Troubleshooting

This chapter describes problems that could occur with the Cisco 800 series router hardware, reasons for the problems, and steps to solve the problems. The problems are grouped as follows:

- Problems during first startup
- Problems after first startup
- Problems after router is running

For information on problems that could occur with the software, refer to the *Cisco 800 Series Routers Software Configuration Guide*.

Problems During First Startup

Table 3-1 lists problems that could occur after you turn on the power switch for the first time.

Table 3-1 Problems During First Startup

Symptom	Problem	Solutions
All LEDs, including OK LED, are off.	No power to router.	Perform the following steps in the following order: • Make sure that the power switch is ON. • Make sure that all connections to and from the power supply are securely connected. • Make sure that the power outlet has power. • If the problem continues, the router might have a faulty power supply. Contact your Cisco reseller.

Problems After First Startup

Table 3-2 lists problems that could occur after the router has power for the first time.

Table 3-2 Problems After First Startup

Symptom	Problem	Solutions
No link to an Ethernet device. (On Cisco 801, Cisco 802, and 802 IDSL routers, the LINK LED on the back panel is off. On Cisco 803 and 804 routers, the LKØ, LK1, LK2, or LK3 LED on the front panel is off. On the Cisco 804 IDSL router, the ETHERNET 1, 2, 3, or 4 LED on the front panel is off.)	• A cable-related problem: – Wrong cable. – Improperly connected cable. – Damaged cable.	Perform the following tasks in the following order: • If you supply your own cable, make sure you are using the right type of cable (either straight-through or crossover). Check the cable information in Table 2-2 in Chapter 2, "Installation." • Check specifications in Table B-13 and Table B-14 in Appendix B, "Specifications and Cables," to make sure the cable complies. If it does not, replace it. • To make sure you have cabled the devices correctly, see Table 2-2 in Chapter 2, "Installation." • Make sure the connectors at both ends of the cable are securely seated. • Make sure the cable is not physically damaged. If it is, replace it.
	• Improperly set router HUB/NO HUB or TO HUB/TO PC button or hub equivalent of HUB/NO HUB button	• To make sure you have set buttons correctly, see Table 2-2 in Chapter 2, "Installation."
	• Improperly functioning network interface card (NIC) on server, PC, or workstation.	• Run the NIC diagnostic supplied by the vendor to make sure it is functioning properly. If it is not, replace it.
		• If the problem continues, call your Cisco reseller.
No link to ISDN or IDSL network. (NT1, LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, or CH2 TXD LED is off.)	• If you have a Cisco 801 or 803 router in North America or in parts of Europe, you might need to connect the router to an external NT1 and connect the NT1 to an ISDN wall jack.	• If outside of North America, contact your telephone service provider and ask if you must provide an NT1 and the ISDN U cable that connects the NT1 to the ISDN wall jack. In North America, you must provide an NT1 and the ISDN U cable. Connect NT1 as described in the "Connecting an ISDN Line to Cisco 801 and Cisco 803 Routers" section in Chapter 2, "Installation."

Table 3-2 Problems After First Startup (continued)

Symptom	Problem	Solutions
	• One of the following cable-related problems: – Improperly connected cable. – Damaged cable.	Perform the following tasks in the following order: • To make sure you have cabled the ISDN or IDSL port correctly, see the "Connecting an ISDN Line" or "Connecting an IDSL Line" sections in Chapter 2, "Installation." • Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If it is, replace it with a similar cable.
	• Problem with ISDN or IDSL line.	• Contact your telephone or Internet service provider to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.
No link to digital telephone.	• One of the following cable-related problems: – Improperly connected cable. – Damaged cable.	Perform the following tasks in the following order: • To make sure you have cabled the port correctly, see the "Connecting a Digital Telephone" section in Chapter 2, "Installation." • Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If it is, replace it.
	• Problem with ISDN line.	• Contact your telephone service provider to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.
No link to analog telephone, fax machine, or modem. (PH1 or PH2 LED on Cisco 803 and 804 routers is off.)	• One of the following cable-related problems: – Improperly connected cable. – Damaged cable.	Perform the following tasks in the following order: • To make sure you have cabled the telephone port correctly, see the "Connecting an Analog Telephone, Fax, or Modem" section in Chapter 2, "Installation." • Make sure the connectors at both ends of the cable are securely connected. • Make sure the cable is not physically damaged. If it is, replace it.

Table 3-2 Problems After First Startup (continued)

Symptom	Problem	Solutions
	• Problem with ISDN line.	• Contact your telephone service provider to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.

Problems After Router Is Running

Table 3-3 lists problems that could occur after the router has been up and running for a while.

Table 3-3 Problems After Router Is Running

Symptom	Problem	Solutions
Problems with Ethernet link. (On Cisco 801, Cisco 802, and Cisco 802 IDSL routers, the LINK LED on the back panel blinks. On Cisco 803 and 804 routers, the LKØ, LK1, LK2, or LK3 LED on the front panel blinks. On the Cisco 804 IDSL router, the ETHERNET 1, 2, 3, or 4 LED on the front panel blinks.)	• One of the following cable-related problems: – Disconnected cable. – Damaged cable.	Perform the following tasks in the following order: • Make sure the connectors at both ends of the cable are securely connected. • Make sure the cable is not physically damaged. If it is, replace it.
	• Improperly functioning NIC on server, PC, or workstation.	• Run the NIC diagnostic supplied by the vendor to make sure it is functioning properly. If it is not, replace it.
		• If the problem continues, call your Cisco reseller.
Connection to an Ethernet device is intermittent or lost. (On Cisco 801, 802, and 802 IDSL routers, the LINK LED on the back panel is off. On Cisco 803 and 804 routers, the LKØ, LK1, LK2, or LK3 LED on the front panel is off. On the Cisco 804 IDSL router, the ETHERNET 1, 2, 3, or 4 LED on the front panel is off.)	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of the cable are securely connected. • Make sure the cable is not physically damaged. If it is damaged, replace it.
	• Improperly functioning NIC on server, PC, or workstation.	• Run the NIC diagnostic supplied by the vendor to determine if it is functioning properly. If it is not, replace it.

Table 3-3 Problems After Router Is Running (continued)

Symptom	Problem	Solutions
		• If the problem continues, call your Cisco reseller.
Problems with ISDN or IDSL link. (CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, or CH2 TXD are off.)	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If one is damaged, replace it.
	• Problem with ISDN or IDSL line.	• Contact your telephone or Internet service provider to determine if there is a problem with your line.
Connection to an ISDN or IDSL network is lost. (LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, or CH2 TXD LED is off.)	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If one is damaged, replace it.
	• Problem with ISDN or IDSL line.	• Contact your telephone or Internet service provider to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.
Problems with link to digital or analog telephone. Symptoms include no dial tone, a call that is abruptly disconnected, and an incoming call that does not cause the device to ring.	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If one is damaged, replace it.
	• Problem with ISDN line.	• Contact your telephone company to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.
Connection to digital telephone is lost. (LINE, CH1, CH1 RXD, CH1 TXD, CH2, CH2 RXD, and CH2 TXD LEDs on Cisco 801 and 803 routers are off.)	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of each cable are securely connected. • Make sure each cable is not physically damaged. If one is damaged, replace it.
	• Problem with ISDN line.	• Contact your telephone company to determine if there is a problem with your line.

Table 3-3 Problems After Router Is Running (continued)

Symptom	Problem	Solutions
		• If the problem continues, call your Cisco reseller.
Connection to analog telephone, fax machine, or modem is lost. (PH1 or PH2 LED on Cisco 803 and 804 routers is off.)	• A cable-related problem: – Disconnected cable. – Damaged cable.	• Make sure the connectors at both ends of the cable are securely connected. • Make sure the cable is not physically damaged. If it is damaged, replace it.
	• Problem with ISDN line.	• Contact your telephone company to determine if there is a problem with your line.
		• If the problem continues, call your Cisco reseller.

When Contacting Your Cisco Reseller

Some of the solutions instruct you to contact your Cisco reseller. Before contacting your reseller, have the following information ready:

- Router model and serial number (see the back panel of the router)
- Maintenance agreement or warranty information
- Date you received your router
- Brief description of the problem
- Brief description of the steps you have taken to solve the problem