使用撥號程式設定檔的非同步備份

目錄

簡介

本文檔介紹如何配置遠端路由器(Cisco 3640)，使其在幀中繼連線斷開時使用模擬POTS線路撥打中心站點。Cisco 3640使用撥號程式設定檔為訊框中繼連結提供備份介面。此外，還預留了一個特定的非同步介面用於備份撥出。請注意，此配置可以擴展為包括多鏈路PPP，這將顯著增加備份連線的可用頻寬。如需詳細資訊，請參閱適用於DDR的多連結PPP — 基本組態和驗證檔案。

本文顯示如何在非同步鏈路上使用路由協定配置備份連線。在實施此類設計之前，需要仔細考慮，因為路由協定使用的頻寬可能會減少資料傳輸的可用頻寬。快照路由或靜態路由可在非同步鏈路上使用，而不是路由協定。

開始之前

慣例

如需文件慣例的詳細資訊，請參閱思科技術提示慣例。

必要條件

本文件沒有特定先決條件。

採用元件

本檔案中的資訊是根據以下軟體和硬體版本。

- Cisco IOS軟體版本12.0(7)T
- Cisco 3640
- 思科AS5200網路存取伺服器
- Cisco 7206

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

為WAN連線（例如帶有按需撥號電路的幀中繼）提供冗餘路徑是常見的。非同步數據機和電路交換普通舊式電話服務(POTS)線路經常用於備份WAN介面。設計撥號備份方案時需要仔細規劃。必須考慮備份鏈路上的流量、容易發生故障的鏈路數量以及支援備份電路的埠容量規劃等因素。

為WAN鏈路提供備份的三種常用方法是：

- 備份介面
- 撥號器監視
- 浮動靜態路由

在主鏈路斷開之前，備用介面一直處於非活動狀態。然後啟用備用鏈路，重新建立兩個站點之間的連線。為幀中繼鏈路實施備份介面時，幀中繼鏈路上的點對點子介面是有利的，因為主介面或多點介面可能保持開啟/開啟狀態，即使主虛擬電路(PVC)關閉，也會導致備份介面未啟用。此外，建議在Cisco IOS®軟體版本12.05(T)或更高版本的網路上配置幀中繼端到端keepalive。有關詳細資訊，請參閱幀中繼端到端保活文檔。

撥號器監視提供可靠的連線，而不只是依靠定義感興趣的流量在中央路由器上觸發傳出呼叫。Dialer Watch會監控某些特定路由，如果無法到達這些網路，Dialer Watch會啟動輔助鏈路。有關撥號器監視的詳細資訊，請參閱使用BRI和撥號器監視配置DDR備份文檔。

浮動靜態路由的管理距離大於動態路由的管理距離。可以在靜態路由上配置管理距離，以便靜態路由比動態路由更不可取；因此，當動態路由可用時，不使用靜態路由。但是，如果動態路由丟失，則靜態路由可以接管，流量可以通過此備用路由傳送。有關如何使用浮動靜態路由配置備份的示例，請參閱為幀中繼配置ISDN備份文檔。

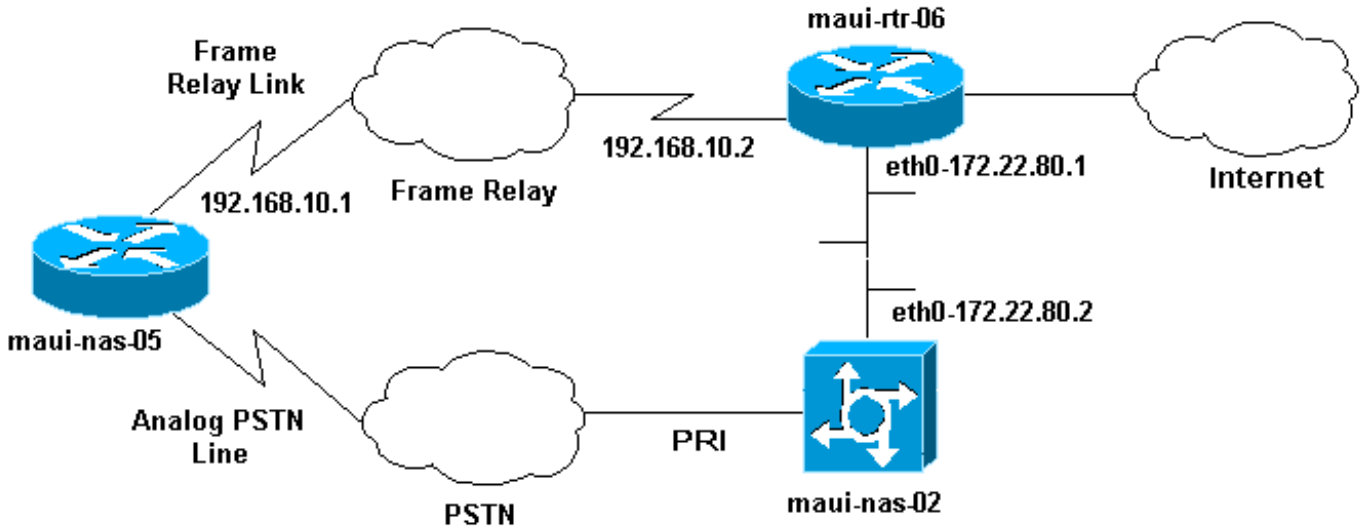
設計撥號備份方案時，切記要考慮各種因素，例如備份鏈路上的流量模式、可能失敗的鏈路數以及在最壞情況下中心站點上可用的埠數。

設定

本節提供用於設定本文件中所述功能的資訊。

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。

注意：本文檔中的配置基於在Cisco 3640和AS5200網路接入伺服器上運行的Cisco IOS軟體版本12.0(7)T。Cisco 3640有一個NM-8AM模擬數據機網路模組卡，該卡允許路由器在不使用外部數據機的情況下發出最多八個傳出模擬呼叫。

AS5200已配置為常規接入伺服器，能夠支援ISDN和非同步撥號使用者以及備份連線。

maui-rtr-06(Cisco 7206)的配置與撥號備份方案無關。Cisco 7206僅用於終止傳入WAN鏈路。無需配置來演示非同步備份。

- maui-nas-05（思科3640）
- maui-nas-02（思科AS5200）

maui-nas-05（思科3640）

```
Current configuration:
!
version 12.1
service timestamps debug datetime msec localtime show-
timezone
service timestamps log datetime msec localtime show-
timezone
service password-encryption
!
hostname maui-nas-05
!
enable secret <deleted>
!
username maui-nas-02 password <deleted>
 !--- username and password of the remote router for !--
- Challenge Handshake Authentication Protocol (CHAP)
authenticationip subnet-zero no ip domain-lookup !
interface Loopback0 ip address 172.22.63.5
255.255.255.255 ! interface Loopback1 ip address
172.22.69.254 255.255.255.0 ! interface Ethernet0/0 no
ip address shutdown ! interface Ethernet0/1 ip address
172.22.95.1 255.255.255.0 ! interface Serial3/0 !---
Frame Relay interface no ip address encapsulation frame-
```

```
relay frame-relay lmi-type cisco ! interface Serial3/0.1
point-to-point !--- Frame Relay subinterface backup
delay 5 10 !--- Enable backup interface 5 seconds after
subinterface is down !--- Disable dialer interface 10
seconds after subinterface comes back up backup
interface Dialer1 !--- Assigns dialer 1 as backup
interface ip address 192.168.10.1 255.255.255.252 frame-
relay interface-dlci 46 ! interface Async33 !--- Async
Interface set aside for dial backup no ip address
encapsulation ppp !--- Set PPP as encapsulation
mechanism for interface dialer in-band !--- Enable DDR
on interface dialer pool-member 2 !--- Assign async
interface to dialer pool 2 async default routing !---
Allows interface to pass routing updates over an async
line no fair-queue no cdp enable ! interface Dialer1 ip
unnumbered Loopback1 !--- Use IP address of Loopback 1
interface for Dialer Interface encapsulation ppp !---
Set PPP as encapsulation mechanism for interface dialer
pool 2 !--- Assign dialer interface to dialer pool 2
dialer idle-timeout 300 !--- Set idle time in seconds
before call is disconnected dialer string 10001 !---
Specify telephone number to be dialed (PRI on maui-nas-
03) dialer hold-queue 50 !--- Number of interesting
packets to hold in queue until !--- modem connection is
established dialer-group 1 !--- Assign dialer interface
to use dialer-list 1 to !--- determine interesting
traffic no peer default ip address !--- Disable peer
default IP address assignment to dialer interface no cdp
enable ppp authentication chap !--- Enforce CHAP
authentication on dialer interface ppp chap hostname
maui-backup !--- Use maui-backup for CHAP hostname
instead of maui-nas-05 !--- This username and password
must be configured on the AS5200 ppp chap password
<deleted> !--- Create CHAP password for user Maui-backup
! router ospf 1 network 172.22.0.0 0.0.255.255 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 !---
Permit IP on dialer group 1 as interesting packets !
line con 0 transport input none line 33 !--- Physical
interface to be used for dialing !--- Matches with
interface Async 33 configured above script dialer mica.*
!--- Assign default chat script for mica modems to line
modem InOut transport input all line 34 40 modem InOut
transport input all line aux 0 line vty 0 4 login ! end
```

maui-nas-02（思科AS5200）

```
Current configuration:
!
version 12.0
service timestamps debug datetime msec localtime show-
timezone
service timestamps log datetime msec localtime show-
timezone
service password-encryption
!
hostname maui-nas-02
!
no logging console guaranteed
enable secret <deleted>
!
username maui-backup password <password>
 !--- username and password used by dialin client !---
```

```
(configured on interface dialer 1 on the Cisco 3640)spe
2/0 2/3 firmware location
system:/ucode/mica_port_firmware ! resource-pool disable
! ip subnet-zero no ip domain-lookup ! isdn switch-type
primary-ni ! controller T1 0 !--- PRI used for dialin
users framing esf clock source line primary linecode
b8zs pri-group timeslots 1-24 description "NAS Phone
Number:10001" ! controller T1 1 clock source line
secondary ! ! interface Loopback0 ip address 172.22.87.2
255.255.255.255 no ip directed-broadcast ! interface
Loopback1 !--- Loopback 1 summarizes addresses in the ip
address pool !--- Note that Loopback 1 and the address
pool are in the same subnet ip address 172.22.83.254
255.255.255.0 no ip directed-broadcast ! interface
Ethernet0 ip address 172.22.80.2 255.255.255.0 no ip
directed-broadcast ! interface Serial0:23 !--- D channel
for T1 0 no ip address no ip directed-broadcast isdn
switch-type primary-ni isdn incoming-voice modem !---
This command is required to accept analog calls on the
PRI fair-queue 64 256 0 no cdp enable ! interface Group-
Async1 !--- Group-Async Interface for all dialin
connections !--- Note that this interface does not
distinguish between !--- a backup connection or a
regular dialup connection ip unnumbered Loopback1 !---
Use IP address of Loopback 1 interface for Dialer
Interface no ip directed-broadcast encapsulation ppp !--
- Set PPP as encapsulation mechanism for interface ip
tcp header-compression passive async default routing !--
- Allows interface to pass routing updates over an async
line async mode interactive !--- Enable interactive mode
on async interface peer default ip address pool default
!--- Assign IP addresses for incoming calls from default
address pool no fair-queue no cdp enable ppp max-bad-
auth 3 ppp authentication chap !--- Use CHAP
authentication group-range 1 24 ! router ospf 1 network
172.22.0.0 0.0.255.255 area 0 ! ip local pool default
172.22.83.2 172.22.83.254 !--- IP address pool for
dialin connection ip default-gateway 172.22.80.1 ip http
server ip classless ! ! line con 0 transport input none
line 1 24 exec-timeout 0 0 autoselect during-login
autoselect ppp absolute-timeout 240 refuse-message
^CCCCCCC!!! All lines are busy, try again later ###^C
modem InOut international transport preferred none
transport input telnet transport output telnet line aux
0 line vty 0 4 password <deleted> login ! ntp clock-
period 17180069 ntp server 172.22.255.1 scheduler
interval 3000 end
```

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 caller *userid* detailed** — 顯示詳細的鏈路控制協定(LCP)協商引數。**註**：11.3(5)AA版中的**show caller**命令已新增到Cisco IOS軟體中。如果您的軟體版本不支援**show caller**命令，請使用**show user**命令。
- **show dialer** — 確定是否已進行物理呼叫。
- **show ip route** — 顯示路由表中的所有路由。

- **show ip ospf database** — 顯示與特定裝置的開放最短路徑優先(OSPF)資料庫相關的資訊清單。
- **show ip ospf interface [*interface-name*]** — 顯示與OSPF相關的介面資訊。有關詳細資訊，請參閱show ip ospf interface命令顯示什麼？檔案。
- **show ip ospf neighbor [*interface-name*] [*neighbor-id*] detail** — 按介面顯示OSPF鄰居資訊。有關詳細資訊，請參閱show ip ospf neighbor命令顯示的內容？檔案。
- **show ip protocols** — 顯示活動路由協定進程的引數和當前狀態。有關詳細資訊，請參閱IP Routing Protocol-Independent Commands文檔中的**show ip protocols**資訊。

show輸出示例

以下輸出顯示了幀中繼鏈路處於工作狀態時maui-nas-05的路由表。請注意，串列子介面上顯示OSPF路由。

```
maui-nas-05#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 - ISIS level-1, L2 - ISIS level-2, ia - ISIS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     192.168.10.0/30 is subnetted, 1 subnets
C       192.168.10.0 is directly connected, Serial3/0.1
     172.22.0.0/16 is variably subnetted, 7 subnets, 2 masks
O       172.22.83.254/32 [110/50] via 192.168.10.2, 00:04:40, Serial3/0.1
O       172.22.255.6/32 [110/49] via 192.168.10.2, 00:04:40, Serial3/0.1
C       172.22.63.5/32 is directly connected, Loopback0
C       172.22.95.0/24 is directly connected, Ethernet0/1
O       172.22.80.0/24 [110/49] via 192.168.10.2, 00:04:40, Serial3/0.1
O       172.22.87.2/32 [110/50] via 192.168.10.2, 00:04:42, Serial3/0.1
C       172.22.69.0/24 is directly connected, Loopback1
```

當主鏈路發生故障時，備用鏈路將啟動，路由表將收斂。請注意，OSPF路由位於撥號器介面上。

```
maui-nas-05#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 - ISIS, L1 - ISIS level-1, L2 - ISIS level-2, IA - ISIS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

     172.22.0.0/16 is variably subnetted, 7 subnets, 2 masks
C       172.22.83.254/32 is directly connected, Dialer1
O       172.22.255.6/32 [110/1796] via 172.22.83.254, 00:00:48, Dialer1
C       172.22.63.5/32 is directly connected, Loopback0
C       172.22.95.0/24 is directly connected, Ethernet0/1
O       172.22.80.0/24 [110/1795] via 172.22.83.254, 00:00:48, Dialer1
```

```
O       172.22.87.2/32 [110/1786] via 172.22.83.254, 00:00:48, Dialer1
C       172.22.69.0/24 is directly connected, Loopback1
```

以下輸出顯示了特定於使用者maui-nas-02（中央站點訪問伺服器）的詳細資訊。

```
maui-nas-05#show caller user maui-nas-02 detail

  User: maui-nas-02, line tty 33, service Async
        Idle time 00:00:09
  Timeouts:            Absolute  Idle      Idle
                                 Session   Exec
      Limits:          -         -         00:10:00
      Disconnect in:   -         -         -
  TTY: Line 33, running PPP on As33
  Location: PPP: 172.22.83.254

  Line: Baud rate (TX/RX) is 9600/9600, no parity, 2 stopbits, 8 databits
  Status: Ready, Active, No Exit Banner, Async Interface Active
          HW PPP Support Active
  Capabilities: Modem Callout, Modem RI is CD, Integrated Modem
  Modem State: Ready

  User: maui-nas-02, line As33, service PPP
        Active time 00:00:35, Idle time 00:00:05
  Timeouts:            Absolute  Idle
      Limits:          -         00:05:00
      Disconnect in:   -         00:04:54
  PPP: LCP Open, CHAP (local <--> local), IPCP
  LCP: -> peer, ACCM, AuthProto, MagicNumber, PCompression, ACCompression
       <- peer, ACCM, AuthProto, MagicNumber, PCompression, ACCompression
 !--- LCP Parameters negotiated NCP: Open IPCP IPCP: <- peer -> peer, Address !--- IPCP
Parameters negotiated Dialer: Connected 00:01:07 to 10001, outbound Idle timer 300 secs, idle 7
secs Type is IN-BAND ASYNC, group Dialer1 Cause: ip (s=172.22.63.5, d=224.0.0.5) !--- Reason for
Dialout IP: Local 172.22.63.5, remote 172.22.83.254 Counts: 23 packets input, 1204 bytes, 0 no
buffer 0 input errors, 0 CRC, 0 frame, 0 overrun 27 packets output, 1498 bytes, 0 underruns 0
output errors, 0 collisions, 0 interface resets
```

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 events** — 顯示有關撥號器介面上接收的資料包的調試資訊。當在介面上啟用按需撥號路由(DDR)時，還會顯示有關任何呼叫原因（稱為撥號原因）的資訊。有關詳細資訊，請參閱Debug命令文檔中的**debug dialer事件**資訊。
- **debug dialer packets** — 顯示有關撥號器介面上接收的資料包的調試資訊。此命令的**no**形式禁用調試輸出。如需詳細資訊，請參閱Debug指令檔案中的**debug dialer packets**資訊。
- **debug ppp** — 顯示實施PPP的網際網路中的流量和交換資訊。此命令的**no**形式禁用調試輸出。**[no] debug ppp {packet |協商 |錯誤 |身份驗證}**如需詳細資訊，請參閱Debug命令檔案中的**debug ppp**資訊。
- **debug isdn event** — 顯示ISDN介面使用者端（路由器上）發生的ISDN事件。顯示Q.931 ISDN事件（呼叫建立和ISDN網路連線斷開）。 此命令的**no**形式禁用調試輸出。

- **debug isdn q931** — 顯示有關本地路由器（使用者端）與網路之間的ISDN網路連線（第3層）的呼叫建立和拆除的資訊。此命令的**no**形式禁用調試輸出。有關詳細資訊，請參閱Debug命令文檔中的**debug isdn q931**資訊。

調試輸出示例

```
maui-nas-05#debug ppp negotiation
PPP protocol negotiation debugging is on
maui-nas-05#debug ppp chap
PPP authentication debugging is on
maui-nas-05#debug modem
Modem control/process activation debugging is on
maui-nas-05#debug backup
Backup events debugging is on
maui-nas-05#debug dialer
Dial on demand events debugging is on
maui-nas-05#show debug
General OS:
  Modem control/process activation debugging is on
Dial on demand:
  Dial on demand events debugging is on
Backup:
  Backup events debugging is on
PPP:
  PPP authentication debugging is on
  PPP protocol negotiation debugging is on
maui-nas-05#
*Mar  1 00:03:49.927 UTC: BACKUP(Serial3/0.1): event = primary went down
*Mar  1 00:03:49.927 UTC: BACKUP(Serial3/0.1): changed state to "waiting to back up"
*Mar  1 00:03:51.859 UTC: %LINK-3-UPDOWN: Interface Serial3/0, changed state to down
*Mar  1 00:03:52.863 UTC: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed
state to down
!--- Primary Link is down *Mar 1 00:03:54.927 UTC: BACKUP(Serial3/0.1): event = timer expired
*Mar 1 00:03:54.927 UTC: BACKUP(Serial3/0.1): secondary interface (Dialer1) made active *Mar 1
00:03:54.927 UTC: BACKUP(Serial3/0.1): changed state to "backup mode" *Mar 1 00:03:55.663 UTC:
As33 DDR: rotor dialout [priority] *Mar 1 00:03:55.663 UTC: As33 DDR: Dialing cause ip
(s=172.22.63.5, d=224.0.0.5) !--- interesting traffic causes dialout *Mar 1 00:03:55.663 UTC:
As33 DDR: Attempting to dial 10001
!--- Number to be dialed (PRI on maui-nas-02) *Mar 1 00:03:55.663 UTC: CHAT33: Attempting async
line dialer script *Mar 1 00:03:55.663 UTC: CHAT33: no matching chat script found for 10001 *Mar
1 00:03:55.663 UTC: CHAT33: Dialing using Modem script: d0efault-d0ials0cript & System script:
none !--- using default modem chat script *Mar 1 00:03:55.663 UTC: CHAT33: process started *Mar
1 00:03:55.663 UTC: CHAT33: Asserting DTR *Mar 1 00:03:55.663 UTC: CHAT33: Chat script d0efault-
d0ials0cript started *Mar 1 00:03:56.927 UTC: %LINK-3-UPDOWN: Interface Dialer1, changed state
to up
!--- Dialer interface is brought up *Mar 1 00:03:56.927 UTC: Di1 LCP: Not allowed on a Dialer
Profile *Mar 1 00:03:56.927 UTC: BACKUP(Dialer1): event = primary came up *Mar 1 00:03:57.271
UTC: Modem 1/0 Mcom: in modem state 'Dialing/Answering' *Mar 1 00:04:06.671 UTC: Modem 1/0 Mcom:
in modem state 'Waiting for Carrier' *Mar 1 00:04:18.135 UTC: Modem 1/0 Mcom: in modem state
'Connected' *Mar 1 00:04:18.543 UTC: Modem 1/0 Mcom: CONNECT at 31200/33600(Tx/Rx), V34, LAPM,
V42bis, Originate *Mar 1 00:04:18.599 UTC: CHAT33: Chat script d0efault-d0ials0cript finished,
status = Success *Mar 1 00:04:18.599 UTC: Modem 1/0 Mcom: switching to PPP mode *Mar 1
00:04:18.599 UTC: TTY33: no timer type 1 to destroy *Mar 1 00:04:18.599 UTC: TTY33: no timer
type 0 to destroy *Mar 1 00:04:20.599 UTC: %LINK-3-UPDOWN: Interface Async33, changed state to
up Dialer statechange to up Async33 !--- Interface Async 33 is changed to state Up *Mar 1
00:04:20.599 UTC: %DIALER-6-BIND: Interface As33 bound to profile Di1 Dialer call has been
placed Async33 *Mar 1 00:04:20.599 UTC: As33 PPP: Treating connection as a callout *Mar 1
00:04:20.599 UTC: As33 PPP: Phase is ESTABLISHING, Active Open *Mar 1 00:04:20.599 UTC: Modem
1/0 Mcom: PPP escape map: TX map = FFFFFFFF, Rx map = 0 !--- LCP Negotiation begins *Mar 1
00:04:20.599 UTC: As33 LCP: O CONFREQ [Closed] id 1 len 25 ... *Mar 1 00:04:22.599 UTC: As33
```

```
LCP: O CONFREQ [REQsent] id 2 Len 25 *... *Mar 1 00:04:22.743 UTC: As33 LCP: I CONFACK [REQsent]
id 2 Len 25 ... *Mar 1 00:04:24.599 UTC: As33 LCP: O CONFREQ [ACKrcvd] id 3 Len 25 ... *Mar 1
00:04:24.787 UTC: As33 LCP: I CONFACK [REQsent] id 3 Len 25 ... *Mar 1 00:04:24.795 UTC: As33
LCP: I CONFREQ [ACKrcvd] id 4 Len 25 ... *Mar 1 00:04:24.795 UTC: As33 LCP: O CONFACK [ACKrcvd]
id 4 Len 25 ... *Mar 1 00:04:24.795 UTC: As33 LCP: State is Open !--- LCP negotiation complete
*Mar 1 00:04:24.795 UTC: Modem 1/0 Mcom: PPP escape map: TX map = A0000, Rx map= 0 *Mar 1
00:04:24.799 UTC: As33 PPP: Phase is AUTHENTICATING, by both *Mar 1 00:04:24.799 UTC: As33 CHAP:
Using alternate hostname Maui-backup
*Mar  1 00:04:24.799 UTC: As33 CHAP: O CHALLENGE id 1 Len 32 from "Maui-backup"
*Mar  1 00:04:24.799 UTC: As33 AUTH: Started process 0 pid 51
*Mar  1 00:04:24.939 UTC: As33 CHAP: I CHALLENGE id 2 Len 32 from "maui-nas-02"
*Mar  1 00:04:24.939 UTC: As33 CHAP: Using alternate hostname Maui-backup
*Mar  1 00:04:24.939 UTC: As33 CHAP: O RESPONSE id 2 Len 32 from "Maui-backup"
*Mar  1 00:04:24.955 UTC: As33 CHAP: I RESPONSE id 1 Len 32 from "maui-nas-02"
*Mar  1 00:04:24.955 UTC: As33 CHAP: O SUCCESS id 1 Len 4
*Mar  1 00:04:25.079 UTC: As33 CHAP: I SUCCESS id 2 Len 4
!--- CHAP Authentication successful *Mar 1 00:04:25.079 UTC: As33 PPP: Phase is UP !--- IPCP
negotiation begins *Mar 1 00:04:25.079 UTC: As33 IPCP: O CONFREQ [Not negotiated] id 1 Len 10
*Mar 1 00:04:25.079 UTC: As33 IPCP: Address 172.22.63.5 (0x0306AC163F05) *Mar 1 00:04:25.087
UTC: As33 IPCP: I CONFREQ [REQsent] id 3 Len 16 *Mar 1 00:04:25.091 UTC: As33 IPCP: CompressType
VJ 15 slots (0x0206002D0F00) *Mar 1 00:04:25.091 UTC: As33 IPCP: Address 172.22.83.254
(0x0306AC1653FE) *Mar 1 00:04:25.091 UTC: As33 IPCP: O CONFREJ [REQsent] id 3 Len 10 *Mar 1
00:04:25.091 UTC: As33 IPCP: CompressType VJ 15 slots (0x0206002D0F00) *Mar 1 00:04:25.215 UTC:
As33 IPCP: I CONFNAK [REQsent] id 1 Len 10 *Mar 1 00:04:25.215 UTC: As33 IPCP:  Address
172.22.83.41 (0x0306AC165329)
!--- IP address assigned to the dialin client from the address pool *Mar 1 00:04:25.215 UTC:
As33 IPCP: O CONFREQ [REQsent] id 2 Len 4 *Mar 1 00:04:25.219 UTC: As33 IPCP: I CONFREQ
[REQsent] id 4 Len 10 *Mar 1 00:04:25.219 UTC: As33 IPCP: Address 172.22.83.254 (0x0306AC1653FE)
*Mar 1 00:04:25.219 UTC: As33 IPCP: O CONFACK [REQsent] id 4 Len 10 *Mar 1 00:04:25.223 UTC:
As33 IPCP: Address 172.22.83.254 (0x0306AC1653FE) *Mar 1 00:04:25.331 UTC: As33 IPCP: I CONFACK
[ACKsent] id 2 Len 4 *Mar 1 00:04:25.331 UTC: As33 IPCP: State is Open
*Mar  1 00:04:25.331 UTC: As33 DDR: dialer protocol up
*Mar  1 00:04:25.331 UTC: As33 DDR: Call connected, 3 packets unqueued, 3 transmitted, 0
discarded
*Mar  1 00:04:25.331 UTC: Di1 IPCP: Install route to 172.22.83.254
!--- Installing route to loopback address of maui-nas-02 *Mar 1 00:04:26.079 UTC: %LINEPROTO-5-
UPDOWN: Line protocol on Interface Async33, changed state to up
!--- Async connection is up
```

相關資訊

- 配置NAS以進行基本撥號訪問
- 操作
- OSPF命令
- 配置OSPF
- 技術支援 - Cisco Systems