

Cisco ISDN Troubleshooting Commands

Integrated Services Digital Network (ISDN) **show** and **debug** IOS commands

>clear interface bri0

(Resets counters on the interface and terminates a connection on the interface)

>show interface bri0 1 2

(Reports the interface encapsulation, txload/rxload queueing type, conversations, and counters)

BRI0 is up, line protocol is up (spoofing)

Hardware is BRI with U interface and external S bus interface

>show controller bri0

(Displays the hardware controller information - **status** of the interface)

>show isdn status

(Reports the status of the interface and a breakdown of each layer - 1, 2 and 3)

First determine if the router can properly communicate with the telco ISDN switch. Once this has been verified, you can proceed to higher level troubleshooting such as issues with dialer interfaces, interesting traffic definitions, PPP failures, so forth and so on.

The current ISDN Switchtype = **basic-ni1**

ISDN BRI0 interface

Layer 1 Status: **shows ACTIVE or DEACTIVATED**

ACTIVE

Layer 2 Status:

TEI = 112, State = **MULTIPLE_FRAME_ESTABLISHED**

TEI = 113, State = **MULTIPLE_FRAME_ESTABLISHED**

Layer 3 Status:

No Active Layer 3 Call(s)

Activated dsl 0 CCBs = 0

Total Allocated ISDN CCBs = 0

>show dialer

(Reports information regarding the DDR connection, including the number dialed, the connection, the idle timers that control the duration of a DDR connection, and calls - success / fail)

Dial String	Successes	Failures	Last called	Last status
4155551212	1	0	00:00:00	successful
4155551213	1	0	00:00:00	successful

0 incoming call(s) have been screened.

BRI0: B-Channel 1

Idle timer (300 secs), Fast idle timer (20 secs)

Wait for carrier (30 secs), Re-enable (15 secs)

BRI0: B-Channel 2

Idle timer (300 secs), Fast idle timer (20 secs)

Wait for carrier (30 secs), Re-enable (15 secs)

Beyond the **TE1 (digital)** and **TE2 (analog)** connection point in the ISDN network is the **NT1** or network termination 1.

These are network-terminating devices.

These are network-terminating devices that terminate subscriber wiring.

In North America, the NT1 is a separate device. In other countries, it is provided by the service provider.

For more information, see the Cisco ISDN Troubleshooting Guide.

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Upon getting the ISDN line provisioned by telco, the only parameters that are required for the router to synchronize with the switch are the switch type and the switch number.

```
isdn switch-type basic-ni1
```

```
!
```

```
interface BRI0
```

```
isdn spid1 41555512120101 5551212
```

```
isdn spid2 41555512130101 5551213
```

DEBUG ISDN Command

(Use the *service timestamp debug* command to timestamp debug messages.)

>debug bri

(Provides information regarding the BRI interface)

>debug isdn q921

(Protocol address)

The D channel

In the first

The router

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