About This Guide

Icon Descriptions

While reading through the User Guide you may see various icons that call attention to specific items. Below is a description of these icons:

- **NOTE:** This check mark indicates that there is a note of interest and is something that you should pay special attention to while using the product.

- **WARNING:** This exclamation point indicates that there is a caution or warning and it is something that could damage your property or product.

- **WEB:** This globe icon indicates a noteworthy website address or e-mail address.

Online Resources

Website addresses in this document are listed without http:// in front of the address because most current web browsers do not require it. If you use an older web browser, you may have to add http:// in front of the web address.

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Chapter 1: Product Overview

Thank you for choosing the Linksys by Cisco EtherFast Cable/DSL Router with 8-Port Switch. The Router lets you access the Internet through its eight switched ports. You can also use the Router to share resources such as computers, printers and files. A variety of security features help to protect your data and your privacy while online. Security features include a Stateful Packet Inspection (SPI) firewall and NAT technology. Configuring the Router is easy using the provided browser-based utility.

Front Panel

- **QoS** (Green) The QoS LED lights up when the QoS feature is active.
- **Power** (Green) The Power LED lights up and will stay on while the Router is powered on. It flashes when the Router goes through its self-diagnostic mode during every boot-up or upgrades its firmware.
- **1-8** (Green) These numbered LEDs correspond with the numbered ports on the Router’s back panel. These LEDs have a dual function. If the LED is continuously lit, the Router is successfully connected to a device through that port. A flashing LED indicates network activity over that port.
- **Internet** (Green) The Internet LED lights up when there is a connection made through the Internet port. A flashing LED indicates network activity over the Internet port.

Back Panel

- **Reset** There are two ways to reset the Router to its factory default settings. Use a straightened paper clip or similar object to press and hold the Reset button for approximately five seconds. You can also restore the defaults from the Administration > Factory Defaults screen of the Router’s web-based utility.
- **Internet** The Internet port is where you will connect your cable or DSL Internet connection.
- **1-8** These Ethernet ports (1, 2, 3, 4, 5, 6, 7, 8) connect the Router to computers on your wired network and other Ethernet network devices.
- **Power** The Power port is where you will connect the power adapter.
Chapter 2: Advanced Configuration

After setting up the Router with the Setup Wizard (located on the CD-ROM), the Router will be ready for use. However, if you’d like to change its advanced settings, use the Router’s web-based utility. This chapter describes each web page of the utility and each page’s key functions. You can access the utility via a web browser on a computer connected to the Router.

The web-based utility has these main tabs: Setup, Security, Applications & Gaming, Administration, and Status. Additional tabs will be available after you click one of the main tabs.

NOTE: When first installing the Router, you should use the Setup Wizard on the Setup CD-ROM. If you want to configure advanced settings, use this chapter to learn about the web-based utility.

How to Access the Web-Based Utility

To access the web-based utility, launch the web browser on your computer, and enter the Router’s default IP address, 192.168.1.1, in the Address field. Then, press Enter.

A login screen will appear. Leave the User Name field blank. The first time you open the web-based utility, use the default password admin. (You can set a new password from the Administration > Management screen.) Click OK to continue.

Setup > Basic Setup

The first screen that appears is the Basic Setup screen. This allows you to change the Router’s general settings.
Static IP

If you are required to use a permanent IP address to connect to the Internet, select Static IP.

IP Address  Enter the Router’s IP address, as seen from the Internet. This is provided by your ISP.

Subnet Mask  Enter the Router’s subnet mask, as seen by users on the Internet (including your ISP). This is provided by your ISP.

Default Gateway  Your ISP will provide you with the IP address of the ISP server.

Static DNS 1-3  Your ISP will provide you with at least one DNS (Domain Name System) server IP address.

PPPoE

Some DSL-based ISPs use PPPoE (Point-to-Point Protocol over Ethernet) to establish Internet connections. If you are connected to the Internet through a DSL line, check with your ISP to see if they use PPPoE. If they do, you will have to enable PPPoE.

User Name and Password  Enter the User Name and Password provided by your ISP.

Service Name  If provided by your ISP, enter the Service Name.

Connect on Demand: Max Idle Time  You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

Keep Alive: Redial Period  If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select Keep Alive. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

RAS

Remote Access Service (RAS) is a service that applies to connections in Singapore only. For users in Singapore, check with Singtel for information on RAS.

User Name and Password  Enter the User Name and Password provided by Singtel.

RAS Plan  Select the type of plan you have.

Connect on Demand: Max Idle Time  You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

Keep Alive: Redial Period  If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select Keep Alive. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default value is 30 seconds.
Point-to-Point Tunneling Protocol (PPTP) is a service that applies to connections in Europe only.

**IP Address**  Enter the Router’s IP address, as seen from the Internet. This is provided by your ISP.

**Subnet Mask**  Enter the Router’s subnet mask, as seen by users on the Internet (including your ISP). This is provided by your ISP.

**Default Gateway**  Your ISP will provide you with the IP address of the ISP server.

**User Name and Password**  Enter the User Name and Password provided by your ISP.

**Connect on Demand: Max Idle Time**  You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field, enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period**  If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select Keep Alive. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default value is 30 seconds.

**Heart Beat Signal**  Heart Beat Signal is a service used in Australia only. If you are using a Heart Beat Signal connection, check with your ISP for the necessary setup information.

L2TP is a service that applies to connections in Israel only.

**Server IP Address**  Enter the IP address of the L2TP server. This is provided by your ISP.

**User Name and Password**  Enter the User Name and Password provided by your ISP.

**Connect on Demand: Max Idle Time**  You can configure the Router to cut the Internet connection after it has been inactive for a specified period of time (Max Idle Time). If your Internet connection has been terminated due to inactivity, Connect on Demand enables the Router to automatically re-establish your connection as soon as you attempt to access the Internet again. To use this option, select Connect on Demand. In the Max Idle Time field,
**Chapter 2**

**Advanced Configuration**

enter the number of minutes you want to have elapsed before your Internet connection terminates. The default Max Idle Time is 5 minutes.

**Keep Alive: Redial Period** If you select this option, the Router will periodically check your Internet connection. If you are disconnected, then the Router will automatically re-establish your connection. To use this option, select Keep Alive. In the Redial Period field, you specify how often you want the Router to check the Internet connection. The default Redial Period is 30 seconds.

**Optional Settings**

Some of these settings may be required by your ISP. Verify with your ISP before making any changes.

**Host Name and Domain Name** These fields allow you to supply a host and domain name for the Router. Some ISPs, usually cable ISPs, require these names as identification. You may have to check with your ISP to see if your broadband Internet service has been configured with a host and domain name. In most cases, leaving these fields blank will work.

**MTU** MTU is the Maximum Transmission Unit. It specifies the largest packet size permitted for Internet transmission. Select Enable if you want to manually enter the largest packet size that is transmitted. To have the Router select the best MTU for your Internet connection, keep the default setting, Disable.

**Size** When Manual is selected in the MTU field, this option is enabled. Leave this value in the 1200 to 1500 range. The default size depends on the Internet Connection Type:

- **DHCP, Static IP, or Telstra:** 1500
- **PPPoE:** 1492
- **PPTP or L2TP:** 1460

**Network Setup**

The Network Setup section changes the settings on the network connected to the Router’s Ethernet ports.

**Router IP**

This presents both the Router’s IP Address and Subnet Mask as seen by your network.

**Network Address Server Settings (DHCP)**

The settings allow you to configure the Router’s Dynamic Host Configuration Protocol (DHCP) server function. The Router can be used as a DHCP server for your network. A DHCP server automatically assigns an IP address to each computer on your network. If you choose to enable the Router’s DHCP server option, make sure there is no other DHCP server on your network.

**Local DHCP Server** DHCP is enabled by factory default. If you already have a DHCP server on your network, or you don’t want a DHCP server, then select Disable (no other DHCP features will be available).

**Start IP Address** Enter a value for the DHCP server to start with when issuing IP addresses. Because the Router’s default IP address is 192.168.1.1, the Start IP Address must be 192.168.1.2 or greater, but smaller than 192.168.1.253. The default is 192.168.1.100.

**Number of Address** Enter the maximum number of computers that you want the DHCP server to assign IP addresses to. This number cannot be greater than 253. The default is 50.

**DHCP Address Range** Displayed here is the range of available IP addresses.

**Client Lease Time** The Client Lease Time is the amount of time a network user will be allowed connection to the Router with their current dynamic IP address. Enter the amount of time, in minutes, that the user will be “leased” this dynamic IP address. After the time is up, the user will be automatically assigned a new dynamic IP address. The default is 0 minutes, which means one day.

**Static DNS 1-3** The Domain Name System (DNS) is how the Internet translates domain or website names into Internet addresses or URLs. Your ISP will provide you with at least one DNS Server IP address. If you wish to use another, enter that IP address in one of these fields. You can enter up to three DNS Server IP addresses here. The Router will use these for quicker access to functioning DNS servers.

**WINS** The Windows Internet Naming Service (WINS) manages each PC’s interaction with the Internet. If you use a WINS server, enter that server’s IP address here. Otherwise, leave this blank.
Chapter 2

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Setup > DDNS**

The Router offers a Dynamic Domain Name System (DDNS) feature. DDNS lets you assign a fixed host and domain name to a dynamic Internet IP address. It is useful when you are hosting your own website, FTP server, or other server behind the Router.

Before you can use this feature, you need to sign up for DDNS service with a DDNS service provider, www.dyndns.org or www.TZO.com. If you do not want to use this feature, keep the default setting, **Disabled**.

**DDNS**

**DDNS Service**

If your DDNS service is provided by DynDNS.org, then select **DynDNS.org** from the drop-down menu. If your DDNS service is provided by TZO, then select **TZO**. The features available on the **DDNS** screen will vary, depending on which DDNS service provider you use.

**DynDNS.org**

- **User Name** Enter the User Name for your DDNS account.
- **Password** Enter the Password for your DDNS account.
- **Host Name** The is the DDNS URL assigned by the DDNS service.
- **Internet IP Address** The Router’s Internet IP address is displayed here. Because it is dynamic, it will change.
- **Status** The status of the DDNS service connection is displayed here.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**TZO.com**

- **E-mail Address, TZO Password Key, and Domain Name** Enter the settings of the account you set up with TZO.
- **Internet IP Address** The Router’s Internet IP address is displayed here. Because it is dynamic, it will change.
- **Status** The status of the DDNS service connection is displayed here.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Setup > MAC Address Clone**

A MAC address is a 12-digit code assigned to a unique piece of hardware for identification. Some ISPs will require you to register a MAC address in order to access the Internet. If you do not wish to re-register the MAC address with your ISP, you may assign the MAC address you have currently registered with your ISP to the Router with the MAC Address Clone feature.

**Setup > MAC Address Clone**
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Advanced Configuration

MAC Clone

**MAC Clone Service** To have the MAC address cloned, select **Enable**.

**MAC Address** Enter the MAC address registered with your ISP here.

**Clone** Click this button to clone the MAC address of the computer you are using.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

Setup > Advanced Routing

This screen is used to set up the Router’s advanced functions. Dynamic Routing automatically adjusts how packets travel on your network. Static Routing sets up a fixed route to another network destination.

Advanced Routing

**NAT**

**Enable/Disable** If this Router is hosting your network’s connection to the Internet, keep the default, **Enable**. If another router exists on your network, select **Disable**. When the NAT setting is disabled, the Dynamic Routing feature can be enabled.

**Dynamic Routing (RIP)**

**Enable/Disable** This feature enables the Router to automatically adjust to physical changes in the network’s layout and exchange routing tables with the other router(s). The Router determines the network packets’ route based on the fewest number of hops between the source and the destination. When the NAT setting is enabled, the Dynamic Routing feature is automatically disabled. When the NAT setting is disabled, this feature is available. Select **Enable** to use the Dynamic Routing feature.

**Transmit RIP Version** To use dynamic routing for transmission of network data, select the protocol you want: **RIP1**, **RIP1-Compatible**, or **RIP2**.

**Receive RIP Version** To use dynamic routing for reception of network data, select the protocol you want, **RIP1** or **RIP2**.

**Static Routing**

A static route is a pre-determined pathway that network information must travel to reach a specific host or network. Enter the information described below to set up a new static route.

**Select Entry** To set up a static route between the Router and another network, select a number from the drop-down list. Click **Delete Entry** to delete a static route.

**Destination IP Address** Enter the IP address of the remote network or host to which you want to assign a static route.

**Subnet Mask** Enter the subnet mask. This determines which portion of a Destination IP Address is the network portion, and which portion is the host portion.

**Gateway** Enter the IP address of the gateway device that allows for contact between the Router and the remote network or host.

**Hop Count** Enter the maximum number of steps between network nodes that data packets will travel. A node is any device on the network, such as a computer, print server, or router.

**Interface** Select the appropriate interface. This tells you whether the Destination IP Address is on the **LAN** (Local Area Network) or the **Internet**.

Click **Show Routing Table** to view the static routes you have already set up.

Routing Table

For each route, the Destination LAN IP address, Subnet Mask, Gateway, Hop Count, and Interface are displayed.

Click **Refresh** to update the information.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.
Security > Filter

The Filter screen is used to set up filters to block specific internal users from accessing the Internet and enhance your network’s security.

Filter IP Address Range

You can create up to five different IP Address Range filters. Users who have filtered IP addresses will not be able to access the Internet at all. If you only want to filter one IP address instead of a range of IP addresses, enter the same value into both fields. For instance, if you wish to filter the PC with the IP address of 192.168.1.5, enter 5 into both fields on one line: 192.168.1.5 ~ 192.168.1.5.

Start Enter the starting IP address of the range you wish to filter.

End Enter the ending IP address of the range you wish to filter.

Filter Port Range

You can create up to five different Port Range filters. Users connected to the Router will no longer be able to access any port number listed here.

Protocol Select the protocol you want to filter, TCP, UDP, or Both.

Start Enter the starting port number of the range you wish to filter.

End Enter the ending port number of the range you wish to filter.

Filter MAC Address

This feature blocks computers with specific MAC addresses from going out to the Internet.

Edit MAC Filter Setting To set the MAC filter, click Edit MAC Filter Setting.

Filter > MAC Access Control Table

Use the MAC Access Control Table to select the MAC addresses you want to filter.

- Filtered MAC Address Select the range of MAC address entries.
- mac 1-10 Enter the MAC address.

Click Apply before closing the window. To cancel changes, click Undo.

Block WAN Requests

Use these features to enhance your network’s security and filter multicasting.

Block Anonymous Internet Requests This feature makes it more difficult for outside users to work their way into your network. This feature is enabled by default. Select Disabled to allow anonymous Internet requests.

Filter Multicast Multicasting allows for multiple transmissions to specific recipients at the same time. If multicasting is permitted, then the Router will allow IP multicast packets to be forwarded to the appropriate computers. Select Enabled to filter multicasting. This feature is disabled by default.

Filter Internet NAT Redirection This feature uses port forwarding to block access to local servers from local networked computers. Select Enabled to filter Internet NAT redirection. This feature is disabled by default.

Filter IDENT (Port 113) This feature keeps port 113 from being scanned by devices outside of your local network. This feature is enabled by default. Select Disabled to allow port 113 to be scanned.
Chapter 2

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Security > VPN Passthrough**

The **VPN Passthrough** screen allows you to enable VPN tunnels using IPSec, PPPoE, or PPTP protocols to pass through the Router’s firewall.

**VPN Passthrough**

**IPSec Passthrough** Internet Protocol Security (IPSec) is a suite of protocols used to implement secure exchange of packets at the IP layer. To allow IPSec tunnels to pass through the Router, keep the default, **Enabled**.

**PPPoE Passthrough** Point-to-Point over Ethernet (PPPoE) Passthrough allows your computer(s) to use the PPPoE client software provided by your ISP. Some ISPs may request that you use this feature on the Router. To allow PPPoE Passthrough, keep the default, **Enabled**.

**PPTP Passthrough** Point-to-Point Tunneling Protocol (PPTP) allows the Point-to-Point Protocol (PPP) to be tunneled through an IP network. To allow PPTP tunnels to pass through the Router, keep the default, **Enabled**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Applications and Gaming > Port Range Forwarding**

The **Port Range Forwarding** screen allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Specialized Internet applications are any applications that use Internet access to perform functions such as videoconferencing or online gaming. Some Internet applications may not require any forwarding.)

When users send these types of requests to your network via the Internet, the Router will forward those requests to the appropriate servers (computers). Before using forwarding, you should assign static IP addresses to the designated servers.

If you need to forward all ports to one computer, click the **DMZ** tab.

**Applications and Gaming > Port Range Forwarding**

**Port Range Forwarding**

To forward a port, enter the information on each line for the criteria required.

**Application** In this field, enter the name you wish to give the application. Each name can be up to 12 characters.

**Start and End** Enter the number or range of port(s) used by the server or Internet applications. Check with the Internet application documentation for more information.

**Protocol** Select the protocol used for this application, either **TCP** or **UDP**, or **Both**.

**IP Address** For each application, enter the IP address of the PC running the specific application.

**Enabled** Select **Enabled** to enable port forwarding for the applications you have defined.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Applications & Gaming > Port Triggering**

The **Port Triggering** screen allows the Router to watch outgoing data for specific port numbers. The IP address of the computer that sends the matching data is remembered by the Router, so that when the requested data returns through the Router, the data is pulled back to the proper computer by way of IP address and port mapping rules.
Port Triggering

**Application** Enter the application name of the trigger.

**Triggered Range**

**Start Port and End Port** For each application, enter the starting and ending port numbers of the triggered port number range. Check with the Internet application documentation for the port number(s) needed.

**Forwarded Range**

**Start Port and End Port** For each application, enter the starting and ending port numbers of the forwarded port number range. Check with the Internet application documentation for the port number(s) needed.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

Applications and Gaming > UPnP Forwarding

The **UPnP Forwarding** screen displays preset application settings as well as options to customize port services for other applications.

**UPnP Forwarding**

**Application**

Ten applications are preset. For custom applications, enter the name of your application in one of the available fields.

The preset applications are among the most widely used Internet applications. They include the following:

**FTP (File Transfer Protocol)** A protocol used to transfer files over a TCP/IP network (Internet, UNIX, etc.). For example, after developing the HTML pages for a website on a local machine, they are typically uploaded to the web server using FTP.

**Telnet** A terminal emulation protocol commonly used on Internet and TCP/IP-based networks. It allows a user at a terminal or computer to log onto a remote device and run a program.

**SMTP (Simple Mail Transfer Protocol)** The standard e-mail protocol on the Internet. It is a TCP/IP protocol that defines the message format and the message transfer agent (MTA), which stores and forwards the mail.

**DNS (Domain Name System)** The way that Internet domain names are located and translated into IP addresses. A domain name is a meaningful and easy-to-remember “handle” for an Internet address.

**TFTP (Trivial File Transfer Protocol)** A version of the TCP/IP FTP protocol that has no directory or password capability.

**Finger** A UNIX command widely used on the Internet to find out information about a particular user, such as a telephone number, whether the user is currently logged on, and the last time the user was logged on. The person
being “fingered” must have placed his or her profile on the system in order for the information to be available. Fingering requires entering the full user@domain address.

**HTTP (HyperText Transport Protocol)** The communications protocol used to connect to servers on the World Wide Web. Its primary function is to establish a connection with a web server and transmit HTML pages to the client web browser.

**POP3 (Post Office Protocol 3)** A standard mail server commonly used on the Internet. It provides a message store that holds incoming e-mail until users log on and download it. POP3 is a simple system with little selectivity. All pending messages and attachments are downloaded at the same time. POP3 uses the SMTP messaging protocol.

**NNTP (Network News Transfer Protocol)** The protocol used to connect to Usenet groups on the Internet. Usenet newsreaders support the NNTP protocol.

**SNMP (Simple Network Management Protocol)** A widely used network monitoring and control protocol. Data is passed from SNMP agents, which are hardware and/or software processes reporting activity in each network device (hub, router, bridge, etc.), to the workstation console used to oversee the network. The agents return information contained in a MIB (Management Information Base), which is a data structure that defines what is obtainable from the device and what can be controlled (turned off, on, etc.).

**Ext. Port.** Enter the number of the external port used by the server in the Ext. Port column. Check with the Internet application documentation for more information.

**TCP or UDP** Select the protocol UDP or TCP for each application. You cannot select both protocols.

**Int. Port** Enter the number of the internal port used by the server in the Int. Port column. Check with the Internet application software documentation for more information.

**IP Address** Enter the IP address of the server that you want the Internet users to be able to access.

**Enabled** Select Enabled to enable the service you have defined.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Applications and Gaming > DMZ**

The DMZ feature allows one network computer to be exposed to the Internet for use of a special-purpose service such as Internet gaming or videoconferencing. DMZ hosting forwards all the ports at the same time to one PC. The Port Range Forwarding feature is more secure because it only opens the ports you want to have opened, while DMZ hosting opens all the ports of one computer, exposing the computer to the Internet.

**DMZ**

Any PC whose port is being forwarded must have its DHCP client function disabled and should have a new static IP address assigned to it because its IP address may change when using the DHCP function.

**DMZ** To disable DMZ hosting, keep the default, **Disable**. To expose one PC, select **Enable**. Then configure the following setting:

**DMZ Host IP Address** Enter the IP address of the computer you want to expose.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to cancel your changes.

**Applications and Gaming > QoS**

Quality of Service (QoS) ensures better service to high-priority types of network traffic, which may involve demanding, real-time applications, such as videoconferencing.
Chapter 2

Advanced Configuration

QoS

Enable/Disable  To limit outgoing bandwidth for the QoS policies in use, select Enable. Otherwise, keep the default, Disable.

Upstream Bandwidth  Select the bandwidth to be used from the drop-down menu. This setting allows you to limit the outgoing bandwidth for the QoS policies in use, so you can control how much bandwidth a particular application is allowed to use.

There are three types of QoS available: Device Priority, Ethernet Port Priority, and Application Priority.

Device Priority

Device Name  Enter the name of your network device.
Priority  Select the appropriate priority level.
MAC Address  Enter the MAC address of the device.

Ethernet Port Priority

Ethernet Port Priority QoS allows you to prioritize performance for four of the Router’s ports, LAN Ports 1-4. It does not require support from your ISP because the prioritized ports are LAN ports going out to your network.

Priority  For each of these ports, select High or Low.

Flow Control  If you want the Router to control the transmission of data between network devices, keep the default, Enable. To disable this feature, select Disable. The Router’s other four ports will be automatically assigned low priority.

Incoming Rate Limit  This feature limits the incoming bandwidth. To use this feature, select 8M, 4M, 2M, 1M, 512K, 256K, or 128K (M stands for Mbps, while K stands for kbps). If you do not want to use this feature, keep the default, Disable.

Application Priority

Application Priority QoS manages information as it is transmitted and received. Depending on the settings of the QoS screen, this feature will assign information a high or low priority for the five preset applications and three additional applications that you specify.

The preset applications are among the most widely used Internet applications. They include the following:

FTP (File Transfer Protocol)  A protocol used to transfer files over a TCP/IP network (Internet, UNIX, etc.). For example, after developing the HTML pages for a website on a local machine, they are typically uploaded to the web server using FTP.

HTTP (HyperText Transport Protocol)  The communications protocol used to connect to servers on the World Wide Web. Its primary function is to establish a connection with a web server and transmit HTML pages to the client web browser.

Telnet  A terminal emulation protocol commonly used on Internet and TCP/IP-based networks. It allows a user at a terminal or computer to log onto a remote device and run a program.

SMTP (Simple Mail Transfer Protocol)  The standard e-mail protocol on the Internet. It is a TCP/IP protocol that defines the message format and the message transfer agent (MTA), which stores and forwards the mail.

POP3 (Post Office Protocol 3)  A standard mail server commonly used on the Internet. It provides a message store that holds incoming e-mail until users log on and download it. POP3 is a simple system with little selectivity. All pending messages and attachments are downloaded at the same time. POP3 uses the SMTP messaging protocol.

Application Name  Enter the name of an application you specify.

Priority  For each application, select High or Low.

Specific Port#  Enter the port number of each application you specify.

Click Save Settings to apply your changes, or click Cancel Changes to cancel your changes.

Administration > Management

The Management screen allows the network’s administrator to manage specific Router functions for access and security.
Chapter 2

Advanced Configuration

Router Access

Local Router Access
To ensure the Router’s security, you will be asked for your password when you access the Router’s web-based utility. The default is admin.

Router Password Enter a new password for the Router.

Re-enter to confirm Enter the password again to confirm.

Remote Router Access

Remote Upgrade If you want to be able to upgrade the Router remotely, from outside the local network, select Enabled. (You must have the Remote Administration feature enabled as well.) Otherwise, keep the default, Disabled.

Remote Administration To permit remote access of the Router, from outside the local network, select Enabled. Otherwise, keep the default, Disabled.

Administration Port Enter the port number that will be open to outside access.

NOTE: When you are in a remote location and wish to manage the Router, enter http://<Internet_IP_address>:port, depending on whether you use HTTP or HTTPS. Enter the Router’s specific Internet IP address in place of <Internet_IP_address>, and enter the Administration Port number in place of the word port.

UPnP

Universal Plug and Play (UPnP) allows Windows Me and XP to automatically configure the Router for various Internet applications, such as gaming and videoconferencing.

Log

Log To disable the Log function, keep the default setting, No. To monitor traffic between the network and the Internet, select Yes. With logging enabled, you can choose to view temporary logs or keep a permanent record using the Logviewer software.

Logviewer IP Address For a permanent record of these logs, the Logviewer software must be used. Download this software from the Linksys website, www.linksys.com. The Logviewer software saves all incoming and outgoing activity in a permanent file on your computer’s hard drive. Enter the fixed IP address of the computer running the Logviewer software. The Router will now send updated logs to that computer.

Incoming Log Click this button to view a temporary log of the Source IP addresses and Destination Port Numbers for all the incoming Internet traffic. Click Refresh to update the log.

Outgoing Log Click this button to view a temporary log of all the URLs and IP addresses of Internet sites that users on your network have accessed. The LAN IP address,
Destination URL/IP, and Service/Port Number for each site are listed. Click Refresh to update the log.

View Log  Click this button to view a log of all activities and to access a drop-down menu of various logs to view.

On the All screen, select the log you wish to view: All, System Log, or Access Log.

- **All**  You see a log of all activities, a combination of the System and Access Logs.
- **System Log**  This log displays a list of cold and warm starts, web login successes and failures, and packet filtering policies.
- **Access Log**  This log shows all data traffic.

  Click Clear to clear a log. Click Refresh to update a log.

Click Save Settings to apply your changes, or click Cancel Changes to cancel your changes.

Administration > Factory Defaults

The Administration > Factory Defaults screen allows you to restore the Router's configuration to its factory default settings.

NOTE: Do not restore the factory defaults unless you are having difficulties with the Router and have exhausted all other troubleshooting measures. Once the Router is reset, you will have to re-enter all of your configuration settings.

**Factory Defaults**

**Restore Factory Defaults**  To reset the Router's settings to the default values, select Yes and click Save Settings. Then follow the on-screen instructions. Any settings you have saved will be lost when the default settings are restored.

**Administration > Firmware Upgrade**

The Firmware Upgrade screen allows you to upgrade the Router’s firmware. Do not upgrade the firmware unless you are experiencing problems with the Router or the new firmware has a feature you want to use.

NOTE: The Router may lose the settings you have customized. Before you upgrade its firmware, write down all of your custom settings. After you upgrade its firmware, you will have to re-enter all of your configuration settings.

**Upgrade Firmware**


**Please select a file to upgrade**  Click Browse and select the extracted firmware upgrade file.

**Upgrade**  After you have selected the appropriate file, click this button, and follow the on-screen instructions.
Chapter 2

**Chapter 2**

**Advanced Configuration**

**Status > Router**

The *Router* screen displays information about the Router and its current settings.

**Information**

- **Firmware Version** This is the version number of the Router's current firmware.
- **MAC Address** This is the Router's MAC address, as seen by your ISP.

**Status**

This section shows the current network information stored in the Router. The information varies depending on the Internet connection type selected on the *Basic Setup* screen.

Click **Refresh** to update the on-screen information.

**Status > Local Network**

The *Local Network* screen displays information about the local, wired network.

**Local Network**

- **Local MAC Address** The MAC address of the Router's local, wired interface is displayed here.
- **IP Address** This shows the Router's IP address, as it appears on your local network.
- **Subnet Mask** This shows the subnet mask of the Router.
- **DHCP Server** The status of the Router's DHCP server function is displayed here.
- **DHCP Clients Table** Click this button to view a list of PCs that are using the Router as a DHCP server.

Click **Refresh** to update the on-screen information.
Appendix A: Troubleshooting

Your computer cannot connect to the Internet.

Follow these instructions until your computer can connect to the Internet:

- Make sure that the Router is powered on. The Power LED should be green and not flashing.
- If the Power LED is flashing, then power off all of your network devices, including the modem, Router, and computers. Then power on each device in the following order:
  1. Cable or DSL modem
  2. Router
  3. Computer
- Check the cable connections. The computer should be connected to one of the ports numbered 1-4 on the Router, and the modem must be connected to the Internet port on the Router.

The modem does not have an Ethernet port.

The modem is a dial-up modem for traditional dial-up service. To use the Router, you need a cable/DSL modem and high-speed Internet connection.

You cannot use the DSL service to connect manually to the Internet.

After you have installed the Router, it will automatically connect to your Internet Service Provider (ISP), so you no longer need to connect manually.

The DSL telephone line does not fit into the Router’s Internet port.

The Router does not replace your modem. You still need your DSL modem in order to use the Router. Connect the telephone line to the DSL modem, insert the setup CD into your computer, and then follow the on-screen instructions.

When you double-click the web browser, you are prompted for a username and password. If you want to get rid of the prompt, follow these instructions.

Launch the web browser and perform the following steps (these steps are specific to Internet Explorer but are similar for other browsers):

1. Select Tools > Internet Options.
2. Click the Connections tab.
3. Select Never dial a connection.
4. Click OK.

The Router does not have a coaxial port for the cable connection.

The Router does not replace your modem. You still need your cable modem in order to use the Router. Connect your cable connection to the cable modem, insert the setup CD into your computer, and then follow the on-screen instructions.

You need to modify the settings on the Router.

Open the web browser (for example, Internet Explorer or Firefox), and enter the Router’s IP address in the address field (the default IP address is 192.168.1.1). When prompted, leave the User name field blank and enter the password to the Router (the default is admin). Click the appropriate tab to change the settings.

WEB: If your questions are not addressed here, refer to the Linksys website, www.linksys.com.
# Appendix B: Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>BEFSR81</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standards</td>
<td>IEEE 802.3 (10BaseT), 802.3u (100BaseTX)</td>
</tr>
</tbody>
</table>
| Ports         | One 10/100 RJ-45 Port for Broadband Modem  
                Eight 10/100 RJ-45 Switched Ports |
| Button        | Reset               |
| Cabling Type  | Ethernet Category 5 |
| LEDs          | Power, QoS, Ethernet, Internet |
| OS Support    | Windows 98SE/Me/2000/XP/Vista |
| Network Protocols | TCP/IP         |

## Environmental

| Dimensions   | 7.31” x 6.06” x 1.89”  
               (186 x 154 x 48 mm) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Weight</td>
<td>12.30 oz. (350 g)</td>
</tr>
<tr>
<td>Power</td>
<td>External, 12V DC, 1A</td>
</tr>
<tr>
<td>Certifications</td>
<td>FCC, CE</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>32 to 104°F (0 to 40°C)</td>
</tr>
<tr>
<td>Storage Temp.</td>
<td>-4 to 158°F (-20 to 70°C)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>10% to 85%, Noncondensing</td>
</tr>
<tr>
<td>Storage Humidity</td>
<td>5% to 90%, Noncondensing</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice.
Appendix C: Warranty Information

Limited Warranty

Linksys warrants this Linksys hardware product against defects in materials and workmanship under normal use for the Warranty Period, which begins on the date of purchase by the original end-user purchaser and lasts for the period specified below:

- One (1) year for new product
- Ninety (90) days for refurbished product

This limited warranty is non-transferable and extends only to the original end-user purchaser. Your exclusive remedy and Linksys’ entire liability under this limited warranty will be for Linksys, at its option, to (a) repair the product with new or refurbished parts, (b) replace the product with a reasonably available equivalent new or refurbished Linksys product, or (c) refund the purchase price of the product less any rebates. Any repaired or replacement products will be warranted for the remainder of the original Warranty Period or thirty (30) days, whichever is longer. All products and parts that are replaced become the property of Linksys.

Exclusions and Limitations

This limited warranty does not apply if: (a) the product assembly seal has been removed or damaged, (b) the product has been altered or modified, except by Linksys, (c) the product damage was caused by use with non-Linksys products, (d) the product has not been installed, operated, repaired, or maintained in accordance with instructions supplied by Linksys, (e) the product has been subjected to abnormal physical or electrical stress, misuse, negligence, or accident, (f) the serial number on the Product has been altered, defaced, or removed, or (g) the product is supplied or licensed for beta, evaluation, testing or demonstration purposes for which Linksys does not charge a purchase price or license fee.

ALL SOFTWARE PROVIDED BY LINKSYS WITH THE PRODUCT, WHETHER FACTORY LOADED ON THE PRODUCT OR CONTAINED ON MEDIA ACCOMPANYING THE PRODUCT, IS PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND. Without limiting the foregoing, Linksys does not warrant that the operation of the product or software will be uninterrupted or error free. Also, due to the continual development of new techniques for intruding upon and attacking networks, Linksys does not warrant that the product, software or any equipment, system or network on which the product or software is used will be free of vulnerability to intrusion or attack. The product may include or be bundled with third party software or service offerings. This limited warranty shall not apply to such third party software or service offerings. This limited warranty does not guarantee any continued availability of a third party’s service for which this product’s use or operation may require.

TO THE EXTENT NOT PROHIBITED BY LAW, ALL IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED TO THE DURATION OF THE WARRANTY PERIOD. ALL OTHER EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF NON-INFRINGEMENT, ARE DISCLAIMED. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary by jurisdiction.

TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL LINKSYS BE LIABLE FOR ANY LOST DATA, REVENUE OR PROFIT, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, REGARDLESS OF THE THEORY OF LIABILITY (INCLUDING NEGLIGENCE), ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE THE PRODUCT (INCLUDING ANY SOFTWARE), EVEN IF LINKSYS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL LINKSYS’ LIABILITY EXCEED THE AMOUNT PAID BY YOU FOR THE PRODUCT. The foregoing limitations will apply even if any warranty or remedy provided under this limited warranty fails of its essential purpose. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Obtaining Warranty Service

If you have a question about your product or experience a problem with it, please go to www.linksys.com/support where you will find a variety of online support tools and information to assist you with your product. If the product proves defective during the Warranty Period, contact Linksys Technical Support for instructions on how to obtain warranty service. The telephone number for Linksys Technical Support in your area can be found in the product User Guide and at www.linksys.com. Have your product serial number and proof of purchase on hand when calling. A DATED PROOF OF ORIGINAL PURCHASE IS REQUIRED TO PROCESS WARRANTY CLAIMS. If you are requested to return your product, you will be given a Return Materials Authorization (RMA) number. You are responsible for properly packaging and shipping your product to Linksys at your cost and risk. You must include the RMA number and a copy of your dated proof of original purchase when returning your product. Products received without a RMA number and dated proof of original purchase will be
rejected. Do not include any other items with the product you are returning to Linksys. Defective product covered by this limited warranty will be repaired or replaced and returned to you without charge. Customers outside of the United States of America and Canada are responsible for all shipping and handling charges, custom duties, VAT and other associated taxes and charges. Repairs or replacements not covered under this limited warranty will be subject to charge at Linksys’ then-current rates.

**Technical Support**

This limited warranty is neither a service nor a support contract. Information about Linksys’ current technical support offerings and policies (including any fees for support services) can be found at: [www.linksys.com/support](http://www.linksys.com/support).

This limited warranty is governed by the laws of the jurisdiction in which the Product was purchased by you.

Please direct all inquiries to: Linksys, P.O. Box 18558, Irvine, CA 92623.
Appendix D: Regulatory Information

FCC Statement

This product has been tested and complies with the specifications for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment or devices
- Connect the equipment to an outlet other than the receiver’s
- Consult a dealer or an experienced radio/TV technician for assistance

Safety Notices

- Caution: To reduce the risk of fire, use only No.26 AWG or larger telecommunication line cord.
- Do not use this product near water, for example, in a wet basement or near a swimming pool.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

WARNING: This product contains lead, known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling.

Industry Canada Statement

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions:

1. This device may not cause interference and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

Avis d’Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Le fonctionnement est soumis aux conditions suivantes :

1. Ce périphérique ne doit pas causer d’interférences;
2. Ce périphérique doit accepter toutes les interférences reçues, y compris celles qui risquent d’entraîner un fonctionnement indésirable.

This document contains important information for users with regards to the proper disposal and recycling of Linksys products. Consumers are required to comply with this notice for all electronic products bearing the following symbol:

### English - Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

### Български (Bulgarian) - Информация относно опазването на околната среда за потребители в Европейския съюз

Европейска директива 2002/96/ЕC изисква уредите, носещи този символ на продукта и/или опаковката му, да не се изхвърлят с несортиран битови отпадъци. Символът обозначава, че изделието трябва да се изхвърля отделно от сметосъбирането на обикновените битови отпадъци. Вашата е отговорността този и другите електрически и електронни уреди да се изхвърлят в предварително определени от държавните или общински органи специализирани пунктове за събиране. Правилното изхвърляне и рециклиране ще помогнат да се предотвратят евентуални вреди за околната среда и здравето на населението последствия. За по-подробна информация относно изхвърлянето на вашите стари уреди се обернете към местните власти, службите за сметосъбиране или магазина, от който сте закупили уреда.

### Чештна (Czech) - Informace o ochraně životního prostředí pro zákazníky v zemích Evropské unie

Evropská směrnice 2002/96/ES zakazuje, aby zařízení označené tímto symbolem na produktu anebo na obalu bylo likvidováno s netříděným komunálním odpadem. Tento symbol udává, že daný produkt musí být likvidován odděleně od běžného komunálního odpadu. Odpovídáte za likvidaci tohoto produktu a dalších elektrických a elektronických zařízení prošifdých vybavení s příslušnými směrnicemi. Správné likvidace a recyklace pomáhá předcházet potenciálním negativům dopadům na životní prostředí a lidské zdraví. Podrobnější informace o likvidaci starého vybavení si laskavě vyžádejte od místních úřadů, podniku zabývajícího se likvidací komunálních odpadů nebo obchodu, kde jste produkt zakoupili.

### Dansk (Danish) - Miljøinformation for kunder i EU


### Deutsch (German) - Umweltinformation für Kunden innerhalb der Europäischen Union

Appendix D

Regulatory Information

EtherFast Cable/DSL Router with 8-Port Switch

Eesti (Estonian) - Keskkonnaalane informatioon
Euroopa Liidus asuvatele klientidele


Español (Spanish) - Información medioambiental para clientes de la Unión Europea

La Directiva 2002/96/CE de la UE exige que los equipos que llevan este símbolo se elijan y se despojen de manera separada de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Français (French) - Informations environnementales pour les clients de l’Union européenne

La directive européenne 2002/96/CE exige que l’équipement contrassegnato con questo simbolo non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. Il proprietario smaltirà i relativi prodotti per i clienti residenti nell’Unione Europea per il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di trattamento dei rifiuti o il negozio nel quale avete acquistato il prodotto.

Italiano (Italian) - Informazioni relative all’ambiente per i clienti residenti nell’Unione Europea

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo siano separate e smaltite da un servizio pubblico o privato adeguate. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. Il proprietario smaltirà i relativi prodotti per i clienti residenti nell’Unione Europea per il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l’ambiente e per la salute dell’essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di trattamento dei rifiuti o il negozio nel quale avete acquistato il prodotto.

Latviešu valoda (Latvian) - Ekoģiskā informācija klientiem Eiropas Savienības jurisdikcijā

Appendix D
Regulatory Information

Lietuškai (Lithuanian) - Aplinkosaugos informacija, skirta Europos Sąjungos vartotojams

EUropos direktīva 2002/96/EC numato, kad įrangos, kuri ir \( \square \) kurios pakuotės yra pažymėta šiuo simboliu (išskirti simbolį), negalima šalinti kartu su nerūšiutomis komunalinėmis atliekomis. Šis simbolis rodo, kad gaminių reikia šalinti atskirai nuo bendro buitinų atliekų saugojimo. Jūs privalate užtikrinti, kad ši įrašą elektros ar elektroninė įranga būtų šalinama per tam tikras nacionalinės ar vietinės valdžios nustatytas atliekų rinkimosios sistemos. Tinkamai šalinti ir perdirbant atliekas, bus išvengta galimos žalos aplinkai ir žmonių sveikatai. Daugiaus informacijos apie įrašų senos įrangos šalinimą galite pateikti vietinės valdžios institucijos, atliekų šalinimo tarnybos ar paveldelės. 

Malti (Maltese) - Informazzjoni Ambjentali ghal Klijenti fl-Unjoni Ewropea


Magyar (Hungarian) - Környezetvédelmi információ az európai uniós vásárlók számára

A 2002/96/EC számú európai uniós irányelv megkívánja, hogy azokat a termékeket, amelyeken, és/vagy amelyek csmagolásán az alábbi címke \( \square \) megjelenik, tilos a többi szelektálatlan lakossági hulladékkal együtt kidobni. A címke azt jelöli, hogy az adott termék kidobásakor a szokványos háztartási hulladékkészletés rendszertől elkülönített eljárást kell alkalmazni. Az Ön felelőssége, hogy ezt, és más elektromos és elektronikus berendezéseit a kormányzati vagy a helyi hatóságok által megadott kitérő hálózatok keresztül számlálja fel. A megfelelő hulladékkedolgozás segít a környezetre és az emberi egészségre potenciálisan ártalmas negatív hatások megelőzésében. Ha elavult berendezéseinek felszámolásához további részletes információra van szüksége, kérjük, lépjen kapcsolatba a helyi hatóságokkal, a hulladékkedolgozás szolgáltattal, vagy azzal üzlettel, ahol a terméket vásárolta.

Nederlands (Dutch) - Milieu-informatie voor klanten in de Europese Unie

De Europese Richtlijn 2002/96/EC schrijft voor dat apparatuur die is voorzien van dit symbool \( \square \) op het product of de verpakking, niet mag worden ingezameld met niet-gescheiden huishoudelijk afval. Dit symbool geeft aan dat het product apart moet worden ingezameld. U bent zelf verantwoordelijk voor de vernietiging van deze en andere elektrische en elektronische apparatuur via de daarvoor door de landelijke of plaatselijke overheid aangewezen inzamelingskanalen. De juiste vernietiging en recycling van deze apparatuur voorkomt mogelijke negatieve gevolgen voor het milieu en de gezondheid. Voor meer informatie over het vernietigen van uw oude apparatuur neemt u contact op met de plaatselijke autoriteiten of afvalverwerkingsdienst, of met de winkel waar u het product hebt aangeschaf.

Norsk (Norwegian) - Miljøinformasjon for kunder i EU


Polski (Polish) - Informacja dla klientów w Unii Europejskiej o przepisach dotyczących ochrony środowiska

Dyrektywa Europejska 2002/96/EC wymaga, aby sprzęt oznaczony symbolem \( \square \) znajdującym się na produkcie i/lub jego opakowaniu nie był wyrzucany razem z innymi niesortowanymi odpadami komunalnymi. Symbol ten wskazuje, że produkt nie powinien być usuwany razem ze zwykłymi odpadami z gospodarstw domowych. Na Państwu spoczywa obowiązek wyrzucania tego i innych urządzeń elektrycznych oraz elektronicznych w punktach odbioru wyznaczonych przez władze krajowe lub lokalne. Pozbywanie się sprzętu we właściwy sposób jest niezbędne. Aby zapobiec potencjalnie negatywnym konsekwencjom dla środowiska i zdrowia ludzkiego. W celu uzyskania szczegółowych informacji o usuwaniu starego sprzętu, prosimy zwrócić się do lokalnych władz, służb ochrony środowiska, w którym produkt został nabyty.
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Română (Romanian) - Informații de mediu pentru clienții din Uniunea Europeană


Slovenčina (Slovak) - Informácie o ochrane životného prostredia pre zákazníkov v Európskej unii

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Suomi (Finnish) - Ympäristöä koskevia tietoja EU-alueen asiakkaille

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Appendix E

Software License Agreement

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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However, linking a “work that uses the Library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a “work that uses the library”. The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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END OF TERMS AND CONDITIONS

END OF SCHEDULE 3

Schedule 4

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The implementation was written so as to conform with Netscape’s SSL.

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