

配置用 Dialer Watch的 AUX 端口间异步备份

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简介

使用拨号监视功能，本文为序列、广域网或者租用的线路链路提供关于配置按需拨号路由(DDR)备份的信息。备份链路使用在两路由器Aux端口的调制解调器。当主链路断开时，使用在Aux端口的调制解调器Dialer Watch启动备用拨出。

先决条件

要求

本文假设您有用在Aux端口的调制解调器关联的一好了解多种问题。如果需要关于这些问题的更多信息，请参考本文[调制解调器-路由器连接指南](#)和[配置拨出使用在Aux端口的一个调制解调器](#)在继续与本文前。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- 两Cisco 2600用US Robotics调制解调器连接对Aux端口。两路由器运行Cisco IOS软件版本12.1(2)。

推荐您使用Cisco IOS版本12.1(7)或以后，包括IOS Bug的修正影响Dialer Watch。

本文档中的信息都是基于特定实验室环境中的设备创建的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您是在真实网络上操作，请确保您在使用任何命令前已经了解其潜在影响。

规则

有关文档规则的详细信息，请参阅 [Cisco 技术提示规则](#)。

背景理论

使用在Aux端口的调制解调器此方案用Dialer Watch介入配置拨入和拨出和配置DDR备份。关于拨号监视功能的更多信息，参考[评估备份接口、浮动静态路由和Dialer Watch DDR备份的](#)。

关于如何的参考的[使用BRI与Dialer Watch配置DDR备份](#)配置和排除故障Dialer Watch的信息。为Dialer Watch介入的概念使用的对立媒体，因此文档为Dialer Watch问题是有用的。

配置

本部分提供有关如何配置本文档所述功能的信息。

注意：要查找本文档所用命令的其他信息，请使用[命令查找工具](#)（[仅限注册用户](#)）。

网络图

本文档使用此图中所示的网络设置：

配置

在此配置中，maui-rtr-10 (客户端)由对maui-rtr-11 (中心站点)的一个串行链路连接。两路由器也有作为备份连接对Aux端口和使用的[外部US Robotics调制解调器](#)。当主链路断开时，Dialer Watch启动备份链路，并且maui-rtr-10拨通中心站点路由器，连接，协商PPP，并且交换开放最短路径优先(OSPF)路由信息。路由器之间的所有流量当前使用备用连接。当主链路被重建时，路由表更新，并且所有流量再次使用主链路。从在备份链路的没有通信流，空闲超时到期，并且Dialer Watch切断备份链路。

maui-rtr-10 (客户端)

```
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 (中心站点)

```

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

```

验证

本部分提供的信息可帮助您确认您的配置是否可正常运行。

[某些show命令受输出解释器工具的支持\(只用于注册的用户\)](#)，允许您查看对show命令输出的分析。

show 输出示例

客户端(maui-rtr-10)的路由表有主链路作用的显示此处：

```
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
```

显示的show ip route命令输出如上显示从使用主链路(序列0/1)的对等体的OSPF获知的路由。注意观看的路由(与掩码255.255.255.0)的172.22.53.0在路由表里存在。必须验证这为了Dialer Watch能正确地作用。

现在主链路减少，并且Dialer Watch激活备份链路。

在备份链路被激活后，OSPF表交换，并且新的路由使用备份链路安装。流量在备份链路间当前通过。相应示例如下：

```
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
```

以上输出显示路由表更新，并且监视的网络的所有流量当前使用备份链路(Async65)。

故障排除

本部分提供的信息可用于对配置进行故障排除。

故障排除命令

[某些show命令受输出解释器工具的支持\(只用于注册的用户\)](#)，允许您查看对show命令输出的分析。

注意：在发出 debug 命令之前，请参阅[有关 debug 命令的重要信息](#)。

- **debug dialer** - 用于显示关于拨号接口上接收的数据包的调试信息。当DDR在接口时启用，信息关于所有呼叫的原因(呼叫拨号原因)也显示。欲知更多信息，请参阅在[调试指令](#)文档的debug dialer信息。
- **debug modem** —显示调制解调器线路活动、调制解调器控制和进程激活消息在路由器。
- **debug chat** —监控对话脚本的执行，当async/POTS拨号启动。请参阅[拨号技术：故障排除技术](#)。
- **debug ppp negotiation** - 显示关于PPP流量的信息，并进行交换，同时协商PPP组件，这些组件包括链路控制协议 (LCP)、认证以及网络控制协议 (NCP)。一个成功的PPP协商协议首先开启LCP状态，然后是鉴权，最后协商NCP。
- **debug ppp authentication** —显示PPP认证协议消息，包括质询验证协议(CHAP)信息包交换和密码认证协议交换

调试输出示例

下面的debug输出显示认可路由丢失的主链路失败和Dialer Watch。路由器然后启动备份链路。在拨号空闲超时到期后，路由器证实主链路是否发生故障。当主链路被重建时，Dialer Watch断开备份链路，在禁用计时器超时后。当查看调试时，请注意在每个消息的时间戳，他们在是活跃的多种计时器和空闲超时能提供信息。

```
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
```

相关信息

- [调制解调器与路由器连接指南](#)
- [拨号技术支持页面](#)
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