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Thank you for choosing the Linksys E3000 High Performance Wireless-N Router. The Router lets you access the Internet via a wireless connection or through one of its four switched Gigabit Ethernet ports. With the built-in Storage Link, you can easily add gigabytes of storage space onto your network using USB 2.0 hard drives, or plug in a USB flash disk to access your portable data files. The Router’s built-in media server streams music, video and photos from an attached storage device to any UPnP-compatible media adapter or player. A variety of security features help to protect your data and your privacy while you are online. Security features include Wi-Fi Protected Access 2 (WPA2) security which encrypts data on your wireless network, a Stateful Packet Inspection (SPI) firewall to block unwanted access to your Router, and Network Address Translation (NAT) technology, which enhances network protection by allowing your computers to share Internet access through a single, public Internet IP address. (IP stands for Internet Protocol.)

Setup and use of the Router is easy using Cisco Connect, the software that is installed when you run the included CD. Advanced configuration of the Router is available through the provided browser-based utility.

For more wireless bandwidth, the Router can create two simultaneous yet separate Wireless-N networks, one using the 5 GHz band and one using the 2.4 GHz band. For example, use the Wireless-N 2.4 GHz network to surf, e-mail, and print while keeping the less crowded, Wireless-N 5 GHz network free for time-sensitive traffic like music, gaming, and high-definition video. For more information, refer to “Simultaneous Networks” on page 9. The Guest Access features allows you to provide Internet access to guests visiting your home without granting them access to your local network.

Top

1, 2, 3, 4 (Green/Blue) These numbered LEDs, corresponding with the numbered ports on the Router’s back panel, serve two purposes. The LED is continuously lit when the Router is connected to a device through that port. It flashes to indicate network activity over that port. The LED lights up green when the port is connected to a gigabit port or blue when the port is connected to a 10/100 port.

Wi-Fi Protected Setup Button If you have client devices, such as wireless adapters, that support Wi-Fi Protected Setup, then you can use the Wi-Fi Protected Setup button to automatically configure wireless security for your wireless network(s).

To use Wi-Fi Protected Setup, refer to “Wi-Fi Protected Setup” on page 11.

Wireless (Blue) The Wireless LED lights up when the wireless feature is enabled. It flashes when the Router sends or receives data over the network.

Internet (Green/Blue) The Internet LED lights up when there is a connection made through the Internet port. It flashes to indicate network activity over the Internet port. The LED lights up green when the port is connected to a gigabit port or blue when the port is connected to a 10/100 port.

USB (Blue) The USB LED lights up when a USB device is attached. It flashes when data is being sent to or received from this device.

Power (Blue) The Power LED lights up when the Router is powered on. When the Router goes through its self-diagnostic mode during every boot-up, the LED flashes. When the diagnostic is complete, the LED is continuously lit.

Back

USB Port The USB port connects to a USB storage device.

Internet Using an Ethernet cable (also called a network or Internet cable), the Internet port connects the Router to your Internet connection, which is typically a cable or Digital Subscriber Line (DSL) modem.

4, 3, 2, 1 Using Ethernet cables, these Ethernet ports connect the Router to computers on your wired network and other Ethernet network devices.
Reset There are two ways to reset the Router to its factory defaults. Either press and hold the Reset Button for approximately five seconds, or restore the defaults from the Administration > Factory Defaults screen in the Router’s browser-based utility (refer to “Administration > Factory Defaults” on page 33).

Power Switch Press the I end to power on the Router. Press the O end to power off the Router.

Power The Power port connects to the included power adapter.

Horizontal Placement
The Router has four rubber feet on its bottom panel. Place the Router on a level surface near an electrical outlet.

Wall-Mounting Placement
The Router has two wall-mount slots on its bottom panel. The distance between the slots is 175.56 mm.

Two screws are needed to mount the Router.

<table>
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<tr>
<th>Suggested Mounting Hardware</th>
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<tr>
<td>2.5-3.0 mm</td>
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<tr>
<td>4-5 mm</td>
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NOTE: Cisco is not responsible for damages incurred by unsecured wall-mounting hardware.

Follow these instructions:
1. Determine where you want to mount the Router. Make sure that the wall you use is smooth, flat, dry, and sturdy. Also make sure the location is within reach of an electrical outlet.
2. Drill two holes into the wall. Make sure the holes are 175 mm apart.
3. Insert a screw into each hole and leave 3 mm of its head exposed.
4. Position the Router so the wall-mount slots line up with the two screws.
5. Place the wall-mount slots over the screws and slide the Router down until the screws fit snugly into the wall-mount slots.

Print this page at 100% size.
Cut along the dotted line, and place on the wall to drill precise spacing.

Wall-Mounting Template
Chapter 2: Advanced Configuration

After setting up the Router with the setup software (located on the CD-ROM), the Router will be ready for use. If you would like to change its advanced settings, use the Router's browser-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 browser-based utility has these main tabs: Setup, Wireless, Security, Storage, Access Restrictions, Applications & Gaming, Administration, and Status. Additional tabs will be available after you click one of the main tabs.

How to Access the Browser-Based Utility

To access the browser-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.

**NOTE:** You can also access the browser-based utility on Windows computers by entering the device name in the Address field. Refer to Device Name under "Router Address" on page 6.

A login screen will appear. (Non-Windows 7 users will see a similar screen.) In the User name field, enter admin. Then enter the password created during the setup software. (If you did not run the setup software, then use the default password, admin. You can set a new password on the Administration > Management screen. Refer to “Administration > Management” on page 30.) Click OK to continue.

**Language**

**Select your language** To use a different language, select one from the drop-down menu. The language of the browser-based utility will change five seconds after you select another language.

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

**Internet Setup**

The Internet Setup section configures the Router to your Internet connection. Most of this information can be obtained through your Internet Service Provider (ISP).

**Internet Connection Type**

Select the type of Internet connection your ISP provides from the drop-down menu. The available types are:

- Automatic Configuration - DHCP
- Static IP
- PPPoE
- PPTP
- L2TP
- Telstra Cable
Automatic Configuration - DHCP

The default Internet Connection Type is set to **Automatic Configuration - DHCP**. Keep the default only if your ISP supports DHCP (Dynamic Host Configuration Protocol) or if you connect using a dynamic IP Address. (This option usually applies to cable connections.)

![Image of Internet Connection Type > Automatic Configuration - DHCP]

**Static IP**

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

![Image of Internet Connection Type > Static IP]

- **IP Address** This is the Router’s IP address, when seen from the Internet. Your ISP will provide you with the IP address you need to enter here.

- **Subnet Mask** This is the Router’s Subnet Mask, as seen by users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

- **Default Gateway** Your ISP will provide you with the Gateway address, which is the ISP server’s IP address.

- **DNS** 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**.

![Image of Internet Connection Type > PPPoE]

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

- **Service Name (optional)** 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 elapse before your Internet connection terminates. The default 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, specify how often the Router should check the Internet connection. The default is 30 seconds.

**PPTP**

Point-to-Point Tunneling Protocol (PPTP) is a service that applies to connections in Europe only.

![Image of Internet Connection Type > PPTP]

If your ISP supports DHCP or you are connecting through a dynamic IP address, then select **Obtain an IP Address Automatically**. If you are required to use a permanent IP address to connect to the Internet, then select **Specify an IP Address**. Then configure the following:

- **Internet IP Address** This is the Router’s IP address, as seen from the Internet. Your ISP will provide you with the IP Address you need to specify here.

- **Subnet Mask** This is the Router’s Subnet Mask, as seen by users on the Internet (including your ISP). Your ISP will provide you with the Subnet Mask.

- **Default Gateway** Your ISP will provide you with the Gateway address, which is the ISP server’s IP address.

- **DNS** Your ISP will provide you with at least one DNS (Domain Name System) Server IP address.
Server IP Address  Your ISP will provide you with the Server IP Address.

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 elapse before your Internet connection terminates. The default 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, specify how often the Router should check the Internet connection. The default is 30 seconds.

L2TP

Layer 2 Tunneling Protocol (L2TP) is a service that applies to connections in Israel only.

Server IP Address  This is the IP address of the L2TP Server. Your ISP will provide you with the IP Address you need to specify here.

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 elapse before your Internet connection terminates. The default is 5 minutes.

Host Name/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 Manual 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, Auto.
**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 configures the IP settings for your local network.

**Router Address**
This presents the Router’s IP Address, the Subnet Mask, and the Device Name as seen by your network.

![Router IP Address](image)

**IP Address**  This is the IP address of the router and is used as the base for all of your local network settings.

**Subnet Mask**  This is the subnet mask address for your router. It offers a selection of addresses from a drop-down menu. Most users will not need to change this setting.

**Device Name**  The default device name is Ciscoxxxxx. xxxx represents the last 5 digits of your serial number. This can be found on the bottom of the router. (The Device name is also the Router’s NetBIOS name.)

**NOTE:** If you used the setup software for installation, then the device name is synchronized with the name of your wireless network (up to 15 characters).

**DHCP Server Settings**
The settings allow you to configure the Router’s 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 or device on your network.

**NOTE:** If you choose to enable the DHCP server option, make sure there is no other DHCP server on your network.

![DHCP Server Setting](image)

**DHCP Server**  DHCP is enabled by factory default. If you already have a DHCP server on your network, or you do not want a DHCP server, then select Disabled (no other DHCP features will be available).

**DHCP Reservation**  Click **DHCP Reservation** if you want to assign a fixed local IP address to a specific device on your network. This is helpful if you have a device you need to access at the same address all the time such as a media server or print server. You can reserve the IP address for the specific device by selecting it from the list of devices or by manually entering the MAC address of the device.

**DHCP Reservation**
You will see a list of DHCP clients with the following information: Client Name, Interface, IP Address, and MAC Address.

![DHCP Reservation](image)

- **Select Clients from DHCP Table**  Click the **Select** check box to reserve a client’s IP address. Then click **Add Clients**.
- **Manually Add Client**  To manually assign an IP address, enter the client’s name in the **Enter Client Name** field. Enter the IP address you want it to have in the **Assign IP Address** field. Enter its MAC address in the **To This MAC Address** field. Then click **Add** and click **Save Settings**.

**Clients Already Reserved**
A list of DHCP clients and their fixed local IP addresses are displayed at the bottom of the screen. If you want to remove a client from this list, click **Remove**.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. To update the on-screen information, click **Refresh**. To exit this screen, click **Close**.

**Start IP Address**  The Start IP Address specifies the starting IP address for the range of addresses assigned by your Router when it functions as a DHCP server. (The first IP address assigned by the Router will be randomly selected within the range you specify.)

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 192.168.1.254. The default Start IP Address is 192.168.1.100.

**Maximum Number of Users** 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**.

**IP Address Range** The range of available IP addresses is displayed.

**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, or the lease will be renewed. 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 computer’s interaction with the Internet. If you use a WINS server, enter that server’s IP address here. Otherwise, leave this blank.

**Time Settings**

**Time Zone** Select the time zone in which your network functions from this drop-down menu.

**Automatically adjust clock for daylight saving changes** Select this option to have the Router automatically adjust for daylight saving time.

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

**Reboot**

**Reboot** Use this option to reboot your Router.

---

**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 (File Transfer Protocol) 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](http://www.dyndns.org) or [www.tzo.com](http://www.tzo.com). If you do not want to use this feature, keep the default, **Disabled**.

**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.com**. The features available on the **DDNS** screen will vary, depending on which DDNS service provider you use.

**DynDNS.org**

**Username** Enter the Username for your DDNS account.

**Password** Enter the Password for your DDNS account.

**Host Name** The DDNS URL assigned by the DDNS service is displayed.

**System** Select the DynDNS service you use: **Dynamic**, **Static**, or **Custom**. The default selection is **Dynamic**.

**Mail Exchange (Optional)** Enter the address of your mail exchange server, so emails to your DynDNS address go to your mail server.

**Backup MX** This feature allows the Mail eXchange (MX) server to be a backup. To disable this feature, keep the default, **Disabled**. To enable the feature, select **Enabled**. If you are not sure which setting to select, keep the default, **Disabled**.
**Wildcard**  This setting enables or disables wildcards for your host. For example, if your DDNS address is myplace.dyndns.org and you enable wildcards, then x.myplace.dyndns.org will work as well (x is the wildcard). To disable wildcards, keep the default, Disabled. To enable wildcards, select Enabled. If you are not sure which setting to select, keep the default, Disabled.

**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.

**Update**  To manually trigger an update, click Update.

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

**TZO.com**

**E-mail Address, TZO Password, 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.

**Update**  To manually trigger an update, click Update.

Click *Save Settings* to apply your changes, or click *Cancel Changes* to clear 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 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 can use the MAC Address Clone feature to assign the currently registered MAC address to the Router.

**Advanced Routing**

**NAT**

**Enabled/Disabled**  If this Router is hosting your network’s connection to the Internet, keep the default, Enabled. If another router exists on your network, select Disabled. When the NAT setting is disabled, dynamic routing will be available.
Dynamic Routing (RIP)

Dynamic routing uses the Routing Information Protocol (RIP). This option enables the Router to automatically adjust to physical changes in the network's layout and exchange routing tables with other router(s). The Router determines the network packets' route based on the fewest number of hops between the source and the destination.

**Enabled/Disabled**  When the NAT setting is enabled, the Dynamic Routing option is automatically disabled. When the NAT setting is disabled, this option is available. Select **Enabled** to use the Dynamic Routing option.

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.

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

**Enter Route Name** Enter a name for the Route here, using a maximum of 25 alphanumeric characters.

**Destination LAN IP** The Destination LAN IP is the address of the remote network or host to which you want to assign a static route.

**Subnet Mask** The Subnet Mask determines which portion of a Destination LAN IP address is the network portion, and which portion is the host portion.

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

**Interface** This interface tells you whether the Destination IP Address is on the **LAN & Wireless** (Ethernet and wireless networks) or the **Internet** (WAN).

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, and Interface are displayed. Click **Refresh** to update the information. Click **Close** to exit this screen.

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

Wireless > Basic Wireless Settings

The basic settings for wireless networking are set on this screen.

There are two ways to configure the Router’s wireless network(s), manual and Wi-Fi Protected Setup.

Wi-Fi Protected Setup is a feature that makes it easy to set up your wireless network. If you have client devices, such as wireless adapters, that support Wi-Fi Protected Setup, then you can use Wi-Fi Protected Setup.

Simultaneous Networks

For more wireless bandwidth, the Router can create two simultaneous yet separate Wireless-N networks, one using the Wireless-N 5 GHz band and one using the Wireless-N 2.4 GHz band. You can use Wi-Fi Protected Setup to easily configure and connect to both networks (refer to "**Wi-Fi Protected Setup**" on page 11), or you can manually configure the Router.

If you use manual configuration, then set up each network with the following:

- Unique Network Name (SSID)
- Wireless security settings (refer to "**5 GHz or 2.4 GHz Wireless Security**" on page 12)

Decide which computers and other wireless devices should join which network. Wireless-N devices support both the 5 GHz and 2.4 GHz bands, so they can join either the 5 GHz or 2.4 GHz network. Wireless-G and Wireless-B devices support only the 2.4 GHz band, so they should join the 2.4 GHz network. Wireless-A devices support only the 5 GHz band, so they should join the 5 GHz network.

For the 5 GHz network, configure all computers and other wireless devices with the same 5 GHz Network Name (SSID) and wireless security settings. For the 2.4 GHz network, configure all computers and other wireless devices with the same 2.4 GHz Network Name (SSID) and wireless security settings.

**NOTE:** Make sure each network uses a unique Network Name (SSID).
Wireless > Basic Wireless Settings

Configuration View
To manually configure your wireless networks, select Manual. Proceed to the Wireless Configuration (Manual) section. To use Wi-Fi Protected Setup, select Wi-Fi Protected Setup. Proceed to “Wi-Fi Protected Setup” on page 11.

Wireless Configuration (Manual)
Your Linksys E3000 can run two networks at the same time, one network using the 5 GHz radio frequency band and the other network using the 2.4 GHz radio frequency band. This allows you to isolate higher-priority traffic, such as video and voice applications, on the 5 GHz network, which is less prone to interference.

The computers and devices running your video and voice applications can use the 5 GHz network, while your guest access and computers that are only browsing the web can use the 2.4 GHz network.

5 GHz Wireless Settings

Network Mode
Select the wireless standards running on your 5 GHz network.

- Mixed If you have both Wireless-A and Wireless-N (5 GHz) devices in your network, keep the default, Mixed.
- Wireless-A Only If you have only Wireless-A devices, select Wireless-A Only.
- Wireless-N Only If you have only Wireless-N (5 GHz) devices, select Wireless-N Only.
- Disabled If you do not have any Wireless-A and Wireless-N (5 GHz) devices in your network, select Disabled.

Network Name (SSID)
The Service Set Identifier (SSID) is the network name shared by all devices in a wireless network. It is case-sensitive and must not exceed 32 keyboard characters. The default is Ciscoxxxxx (xxxxx are the last five digits of the Router’s serial number, found on the product label on the left side of the Router’s bottom panel). The setup software that you use to install your Router and set up your wireless network changes the default Network Name to an easy-to-remember name.

NOTE: If you restore the Router’s factory default settings (by pressing the Reset button or using the Administration > Factory Defaults screen), the Network Name will return to its default value, and all devices on your wireless network will need to be reconnected.

Channel Width
For best performance in a network using Wireless-A and Wireless-N (5 GHz) devices, keep the default, Auto (20MHz or 40MHz). For a channel width of 40 MHz, select 40MHz only. For a channel width of 20 MHz, select 20MHz only.

Channel
Select the channel from the drop-down list for Wireless-A and Wireless-N (5 GHz) networking. If you are not sure which channel to select, keep the default, Auto.

SSID Broadcast
When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Router. To broadcast the Router’s SSID, keep the default, Enabled. If you do not want to broadcast the Router’s SSID, then select Disabled.

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

2.4 GHz Wireless Settings

Network Mode
Select the wireless standards running on your 2.4 GHz network.

- Mixed If you have both Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices in your network, keep the default, Mixed.
- **Wireless-B/G Only** If you have both Wireless-B and Wireless-G (2.4 GHz) devices in your network, select *Wireless-B/G Only*.

- **Wireless-B Only** If you have only Wireless-B devices, select *Wireless-B Only*.

- **Wireless-G Only** If you have only Wireless-G devices, select *Wireless-G Only*.

- **Wireless-N Only** If you have only Wireless-N (2.4 GHz) devices, select *Wireless-N Only*.

- **Disabled** If you do not have any Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices in your network, select *Disabled*.

**Network Name (SSID)** The Service Set Identifier (SSID) is the network name shared by all devices in a wireless network. It is case-sensitive and must not exceed 32 keyboard characters. The default is *Ciscoxxxxx* (xxxxx are the last five digits of the Router’s serial number, found on the product label on the left side of the Router’s bottom panel). The setup software that you use to install your Router and set up your wireless network changes the default Network Name to an easy-to-remember name.

**NOTE:** If you restore the Router’s factory default settings (by pressing the Reset button or using the Administration > Factory Defaults screen), the Network Name will return to its default value, and all devices on your wireless network will need to be reconnected.

**Channel Width** For best performance in a network using Wireless-B, Wireless-G and Wireless-N (2.4 GHz) devices, select *Auto (20MHz or 40MHz)*. For a channel width of 20 MHz, keep the default, *20MHz only*.

**Channel** Select the channel from the drop-down list for Wireless-B, Wireless-G, and Wireless-N (2.4 GHz) networking. If you are not sure which channel to select, keep the default, *Auto*.

**SSID Broadcast** When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the Router. To broadcast the Router’s SSID, keep the default, *Enabled*. If you do not want to broadcast the Router’s SSID, then select *Disabled*.

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

**Wi-Fi Protected Setup** There are three methods available. Use the method that applies to the client device you are configuring.

### 1. Use the Wi-Fi Protected Setup Button

- Use this method if your client device has a Wi-Fi Protected Setup button.
  
  a. Click or press the *Wi-Fi Protected Setup* button on the client device.
  
  b. Click the *Wi-Fi Protected Setup* button on the Router’s *Wi-Fi Protected Setup* screen.

  The Wi-Fi Protected Setup LED flashes blue for two minutes during the Wi-Fi Protected Setup process and lights up blue when the Wi-Fi Protected Setup process is successful.

  The LED lights up amber if there is an error during the Wi-Fi Protected Setup process. Make sure the client device supports Wi-Fi Protected Setup. Wait until the LED is off, and then try again.

  The LED flashes when a Wi-Fi Protected Setup session is active. The Router supports one session at a time. Wait until the LED is solidly lit, or off before starting the next Wi-Fi Protected Setup session.

  c. After the client device has been configured, click *OK* on the Router’s *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

### 2. Enter the client device’s PIN on the Router

- Use this method if your client device has a Wi-Fi Protected Setup PIN number.
  
  a. Enter the PIN number from the client device in the field on the Router’s *Wi-Fi Protected Setup* screen.
b. Click the **Register button on the** Router’s *Wi-Fi Protected Setup* screen.

c. After the client device has been configured, click **OK** on the Router’s *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

3. **Enter the Router’s PIN on your client device** Use this method if your client device asks for the Router’s PIN number.

   a. On the client device, enter the PIN number listed on the Router’s *Wi-Fi Protected Setup* screen. (It is also listed on the label on the bottom of the Router.)

   b. After the client device has been configured, click **OK** on the Router’s *Wi-Fi Protected Setup* screen. Then refer back to your client device or its documentation for further instructions.

The Network Name (SSID), Security, and Passphrase are displayed at the bottom of the screen.

**NOTE:** If you have client devices that do not support Wi-Fi Protected Setup, note the wireless settings, and then manually configure those client devices.

### Wireless Security

The wireless security settings configure the security of your wireless network(s). The Router supports the following wireless security options: WPA2/WPA Mixed Mode, WPA2 Personal, WPA Personal, WPA2/WPA Enterprise Mixed Mode, WPA2 Enterprise, WPA Enterprise, WEP, and RADIUS. (WPA stands for Wi-Fi Protected Access. WEP stands for Wireless Equivalent Privacy. RADIUS stands for Remote Authentication Dial-In User Service.)

#### Personal Options

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#### Office Options

The office options are available for networks that use a RADIUS server for authentication. The office options are stronger than the personal options because WPA2 or WPA provides encryption while RADIUS provides authentication.

### 5 GHz or 2.4 GHz Wireless Security

Wireless security is strongly recommended, and WPA2 is the strongest method available. Use WPA2 if it is supported by all of your wireless devices.

#### Security Mode

Select the security method for each wireless network.

**WPA2/WPA Mixed Mode**

**NOTE:** If you select WPA2/WPA Mixed Mode as your Security Mode, each device in your wireless network MUST use WPA2/WPA and the same passphrase.

**Passphrase** Enter a passphrase of 8-63 characters. The default is **password**. The setup software that you use to install your Router and set up your wireless network changes the default passphrase.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.
WPA2 Personal

**NOTE:** If you select WPA2 Personal as your Security Mode, each device in your wireless network MUST use WPA2 Personal and the same passphrase.

**Passphrase** Enter a passphrase of 8-63 characters. The default is **password**. The setup software that you use to install your Router and set up your wireless network changes the default passphrase.

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

WPA Personal

**NOTE:** If you select WPA Personal as your Security Mode, each device in your wireless network MUST use WPA Personal and the same passphrase.

**Passphrase** Enter a passphrase of 8-63 characters. The default is **password**. The setup software that you use to install your Router and set up your wireless network changes the default passphrase.

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

WPA2/WPA Enterprise Mixed Mode

This option features WPA2/WPA used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

**NOTE:** If you select WPA2/WPA Enterprise Mixed Mode as your Security Mode, each device in your wireless network MUST use WPA2/WPA Enterprise and the same shared key.

**RADIUS Server** Enter the IP address of the RADIUS server.

**RADIUS Port** Enter the port number of the RADIUS server. The default is **1812**.

**Shared Key** Enter the key shared between the Router and the server.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.
WPA2 Enterprise

This option features WPA2 used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

**NOTE:** If you select WPA2 Enterprise as your Security Mode, each device in your wireless network MUST use WPA2 Enterprise and the same shared key.

![WPA2 Enterprise](image)

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is **1812**.

Shared Key Enter the key shared between the Router and the server.

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

WPA Enterprise

This option features WPA used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

**NOTE:** If you select WPA Enterprise as your Security Mode, each device in your wireless network MUST use WPA Enterprise and the same shared key.

![WPA Enterprise](image)

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is **1812**.

Shared Key Enter the key shared between the Router and the server.

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

WEP

WEP is a basic encryption method, which is not as secure as WPA.

**NOTE:** If you select WEP as your Security Mode, each device in your wireless network MUST use WEP and the same encryption and shared key.

![WEP](image)

Encryption Select a level of WEP encryption, **64 bits 10 hex digits** or **128 bits 26 hex digits**. The default is **64 bits 10 hex digits**.

Passphrase Enter a Passphrase to automatically generate WEP keys. Then click **Generate**.
Key 1-4 If you did not enter a Passphrase, enter the WEP key(s) manually.

TX Key Select a default TX (Transmit) Key (choose which Key to use). The default is 1.

RADIUS

This option features WEP used in coordination with a RADIUS server. (This should only be used when a RADIUS server is connected to the Router.)

**NOTE:** If you select RADIUS as your Security Mode, each device in your wireless network MUST use RADIUS and the same WEP encryption and shared key.

RADIUS Server Enter the IP address of the RADIUS server.

RADIUS Port Enter the port number of the RADIUS server. The default is 1812.

Shared Key Enter the key shared between the Router and the server.

Encryption Select a level of WEP encryption, 64 bits 10 hex digits or 128 bits 26 hex digits. The default is 64 bits 10 hex digits.

Passphrase Enter a Passphrase to automatically generate WEP keys. Then click Generate.

Key 1-4 If you did not enter a Passphrase, enter the WEP key(s) manually.

TX Key Select a default TX (Transmit) Key (choose which Key to use). The default is 1.

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

Disabled

If you choose to disable wireless security, you will be informed that wireless security is disabled when you first attempt to access the Internet. You will given the option to enable wireless security, or confirm that you understand the risks but still wish to proceed without wireless security.

**NOTE:** When wireless security is disabled, anyone can access your wireless network at any time.

Click Save Settings to apply your changes, or click Cancel Changes to clear your changes.
Wireless > Wireless MAC Filter

Wireless access can be filtered (restricted) by specifying the MAC addresses of the devices in your wireless network.

Wireless MAC Filter

**Enabled/Disabled** To filter wireless users by the MAC addresses of their computers or devices, select **Enabled**. Otherwise, keep the default, **Disabled**.

**Access Restriction**

**Prevent** When the Wireless MAC Filter is enabled and this option is selected, computers listed in the MAC Address filter list will be prevented from accessing the wireless network.

**Permit** When the Wireless MAC Filter is enabled and this option is selected, only computers listed in the MAC Address filter list will be granted access to the wireless network.

**MAC Address Filter List**

**Wireless Client List** Click this to open the Wireless Client List screen.

MAC 01-32 Enter the MAC addresses of the devices whose wireless access you want to control.

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

Wireless > Advanced Wireless Settings

The **Advanced Wireless Settings** screen is used to set up the Router’s advanced wireless functions. These settings should only be adjusted by an advanced user because incorrect settings can reduce wireless performance. In most cases, keep the default settings.

**5 GHz and 2.4 GHz Advanced Wireless**

**AP Isolation** This isolates all wireless clients and wireless devices on your network from each other. Wireless devices will be able to communicate with the Router but not with each other. To use this function, select **Enabled**. AP Isolation is disabled by default.
Frame Burst Enabling this option should provide your network with greater performance, depending on the manufacturer of your wireless products. To use the Frame Burst option, keep the default, Enabled.

Authentication Type The default is Auto, which allows either Open System or Shared Key authentication to be used. With Open System authentication, the sender and the recipient do NOT use a WEP key for authentication. With Shared Key authentication, the sender and recipient use a WEP key for authentication.

Basic Rate The Basic Rate setting is not actually one rate of transmission but a series of rates at which the Router can transmit. (The Basic Rate is not the actual rate of data transmission. If you want to specify the Router’s rate of data transmission, configure the Transmission Rate setting.) The Router will advertise its Basic Rate to the other wireless devices in your network, so they know which rates will be used. The Router will also advertise that it will automatically select the best rate for transmission. The default setting is Default, for transmission at all standard wireless rates (1-2 Mbps, 5.5 Mbps, 11 Mbps, 18 Mbps, and 24 Mbps).

Transmission Rate The rate of data transmission should be set depending on the speed of your wireless network. You can select from a range of transmission speeds, or you can select Auto to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client. The default value is Auto.

N Transmission Rate The rate of data transmission should be set depending on the speed of your Wireless-N networking. You can select from a range of transmission speeds, or you can select Auto to have the Router automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the Router and a wireless client. The default is Auto.

Transmission Power Select the appropriate level of transmission power: High, Medium, or Low. In most cases, keep the default, High.

CTS Protection Mode The Router automatically uses CTS (Clear-To-Send) Protection Mode when your Wireless-N and Wireless-G devices are experiencing severe problems and are not able to transmit to the Router in an environment with heavy 802.11b traffic. This option boosts the Router’s ability to catch all Wireless-N and Wireless-G transmissions but severely decreases performance. To use this option, keep the default, Auto. To disable this option, select Disabled.

Beacon Interval A beacon is a packet broadcast by the Router to synchronize the wireless network. Enter a value between 20 and 1000 milliseconds. The Beacon Interval value indicates the frequency interval of the beacon. The default value is 100.

DTIM Interval This value, between 3 and 255, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the Router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awake to receive the broadcast and multicast messages. The default value is 3.

Fragmentation Threshold This value specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting the Fragmentation Threshold too low may result in poor network performance. Only minor reduction of the default value is recommended. In most cases, it should remain at its default value of 2346.

RTS Threshold Should you encounter inconsistent data flow, only minor reduction of the default value, 2347, is recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The Router sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission. The RTS Threshold value should remain at its default value of 2347.

Click Save Settings to apply your changes, or click Cancel Changes to clear your changes.
Security > Firewall

The Firewall screen is used to configure a firewall that can filter out various types of unwanted traffic on the Router’s local network.

**Firewall**

**SPI Firewall Protection** To use firewall protection, keep the default selection, **Enabled**. To turn off firewall protection, select **Disabled**.

**Internet Filters**

**Filter Anonymous Internet Requests** This feature makes it more difficult for outside users to work their way into your network. This option is enabled by default. Disable it 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 this option to enable the filter. This option is disabled by default.

**Filter Internet NAT Redirection** This feature is used to prevent a local computer from using a URL or Internet address to access the local server. Select this option to enable the filter. This option is disabled by default.

**Filter IDENT (Port 113)** The Filter IDENT (Identification) option keeps port 113 from being scanned by devices outside of your local network. This option is enabled by default. Disable it to allow port 113 to be scanned.

**Web Filters**

**Proxy** Use of WAN proxy servers may compromise the Gateway’s security. Denying Proxy will disable access to any WAN proxy servers. Select this option to enable proxy filtering. Deselect the feature to allow proxy access.

**Java** Java is a programming language for websites. If you deny Java, you run the risk of not having access to Internet sites created using this programming language. Select this option to enable Java filtering. Deselect the feature to allow Java usage.

**ActiveX** ActiveX is a programming language for websites. If you deny ActiveX, you run the risk of not having access to Internet sites created using this programming language. Select this option to enable ActiveX filtering. Deselect the feature to allow ActiveX usage.

**Cookies** A cookie is data stored on your computer and used by Internet sites when you interact with them. Select this option to filter cookies. Deselect the feature to allow cookie usage.

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

Security > VPN Passthrough

The **VPN Passthrough** screen allows you to enable VPN tunnels using IPSec, L2TP, 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**.

**L2TP Passthrough** Layer 2 Tunneling Protocol is the method used to enable Point-to-Point sessions via the Internet on the Layer 2 level. To allow L2TP tunnels to pass through the Router, 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 clear your changes.
Storage > Disk

Your Linksys E3000 has a USB port on the back of the Router. This allows you to connect an external USB drive and access the contents over the network.

When a USB drive is connected to the USB port of the Router, a shared folder titled public is automatically created and shared on the USB drive. You can access the contents via Windows Explorer or the Mac Finder. For details on accessing the contents, refer to How to Install and Access USB Storage - Overview, page 38.

The Storage options can be edited in the browser-based utility when a USB drive is plugged in.

The Disk screen describes the disk (USB drive) currently attached to the Router. Use this screen to create shared folders, safely remove a disk, or format a disk (any data on the disk will be deleted during formatting).

Shared folders are folders on the disk that are accessible via the network. You can specify individual folders that you want shared or share the entire partition. By default, existing files and folders are not shared on a disk that is plugged in for the first time. The only folder that is shared by default is the public folder that is automatically created. You can manually provide access to additional folders and grant access to specific users or groups.

Disk Management

If a formatted disk is connected to the Router, then its name is displayed. For each partition of the disk, the Partition, File System, Capacity, and Free Space information are displayed.

Safely Remove Disk Before physically disconnecting a disk from the Router, click Safely Remove Disk first. This prevents the possible loss of data, which may occur if you remove the disk while it is transferring data.

Create Share To create a shared folder, click this option for the appropriate partition, and the Shared Folder screen appears.

Create Share > Shared Folder

Use this screen to create a shared folder.

Display Name Create a name for the folder. This will appear in the Shared Folder table on the Disk screen.

Partition The name of the partition is displayed.

Location The location of the current folder is displayed. If you haven’t selected a folder or shared the partition, a location will not be displayed.

New Folder Type in a new folder name if you want to create a new subfolder in the current location. Then click Create.

Share entire Partition Select this option if you want to share the entire partition. If your disk doesn’t have multiple partitions, selecting this option will share the entire disk. If you do not want to share the entire partition, then select the folder you do want to share.

Enter into Folder Select to go into the specified subfolder.
Return to Upper Folder  To move back up a folder level, select this option.

Current Folder  The current folder is displayed.

Folder Name  The available folders are listed by Folder Name.

Enter into Folder  To display subfolders, click this button.

Select  Select a folder.

Return to Upper Folder  To go back up a folder level from a subfolder, click this button.

Access

Specify which user groups have read-and-write or read-only access to the folder. (To create user groups, refer to “Create or Edit a Group Account” on page 24.)

Available Groups  To allow a group access to the folder, select it, and then click the >> button.

Groups with Access  To block a group from accessing the folder, select it, and then click the << button.

Click Save Settings to apply your changes, or click Cancel Changes to clear your changes. Click Close to exit the screen.

Shared Folder

Device Name  The default device name is Ciscoxxxxx. xxxxx represents the last 5 digits of your serial number. This can be found on the bottom of the router. (The Device name is also the Router’s NetBIOS name.)

NOTE: If you used the setup software for installation, then the device name is synchronized with the name of your wireless network (up to 15 characters).

Shared Disk IP Address  The IP address of the disk is displayed.

Summary  To view a list of shared folders, click this option.

For each shared folder, the Display Name, Partition, and Shared Folder location are displayed.

Edit  To change the access settings of a shared folder, click this option, and the Shared Folder screen appears.

Display Name  Create a name for the folder. This will appear in the Shared Folder table on the Disk screen.

Partition  The name of the partition is displayed.

Location  The location of the current folder is displayed.

New Folder  Type in a new folder name if you want to create a new subfolder in the current location. Then click Create.

Share entire Partition  Select this option if you want to share the entire partition. If your disk doesn’t have multiple partitions, selecting this option will share the entire disk. If you do not want to share the entire partition, then select the folder you do want to share.

Current Folder  The current folder is displayed.

Folder Name  The available folders are listed by Folder Name.

Enter into Folder  To display subfolders, click this button.

Select  Select a folder.

Return to Upper Folder  To go back up a folder level from a subfolder, click this button.

Access

Specify which user groups have read-and-write or read-only access to the folder. (To create user groups, refer to “Create or Edit a Group Account” on page 24.)

Available Groups  To allow a group access to the folder, select it, and then click the >> button.

Groups with Access  To block a group from accessing the folder, select it, and then click the << button.
Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen.

**Delete**  To delete a shared folder, click this option.

**Format Disk**

**Disk**  To format a disk and create a new partition, select the disk you want to format, and then click **Format Disk**. (If your disk was formatted with multiple partitions, then the formatting will delete them and create a single partition.)

To format the disk as FAT32, click **Format** and follow the on-screen instructions. To cancel the formatting, click **Cancel**.

**WARNING:** Formatting a disk erases all data on the disk. Be sure to save any files that you want to keep from the disk onto another computer or drive before formatting a disk.

**Storage > Media Server**

The *Storage* options are available when a USB drive is connected to the USB port of the Router.

The Media Server feature allows you to share stored content with other computers and devices on your home network and on the Internet.

For example, if you have a digital media adapter that sends content to your entertainment system, then the digital media adapter can locate the Router using the UPnP AV standard. The folders you specify can then be accessed and played by the digital media adapter.

**UPnP Media Server**

**Setup**

**Server Name**  Enter the UPnP Media Server Name, which serves as a display name only. Use only alphanumeric characters (letters A to Z and numbers 0 to 9). The default UPnP Media Server name of the Router is `Ciscoxxxxx`. `xxxxx` represents the last 5 digits of your serial number. This can be found on the bottom of the router.

**WARNING:** If you used the setup software for installation, then the UPnP Media Server name is synchronized with the name of your wireless network (up to 15 characters).

**NOTE:** To use the Router’s media server function, select **Enabled**. Otherwise, select **Disabled**.

**Database**

This section lets you select content to add to the database of the Router’s media server.

**Specify Folder to Scan**  To add a media folder to the database of the Router’s media server, click this button. The *Media Folder* screen appears. Proceed to “**Add a Media Folder**” on page 22.

**Last scanning time**  The last time the media server scanned for content is displayed.

**Auto-scan every __**  To automatically scan the media folders, select this option. Then select the appropriate interval: 2 Hours (default), 6 Hours, 12 Hours, 24 Hours, or 48 Hours.

**Scan All**  To scan all media files, click this button.

The database table lists the media folders with the following information: Display Name, Partition, and Folder.

**Scan**  To scan a folder, click **Scan**.

**Delete**  To delete a folder, click **Delete**.
Add a Media Folder

Use this screen to add a media folder.

![Media Folder](image)

Media Folder

- **Display Name**: Create a name for the folder. This will appear in the Database table on the Media Server screen.
- **Partition**: The name of the partition is displayed.
- **Location**: The location of the folder is displayed.
- **New Folder**: Type in a new folder name if you want to create a new subfolder in the current location. Then click **Create**.
- **Share entire Partition**: Select this option if you want to share the entire partition with your UPnP AV devices. If your disk doesn't have multiple partitions, selecting this option will share the entire disk. If you do not want to share the entire partition, then select the folder you do want to share.
- **Current Folder**: The current folder is displayed.
- **Folder Name**: The available folders are listed by Folder Name.
- **Enter into Folder**: To display subfolders, click this button.
- **Select**: Select a folder.
- **Return to Upper Folder**: To return to the previous folder, click this button.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen.

On the Media Server screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

### Storage > FTP Server

The Storage options are available when a USB drive is connected to the USB port of the Router.

The FTP Server tab creates an FTP server that can be accessed from the Internet or your local network.

![Storage > FTP Server](image)

#### Setup

- **Server Name**: Enter the FTP Server Name, which serves as a display name only. Use only alphanumeric characters (letters A to Z and numbers 0 to 9). The default FTP Server name of the Router is **Ciscoxxxxx**. XXXXX represents the last 5 digits of your serial number. This can be found on the bottom of the router.

  **NOTE:** If you used the setup software for installation, then the FTP Server name is synchronized with the name of your wireless network (up to 15 characters).

- **FTP Server**: Select **Enabled** to use the Router as an FTP server. Otherwise, select **Disabled**. An external USB hard drive or USB disk must be connected to the USB port to use this service.

- **Internet Access**: Select **Enabled** to allow access of the FTP server from the Internet. Otherwise, select **Disabled** to only allow local network access.

- **FTP Port**: Enter the FTP Port number to use. The default is **21**.

- **Encoding**: The Router supports different character sets for the transfer of files in different languages. Select the appropriate character encoding set: Unicode(UTF-8), Chinese Simplified(GB18030), Vietnamese(CP1258), or ISO8859_1. The default is **Unicode(UTF-8)**.

#### Access

This section lets you add FTP folders that can be accessed through the FTP client.

- **Specify Folder**: To add an FTP folder to the Access table, click this button. The FTP Folder screen appears. Proceed to **Create or Edit an FTP Folder** on page 23.
Summary  To view a list of FTP folders, click this option.

For each FTP folder, the Display Name, Partition, and Folder location are displayed.
The database table lists the FTP folders with the following information: Display Name, Partition, and Folder.

Edit  To change the access settings of an FTP folder, click this option, and the FTP Folder screen appears. Proceed to “Create or Edit an FTP Folder” on page 23.

Delete  To delete an FTP folder, click this option.

Create or Edit an FTP Folder
Use this screen to add an FTP folder.

Display Name  Create a name for the folder. Enter a display name that will appear in the Access table of the FTP Server screen.

Partition  The name of the partition is displayed.

Location  The location of the folder is displayed.

New Folder  Type in a new folder name if you want to create a new subfolder in the current location. Then click Create.

Share entire Partition  Select this option if you want to share the entire partition with your FTP clients. If your disk doesn't have multiple partitions, selecting this option will share the entire disk. If you do not want to share the entire partition, then select the folder you do want to share.

Current Folder  The current folder is displayed.

Folder  The available folders are listed by Folder name.

Enter into Folder  To display subfolders, click this button.

Select  Select a folder.

Return to Upper Folder  To return to the previous folder, click this button.

Access
Specify which user groups have read-and-write or read-only access to the folder. (To create user groups, refer to “Create or Edit a Group Account” on page 24.)

Available Groups  To allow a group access to the folder, select it, and then click the >> button.

Groups with Access  To block a group from accessing the folder, select it, and then click the << button.

Click Save Settings to apply your changes, or click Cancel Changes to clear your changes. Click Close to exit the screen.

On the FTP Server screen, click Save Settings to apply your changes, or click Cancel Changes to clear your changes.

Storage > Administration
The Administration screen allows you to manage the user groups and individual users who can access the shared folders.

Information
Device Name  The default device name of the Router is Ciscoxxxxx. XXXXX represents the last 5 digits of your serial number. This can be found on the bottom of the router. (The Device name is also the Router’s NetBIOS name.)

NOTE: If you used the setup software for installation, then the device name is synchronized with the name of your wireless network (up to 15 characters).
Workgroup Name  Enter the workgroup name for the Router; it should match the workgroup name of the computers on your local network. The Router's default is workgroup.

Server LAN IP Address  The local IP address of the Router's media and FTP server is displayed.

Server Internet IP Address  The Internet IP address of the Router's FTP server is displayed.

User Management

By default the Router creates two users, **admin** and **guest**. The users are listed by User Name and Group.

Create New User  To create a new user, click this button. The **User Account** screen appears. Proceed to "Create or Edit a User Account", page 24.

Edit  To change the settings of a user account, click Edit, and the **User Account** screen appears. Proceed to "Create or Edit a User Account" on page 24.

Delete  To delete a user, click this button.

Group Management

By default the Router creates two user groups, **admin** and **guest**.

The groups are listed by Group Name and Access level. There are two levels of access, r & w (read-and-write) and r (read-only).

Create New Group  To create a new group of users, click this button. The **Group Account** screen appears. Proceed to “Create or Edit a Group Account” on page 24.

Edit  To change the description or access rights of a group, click Edit, and the **Group Account** screen appears. Proceed to “Create or Edit a Group Account” on page 24.

Delete  To delete a group, click this button.

Create or Edit a User Account

**User Name**  Create a name for the user.

**Full Name**  Enter the actual name of the user.

**Description**  Enter keywords to describe the user.

**Password**  Enter the password that the user will use for login

**Confirm Password**  Enter the password again to confirm.

**Account Disabled**  To temporarily disable an account, select this option.

Click **Save Settings** to apply your changes, or click **Cancel** to clear your changes. Click **Close** to exit the screen.

On the **Administration** screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.

Create or Edit a Group Account

**Group Name**  Create a name for the group.

**Description**  Enter keywords to describe the group.

**Access**  Select the appropriate level of access, **read and write** or **read only**.

Click **Save Settings** to apply your changes, or click **Cancel** to clear your changes. Click **Close** to exit the screen.

On the **Administration** screen, click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes.
Access Restrictions > Internet Access Policy

The Internet Access Policy screen allows you to deny or allow specific kinds of Internet usage and traffic, such as Internet access, designated services, and websites during specific days and times.

Access Policy Access can be managed by a policy. Use the settings on this screen to establish an access policy (after Save Settings is clicked). Selecting a policy from the drop-down menu will display that policy’s settings. To delete a policy, select that policy’s number and click Delete This Policy. To view all the policies, click Summary.

Internet Access Policy

Summary

The policies are listed with the following information: No., Policy Name, Access, Days, Time, and status (Enabled). To enable a policy, select Enabled. To delete a policy, click Delete. Click Save Settings to save your changes, or click Cancel Changes to clear your changes. To return to the Internet Access Policy screen, click Close.

Status Policies are disabled by default. To enable a policy, select the policy number from the drop-down menu, and select Enabled.

To create a policy, follow steps 1-11. Repeat these steps to create additional policies, one at a time.

1. Select a number from the Access Policy drop-down menu.
2. Enter a Policy Name in the field provided.
3. To enable this policy, select Enabled.
4. Click Edit List to select which computers will be affected by the policy. The List of PCs screen appears. You can select a computer by MAC address or IP address. You can also enter a range of IP addresses if you want this policy to affect a group of computers. After making your changes, click Save Settings to apply your changes, or click Cancel Changes to clear your changes. Then click Close.
5. Select the appropriate option, Deny or Allow, depending on whether you want to block or allow Internet access for the computers listed on the List of PCs screen.
6. Decide which days and what times you want this policy to be enforced. Select the individual days during which the policy will be in effect, or select Everyday. Then enter a range of hours and minutes during which the policy will be in effect, or select 24 Hours.
7. You can block websites with specific URL addresses. Enter each URL in a separate Website Blocking by URL Address field.
8. You can also block websites using specific keywords. Enter each keyword in a separate Website Blocking by Keyword field.
9. You can filter access to various services accessed over the Internet, such as FTP or telnet. (You can block up to three applications per policy.) From the Applications list, select the application you want to block. Then click the >> button to move it to the Blocked List. To remove an application from the Blocked List, select it and click the << button.
10. If the application you want to block is not listed or you want to edit a service’s settings, enter the application’s name in the Application Name field. Enter its range in the Port Range fields. Select its protocol from the Protocol drop-down menu. Then click Add.

To modify a service, select it from the Application list. Change its name, port range, and/or protocol setting. Then click Modify.
To delete a service, select it from the Application list. Then click **Delete**.

11. Click **Save Settings** to save the policy’s settings, or click **Cancel Changes** to clear the changes.

**Applications and Gaming > Single Port Forwarding**

The **Single Port Forwarding** screen allows you to customize port services for common applications.

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 (use the DHCP Reservation feature on the **Basic Setup** screen; refer to “**DHCP Reservation**” on page 6).

**Application Name**  Select the appropriate application.

**To IP Address**  Enter the IP address of the server that should receive these requests.

**Enabled**  For each application, select **Enabled** to activate port forwarding.

For additional applications, complete the following fields:

**Application Name**  Enter the name you wish to give the application. Each name can have up to 12 characters.

**External Port**  Enter the external port number used by the server or Internet application. Check with the Internet application documentation for more information.

**Internal Port**  Enter the internal port number used by the server or Internet application. Check with the Internet application documentation for more information.

**Protocol**  Select the protocol(s) used for this application, TCP, UDP, or **Both**.

**To IP Address**  For each application, enter the IP address of the computer that should receive the requests. If you assigned a static IP address to the computer, then you can look up its static IP address; refer to “**DHCP Reservation**” on page 6.

**Enabled**  For each application, select **Enabled** to enable port forwarding.

Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear 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 video conferencing 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 (use the DHCP Reservation feature on the **Basic Setup** screen; refer to “**DHCP Reservation**” on page 6).

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

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

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

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

**Protocol** Select the protocol(s) used for this application, TCP, UDP, or Both.

**To IP Address** For each application, enter the IP address of the computer running the specific application. If you assigned a static IP address to the computer, then you can look up its static IP address; refer to "DHCP Reservation" on page 6.

**Enabled** Select Enabled to enable port forwarding.

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

Applications & Gaming > Port Range Triggering

The Port Range 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.

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

**Triggered Range** 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** 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.

**Enabled** Select Enabled to enable port triggering.

Click Save Settings to apply your changes, or click Cancel Changes to clear 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 computer whose port is being forwarded should have its DHCP client function disabled and have a new static IP address assigned to it because its IP address may change when using the DHCP function.

**Enabled/Disabled** To disable DMZ hosting, select Disabled. To expose one PC, select Enabled. Then configure the following settings:

**Source IP Address** If you want any IP address to be the source, select Any IP Address. If you want to specify an IP address or range of IP addresses as the designated source, select and complete the IP address range fields.

**Destination** If you want to specify the DMZ host by IP address, select IP Address and enter the IP address in the field provided. If you want to specify the DMZ host by MAC address, select MAC Address and enter the MAC address in the field provided. To retrieve this information, click DHCP Client Table.
DHCP Client Table

The DHCP Client Table lists computers and other devices that have been assigned IP addresses by the Router. The list can be sorted by Client Name, Interface, IP Address, and MAC Address. To select a DHCP client, click Select. To update the on-screen information, click Refresh. To exit this screen and return to the DMZ screen, click Close.

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

Applications and Gaming > QoS

Quality of Service (QoS) is a method that assigns priority to specific types of network traffic, which often are demanding, real-time applications, such as gaming, videoconferencing, video streaming, and Voice over Internet Protocol (VoIP) telephony. QoS helps to ensure optimal performance for these types of uses.

No Acknowledgement If you want to disable the Router’s Acknowledgement feature, so the Router will not re-send data if an error occurs, select Enabled. Otherwise, keep the default, Disabled.

Internet Access Priority

In this section, you can set the bandwidth priority for a variety of applications and devices. There are four levels of priority; High, Medium, Normal, or Low. When you set priority, do not set all applications to High, because this will defeat the purpose of allocating the available bandwidth. If you want to select below normal bandwidth, select Low. Depending on the application, a few attempts may be needed to set the appropriate bandwidth priority.

Enabled/Disabled To use the QoS policies you set, select Enabled. Otherwise, select Disabled.

Upstream Bandwidth

Upstream Bandwidth This option sets the maximum outgoing bandwidth that applications can use. To allow the Router to set the maximum, keep the default, Auto. To specify the maximum, select Manual. Then enter the appropriate value and select Kbps or Mbps.

Category

Select one of the following categories: Applications, Online Games, MAC Address, or Voice Device. Proceed to the instructions for your selection.

Summary

This lists the QoS entries you have created for your applications and devices. Refer to “Summary” on page 30 for more information.

Applications

Applications Select the appropriate application. If you select Add a New Application, follow the instructions in the Add a New Application section.

Priority Select the appropriate priority: High, Medium (Recommended), Normal, or Low.

Click Apply to save your changes. Your new entry will appear in the Summary list.

QoS (Quality of Service)

Wireless

WMM Support Wi-Fi Multimedia (WMM) is a wireless Quality of Service feature that improves quality for audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices in your network must support Wireless WMM. If you would like to disable this feature, select Disabled. Otherwise, keep the default, Enabled.
Add a New Application

**Enter a Name** Enter a name for this application.

**Port Range** Enter the port range that the application will be using. For example, if you want to allocate bandwidth for FTP, you can enter 21-21. If you need services for an application that uses from 1000 to 1250, you enter 1000-1250 as your settings. You can have up to three ranges to define for this bandwidth allocation. Port numbers can range from 1 to 65535. Check your application's documentation for details on the service ports used.

Select the protocol **TCP** or **UDP**, or select **Both**.

**Priority** Select the appropriate priority: **High**, **Medium (Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

Add a New Game

**Enter a Name** Enter any name to indicate the name of the entry.

**Port Range** Enter the port range that the game will be using. You can have up to three ranges to define for this bandwidth allocation. Port numbers can range from 1 to 65535. Check your application's documentation for details on the service ports used.

Select the protocol **TCP** or **UDP**, or select **Both**.

**Priority** Select the appropriate priority: **High**, **Medium (Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

MAC Address

The MAC address of the computer you are using is displayed.

**Enter a Name** Enter a name for your device.

**MAC Address** Enter the MAC address of your device.

**Priority** Select the appropriate priority: **High**, **Medium (Recommended)**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.
Voice Device

**Enter a Name**  Enter a name for your voice device.

**MAC Address**  Enter the MAC address of your voice device.

**Priority**  Select the appropriate priority: **High (Recommended)**, **Medium**, **Normal**, or **Low**.

Click **Apply** to save your changes. Your new entry will appear in the Summary list.

**Summary**

This lists the QoS entries you have created for your applications and devices.

**Priority**  This column displays the bandwidth priority of High, Medium, Normal, or Low.

**Name**  This column displays the application, game, device, or port name.

**Information**  This column displays the port range or MAC address entered for your entry. If a pre-configured application or game was selected, there will be no valid entry shown in this section.

**Remove**  Click this button to remove an entry.

**Edit**  Click this button to make changes.

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

Administration > Management

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

**Router Password**

**Router Access**

To ensure the Router’s security, you will be asked for your password when you access the Router’s browser-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.

**Local Management Access**

**Access via**  HTTP (HyperText Transport Protocol) is the communications protocol used to connect to servers on the World Wide Web. HTTPS uses SSL (Secure Socket Layer) to encrypt data transmitted for higher security. Select **HTTP** or **HTTPS**. The default is **HTTP**.

**Access via Wireless**  If you are using the Router in a public domain where you are giving wireless access to your guests, you can disable wireless access to the Router’s web-based utility. You will only be able to access the utility via a wired connection if you disable the setting. Keep the default, **Enabled**, to allow wireless access to the utility, or select **Disabled** to block wireless access to the utility.

**Remote Management Access**

**Remote Management**  To permit remote access of the Router from the Internet (outside the local network), select **Enabled**. Otherwise, keep the default, **Disabled**.
Access via HTTP (HyperText Transport Protocol) is the communications protocol used to connect to servers on the World Wide Web. HTTPS uses SSL (Secure Socket Layer) to encrypt data transmitted for higher security. Select HTTP or HTTPS. HTTP is the default.

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

Allowed Remote IP Address If you want to be able to access the Router from any external IP address, select Any IP Address. If you want to specify an external IP address or range of IP addresses, then select the second option and complete the fields provided.

Remote Management Port Enter the port number that will be open to outside access. To access the Router, you will need to enter the Router’s password.

NOTE: When you are in a remote location and wish to manage the Router, enter http://xxx.xxx.xxx.xxx:yyyy or https://xxx.xxx.xxx.xxx:yyyy, depending on whether you use HTTP or HTTPS. Enter the Router’s specific Internet IP address in place of xxx.xxx.xxx.xxx, and enter the Remote Management Port number in place of yyyy.

Advanced Features

SIP ALG The Session Initiation Protocol (SIP) Application Layer Gateway (ALG) feature allows SIP packets, which are used for Voice over Internet Protocol (VoIP), to traverse the NAT firewall. For more information, contact your VoIP service provider.

To use the SIP ALG feature for VoIP service, select Enabled. If you are not using VoIP service, then keep the default, Disabled.

If your VoIP service provider uses other NAT traversal solutions such as Session Traversal Utilities for NAT (STUN), Traversal Using Relay NAT (TURN), or Interactive Connectivity Establishment (ICE), then keep the default, Disabled.

UPnP

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

UPnP If you want to use UPnP, keep the default, Enabled. Otherwise, select Disabled.

Allow Users to Configure Keep the default, Enabled, if you want to be able to make manual changes to the Router while using the UPnP feature. Otherwise, select Disabled.

Allow Users to Disable Internet Access Select Enabled, if you want to be able to prohibit any and all Internet connections. Otherwise, keep the default, Disabled.

Backup and Restore

Backup Configurations To back up the Router’s configuration settings, click this button and follow the on-screen instructions.

Restore Configurations To restore the Router’s configuration settings, click this button and follow the on-screen instructions. (You must have previously backed up the Router’s configuration settings.)

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

Administration > Log

The Router can keep logs of all traffic for your Internet connection.

Log

Log To disable the Log function, select Disabled. To monitor traffic between the network and the Internet, keep the default, Enabled. With logging enabled, you can choose to view temporary logs.

View Log When you wish to view the logs, click this option.
Log

- **Type** Select **Incoming Log**, **Outgoing Log**, **Security Log**, or **DHCP Client Log**.

- **<Type> Log** The Incoming Log displays a temporary log of the source IP addresses and destination port numbers for the incoming Internet traffic. The Outgoing Log displays a temporary log of the local IP addresses, destination URLs/IP addresses, and service/port numbers for the outgoing Internet traffic. The Security log displays the login information for the browser-based utility. The DHCP Client Log displays the local DHCP server status information.

Click **Save the Log** to save this information to a file on your computer’s hard drive. Click **Refresh** to update the log. Click **Clear** to clear all the information that is displayed.

Click **Save Settings** to apply your change, or click **Cancel Changes** to clear your change.

Administration > Diagnostics

The diagnostic tests (Ping and Traceroute) allow you to check the connections of your network devices, including connection to the Internet.

**IP or URL Address** Enter the address of the PC whose connection you wish to test.

**Packet Size** Enter the packet size you want to use. The default is **32** bytes.

**Number to Ping** Enter the number of times you wish to test the connection. The default is **5**.

**Start Test** To run the test, click this button. The Ping screen shows if the test is successful. Click **Close** to return to the Diagnostics screen. Click **Stop** to stop the test.

**Ping Test**
Ping checks the status of a connection.

**IP or URL Address** Enter the address of the PC whose connection you wish to test.

**Packet Size** Enter the packet size you want to use. The default is **32** bytes.

**Number to Ping** Enter the number of times you wish to test the connection. The default is **5**.

**Start Test** To run the test, click this button. The Ping screen shows if the test is successful. Click **Close** to return to the Diagnostics screen. Click **Stop** to stop the test.

**Traceroute Test**
Traceroute checks the performance of a connection.

**IP or URL Address** Enter the address of the PC whose connection you wish to test.

**Start Test** Click to run the test. The Traceroute screen shows if the test is successful. Click **Close** to return to the Diagnostics screen. Click **Stop** to stop the test.
Administration > Factory Defaults

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

Factory Defaults

**Restore Factory Defaults** To reset the Router's settings to the default values, select Restore Factory Defaults. Any settings you have saved will be lost when the default settings are restored.

**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.

Firmware Upgrade

Before upgrading the firmware, download the Router's firmware upgrade file from our website at www.linksys.com/support/E3000.

**Please Select a File to Upgrade** Click Browse and select the firmware upgrade file.

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

**WARNING:** Do not interrupt the upgrade process. You should not turn off the power or press the Reset button during the upgrade process. Doing so may disable the Router.

Status > Router

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

**Router Information**

- **Firmware Version** The version number of the Router's current firmware is displayed.
- **Firmware Verification** The unique identifier of the firmware is displayed.
- **Current Time** The time set on the Router is displayed.
- **Internet MAC Address** The Router's MAC Address, as seen by your ISP, is displayed.
- **Server Name** The Server Name is the name used for the USB network storage, FTP, and media server functions of the Router. The default, Ciscoxxxxxx, is displayed. XXXXX represents the last 5 digits of your serial number. This can be found on the bottom of the router.
**NOTE:** If you used the setup software for installation, then the name of your wireless network (up to 15 characters) is the server name of the Router.

**Host Name**  The Host Name of the Router is displayed (if it was entered on the Setup > Basic Setup screen).

**Domain Name**  The Domain Name of the Router is displayed (if it was entered on the Setup > Basic Setup screen).

**Internet Connection**

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

For a DHCP connection, select **Release IP Address** or **Renew IP Address** as appropriate to release or renew a DHCP lease. For a PPPoE or similar connection, select **Connect** or **Disconnect** as appropriate to connect to or disconnect from the Internet.

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

**Status > Local Network**

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

**Local Network**

**Local MAC Address**  The MAC address of the Router’s local, wired interface is displayed.

**Router IP Address**  The Router’s IP address, as it appears on your local network, is displayed.

**Subnet Mask**  The Subnet Mask of the Router is displayed.

**DHCP Server**

**DHCP Server**  The status of the Router’s DHCP server function is displayed.

**Start IP Address**  For the range of IP addresses that can be used by devices on your local network, the starting IP address is displayed.

**End IP Address**  For the range of IP addresses that can be used by devices on your local network, the ending IP address is displayed.

**DHCP Client Table**  Click this option to view a list of computers or other devices that are using the Router as a DHCP server.

**DHCP Client Table**

The DHCP Client Table lists computers and other devices that have been assigned IP addresses by the Router. The list can be sorted by IP Address, MAC Address, Interface, and Client Name. To remove a DHCP client, click **Delete**. To update the on-screen information, click **Refresh**. To exit this screen and return to the **Local Network** screen, click **Close**.

**Status > Wireless Network**

The **Wireless Network** screen displays the status information of your 5 GHz and/or 2.4 GHz wireless network(s).
5GHz/2.4GHz Wireless Network

**MAC Address**  The MAC address of the Router’s local, wireless interface is displayed.

**Mode**  The wireless mode used by the network is displayed.

**Network Name (SSID)**  The name of the wireless network, which is also called the SSID, is displayed.

**Radio Band**  The Radio Band setting selected on the Basic Wireless Settings screen is displayed.

**Wide Channel**  The Wide Channel setting selected on the Basic Wireless Settings screen is displayed.

**Standard Channel**  The Standard Channel setting selected on the Basic Wireless Settings screen is displayed.

**Security**  The wireless security method used by the Router is displayed.

**SSID Broadcast**  The status of the SSID Broadcast feature is displayed.
Appendix A: Troubleshooting

Your computer cannot connect to the Internet.

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

- Verify that the power adapter is connected to the Router and to a power outlet. If connected to a power strip, make sure the power strip is turned on.
- Make sure that the Power LED, Internet LED, and Wireless LED are on. If you have any wired computers connected to the Router, make sure the appropriate port LED is lit.

**NOTE:** The Power LED flashes after the power adapter is plugged in to the Router. If the light remains flashing for more than 30 seconds, it may indicate the Router is not working properly. For assistance, use a computer or device with Internet access to refer to our Linksys E3000 support section on the web, [www.linksys.com/support/E3000](http://www.linksys.com/support/E3000)

- Make sure that your DSL or cable modem is connected to your Router’s Internet port using an Ethernet cable.
- Reset all of the devices on your network:
  1. Turn off all of your network computers and devices, and then unplug the power adapter from your Router.
  2. Unplug your modem’s power cord (and coaxial cable if you have a cable modem), and wait two minutes.
  3. Reconnect your modem’s power cord (and coaxial cable) and wait two more minutes.
  4. Reconnect the power adapter to the Router, and then power on all of your network computers and devices.

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, and then insert the setup CD into your computer. Click Set up your Linksys Router and 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, and then insert the setup CD into your computer. Click Set up your Linksys Router and follow the on-screen instructions.

The computer cannot connect wirelessly to the network.

Make sure the wireless network name or SSID is the same on both the computer and the Router. If you have enabled wireless security, then make sure the same security method and key are used by both the computer and the Router.

You need to change the settings on the Router.

Wireless network settings can be changed using Cisco Connect. To change the Router’s advanced settings, refer to ‘How to Access the Browser-Based Utility’ on page 3.

You want to access the browser-based utility from Cisco Connect.

To enter the browser-based utility from Cisco Connect, follow these steps:

1. Open Cisco Connect.
2. On the Main Menu, click Router Settings.
3. Click Advanced Settings.
4. Write down the username and password that are displayed. (To help protect your password, you can copy it to the Clipboard by clicking Copy Password.)
5. Click OK.
6. Your web browser automatically opens. Enter the username and password, and then click OK. (If you copied the password to the Clipboard in step 4, press Ctrl-V to paste it into the Password field.)

**When you try to log into the browser-based utility, your password does not work.**

Your wireless security password also serves as the browser-based utility’s login password. To see this password:

1. Open Cisco Connect.
2. On the Main Menu, click Router Settings.
3. The Password is displayed on the left side of the screen.

**The Router does not recognize your USB storage device.**

Make sure the USB storage device uses the NTFS or FAT format. To check its format, follow these instructions:

1. Connect the USB storage device directly to your computer.
2. On your desktop, double-click Computer or My Computer icon.
3. Right-click the USB storage device, and click Properties.
4. The format is listed in the File system description. If the format is not NTFS or FAT, then back up the data on the USB storage device.

After you have backed up the data on the USB storage drive, you can format it. Right-click the USB storage device, and click Format. Follow the on-screen instructions. For more information, refer to Windows Help.

If the Router still does not recognize the USB storage device, then remove the power adapter from the Router’s Power port. Wait five seconds, and then re-connect the power adapter to the Router’s Power port.

**In Windows Vista, you do not see the USB storage device in the Network screen.**

Make sure the Router and your computer use the same workgroup name. (The default workgroup name of the Router is workgroup. In Windows Vista, right-click the Computer icon and select Properties. Click Advanced system settings. Click the Computer Name tab. The workgroup name is displayed.) If they differ, then change the workgroup name of the Router. Follow these instructions:

1. Access the web-based utility of the Router. (Refer to “How to Access the Browser-Based Utility” on page 3.)
2. Click the Storage tab.
3. Click the Administration tab.

4. In the Workgroup Name field, enter the workgroup name of your computer.
5. Click Save Settings.

**In Windows XP, you do not see the Router in the My Network Places screen.**

In the Network Tasks section, click Show icons for networked UPnP devices. If the Router does not appear, follow these instructions:

1. Go to Start > Control Panel > Firewall.
2. Click the Exceptions tab.
4. Click OK.

**In Windows XP, you do not see your USB storage device in the View workgroup computers screen.**

Make sure the Router and your computer use the same workgroup name. (The default workgroup name of the Router is workgroup. In Windows XP, go to Start > Control Panel > System. Click the Computer Name tab. The workgroup name is displayed.) If they differ, then change the workgroup name of the Router. Follow these instructions:

1. Access the web-based utility of the Router. (Refer to “How to Access the Browser-Based Utility” on page 3.)
2. Click the Storage tab.
3. Click the Administration tab.
4. In the Workgroup Name field, enter the workgroup name of your computer.
5. Click Save Settings.

**WEB:** If your questions are not addressed here, refer to our E3000 support section on the web, www.linksys.com/support/E3000
Appendix B: How to Install and Access USB Storage

Overview
The Router’s USB port lets you connect USB storage that can be accessed over your network. This appendix covers the main functions of the shared storage feature, including the following:

- Connect and access a USB storage device
- Map a shortcut to a USB storage device
- Create a shared folder on a USB storage device (advanced users)
- Manage access to shared folders using group and user accounts (advanced users)

Follow the instructions for your operating system, Windows 7, Windows Vista, Windows XP, or Mac OS X.

Windows 7

Install the USB Storage Device
1. Make sure your computer has a wired or wireless connection to the Router.
2. Connect an external USB hard disk drive or USB flash disk to the USB port of the Router.

Access the USB Storage Device
1. On your desktop, click the Windows Explorer icon.

NOTE: If the Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

Windows Explorer Icon

NOTE: If the Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. In the Address field, enter the local IP address of the Router:
   \xxx.xxx.xxx.xxx
   The default is 192.168.1.1. You can change this IP address on the Setup > Basic Setup screen; refer to “Setup > Basic Setup” on page 3.

   Enter Local IP Address of Router

NOTE: Another option is to use the default server name of the Router. In the Address field, enter:
   \Ciscoxxxxx (xxxxx represents the last five digits of the Router’s serial number.)
   If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the Address field.

3. Double-click the Public folder. (By default the Router creates a shared folder called Public.)

NOTE: If the USB storage device has pre-existing folders, then you will have to create shared folders so there is network access to these pre-existing folders. Proceed to “Create a Shared Folder” on page 46.

Double-Click Public Folder

NOTE: If the Public folder is not displayed, right-click Network. Click Properties. Click Change advanced sharing settings. Select Turn on network discovery. Select Turn on file and printer sharing. Click Save changes.
4. On the login screen, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

   ![Enter Account User Name and Password](image1)

   User accounts are set up on the **Storage > Administration** screen; for more information, refer to “**Storage > Administration**” on page 23.

**Map a Drive**

1. On your desktop, click the **Windows Explorer** icon.

   ![Windows Explorer Icon](image2)

   **NOTE:** If the Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2. In the **Address** field, enter the local IP address of the Router:

   \(\text{\textbackslash}xxx.xxx.xxx.xxx\)

   The default is **192.168.1.1**. You can change this IP address on the **Setup > Basic Setup** screen; refer to “**Setup > Basic Setup**” on page 3.

   ![Enter Local IP Address of Router](image3)

   **NOTE:** Another option is to use the default server name of the Router. In the **Address** field, enter: \(\text{\textbackslash}Ciscoxxxxx\) (xxxxx represents the last five digits of the Router’s serial number.) If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the **Address** field.

3. Right-click the folder you want to map, and click **Map Network Drive**.

   ![Map Network Drive](image4)

4. From the **Drive** drop-down menu, select an available drive letter.

   ![Select Drive Letter](image5)

5. If the login screen appears, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

   ![Enter Account User Name and Password](image6)

   User accounts are set up on the **Storage > Administration** screen; for more information, refer to “**Storage > Administration**” on page 23.
6. Click Finish.

Access Mapped Drive
1. On your desktop, click the Windows Explorer icon.

   Windows Explorer Icon

   NOTE: If the Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. Double-click the mapped drive to access it.

   Double-Click Mapped Drive

Windows Vista

Install the USB Storage Device
1. Make sure your computer has a wired or wireless connection to the Router.
   2. Connect an external USB hard disk drive or USB flash disk to the USB port of the Router.

Access the USB Storage Device
1. On your desktop, double-click the Computer icon.

   Computer Icon

   NOTE: If the Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. In the Address field, enter the local IP address of the Router:

   \xxx.xxx.xxx.xxx

   The default is 192.168.1.1. You can change this IP address on the Setup > Basic Setup screen; refer to “Setup > Basic Setup” on page 3.

   Enter Local IP Address of Router

   NOTE: Another option is to use the default server name of the Router. In the Address field, enter: \Ciscoxxxxx (xxxxx represents the last five digits of the Router’s serial number.) If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the Address field.
3. Double-click the **Public** folder. (By default the Router creates a shared folder called **Public**.)

![Double-Click Public Folder]

**NOTE:** If the USB storage device has pre-existing folders, then you will have to create shared folders so there is network access to these pre-existing folders. Proceed to "Create a Shared Folder" on page 46.

4. Enter your account user name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

![Enter Account User Name and Password]

User accounts are set up on the **Storage > Administration** screen; for more information, refer to "**Storage > Administration**" on page 23.

**Map a Drive**

1. On your desktop, double-click the **Network** icon.

![Network Icon]

**NOTE:** If the My Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer.**

2. In the **Address** field, enter the local IP address of the Router: \xxx.xxx.xxx.xxx

The default is **192.168.1.1**. You can change this IP address on the **Setup > Basic Setup** screen; refer to “**Setup > Basic Setup**” on page 3.

![Enter Local IP Address of Router]

**NOTE:** Another option is to use the default server name of the Router. In the **Address** field, enter: \Ciscoxxxxx (xxxxx represents the last five digits of the Router’s serial number.) If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the **Address** field.

3. Right-click the folder you want to map, and click **Map Network Drive**. (The default shared folder is named **Public**.)

![Map Network Drive]

**NOTE:** If the USB storage device has pre-existing folders, then you will have to create shared folders so there is network access to these pre-existing folders. Proceed to “**Create a Shared Folder**” on page 46.
4. From the *Drive* drop-down menu, select an available drive letter.

![Select Drive Letter](image1.png)

5. If the login screen appears, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

![Enter Account User Name and Password](image2.png)

User accounts are set up on the **Storage > Administration** screen; for more information, refer to “**Storage > Administration**” on page 23.

6. Click **Finish**.

![Click Finish](image3.png)

---

### Access Mapped Drive

1. On your desktop, double-click the **Computer** icon.

![Computer Icon](image4.png)

**NOTE:** If the Computer icon is not displayed, then go to **Start > All Programs > Accessories > Windows Explorer**.

2. Double-click the mapped drive to access it.

![Double-Click Mapped Drive](image5.png)

### Windows XP

#### Install the USB Storage Device

1. Make sure your computer has a wired or wireless connection to the Router.

2. Connect an external USB hard disk drive or USB flash disk to the USB port of the Router.

![USB Storage Device](image6.png)
Access the USB Storage Device

1. On your desktop, double-click the My Computer icon.

![My Computer Icon](image)

**NOTE:** If the My Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. In the Address field, enter the local IP address of the Router:
\[
\text{\textbackslash xxx.xxx.xxx.xxx}
\]

The default is 192.168.1.1. You can change this IP address on the Setup > Basic Setup screen; refer to “Setup > Basic Setup” on page 3.

![Enter Local IP Address of Router](image)

**NOTE:** Another option is to use the default server name of the Router. In the Address field, enter: \[\text{\textbackslash Ciscoxxxxx} \] (xxxxx represents the last five digits of the Router’s serial number.) If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the Address field.

3. Double-click the Public folder. (By default the Router creates a shared folder called Public.)

![Double-Click Public Folder](image)

**NOTE:** If the USB storage device has pre-existing folders, then you will have to create shared folders so there is network access to these pre-existing folders. Proceed to “Create a Shared Folder” on page 46.

4. Enter your account user name and password. (For the admin account, admin is both the default user name and password.) Click OK.

![Enter Account User Name and Password](image)

User accounts are set up on the Storage > Administration screen; for more information, refer to “Storage > Administration” on page 23.

Map a Drive

1. On your desktop, double-click the My Computer icon.

![My Computer Icon](image)

**NOTE:** If the My Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. In the Address field, enter the local IP address of the Router:
\[
\text{\textbackslash xxx.xxx.xxx.xxx}
\]

The default is 192.168.1.1. You can change this IP address on the Setup > Basic Setup screen; refer to “Setup > Basic Setup” on page 3.

![Enter Local IP Address of Router](image)

**NOTE:** Another option is to use the default server name of the Router. In the Address field, enter: \[\text{\textbackslash Ciscoxxxxx} \] (xxxxx represents the last five digits of the Router’s serial number.) If you used the setup software for installation, then enter the name of your wireless network (up to 15 characters) in the Address field.
3. Right-click the folder you want to map, and click **Map Network Drive**.

4. From the **Drive** drop-down menu, select an available drive letter.

5. If the login screen appears, enter your account user name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

6. Click **Finish**.

User accounts are set up on the **Storage > Administration** screen; for more information, refer to “**Storage > Administration**” on page 23.
Access Mapped Drive

1. On your desktop, double-click the My Computer icon.

   ![My Computer Icon]

   **NOTE:** If the My Computer icon is not displayed, then go to Start > All Programs > Accessories > Windows Explorer.

2. Double-click the mapped drive to access it.

   ![Double-Click Mapped Drive]

Mac OS X

Install the USB Storage Device

1. Make sure your computer has a wired or wireless connection to the Router.

2. Connect an external USB hard disk drive or USB flash disk to the USB port of the Router.

   ![Mac OS X USB Device]

Access the USB Storage Device

1. From your desktop select Go > Network.

   ![Mac OS X Access USB]

2. Double-click the server name.

   **NOTE:** If you used the setup software to install your Router, then the name of your wireless network will be the server name (up to 15 characters). If not, the name will appear as Ciscoxxxxx (xxxxx represents the last five digits of the Router’s serial number.)

   ![Mac OS X Server Name]
3. Click **Connect As**.

4. Enter your name and password. (For the admin account, **admin** is both the default user name and password.) Click **OK**.

5. The window should display Connected as: **admin** (or whatever name you’ve connected with). The folders that you have permission to view will be displayed. Double-click a folder such as **Public** to open it.

6. The selected folder will open. If the user name that you logged in with is in the admin group you can read/write to the folder. If the user name is a member of the guest group you will only have read access.

Display Shared Folder on the Desktop

1. Go to **Finder > Preferences**.

2. Check **Connected Servers**.

User accounts are set up on the **Storage > Administration** screen; for more information, refer to **“Storage > Administration”** on page 23.
3. The shared folder will be displayed on the desktop and you can access it by double-clicking on the icon.

**Add to Startup Login Items**

1. Go to the Apple menu and select **System Preferences**.

2. Click **Accounts**.

3. Select **Login Items**.

4. Drag the shared folder to the Login Items window.

5. The folder will appear in the list of Login Items. Click the red x to close the window.
Advanced Configuration  
(Advanced Users Only)

To manage access to the USB storage device, you can create shared folders, user groups, and user accounts.

Access the Browser-Based Utility

To access the browser-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. (Non-Windows 7 users will see a similar screen.) In the **User name** field, enter **admin**. Then enter the password created during the Setup Software. (If you did not run the Setup Software, then use the default password, **admin**. You can set a new password on the **Administration > Management** screen. Refer to “**Administration > Management**” on page 30.) Click **OK** to continue.

3. To create a shared folder, click **Create Share**.

4. In the **Display Name** field, create a display name for the shared folder.

5. In the **New Folder** field, create a name for the physical location of the shared folder. Then click **Create**.

6. If the shared folder should include the entire partition, select **Share entire Partition** and proceed to step 8. If you do not want to share the entire partition, then specify the folder you do want to share.

7. Select the appropriate folder. To display subfolders, click **Enter into Folder**. To return to the previous folder, click **Return to Upper Folder**.

8. To allow a group access to the shared folder, select it from the Available Groups column, and then click the **>>** button.

**NOTE:** Specify which user groups have read-and-write or read-only access to the shared folders.

9. To block a group from accessing the shared folder, select it from the Groups with Access column, and then click the **<<** button.

10. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the **Disk** screen.
Create a User Group Account

1. Click the **Storage** tab.
2. Click the **Administration** tab.

3. In the **Group Management** section, click **Create New Group**.

4. In the **Group Name** field, create a name for the group.
5. In the **Description** field, enter keywords to describe the group.
6. From the **Access** drop-down menu, select the appropriate level of access, **read and write** or **read only**.
7. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the **Administration** screen.

Create a User Account

1. Click the **Storage** tab.
2. Click the **Administration** tab.

3. In the **User Management** section, click **Create New User**.

4. In the **User Name** field, create a name for the user.
5. In the **Full Name** field, enter the actual name of the user.
6. In the **Description** field, enter keywords to describe the user.
7. In the **Password** and **Confirm Password** fields, enter the password that the user will use for login.
8. From the **Group Member** drop-down menu, select the appropriate user group.

9. Click **Save Settings** to apply your changes, or click **Cancel Changes** to clear your changes. Click **Close** to exit the screen and return to the **Administration** screen.

**NOTE:** To temporarily disable an account, select **Account Disabled**.
<table>
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<th>Specification</th>
<th>Details</th>
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</thead>
<tbody>
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<td><strong>Model Name</strong></td>
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<td><strong>Description</strong></td>
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<td>802.11g: OFDM</td>
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<td>802.11a: OFDM</td>
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<td>802.11n: BPSK, QPSK, 16-QAM, 64-QAM</td>
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<td>MCS15 (40MHz): -65 dBm @ Typical</td>
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Specifications are subject to change without notice.