LINKSYS®
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2.4GHz 802.11g

Wireless-G

WIRELESS

PrintServer with Multifunction Printer Support

User Guide

Model No. WPSM54G V1.1

CISCO SYSTEMS

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How to Use this User Guide

The user guide to the Wireless-G PrintServer with Multifunction Printer Support has been designed to make understanding networking with the PrintServer easier than ever. Look for the following items when reading this User Guide:

This checkmark means there is a note of interest and is something you should pay special attention to while using the PrintServer.

This exclamation point means there is a caution or warning and is something that could damage your property or the PrintServer.

This question mark provides you with a reminder about something you might need to do while using the PrintServer.

In addition to these symbols, there are definitions for technical terms that are presented like this:

word: *definition.*

Also, each figure (diagram, screenshot, or other image) is provided with a figure number and description, like this:

Figure 0-1: Sample Figure Description

Figure numbers and descriptions can also be found in the “List of Figures” section.

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Chapter 1: Introduction

Welcome

Thank you for choosing the Linksys Wireless-G PrintServer with Multifunction Printer Support. The PrintServer lets you connect a USB printer directly to your network, eliminating the need to dedicate a PC to print sharing chores. Using a PrintServer frees up your "print share PC" so you don't have to leave it on all the time. It also removes the printing bottleneck, and sets your PC free to do more useful work.

The USB port is compatible with USB 1.1 printers, as well as printers that support the new high-speed USB 2.0 specification for even faster throughput.

How does the PrintServer do all of this? A print server is a device that allows multiple computers to share a printer over a network. You can connect the PrintServer directly to your network using an Ethernet network cable, or you can connect the PrintServer over Wireless-G (802.11g) at up to 54Mbps. The wireless option lets you put your printer wherever you want to, without having to run a cable. Whichever way the PrintServer is attached to your network, both your wireless and wired PCs will have access to it and its USB printer.

But what does all of this mean?

Networks are useful tools for sharing Internet access and computer resources. Multiple computers can share Internet access, so you don't need more than one high-speed Internet connection. Using the PrintServer, you can access one printer from different computers. Plus, you can access data located on another computer's hard drive and play multi-player video games. So, networks not only are useful in homes and offices, but also can be fun.

PCs on a wired network create a LAN, or Local Area Network. They are connected with Ethernet cables, which is why the network is called "wired".

PCs equipped with wireless cards or adapters can communicate without cumbersome cables. By sharing the same wireless settings, within their transmission radius, they form a wireless network. This is sometimes called a WLAN, or Wireless Local Area Network. Your network router bridges wireless networks of both 802.11b and 802.11g standards and wired networks, allowing them to communicate with each other.

To guide you through the process of installing the PrintServer, run the Setup Wizard on the Setup CD-ROM (you can use the instructions in the Quick Installation or User Guide to help you). After you have installed the PrintServer, you can change its settings using its browser-based utility, which is described in this User Guide. These instructions should be all you need to get the most out of the Wireless-G PrintServer.

***mbps**: one million bits per second; a unit of measurement for data transmission*

***lan** (local area network): the computers and networking products that make up the network in your home or office*

***ethernet**: an IEEE standard network protocol that specifies how data is placed on and retrieved from a common transmission medium*

***802.11b**: an IEEE wireless networking standard that specifies a maximum data transfer rate of 11Mbps and an operating frequency of 2.4GHz*

***802.11g**: an IEEE wireless networking standard that specifies a maximum data transfer rate of 54Mbps, an operating frequency of 2.4GHz, and backward compatibility with 802.11b devices*

***browser**: an application program that provides a way to look at and interact with all the information on the World Wide Web*

What's in this Guide?

This user guide covers the steps for setting up and using the PrintServer.

- Chapter 1: Introduction
  This chapter describes the PrintServer's applications and this User Guide.
- Chapter 2: Getting to Know the PrintServer
  This chapter describes the physical features of the PrintServer.
- Chapter 3: Connecting the PrintServer
  This chapter instructs you on how to connect the PrintServer to your network.
- Chapter 4: Configuring the PrintServer using the Setup Wizard
  This chapter instructs you on how to use the Setup Wizard to install your PrintServer.
- Chapter 5: Windows Driver Installation
  This chapter explains how to install the Windows driver for the PrintServer.
- Chapter 6: Configuring the PrintServer Using the Web-based Utility
  This chapter explains use the web-based utility to change the PrintServer's settings.
- Chapter 7: Bi-Admin Management
  This chapter explains how to use the Bi-Admin Management utility, which is for advanced users only.
- Chapter 8: Internet Printing Protocol (IPP)
  This chapter instruct you on how to use the PrintServer as an IPP server so you can run remote print jobs.
- Appendix A: Troubleshooting
  This appendix describes some potential problems and solutions regarding use of the PrintServer.
- Appendix B: Wireless Security
  This appendix explains the security risks in wireless networking and how you can help protect your network
- Appendix C: About Bi-Directional Printing
  This appendix describes bi-directional printing.
- Appendix D: Upgrading Firmware
  This appendix instructs you on how to upgrade the firmware on the PrintServer should you need to do so.

- Appendix E: Windows Help
  This appendix describes how you can use Windows Help for instructions about networking, such as installing the TCP/IP protocol.

- Appendix F: Glossary
  This appendix gives a brief glossary of terms frequently used in networking.

- Appendix G: Specifications
  This appendix provides the technical specifications for the PrintServer.

- Appendix H: Warranty Information
  This appendix supplies the warranty information for the PrintServer.

- Appendix I: Regulatory Information
  This appendix supplies the regulatory information regarding the PrintServer.

- Appendix J: Contact Information
  This appendix provides contact information for a variety of Linksys resources, including Technical Support.

Chapter 2: Getting to Know the PrintServer

The Bottom Panel

The PrintServer's ports and Reset button are located on the bottom panel.

Figure 2-1: PrintServer's Bottom Panel

Power The **Power** port is where you will connect the power adapter.

Ethernet The **Ethernet** port is where you will connect the PrintServer to your wired network. (This is optional.)

USB Printer The **USB Printer** port is where you will connect the USB printer to the PrintServer.

The USB icon (right) designates a USB port. The PrintServer comes with a USB cable. One end has a rectangular connector called Type A. The other end has a square connector called Type B. The USB cable's Type A end connects to the PrintServer, and the Type B end connects to the printer.

USB Connector-Type A

USB Connector-Type B

Reset Button Use the **Reset Button** to reset the PrintServer to its factory defaults or print a test page. The instructions are provided on the right side of this page.

IMPORTANT: Resetting the PrintServer will delete all of your settings and replace them with the factory defaults. Do not reset the PrintServer if you want to retain the settings.

To reset the factory default settings

1. Unplug the PrintServer.
2. Press and hold the Reset button. While pressing the button, plug in the PrintServer.
3. If you continue pressing the button for 10 seconds, the PrintServer will be reset to factory defaults.

To generate a diagnostic print-out

1. Ensure that both the PrintServer and the printer attached to the Printer port are ON.
2. Press the Reset button, and hold it in for 2 seconds.
3. The test page, which lists the current settings, will be printed.

PostScript printers are unable to print this page. If you have a PostScript printer on the USB Printer port, the test page will not be printed.

The Front Panel

The PrintServer's LEDs are located on the front panel.

Figure 2-2: PrintServer's Front Panel

USB Green/Orange. The **USB** LED lights up green when there is a printer connected to the USB port. The LED flashes green when the PrintServer is sending data through the USB port. It lights up orange when there is a problem with the USB printer.

Wireless Green. The **Wireless** LED serves two purposes. If the LED is continuously lit, the PrintServer is successfully connected to the wireless network. If the LED is flashing, the PrintServer is actively sending or receiving data from the wireless network.

Ethernet Green/Orange. If the **Ethernet** LED is continuously lit green, the PrintServer is successfully connected to a device through the Ethernet port. The LED flashes green when the PrintServer is actively sending or receiving data from the wired network. It flashes orange when there are collisions detected on the Ethernet port.

Power Green/Orange. If the **Power** LED is continuously lit green, then the PrintServer is ready for use. The LED flashes green when the PrintServer is booting up, a system self-test is running, or the firmware is being upgraded. It lights up orange when there is an error.

Chapter 3: Connecting the PrintServer

Overview

Before starting the physical installation, note the PrintServer's default name, which starts with "LK" (for example, LK71107). The default name is shown in the *Server* field on the PrintServer's sticker, which is located on the PrintServer's back panel. During the PrintServer driver installation, this name is used to identify the PrintServer you are currently installing.

Connecting the PrintServer to Your Network

1. Use the USB cable to connect your USB printer to the PrintServer's USB Printer port. Plug the Type A connector end into the PrintServer and the Type B connector end into the printer.
2. If you are connecting the PrintServer to your wired network, then plug one end of the Ethernet network cable into the PrintServer's Ethernet port.

   Then connect the other end of the cable to your router or switch. The distance between the PrintServer and the other device should not exceed 328 feet (100 meters).
3. Power on your printer.
4. Plug the power adapter into the PrintServer's Power port.

   Then plug the other end into an electrical outlet.

IMPORTANT: Make sure you use the power adapter supplied with the PrintServer. Use of a different power adapter could damage the PrintServer.

NOTE: The PrintServer does not have an on/off power switch. Whenever its power adapter is plugged into a power supply, the PrintServer is powered on. The PrintServer can be powered on before, during, or after your network is powered on.

Proceed to the next section, "Placement Options."

Figure 3-1: Connect to the USB Port

Figure 3-2: Connect to the Ethernet Port

Placement Options

There are different ways to place the PrintServer. The first way is to place the PrintServer horizontally on a surface, so it sits on four small rubber pads. You can also use the included velcro to mount the PrintServer on a wall or underneath a shelf. To use the velcro, follow these instructions:

1. Separate the included velcro into its two sides, the hook side and the loop side. You will use the tape on the backs of the velcro sides to attach them to the PrintServer and surface you want to use.
2. For the first velcro side, peel off the cover protecting the tape, and attach it to the recessed area on the back panel of the PrintServer.
3. For the other velcro side, peel off the cover, and attach it to the location you have chosen for the PrintServer.
4. Attach the velcro sides to each other, and make sure the PrintServer is securely mounted on the wall or underneath the shelf.
5. Adjust the position of the antenna so that it is positioned as high as possible. Usually, the higher you place the antenna, the better the performance and range will be.

The physical installation of the Wireless-G PrintServer with Multifunction Printer Support is complete. Proceed to "Chapter 4: Configuring the PrintServer Using the Setup Wizard."

Figure 3-3: Desktop Placement

Chapter 4: Configuring the PrintServer Using the Setup Wizard

Installation

To install the PrintServer, you will use the Setup CD-ROM to run the Setup Wizard. It is highly recommended that you use a computer on the wired network to set up the PrintServer. However, if you only have a wireless network, then you can use a computer on the wireless network to set up the PrintServer.

1. Insert the Setup CD-ROM into the computer's CD-ROM drive. The Setup Wizard should run automatically. If it does not, click the **Start** button and choose **Run**. In the box that appears, enter **D:\setupWizard.exe** (if "D" is the letter of your CD-ROM drive).

2. When you see the *Welcome* screen, click **Setup Wizard** to continue. Click **Exit** to end the installation. Click **User Guide** button to view the User Guide.

Figure 4-1: Welcome

3. If this is the first time you have installed the PrintServer, click **Set up PrintServer**. If you have already installed and configured the PrintServer, click **Set up Computer** and proceed to *Chapter 5: Windows Driver Installation*.

Figure 4-2: Set up PrintServer

4. You will need to first disconnect the USB Printer cable from the computer and disconnect the power from the printer. Click **Next** when finished.

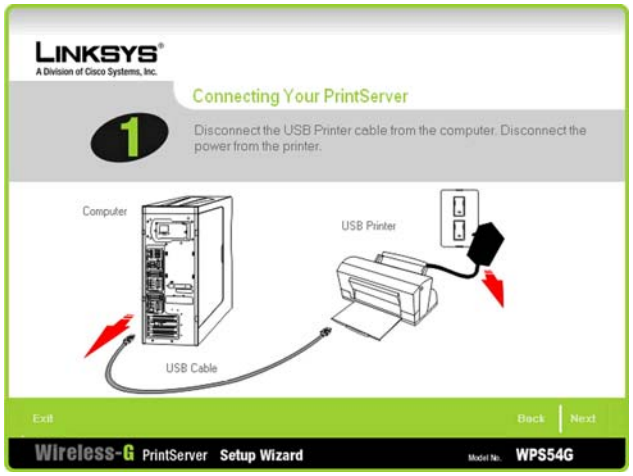

Figure 4-3: Disconnect the USB Printer cable and power

5. In *Step 2*, you will connect the USB printer cable to the USB port on the Print Server. Click **Next**.

Figure 4-4: Connect the PrintServer to the Printer

6. From the *Connecting Your PrintServer* screen, you will connect your Ethernet port.

   The Ethernet connection is for configuration purposes only. Later in this installation, you will need to disconnect the ethernet cable and reconnect your PrintServer, printer, and router.

   Click **Next** to continue. Click **Back** to return to the previous screen.

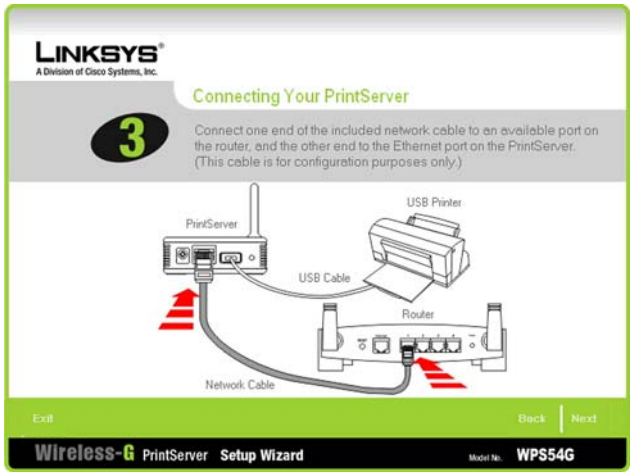

Figure 4-5: Connect the PrintServer

7. Connect the Power Adapter to the PrintServer and click **Next**.

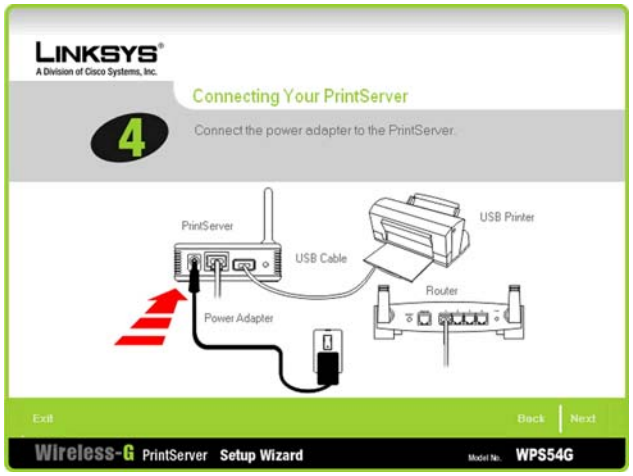

Figure 4-6: Connect the PrintServer

8. Reconnect the power adapter to the printer. Plug the power into the wall outlet.

   Click **Next** to continue, or click **Back** to return to the previous screen.

   Wait a few moments while the system searches for the PrintServer.

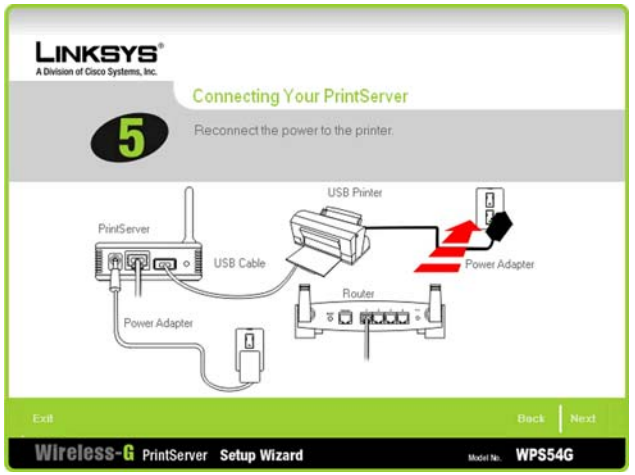

Figure 4-7: Reconnect the Printer

9. Select the proper PrintServer. If you can not find the PrintServer, click **Refresh**.

   Click **Next**.

Figure 4-8: Choose PrintServer

10. If you have changed the default password previously, the password dialog opens and you are prompted for your password. Otherwise, the installation will continue.

    If you have forgotten your password, hold the reset button on the side of the PrintServer for 10 seconds. This will reset the device to factory default. The default password is **admin**.

Figure 4-9: Password

11. The *Configure IP Settings* screen appears. If your network uses a router with a DHCP setting that automatically assigns IP addresses, select **Automatically obtain an IP address (DHCP)**. If your network uses a static IP address, select **Set IP configuration manually**, and enter the IP Address, Subnet Mask, and Gateway in the fields provided.

    Click **Next** to continue, or click **Back** to return to the previous screen.

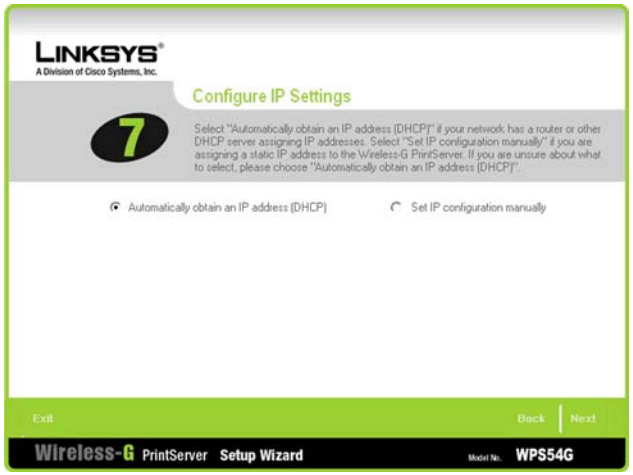

Figure 4-10: Configure IP Settings

***ip** (internet protocol): a protocol used to send data over a network*

***ip address**: the address used to identify a computer or device on a network*

***static ip address:** a fixed address assigned to a computer or device connected to a network.*

12. The *Set PrintServer's Password* screen appears. If you want to change your password, enter your current password in the *Password* field. Enter the new password in the *Confirm* field.

    Click **Next** to continue, or click **Back** to return to the previous screen.

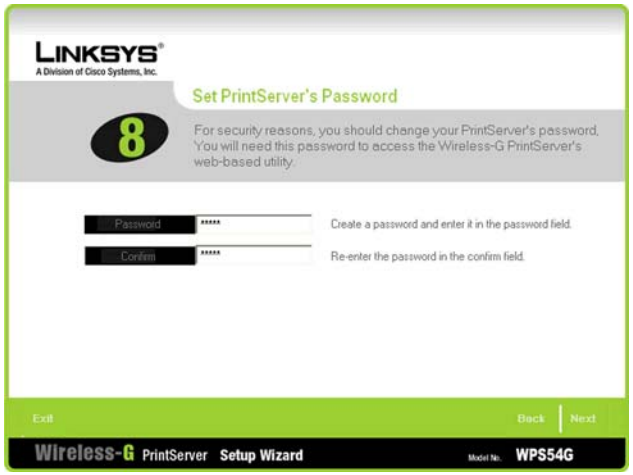

Figure 4-11: Set PrintServer Password

13. Locate and select the wireless network you want to connect to. If you do not see the wireless network you wish to use, click **Refresh** and locate the network.

    Click **Next** to continue, or click **Back** to return to the previous screen.

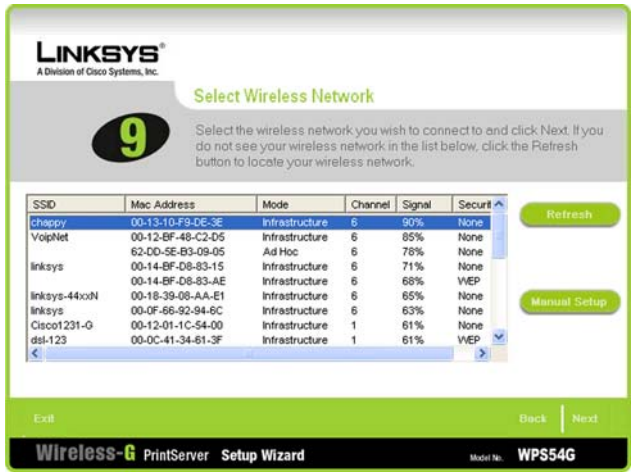

Figure 4-12: Select Wireless Network

14. If you clicked Manual Setup, the *Configure Wireless Settings* screen appears with the *SSID* field. Enter your wireless network's SSID or name. This is the unique name shared by all devices in a wireless network. The SSID is case-sensitive and should have 32 characters or fewer.

    Click **Next** to continue, or click **Back** to return to the previous screen.

Figure 4-13: Configure Wireless Settings - SSID

If you click **Refresh** and select the network, the setup wizard automatically detects what kind of security network your computer has.

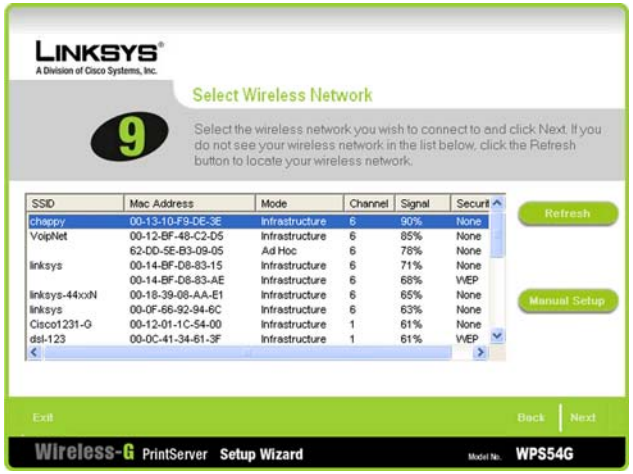

Figure 4-14: Select Wireless Network

15. If your network uses wireless security, you will prompted to enter the correct information.

Figure 4-15: Wireless Security Settings - Disabled

If you enter a Passphrase, you will see the automatically generated WEP key on the following screen. Otherwise, enter the WEP key manually in the field provided. If you are using 64-bit WEP encryption, then the key must consist of exactly 10 hexadecimal characters. If you are using 128-bit WEP encryption, then the key must consist of exactly 26 hexadecimal characters. Valid hexadecimal characters are "0"-"9" and "A"-"F".

Click **Next** to continue, or click **Back** to return to the previous screen.

Figure 4-16: Wireless Security - WEP

WPA-Pre-Shared Key
Enter a Pre-Shared Key that is 8-63 characters in length. Click **Next** to continue, or click **Back** to return to the previous screen.

Figure 4-17: Wireless Security - WPA-Pre-Shared

16. The *Confirmation* screen will appear. Your old and new settings will be displayed. If you want to save the new settings, click **Next**. If you want to make a change, click **Back** to make changes.

    Please wait a few moments while the system changes the PrintServer's settings.

NOTE: In the next few screens, you will need to disconnect and reconnect your PrintServer. Proceed in the order specified to avoid any networking conflicts.

Figure 4-18: Confirm New Settings

17. Disconnect the power to the PrintServer. Click **Next**.

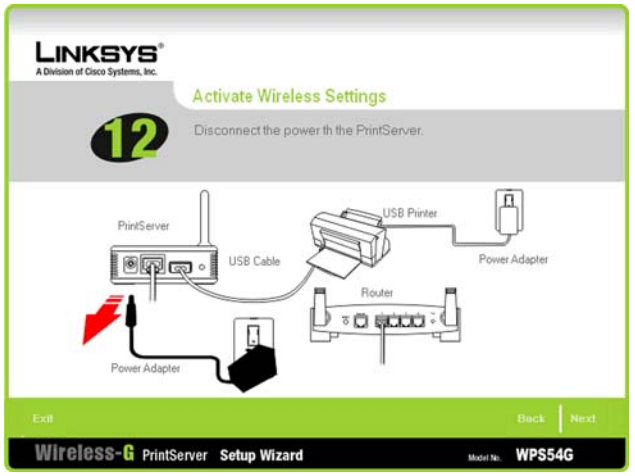

Figure 4-19: Disconnect power to the PrintServer

18. Disconnect the Network Cable from the PrintServer and router.

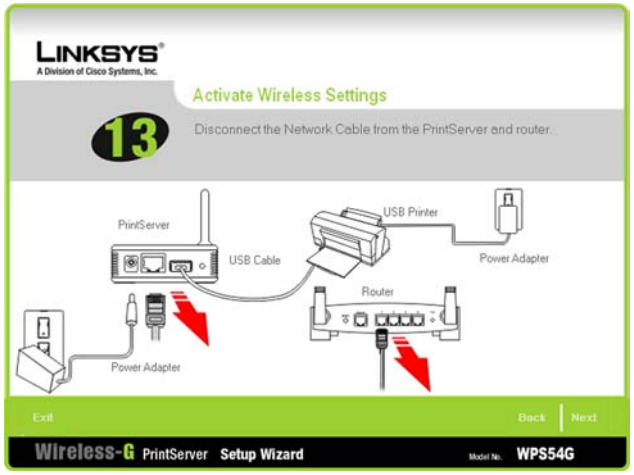

Figure 4-20: Disconnect Network

19. Reconnect the power to the PrintServer and click **Next**.

    Wait a few moments while the system checks for the network.

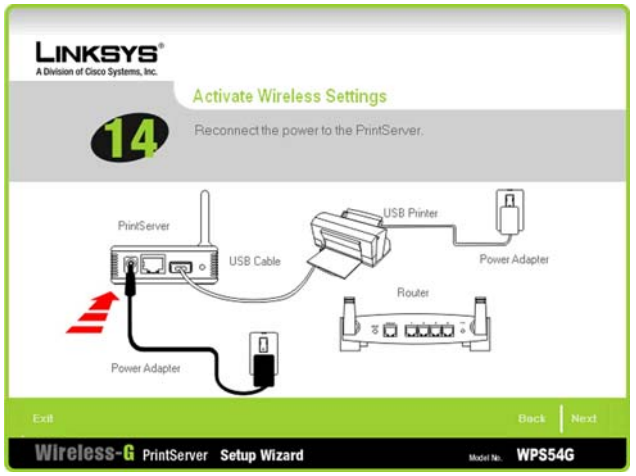

Figure 4-21: Reconnect the PrintServer

20. The PrintServer is now connected to your wireless network properly.

    The order used in reconnecting your PrintServer, router, and printer is very important. If you may have reconnected improperly, please click **Back** and review your processes.

Figure 4-22: PrintServer connection complete

21. Now you have finished the initial setup..

You will need to install the driver next. Click **Set up Computer** at the bottom of this, and go to “Chapter 5: Windows Driver Installation” of this user guide.

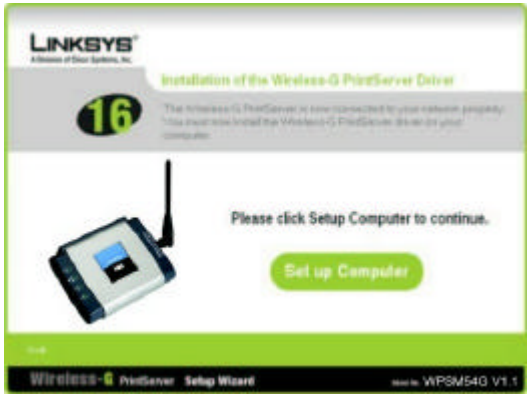

Figure 4-23: Continue to Set up Computer

Chapter 5: Windows Driver Installation

Overview

This section installs the PrintServer's software on your Windows 98, Me, 2000, or XP computers so they can use the PrintServer for print jobs. (The PrintServer is fully compatible with Windows 98, Me, 2000, and XP.)

At this point, you must have the following:

- the PrintServer hardware installed on your network. If not, see "Chapter 3: Connecting the PrintServer."
- TCP/IP installed on each of your computers.
- an IP address assigned to each of the computers on your network.
- an IP address assigned to the PrintServer by you or your network router. By default the PrintServer has DHCP enabled so the network router will automatically assign an IP address. If you need to manually assign an IP address, run the Setup Wizard on the Setup CD-ROM or go to "Chapter 7: Bi-Admin Management."

It is assumed that your CD-ROM drive's letter name is designated as "D". If your CD-ROM drive is named another letter, replace all instances of "D" with the appropriate letter.

If you need to install the PrintServer's driver on computers without a CD-ROM drive, you can create a setup disk by using a computer with a CD-ROM drive to copy the contents of D:\Driver\PTP onto a floppy disk.

HAVE YOU: already set up your printer? Linksys recommends that you set up your printer and install your printer's driver before you install the PrintServer's driver.

Installation

1. Make sure you have no programs or applications running on your computer.

2. If you haven't already done so, insert the Setup CD-ROM into the computer's CD-ROM drive. The Setup CD-ROM should run automatically. If it does not, click the **Start** button and choose **Run**. In the field that appears, enter **D:\setupWizard.exe** (if "D" is the letter of your CD-ROM drive).

3. When you see the *Welcome* screen, click **Click Here to Start** to continue. Click **Exit** to end the installation.

Figure 5-1: Welcome

4. Click **Set up Computer.**

Figure 5-2: Set up Computer

Configuration of the PrintServer Driver

Configuration of the PrintServer Driver

1. The *Wireless-G PrintServer Driver* screen automatically appears. Select the PrintServer you are installing. Then click **Next**.

NOTE: If the PrintServer is not listed, then click **Refresh**. If the PrintServer cannot be found, then select to temporarily disable the firewall and click **Refresh** again.

Figure 5-3: Select Printer

2. The *Checking Printer Driver* screen appears. Select the driver for your printer, and click **Next** to continue.

If the driver for your printer is not installed, you will see a new window pop up. The message will ask you to exit the Wizard and install the driver for your printer. Click **OK** and install the driver. After the driver has been installed, run the Setup Wizard and click **Driver Install** on the *Welcome* screen.

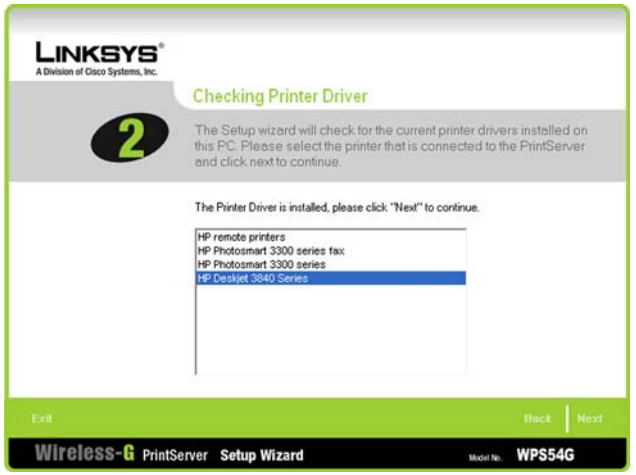

Figure 5-4: Check Print Driver

3. The *Wireless-G PrintServer Driver* screen appears. Review the PrintServer status and then click **Next**.

Figure 5-5: Wireless-G PrintServer Diagnostic - Check Printer Driver Installation

4. The *Wireless-G PrintServer Driver* screen appears. If you want to print a test page, click **Test Print**. Then click **Finish**.

Figure 5-6: Printer Driver Not Installed

5. If you've chosen to print a test page, the test page dialog appears. Click **OK**.

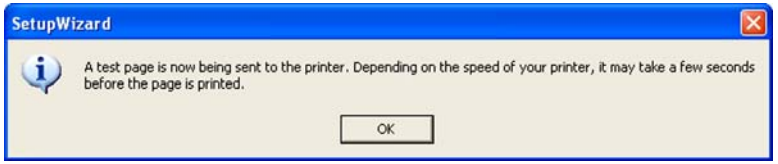

Figure 5-7: Print Test Page

6. The Print Server diagnostic icon will appear in the system tray of your desktop. When you double-click the icon, you will see the *PrintServer Info* screen.

   If you want to run the wizard that configures the printer driver, click the **Diagnostics** button.

   To close the *PrintServer Info* screen, click the **Close** button.

   When you right-click the Print Server diagnostic icon, you will see a menu. To see the version number of the Print Server Utility, click **About**. To see the *PrintServer Info* screen, click **Info**. To close the Utility, click **Exit**.

The driver installation and configuration is complete. You can now use the PrintServer.

If you would like to change the PrintServer's settings, use the PrintServer's web-based utility. For more information, refer to "Chapter 6: Configuring the PrintServer Using the Web-based Utility."

Figure 5-8: PrintServer Diagnostic Icon

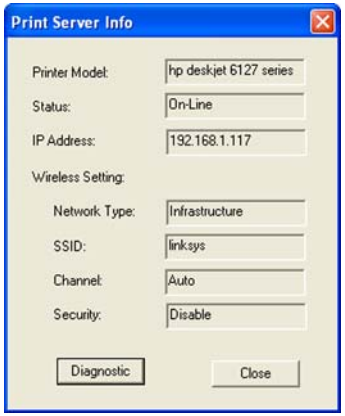

Figure 5-9: PrintServer Info

Figure 5-10: Right-click Icon

Chapter 6: Configuring the PrintServer Using the Web-based Utility

Overview

After setting up the PrintServer with the Setup Wizard, the PrintServer will be ready for use. However, if you'd like to change its settings, use the PrintServer's web-based utility. This chapter will describe each web page of the utility and each page's key functions. The utility can be accessed via your web browser through the use of a networked computer.

There are six main tabs: Setup, Protocol, Wireless, Printer, Status, and Exit. Additional tabs will be available after you click one of the main tabs, except for the Setup tab.

To access the web-based utility, launch Internet Explorer or Netscape Navigator, and enter the PrintServer's IP address in the *Address* field. Then press **Enter**.

NOTE: Use the PrintServer's IP address that you noted when you ran the Setup Wizard. Otherwise, insert the Setup CD-ROM, and when the *Welcome* screen appears, click **Setup Wizard**. Follow the instructions until you reach the *Wireless-G PrintServer Setup* screen. Note the IP address, and then click **Back** until you reach the *Welcome* screen. Click **Exit**.

The Setup Tab

The first screen that appears is the Setup tab and allows you to change the PrintServer's general settings.

Figure 6-1: Setup Tab

WPS54G Device Name

Enter the PrintServer's name in the field provided. The name is located on a sticker on the bottom of the PrintServer.

Password

Current Password. To change the PrintServer's password, enter the current password in the *Current Password* field.

New Password and Verify Password. Enter the new password in the *New Password* field, and then enter the new password again in the *Verify Password* field.

Protocols

The TCP/IP protocol is enabled by default.

Enable: Apple Talk or NetBEUI. Check the box(es) for AppleTalk or NetBEUI, if they are used by your network.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

The Protocol Tab - TCP/IP

Click the TCP/IP tab to view or change the TCP/IP values of the PrintServer.

IP Address

Obtain an IP Address Automatically. If your network router is using DHCP to assign IP addresses, select **Obtain an IP Address Automatically**. By default, **Obtain an IP Address Automatically** is enabled.

Use the Following IP Address. If you need to assign the PrintServer a fixed IP address (also known as static IP address), select **Use the Following IP Address**, and enter the appropriate values under IP Address, Subnet Mask, and Gateway. Make sure the IP Address and Subnet Mask are appropriate for your network. If you change the PrintServer's IP address, make sure you that you reconnect to the PrintServer using that new IP address. Otherwise, you will not be communicating with the PrintServer. In most cases, the Gateway IP address is the IP address of your router, and you should complete the *Gateway* field if you will use the PrintServer for Internet printing. (To find out your router's IP address, consult your router's documentation.)

Connection

Delay before reconnection attempt. Set how long you want the PrintServer to wait between attempts.

Number of reconnection attempts. Specify the number of times that the PrintServer will attempt to connect to the network.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

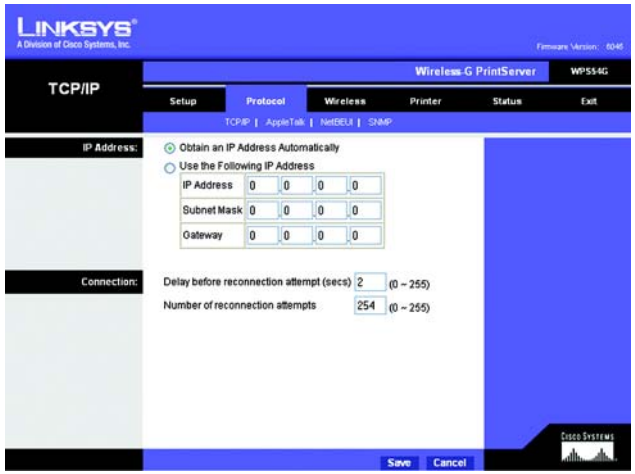

Figure 6-2: Protocol Tab - TCP/IP

The Protocol Tab - AppleTalk

AppleTalk is a network communications protocol that allows computers to talk to each other using Ethernet. Typically only Macintoshes use AppleTalk, although other platforms can use it if they have the necessary, third-party software.

Communication

Printer Object Type. The Printer Object Type can be obtained from the manufacturer of the printer. Enter the type of printer in the field provided. For each printer connected to the PrintServer, you will choose the Communications Protocol that allows the devices on the network to communicate.

Communication Protocol. Select the type of Communication Protocol you will use, **ASCII** or **Binary** for each printer, according to the recommendation of the printer's manufacturer. For more information, refer to the printer's documentation.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

Figure 6-3: Protocol Tab - AppleTalk

The Protocol Tab - NetBEUI

NetBEUI connection settings of the PrintServer are available on this tab.

Figure 6-4: Protocol Tab - NetBEUI

Domain Name

Enter the name of the domain that you want the PrintServer associated with in the *Domain Name* field.

If you are unsure of the Domain Name, you can find it out by looking on any computer already on the network. In Windows 98, right-click **Network Neighborhood** and select **Properties**. Under the Identification tab, there will be listed that computer's name, and the Domain to which it is connected. For Windows Me, 2000, or XP, right-click **My Network Places**. In Windows Me, choose **Properties** from the menu that appears. In Windows 2000 or XP, choose **Properties** from the menu that appears. Then, right-click **Local Area Connection** and choose **Properties**. The Domain name will appear. If you want the PrintServer to be connected to that same Domain, enter that Domain name here. If no Domain name exists there, you will use the Workgroup name from that window.

Options

Response Time. You can specify the Response Time that you prefer for the PrintServer. This is the amount of time (measured in seconds) that the PrintServer will wait for a response from the network before "timing out."

Abort Print Job if Error. You also have the option to use this feature, Abort Print Job if Error. Selecting Yes here will terminate the printing if there is an error of any kind. If you select No, print jobs that have errors will be sent to the printer, but might not print properly.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

The Protocol Tab - SNMP

Use this screen to view or change the PrintServer's SNMP (Simple Network Management Protocol) settings.

The PrintServer supports SNMP, which allows network administrators to monitor and control the PrintServer through the use of network management platforms, such as HP OpenView.

The appropriate MIB file must be imported into your SNMP management program using the Import-Compile command. Check your program's documentation for details on this procedure. The MIB file is named Mib2p.mib and is provided in the MiB folder on the Setup CD-ROM.

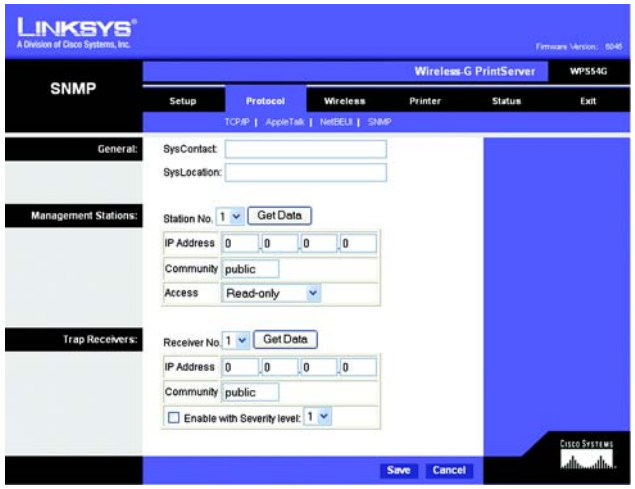

Figure 6-5: Protocol Tab - SNMP

General

SysContact. Enter the name of the contact person in the *SysContact* field.

SysLocation. Enter the location of the contact person in the *SysLocation* field.

Management Stations

Station No. Select the number of the management station from the *Station No.* drop-down menu (1-4). Click the **Get Data** button to display the information for the selected station.

IP Address. Enter the IP address of the management station running the SNMP program.

Community. Enter the name of the SNMP community, which is usually **public** or **private**.

Access. Select the level of access for this management station, **Not Accessible**, **Read-only**, or **Read/Write**.

Trap Receivers

Receiver No. Select the number of the trap receiver from the *Receiver No.* drop-down menu (1-4). Click the **Get Data** button to display the information for the selected trap receiver.

IP Address. Enter the IP address of the trap receiver that will be sent the trap messages or notifications.

Community. In the *Community* field, enter the name of the SNMP community, which is usually **public** or **private**.

Enable with Severity level. To designate a severity level, click the checkbox next to *Enable with Severity level*. From the following drop-down menu, select the desired level of severity, with 1 meaning least severe.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

The Wireless Tab - Basic

This screen allows you to change the PrintServer's basic wireless settings.

Configuration

Regulatory Domain and MAC Address. The PrintServer's Regulatory Domain and MAC Address are listed and cannot be changed.

SSID. In the *SSID* field, enter the name of your wireless network. This is the unique name shared by all devices in a wireless network. The SSID is case-sensitive and should have 32 characters or fewer.

Channel No. If your network is set to ad-hoc mode, select your network's channel setting from the *Channel No.* drop-down menu.

Network Type. The Network Type setting shows a choice of two wireless modes. Select **Infrastructure** if you want the PrintServer to communicate using an access point or wireless router. Select **Ad-Hoc** if you want the PrintServer to communicate without using an access point or wireless router.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

Figure 6-6: Wireless Tab - Basic

The Wireless Tab - Security

Configure the security of your wireless network on this screen. Wi-Fi Protected Access (WPA) and two levels of Wired Equivalent Privacy (WEP) encryption are available. If you do not want to use wireless security, select **None** from the *Security Mode* drop-down menu.

Wireless Security

Security Mode. To use WPA, select **Pre-Shared Key**. To use WEP, select the level of WEP encryption you want to use, **64 Bit Keys (10 Hex chars)** or **128 Bit Keys (26 Hex chars)**. Then proceed to the instructions for your security method.

WEP

Default Transmit Key. Select the Default Transmit Key used by your wireless network. This indicates which WEP key your network uses for WEP encryption.

Passphrase. Enter a Passphrase and click the **Generate Keys** button to automatically generate WEP Keys 1-4. The Passphrase is case-sensitive and should have no more than 16 alphanumeric characters. It must match your wireless network's passphrase and is compatible with Linksys wireless products only. (Enter the WEP key(s) manually on any non-Linksys wireless products.)

Key 1 to Key 4. To enter the WEP keys manually, leave the *Passphrase* field blank and enter your WEP key(s). For 64-bit WEP encryption, each key must have 10 hexadecimal characters, while for 128-bit WEP encryption, the key must have 26 hexadecimal characters. Valid hexadecimal characters are "0"-"9" and "A"-"F".

Authentication. Select your wireless network's authentication type. The default is **Open System**, for which the sender and the recipient do NOT use a WEP key for authentication. You can also choose **Shared Key**, for which the sender and recipient use a WEP key for authentication.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

Figure 6-7: Wireless Tab - Security (WEP)

Figure 6-8: Wireless Tab - Security (WPA)

Pre-Shared Key (WPA)

WPA Algorithm. TKIP is the default algorithm.

WPA Shared Key. Enter your Pre-Shared Key, which must have 8-63 characters in length.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.

The Printer Tab - Internet Printing

Internet Printing allows you to automatically print any e-mails that are sent to a specific e-mail account on your network. This is especially useful for printing information when you are not connected to the network. You can print from any location where you can access e-mail.

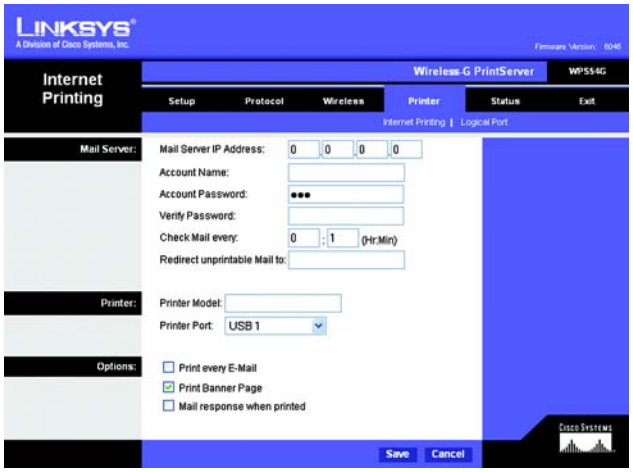

Figure 6-9: Printer - Internet Printing

Mail Server

Mail Server IP Address. Enter the address of your mail server. (This value must be a fixed IP address.)

Account Name and Password. Enter the Account Name and Account Password.

Verify Password. Enter the password again in the *Verify Password* field.

Check Mail every. Specify how often you want the PrintServer to check for e-mail to be printed.

Redirect unprintable Mail to. Specify an e-mail address to which e-mails that cannot be printed are routed; this is useful for both graphic-intensive e-mails and for troubleshooting purposes.

Printer

Printer Model. Enter the Printer Model in the field provided. You can find this in the Device Manager.

Printer Port. Choose the appropriate Printer Port from the drop-down menu: USB, the PrintServer's USB port, or **Logical Printer 1-3**. The PrintServer has three logical or virtual printer ports. For example, you can have three different configurations for your USB printer: Logical Printer 1 for landscape orientation, Logical Printer 2 for double-sided copies, and Logical Printer 3 for manual feed. Then configure the Logical Printers on the Logical Port tab, so Logical Printers 1, 2, and 3 will be mapped to the physical printer on the PrintServer's USB port.

Options

Print every E-Mail. Click this checkbox if you want to print every e-mail message.

Print Banner Page. Enabled by default, this feature tells the PrintServer to print a banner page for every print job (the banner page describes the print job). Click the checkbox to remove the checkmark and disable this feature.

Mail response when printed. Click this checkbox if you want an e-mail sent when a print job is complete.

Click the **Save** button to apply your changes, or click **Cancel** to cancel your changes.