



Cisco 820 Series and SOHO Series Routers Cabling and Setup Quick Start Guide

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Streamlined Installation: Try These Steps First!

This router is configured for the most common type of installation. To set up the router quickly, try performing the following steps. If you cannot complete a step, or if you want more information at any point, skip to the [“1: Connect the Router to a PC” section on page 3](#), and complete the steps described in the other sections of this Quick Start Guide.

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- Step 1** Cable the router. Connect your PCs to the router, and connect the router to a DSL line.
 - Step 2** Connect the power. Connect the AC adapter to the router, and plug the AC adapter into a wall socket.
 - Step 3** Start, or restart, a PC that is connected to the router.
 - Step 4** Start a web browser on the PC (Netscape version 3.0 to 4.7, or Internet Explorer version 4.0 or later,) and enter the URL **http://10.10.10.1**. The home page of the router should appear after 1 or 2 minutes.
 - Step 5** If you have no special configuration requirements, click the **Router Setup** link on the home page, and then click **Quick Setup**. (This may appear as **Easy Setup** on some models.)
 - Step 6** Enter the user name and password provided to you by your Internet service provider. Check the **Test Connection** box, and click **Apply**. (If no **Test Connection** box is present, click the **Test Connection** link after clicking **Apply**.)
 - Step 7** Click the **Router Password** link on the home page and set a password for the router.
 - Step 8** Select **Start/Run**, and type **windowsipcfg** in the Open field of the Run window. When the IP Config window appears, click **Release**. Then click **Renew** to release and renew the PC's IP address. Alternatively, enter **ipconfig /release** to release the PC's IP address, and then enter **ipconfig /renew** to renew the IP address of the PC.
 - Step 9** Open a web browser on the PC, and connect to a website. If you connected to a website, you have successfully completed the installation.
 - Step 10** If you could not connect to a website, see the [“1: Connect the Router to a PC” section on page 3](#), and complete the steps described in the other sections of this Quick Start Guide.
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This document describes the basic process of cabling and configuring the Cisco 800 and SOHO series routers.

Parts List

The shipment of your Cisco router includes the following items:

- One Cisco 827, 827H, 827-4V, or 828 router, or one SOHO 77, 77H, or 78 router
- One yellow Ethernet cable
- One lavender ADSL cable
- One light blue console cable
- One black power supply
- One black power supply cord
- One Cisco 800 and SOHO Series Product Documentation

If any of the items is missing or damaged, contact your customer service representative.

1: Connect the Router to a PC

Follow the steps shown in [Figure 1 on page 3](#) to connect the router to a PC with an Ethernet network interface card (NIC) installed. [Figure 1](#) shows portions of two router back panels. Refer to the back panel that is similar to the back panel of the router that you are installing.

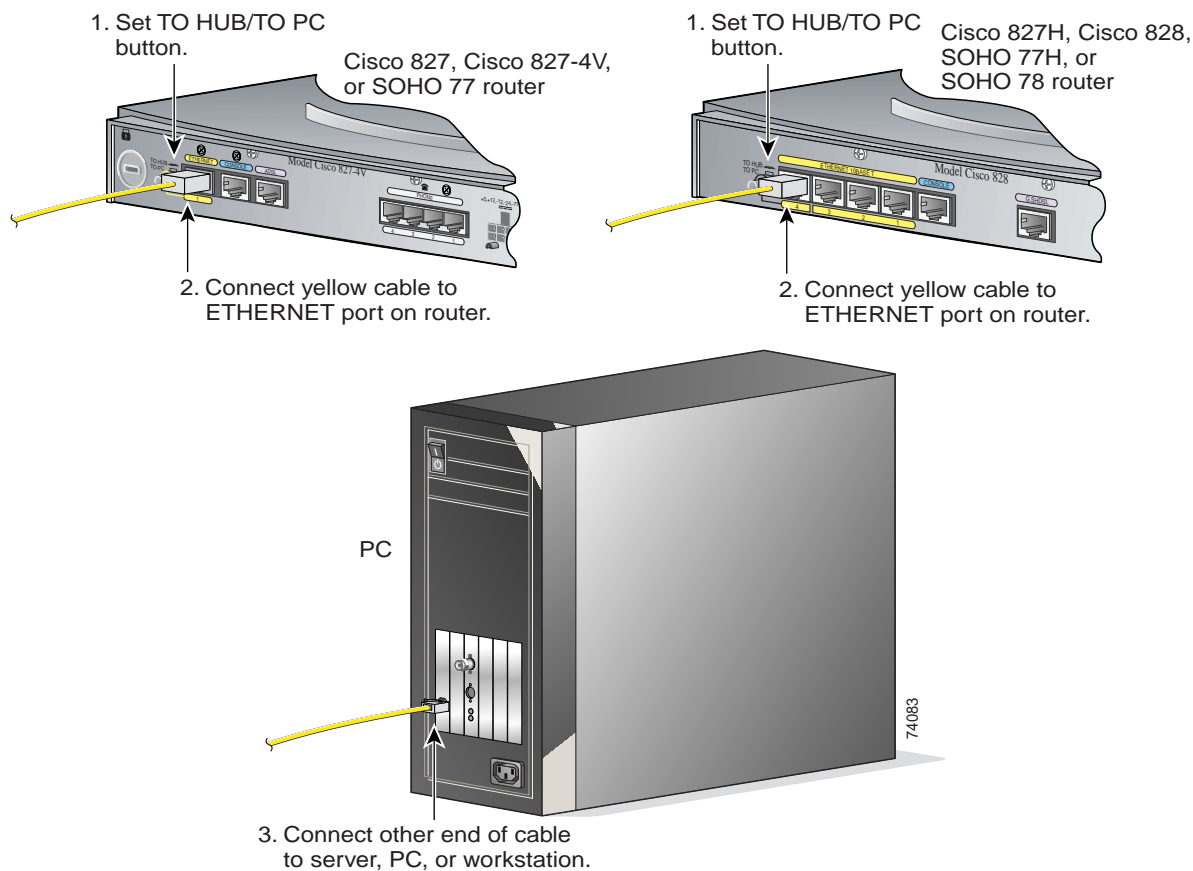


Note

Verify that the TO HUB/TO PC switch on the left side of the back panel has been set to the TO PC position (out). If the button is in, press it to set it to the out position. You will know that the position is correct if the LED for this port on the front of the router comes on after you have finished installing the router and the PCs have been turned on.

To connect additional computers to Cisco 827H, Cisco 828, or SOHO 78 routers, obtain standard Ethernet cables, and attach them to the router via Ethernet ports 1, 2, and 3.

Figure 1 Connecting the Router to a PC



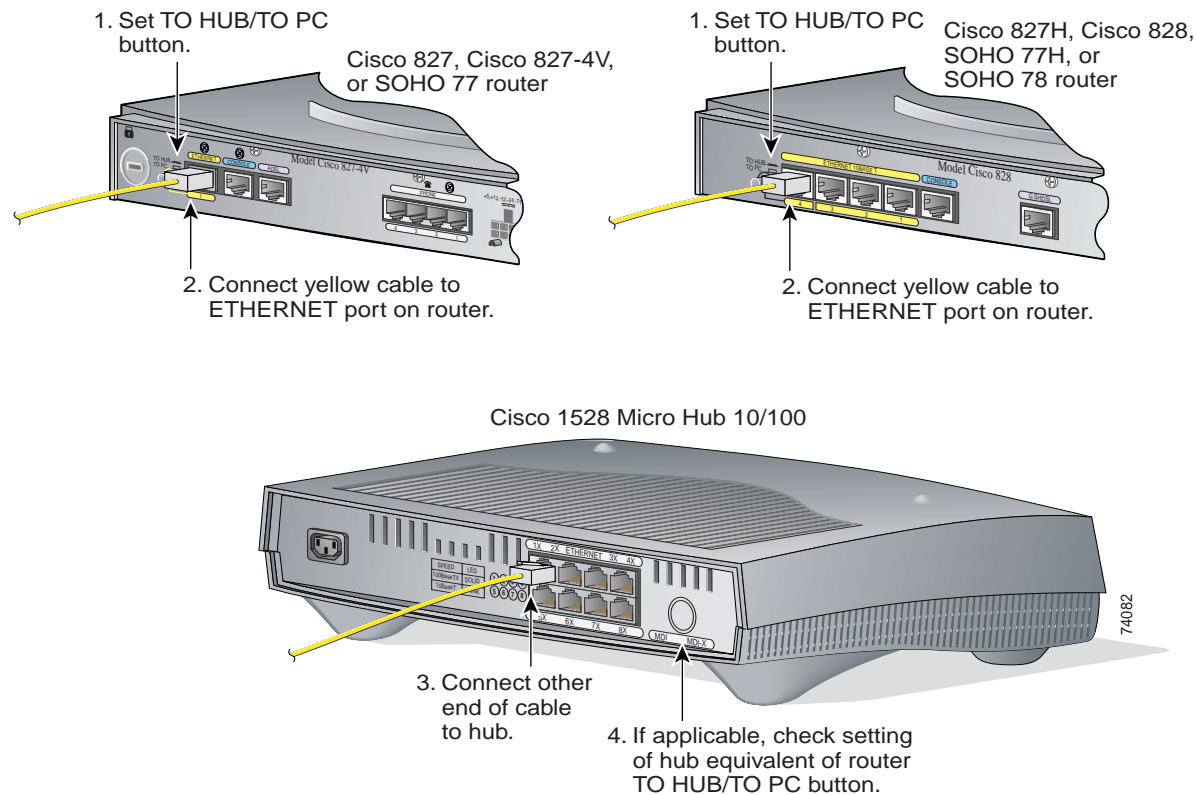
1	Set TO HUB/TO PC button for Cisco 827, 827-4V, or SOHO 77 router.	3	Connect yellow cable to Ethernet port on router.
2	Set TO HUB/TO PC button for Cisco 827H, 828, SOHO 77H or SOHO 78 router.	4	Connect other end of cable to server, PC, or workstation.

See the “3: Connect a Digital Subscriber Line” section on page 5 to complete the next step.

2: Connect the Router to a Hub (Optional)

If you have PCs connected to a hub, follow the steps shown in Figure 2 on page 4 to connect the router to a hub. Figure 2 shows portions of two router back panels. Refer to the back panel that is similar to the back panel of the router that you are installing.

Figure 2 Connecting the Router to a Hub



1	Set TO HUB/TO PC button for Cisco 827, 827-4V, or SOHO 77 router.	4	Cisco 1528 Micro Hub 10/100
2	Set TO HUB/TO PC button for Cisco 827H, 828, SOHO 77H or SOHO 78 router.	5	Connect other end of cable to hub.
3	Connect yellow cable to Ethernet port on router.	6	If applicable, check settings of hub equivalent of router TO HUB/TO PC button.

Verify that the TO HUB/TO PC switch on the left side of the back panel has been set to the TO HUB position (in). If the button is out, press it to set it to the in position. You will know that the position is correct if the LED for this port on the front of the router lights after the router and the PCs have been turned on.

**Note**

You must use a crossover cable to connect a hub to an Ethernet port other than the ETHERNET 4 port on Cisco 827H, Cisco 828, SOHO 77H or SOHO 78 routers. Crossover cables must be purchased separately.

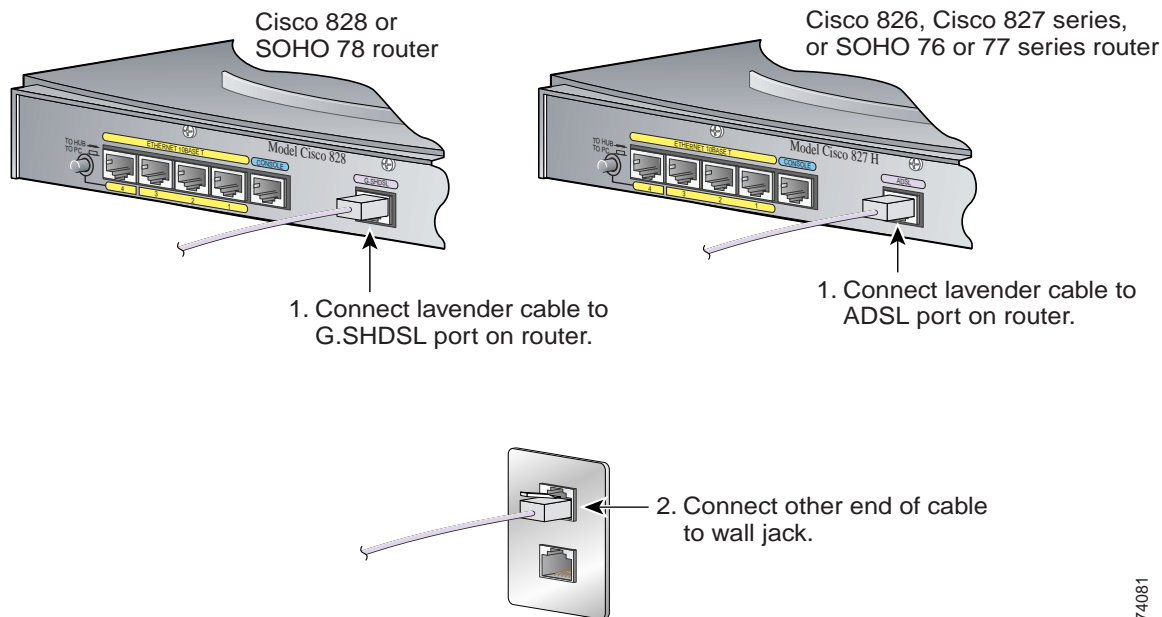
3: Connect a Digital Subscriber Line

Follow the steps in [Figure 3](#) to connect an asymmetric digital subscriber line (ADSL) or G.SHDSL line to the xDSL port on your router. [Figure 3](#) shows back panels for ADSL and for G.SHDSL routers. Refer to the back panel that is similar to the back panel of the router that you are installing.

**Note**

The instructions in [Figure 3](#) are for a straight-through ADSL cable, but they also apply if you are using a crossover cable to connect your ADSL line. If you have microfilters or do not have the phone service on the same line, use the lavender CAB-ADSL-RJ11 cable. If you have a splitter installed, use the lavender CAB-ADSL-RJ11X cable with the blue stripe.

Figure 3 Connecting the Router to an xDSL Line



74081

1	Cisco 828 or SOHO 78 router	4	Connect lavender cable to ADSL port on router.
2	Cisco 826, Cisco 827 series, or SOHO 76 or 77 series router	5	Connect other end of cable to wall jack.
3	Connect lavender cable to G.SHDSL port on router.	6	

4: Connect a Cisco 827-4V Router to a Phone or Fax

If you have a Cisco 827-4V router, you can connect analog telephones or fax machines to your router. Use the cables provided with these devices.

The gray PHONE 1, 2, 3, and 4 ports are RJ-11 connectors. If you are outside North America, you must buy and attach adapters that allow telephones or faxes to be connected to the RJ-11 connectors. In some countries, these adapters need additional electronics to convert the telephones or faxes to work properly with the router phone ports. For example, in the United Kingdom, you must buy an adapter that also provides a *master socket*, which causes incoming calls to ring the connected devices. For information on recommended master sockets, see the *Cisco 827 and SOHO 77 Routers Hardware Installation Guide*.

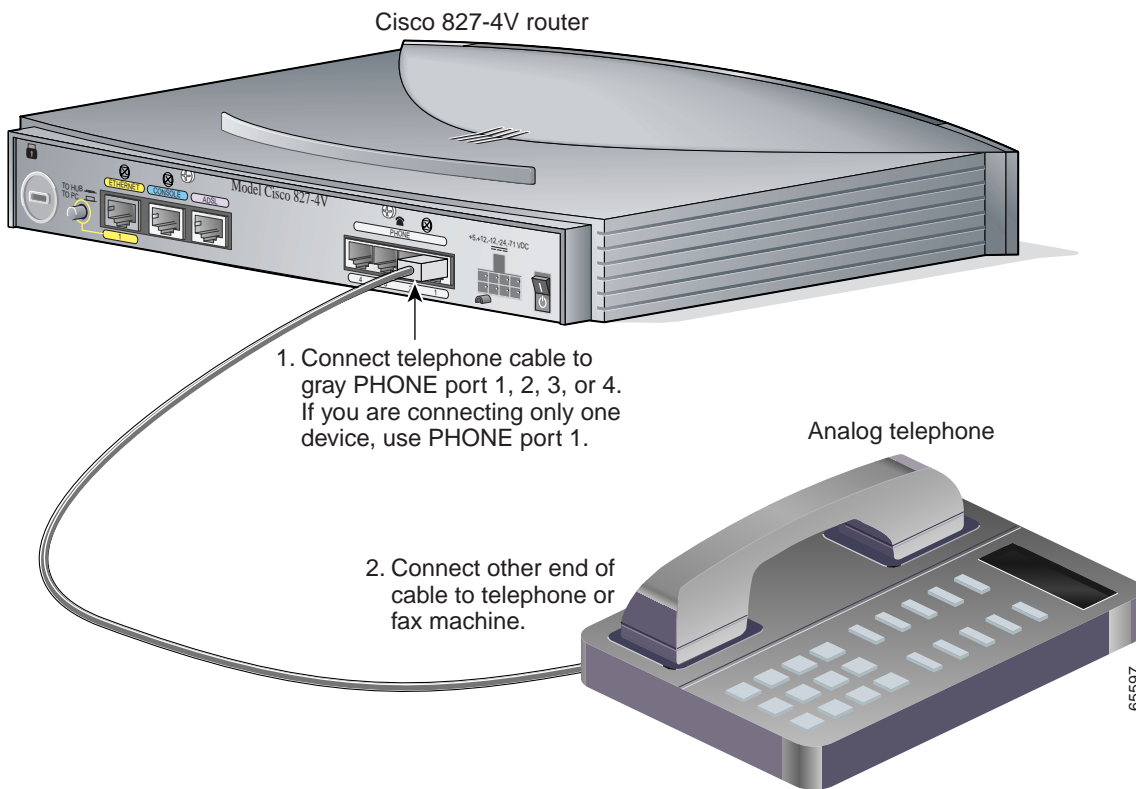
Follow the steps in [Figure 4 on page 6](#) to connect a telephone or a fax machine to a Cisco 827-4V router.



Caution

Do not connect the router telephone ports to the telephone wall jack. These ports are not meant for direct connection to the public network. This connection can damage your router.

Figure 4 Connecting a Telephone to a Cisco 827-4V Router



1	Cisco 827-4V router	3	Analog telephone
2	Connect telephone cable to gray PHONE port 1, 2, 3, or 4. If you are connecting only one device, use PHONE port 1.	4	Connect other end of cable to telephone or fax machine.

5: Connect the Power and Turn On the Router

Follow the steps in [Figure 5 on page 7](#) to connect an AC adapter to the Cisco router and turn it on. ([Figure 5](#) shows a Cisco 827-4V router, but the process applies to all Cisco 820-series and SOHO routers.)

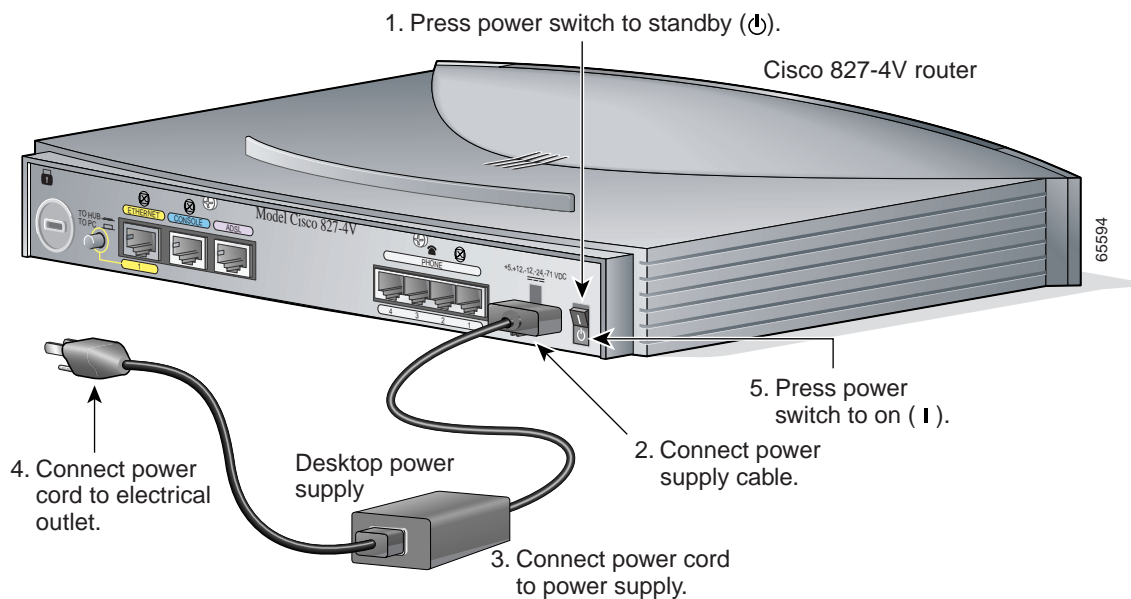


Caution

Be sure to use the power supply that was supplied with your Cisco router. Power supplies for other Cisco routers will not plug in to the power receptacle on the back panel.

After you turn on the router, the OK LED on the front will turn on. After a minute or two, the xDSL CD LED will turn on. The Ethernet LEDs for the Ethernet ports to which you have connected PCs or hubs will turn on a minute or two after you have turned on the PCs.

Figure 5 Connecting the Power to the Router



1	Press power switch to standby.	4	Desktop power supply
2	Cisco 827-4V router.	5	Connect power cord to electrical outlet.
3	Connect power supply cable.	6	Press power switch to on.
4	Connect power cord to power supply.	7	

6: Check the PC Configuration

Each PC that is connected to the router must be configured to use the Transmission Control Protocol/Internet Protocol (TCP/IP) and to obtain its IP address automatically. Follow these steps to configure each PC that is running Microsoft Windows NT or Microsoft Windows 95 or 98. If the PC is running a different version of Microsoft Windows, refer to the documentation that came with the PC.

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- Step 1** Start the PC, and open the Control Panel.
- Step 2** Click the **Network** icon to display the Network window.
- Step 3** Verify that TCP/IP has been added and associated with the Ethernet adapter. TCP/IP is shown as a cable icon in the Configuration window on Microsoft Windows 95 and 98; and as a cable icon in the Protocol window on Microsoft Windows NT. If the icon is not visible, click **Add**, and add Microsoft TCP/IP.
- Step 4** To verify that the PC is configured to obtain an IP address automatically, click the TCP/IP cable icon, and select the **IP address** tab in the TCP/IP Properties window. If it is unchecked, check **Obtain an IP address from a DHCP server**. The IP address and Subnet mask fields should be grayed out.
- Step 5** To accept all changes and exit this window, click **OK**. Then click **OK** in the Network window.
- Step 6** If you are prompted, click **Yes** to reboot the PC.
-

For more information on how to configure TCP/IP, refer to the *Cisco Router Web Setup Troubleshooting Guide*, which is available on Cisco.com.

7: Configure the Router with Cisco Router Web Setup

The Cisco Router Web Setup (CRWS) software is loaded on the router and should be used to configure it to connect to the Internet. The CRWS software runs on Netscape version 3.0 to 4.7, and on Internet Explorer version 4.0 or later. Follow these steps to start the CRWS software and configure the router:

-
- Step 1** Start, or restart, a PC connected to one of the router Ethernet ports (1, 2, 3, or 4).
- Step 2** Open a web browser. Make sure that the browser is set to work in online mode.
- In Internet Explorer, click the File menu, and verify that the “work offline” option is unchecked.
 - In Netscape, the default selection in the File menu is set to work online.
- Step 3** Type in the following universal resource locator (URL):

http://10.10.10.1

The home page of the router should appear after one or two minutes.



Tip

If the CRWS home page does not appear when you enter the URL **http://10.10.10.1**, test the connection between the PC and the router by doing the following:

1. Check that the OK LED on the router is on, and check the cable connection between the router and the PC. Be sure that the TO HUB/TO PC button is in the correct position. The position is correct if the LED for the port on the front of the router is on.
2. If the CRWS home page still does not appear, verify that the web browser’s “work offline” option is disabled.

3. If the web page still does not appear, verify that the PC is configured to automatically receive an IP address. Follow the instructions in [Step 4](#) in section “[6: Check the PC Configuration](#).” If you need more information refer to the *Cisco Router Web Setup Troubleshooting Guide*, which is available on Cisco.com.
4. If the PC is configured to automatically receive an IP address, but the web page still does not appear, select **Start/Run**, type **winipcfg** in the Run window, and examine the address in the IP address field. The address should be in the format 10.10.10.X, in which X is a number that is 2 or greater; for example, 10.10.10.2 or 10.10.10.3. If the IP address is not in this format, verify that an Ethernet adapter name is visible in the Adapter field. If it is not, return to [Step 3](#) in section “[6: Check the PC Configuration](#),” add TCP to the list of protocols. Then return to section “[7: Configure the Router with Cisco Router Web Setup](#),” and complete the procedure.

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- Step 4** If you have no special configuration requirements, click the **Router Setup** link on the home page, and then click **Quick Setup**. (This may appear as **Easy Setup** on some models.) Then, enter the user name and password provided to you by your Internet service provider, and click **Apply**.
- Step 5** If you need to configure special features such as Network Address Translation (NAT), click the appropriate links on the home page, and complete the configuration screens.
- Step 6** Click the **Password** link on the home page, and set a password for the router.
- Step 7** Click the **Test Connection** link on the home page, and allow the connection to be tested.
- Step 8** Select **Start/Run**, and type **winipcfg** in the Open field of the Run window. When the IP Config window appears, click **Release**, and then click **Renew** to release and renew the PC's IP address.
- Alternatively, open a DOS window, and enter **ipconfig /release** to release the PC's IP address. Then enter **ipconfig /renew** to renew the IP address of the PC.
- Step 9** Open a web browser on the PC, and connect to a website.
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8: Congratulations! You're Done!

If you were able to connect to a website, you have completed the cabling and setup of your router, and you can continue to use it to access the Internet.

If you need to configure more features, click the CRWS link for the feature you need to configure, and enter configuration values for the router.

Related Documentation

For more information, refer to the following publications:

- *Cisco 827 and SOHO 77 Routers Hardware Installation Guide*—Provides detailed cabling and hardware information for the Cisco 827 and SOHO 77 routers.
- *Cisco 827 Routers Software Configuration Guide*—Provides detailed configuration instructions for the Cisco 827 and SOHO 77 routers.
- *Cisco 828 Router and SOHO 78 Router Hardware Installation Guide*—Provides detailed cabling and hardware information for the Cisco 828 and SOHO 78 routers.

- *Cisco 828 Router and SOHO 78 Router Software Configuration Guide*—Provides detailed configuration instructions for the Cisco 828 and SOHO 78 routers.
- *Cisco Router Web Setup Troubleshooting Guide*—Provides basic router configuration information.
- *Configuration Note for the Cisco SOHO 77 Router*—Provides software configuration information for the SOHO 77 and 77H routers.

These documents are available on the World Wide Web. You can access the most current Cisco documentation on the World Wide Web at the following sites:

- <http://www.cisco.com>
- <http://www-china.cisco.com>
- <http://www-europe.cisco.com>

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation DVD

Cisco documentation and additional literature are available in a Documentation DVD package, which may have shipped with your product. The Documentation DVD is updated regularly and may be more current than printed documentation. The Documentation DVD package is available as a single unit.

Registered Cisco.com users (Cisco direct customers) can order a Cisco Documentation DVD (product number DOC-DOCDVD=) from the Ordering tool or Cisco Marketplace.

Cisco Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

Cisco Marketplace:

<http://www.cisco.com/go/marketplace/>

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 1 800 553-NETS (6387).

Documentation Feedback

You can send comments about technical documentation to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Cisco Product Security Overview

Cisco provides a free online Security Vulnerability Policy portal at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

From this site, you can perform these tasks:

- Report security vulnerabilities in Cisco products.
- Obtain assistance with security incidents that involve Cisco products.
- Register to receive security information from Cisco.

A current list of security advisories and notices for Cisco products is available at this URL:

<http://www.cisco.com/go/psirt>

If you prefer to see advisories and notices as they are updated in real time, you can access a Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed from this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

Cisco is committed to delivering secure products. We test our products internally before we release them, and we strive to correct all vulnerabilities quickly. If you think that you might have identified a vulnerability in a Cisco product, contact PSIRT:

- Emergencies — security-alert@cisco.com
- Nonemergencies — psirt@cisco.com



Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one that has the most recent creation date in this public key server list:

<http://pgp.mit.edu:11371/pks/lookup?search=psirt%40cisco.com&op=index&exact=on>

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, Cisco Technical Support provides 24-hour-a-day, award-winning technical assistance. The Cisco Technical Support Website on Cisco.com features extensive online support resources. In addition, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not hold a valid Cisco service contract, contact your reseller.

Cisco Technical Support Website

The Cisco Technical Support Website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, 365 days a year, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support Website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>



Note

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support Website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID

or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco TAC engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco TAC engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

<http://www.ciscopress.com>

- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

- World-class networking training is available from Cisco. You can view current offerings at this URL:

<http://www.cisco.com/en/US/learning/index.html>

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