

T1背對背連線上的主從關係

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簡介

本文檔提供用於背對背連線並測試與兩台Cisco 3640路由器的T1連線的配置示例。

在此配置示例中，我們將Cisco路由器asj3640-1的時鐘源設定為內部。這意味著服務提供商或電話公司(telco)不提供時鐘，因此T1需要在內部派生時鐘，並且在此情況下是「主時鐘」。我們還需要配置直接連線到此T1的所有其它裝置，以便從主路由器（思科路由器asj3640-1）獲得時鐘，並充當「從路由器」。在我們的設定中，從屬路由器是Cisco路由器asj3640-2。

必要條件

需求

本文件沒有特定需求。

採用元件

本文中的資訊係根據以下軟體和硬體版本：

- asj3640-1上的Cisco IOS®軟體版本11.3(10)T。此處使用NM-1CT1-CSU網路模組。
- asj3640-2上的Cisco IOS軟體版本12.2(1)。此處使用NM-2CT1-CSU網路模組。

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。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

慣例

如需文件慣例的詳細資訊，請參閱[思科技術提示慣例](#)。

背景資訊

計時

在T1網路中，計時是一項重要的功能。計時指的是T1載波的計時和同步。定時在傳輸的資料訊號內編碼，用於確保整個網路的同步。在典型情況下，T1的一側提供主時鐘，而另一側是主時鐘的從時鐘。

設定

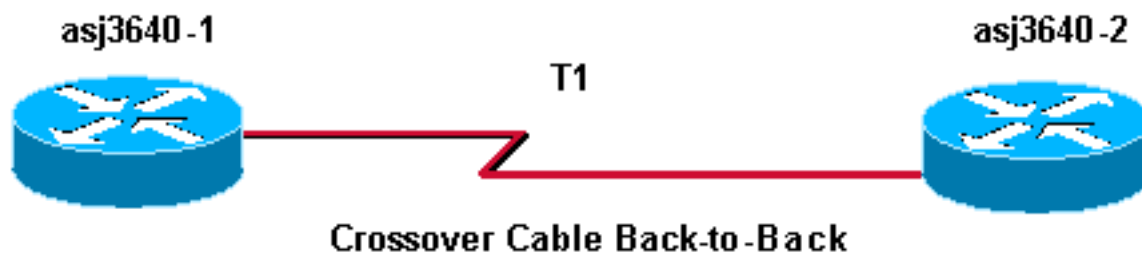
本節提供用於設定本文件中所述功能的資訊。

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](#)([僅限註冊客戶](#))。

網路圖表

本檔案會使用以下網路設定：

圖1 — 網路圖



組態

本檔案會使用以下設定：

- asj3640-1
- asj3640-2

asj3640-1

```
asj3640-1#show running-config
Building configuration...
Current configuration:
!
```

```
version 11.3
!
hostname asj3640-1
!
!
controller T1 1/0
 framing esf
 clock source internal
 linecode b8zs
 channel-group 1 timeslots 1 speed 64
!
!
interface Serial1/0:1
 ip address 10.10.10.1 255.255.255.192
 encapsulation ppp
!
interface Ethernet2/0
 ip address 171.68.186.116 255.255.255.240
!
!
line con 0
 transport input none
line aux 0
line vty 0 4
 exec-timeout 60 0
 login
!
end
```

asj3640-2

```
asj3640-2#show running-config
Building configuration...
!
version 12.2
!
hostname asj3640-2
!
!
controller T1 1/0
 framing esf
 linecode b8zs
 channel-group 1 timeslots 1 speed 64
!
controller T1 1/1
 shutdown
!
interface Serial1/0:1
 ip address 10.10.10.2 255.255.255.192
 encapsulation ppp
!
interface Ethernet2/0
 ip address 171.68.186.117 255.255.255.240
!
!
line con 0
 transport input none
line 1 18
line aux 0
line vty 0 4
 login
!
```

```
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](#)(僅供註冊客戶使用)支援某些show命令，此工具可讓您檢視show命令輸出的分析。

- **show interfaces serial** — 顯示有關串列介面的資訊。
- **show controllers** — 顯示有關物理埠裝置的資訊。
- **show diag** — 顯示環境統計資訊和加電診斷狀態。

以下是在圖1所示的裝置上輸入的這些命令的輸出。此輸出表明網路運行正常。

在路由器asj3640-1上

```
asj3640-1#show interfaces serial 1/0:1
Serial1/0:1 is up, line protocol is up
  Hardware is DSX1
  Internet address is 10.10.10.1/26
  MTU 1500 bytes, BW 64 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation PPP, loopback not set, keepalive set (10 sec)
  LCP Open
  Open: IPCP, CDPCP
  Last input 00:00:02, output 00:00:02, output hang never
  Last clearing of "show interface" counters never
  Input queue: 0/75/2 (size/max/drops); Total output drops: 0
  Queueing strategy: weighted fair
  Output queue: 0/1000/64/0 (size/max total/threshold/drops)
    Conversations 0/1/256 (active/max active/max total)
    Reserved Conversations 0/0 (allocated/max allocated)
  5 minute input rate 0 bits/sec, 0 packets/sec
  5 minute output rate 0 bits/sec, 0 packets/sec
    56408 packets input, 3194092 bytes, 0 no buffer
    Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
    0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
    52431 packets output, 1988028 bytes, 0 underruns
    0 output errors, 0 collisions, 0 interface resets
    0 output buffer failures, 0 output buffers swapped out
    0 carrier transitions
  Timeslot(s) Used:1, Transmitter delay is 0 flags

asj3640-1#show controllers t1
T1 1/0 is up.
  T1 with CSU interface.
  Cable Length is LONG, Rcv gain is 36 db and Tx gain is 0 db.
  No alarms detected.
  Framing is ESF, Line Code is B8ZS, Clock Source is Internal.
  Data in current interval (765 seconds elapsed):
    0 Line Code Violations, 0 Path Code Violations
    0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
    0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs
  Total Data (last 24 hours)
    0 Line Code Violations, 0 Path Code Violations,
    0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins,
    0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs
```

asj3640-1#show diag

Slot 1:

```
CT1 (CSU) port adapter, 1 port
Port adapter is analyzed
Port adapter insertion time unknown
Hardware revision 1.1          Board revision A0
Serial number 5706080         Part number 800-01228-03
Test history 0x0              RMA number 00-00-00
EEPROM format version 1
EEPROM contents (hex):
0x20: 01 26 01 01 00 57 11 60 50 04 CC 03 00 00 00 00
0x30: 50 00 00 00 97 10 11 17 FF FF FF FF FF FF FF FF
```

在路由器asj3640-2上

asj3640-2#show interfaces serial 1/0:1

```
Serial1/0:1 is up, line protocol is up
Hardware is DSX1
Internet address is 10.10.10.2/26
MTU 1500 bytes, BW 64 Kbit, DLY 20000 usec,
    reliability 255/255, txload 1/255, rxload 1/255
Encapsulation PPP, loopback not set
Keepalive set (10 sec)
LCP Open
Open: IPCP, CDPCP
Last input 00:00:03, output 04:23:19, output hang never
Last clearing of "show interface" counters 1d20h
Input queue: 0/75/0/0 (size/max/drops/flushes); Total output drops: 8
Queueing strategy: weighted fair
Output queue: 0/1000/64/0 (size/max total/threshold/drops)
    Conversations 0/1/256 (active/max active/max total)
    Reserved Conversations 0/0 (allocated/max allocated)
    Available Bandwidth 48 kilobits/sec
5 minute input rate 0 bits/sec, 0 packets/sec
5 minute output rate 0 bits/sec, 0 packets/sec
 34363 packets input, 1305984 bytes, 0 no buffer
  Received 0 broadcasts, 0 runts, 0 giants, 0 throttles
  0 input errors, 0 CRC, 0 frame, 0 overrun, 0 ignored, 0 abort
 37049 packets output, 2090260 bytes, 0 underruns
  0 output errors, 0 collisions, 1 interface resets
  0 output buffer failures, 0 output buffers swapped out
  0 carrier transitions
Timeslot(s) Used:1, Transmitter delay is 0 flags
```

asj3640-2#show controllers t1

```
T1 1/0 is up.
Applique type is Channelized T1
Cablelength is long gain36 0db
No alarms detected.
alarm-trigger is not set
Framing is ESF, Line Code is B8ZS, Clock Source is Line.
Data in current interval (557 seconds elapsed):
  0 Line Code Violations, 0 Path Code Violations
  0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
  0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs
Total Data (last 24 hours)
  0 Line Code Violations, 0 Path Code Violations,
  0 Slip Secs, 1 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins,
  0 Errored Secs, 0 Bursty Err Secs, 1 Severely Err Secs, 0 Unavail Secs
```

```
asj3640-2#show diag
```

```
Slot 1:
```

```
CT1 (CSU) Port adapter, 2 ports
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
Hardware revision 1.1          Board revision B0
Serial number    16809907      Part number      800-01229-04
Test history     0x0           RMA number       00-00-00
EEPROM format version 1
EEPROM contents (hex):
 0x20: 01 27 01 01 01 00 7F B3 50 04 CD 04 00 00 00 00
 0x30: 58 00 00 00 99 11 02 00 FF FF FF FF FF FF FF FF
```

[疑難排解](#)

目前尚無適用於此組態的具體疑難排解資訊。

[相關資訊](#)

- [存取技術支援頁面](#)
- [技術支援 - Cisco Systems](#)