

Troubleshooting the Cisco 2524 and Cisco 2525 Routers

This appendix describes how to troubleshoot the Cisco 2524 and Cisco 2525 routers by referring to the LEDs on the rear panel of the chassis (see Figure 1-2 and Figure 1-3) and on the network processor modules (see Figure 1-4 through Figure 1-9).

The LEDs indicate the current operating condition of your router. You can observe the LEDs, note any fault condition that the router is encountering, and then contact your system administrator or a customer service representative, if necessary. Table B-1 describes the LEDs on the router chassis and WAN modules.

Table B-1 LEDs

| Chassis/Module | LED | State | Description |
|----------------|--|-------------|--|
| Router chassis | Power | On steadily | Power is being supplied to the router. |
| | | Off | Power is not reaching the router. Verify that the power supply is plugged into the wall receptacle, and that the cable from the power supply to the router is connected. |
| | Activity (Ethernet/Token Ring ¹) | Flickering | The Ethernet/Token Ring LAN connection is transmitting and receiving data normally. |
| | | Off | The Ethernet/Token Ring LAN connection is not transmitting or receiving data. Check the Ethernet/Token Ring cable connection. |

| Chassis/Module | LED | State | Description |
|--|--|------------|--|
| Router chassis | Ethernet link (Cisco 2524) ² | On | The router senses the Ethernet 10BaseT link integrity signal, indicating normal operation. |
| | | Off | The router is not sensing the Ethernet 10BaseT link integrity signal. Check the Ethernet 10BaseT cable connection. |
| | In-ring (Cisco 2525) | On | The router has been successfully inserted into the Token Ring, indicating normal operation. |
| | | Off | The router has not been successfully inserted into the Token Ring. Check the Token Ring cable connection. |
| 2-wire switched 56-kbps, 4-wire 56/64-kbps, and fractional T1/T1 WAN DSU/CSU modules | RX | On | Data is being received at the DTE interface. |
| | TX | On | Data is transmitting from the DTE interface. |
| | CD (Carrier) | On | The DSU/CSU in the module is communicating with another DSU/CSU. |
| | Loopback | On | The DSU/CSU is in loopback mode. |
| Serial module | Activity (serial activity) | On | An alarm condition is present. |
| | | Off | |
| ISDN BRI module | Activity (ISDN BRI activity) | Flickering | The serial WAN connection is transmitting and receiving data normally. |
| | | Off | The serial WAN connection is not transmitting or receiving data. Check the serial cable connection. |
| ISDN BRI with integrated NT1 module | ACT (ISDN BRI activity) | Flickering | The ISDN BRI WAN connection is transmitting and receiving data normally. |
| | | Off | The ISDN BRI WAN connection is not transmitting or receiving data. Check the BRI cable connection. |
| | NT1 | Flickering | The ISDN BRI (with integrated NT1) WAN connection is transmitting and receiving data normally. |
| | | On | The ISDN BRI (with integrated NT1) WAN connection is transmitting and receiving data normally. |
| | | | The router detects the ISDN link integrity signal at the U interface ³ and the internal S/T interface ⁴ , indicating that an ISDN connection has been established. |

| Chassis/Module | LED | State | Description |
|-------------------------------------|-----|---------------------------------|--|
| ISDN BRI with integrated NT1 module | | Blinking once per second | The ISDN connection at the U interface is up, and the internal S/T interface is coming up. If this state persists, the ISDN port is either not configured or it is configured incorrectly. |
| | | Blinking eight times per second | The ISDN connection at the U interface is coming up. |
| | | Off | The router is not detecting the ISDN link integrity signal. An ISDN connection has not been established. Check the BRI cable connection. |

1. The Token Ring activity LED is labelled ACT.
2. The Ethernet link LED is for the Ethernet 10BaseT port only; it does not work with the Ethernet AUI port.
3. The U interface is from the wall jack (telco interface) to the NT1 device.
4. The S/T interface is from the ISDN port on the module to the microprocessor.

Running Diagnostic Tests

If you have the fractional T1/T1 module, you can use external test equipment with the monitor jack labeled OUT to monitor signals coming into the RJ-48C port, without interrupting normal data transmission. You can use the monitor jack labeled IN to inject data, which would interrupt normal data transmission.

Getting Help

For information on technical support, onsite service, and exchange and repair services, refer to the *Cisco Information Packet* publication that shipped with your router.

Getting Help
