: As65 **CHAP: O SUCCESS** id 7 Len 4
!--- Incoming and Outgoing CHAP authentication are successful. *Mar 3 17:00:46.975: As65 PPP: Phase is UP *Mar 3 17:00:46.979: As65 IPCP: O CONFREQ [Closed] id 8 Len 10 *!--- IP Control Protocol (IPCP) negotiation begins.* *Mar 3 17:00:46.979: As65 IPCP: Address 172.17.1.1 (0x0306AC110101) *Mar 3 17:00:46.979: As65 CDPCP: O CONFREQ [Closed] id 7 Len 4 *Mar 3 17:00:47.087: As65 IPCP: I CONFREQ [REQsent] id 7 Len 10 *Mar 3 17:00:47.091: As65 IPCP: Address 172.22.1.1 (0x0306AC160101) *Mar 3 17:00:47.091: As65 IPCP: O CONFACK [REQsent] id 7 Len 10 *Mar 3 17:00:47.091: As65 IPCP: Address 172.22.1.1 (0x0306AC160101) *Mar 3 17:00:47.095: As65 CDPCP: I CONFREQ [REQsent] id 7 Len 4 *Mar 3 17:00:47.095: As65 CDPCP: O CONFACK [REQsent] id 7 Len 4 *Mar 3 17:00:47.099: As65 IPCP: I CONFACK [ACKsent] id 8 Len 10 *Mar 3 17:00:47.099: As65 IPCP: Address 172.17.1.1 (0x0306AC110101) *Mar 3 17:00:47.099: As65 IPCP: State is Open *Mar 3 17:00:47.103: As65 DDR: dialer protocol up *Mar 3 17:00:47.103: As65 IPCP: Remove route to 172.22.53.0 *Mar 3 17:00:47.103: As65 CDPCP: I CONFACK [ACKsent] id 7 Len 4 *Mar 3 17:00:47.107: As65 CDPCP: State is Open *Mar 3 17:00:47.107: As65 IPCP: Install route to 172.22.1.1 *Mar 3 17:00:47.708: %LINEPROTO-5-UPDOWN: **Line protocol on Interface Async65,**
changed state to up
!--- Async 65 (AUX Port) is UP. *Mar 3 17:01:14.572: **As65 DDR: idle timeout***
!--- Idle timeout expires. !--- The router will check to see if the primary link has come up. *Mar 3 17:01:14.572: DDR: Dialer Watch: watch-group = 8 *Mar 3 17:01:14.572: DDR: **network 172.22.53.0/255.255.255.0 UP,***
!--- A route for the watched network exists (due to the active backup link). *Mar 3 17:01:14.572: DDR: **primary DOWN***
!--- The primary network is down. *Mar 3 17:02:05.191: **As65 DDR: idle timeout***
!--- Idle Timeout expires. !--- The router will check to see if the primary link has come up. *Mar 3 17:02:05.191: DDR: Dialer Watch: watch-group = 8 *Mar 3 17:02:05.191: DDR: network 172.22.53.0/255.255.255.0 UP, *Mar 3 17:02:05.191: DDR: **primary DOWN***
!--- The primary network is still down. *Mar 3 17:02:50.982: %LINK-3-UPDOWN: **Interface Serial0/1,***
changed state to up
!--- Primary link is reestablished. *Mar 3 17:02:50.986: Se0/1 PPP: Treating connection as a dedicated line *Mar 3 17:02:50.986: Se0/1 PPP: Phase is ESTABLISHING, Active Open ... ... *!--- Primary link PPP negotiation output omitted.* ... *Mar 3 17:02:51.039: Se0/1 IPCP: **Install route to 192.168.10.1***
*Mar 3 17:02:52.020: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1,
changed state to up
*Mar 3 17:03:05.194: As65 DDR: idle timeout
!--- Next Idle Timeout expires. !--- The router will check to see if the primary link has come up. *Mar 3 17:03:05.194: DDR: Dialer Watch: watch-group = 8 *Mar 3 17:03:05.194: DDR: network 172.22.53.0/255.255.255.0 UP, *Mar 3 **17:03:05**.194: DDR: **primary DOWN***
!--- Dialer watch considers the primary network still down. !--- Even though the primary link is "up," the OSPF table has not yet been exchanged. !--- The primary link is not considered up

until the route is installed. *Mar 3 **17:03:35.**195: **As65 DDR: idle timeout**
!--- Next idle timeout (30 seconds) expires. !--- The router will check to see if the primary link has come up. *Mar 3 17:03:35.195: DDR: Dialer Watch: watch-group = 8 *Mar 3 17:03:35.195: DDR: network 172.22.53.0/255.255.255.0 UP, *!--- A route for the watched network exists.* *Mar 3 17:03:35.195: DDR: **primary UP**
!--- The primary network is up. !--- Dialer watch will initiate a disconnect of the backup link.
*Mar 3 **17:03:35**.195: As65 DDR: **starting watch disable timer**
!--- Delays disconnecting the backup interface after the primary !--- interface recovers. This timer is 15 seconds as configured !--- with the command **dialer watch-disable 15**.

*Mar 3 **17:03:50**.196: As65 DDR: **watch disable timeout**
!--- The 15 second disconnect delay expires. !--- The link will be immediately brought down.
*Mar 3 17:03:50.196: **As65 DDR: disconnecting call**
!--- Call on Async 65 (AUX Port) is disconnected. *Mar 3 17:03:50.196: TTY65: Async Int reset: Dropping DTR ... ... *!--- Link tear-down messages omitted here.* ... *Mar 3 17:03:57.203: %LINK-3-UPDOWN: **Interface Async65, changed state to down**

관련 정보

- 모뎀-라우터 연결 가이드
- 다이얼 기술 지원 페이지
- Technical Support - Cisco Systems