PRINT SERVER

Mini-sized 10/100 Mbits/sec
Print Server

PM1110U
PM1110P

Instruction Guide

StarTech.com

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Introduction

Thank you for purchasing a StarTech.com one-port mini-sized 10/100 Mbits/sec print server. This external USB (PM1110U) or parallel (PM1110P) print server lets you place your printers or plotters directly on your Ethernet network, easily accessible to all your networked computers. With web-based management and SNMP support, the print server is easy to install and configure. The print server works with a wide range of operating systems and is light-weight and compact to help you save space as well as time.

Features

- Shares one printer with computers connected to a home or small office network

- Supports SNMP for remote printer management

- Eliminates the need to purchase additional printers for individual workstations

- Configurable using a web-based browser or a Windows-based configuration

- Supports 10/100 Mbits/sec Fast Ethernet network

- Works with Novell NetWare 3.12, 4.x, 5.x (Bindery, NDS, NDPS), Windows 95/98/Me/NT/2000/XP/Server 2003, Apple EtherTalk (Postscript printer only), or UNIX/Linux

Before You Begin

To ensure a quick and easy installation, please read through this section carefully before attempting to install the print server.

System Requirements

- A printer with a USB (PM1110U) or parallel (PM1110P) port

- A PC running Windows 95/98/Me/2000/XP

Package Contents

- 1 x Mini 10/100 Mbits/sec print server

- 1 x external power adapter

- 1 x driver disk

Hardware Installation

1. Make sure that your printer is turned off.

2. **PM1110U:** Use a USB cable to connect the printer server to the printer.
   PM1110P: Plug the print server directly into your printer.

3. Use a UTP RJ-45 cable to connect the printer server to your network.

4. Plug the power adapter into the power port on the print server and plug the other end into an external power source. The Status LED on the server should flash momentarily, then remain solid.

5. Turn on your printer.

Software Installation

The initial installation program must be run from a Windows PC. You will have the choice of either using the Setup Wizard or performing a Manual Install. The Setup Wizard lets you get you print server up and running quickly. Manual Installation installs the PSAdmin software that allows you to configure and manage your print server in NetWare environments.

Note: Depending on your operating system and the firmware version you are running, the following instructions may not be identical to what you see on your screen.

The Setup Wizard

1. Insert the driver disk into your disk drive.

2. The Autorun program should automatically start. If the setup program does not start automatically, run **Autorun.exe** in the root folder from the driver disk.

3. Choose **Setup Wizard**.

4. After installation completes, the Setup Wizard message appears. Click on **Network Print Server Setup Wizard** to configure the print server settings and add the printer to the computer.

5. On the Welcome screen click **Next**. The Wizard will automatically discover the print server and bring up the Select A Print Server screen. This screen displays information about your print server's IP address, MAC address, port number and status. Click **Next** again.
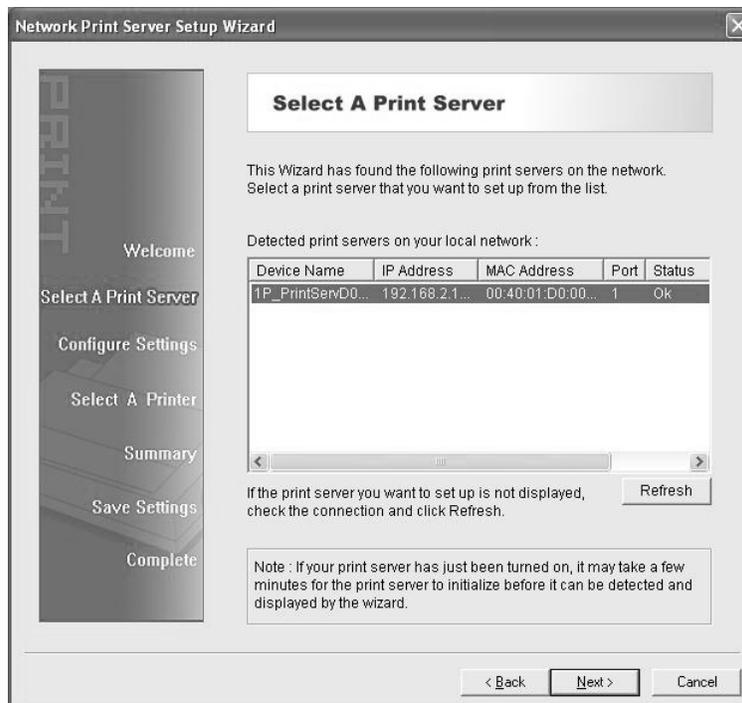
6. If you want to configure the print server's IP address, choose "Yes, I want to change settings" and click **Next**. If not, choose "No, I don't want to change settings" and click **Next**. If you chose No, skip ahead to Step 9.

7. You are now on the Configure Settings screen. If you have a DHCP server on the network, you can select "Obtain an IP address automatically." If you want to use specific information, click "Specify an IP address" and input the IP Address, Subnet Mask, and Gateway IP Addresses (if necessary). Click **Next**.
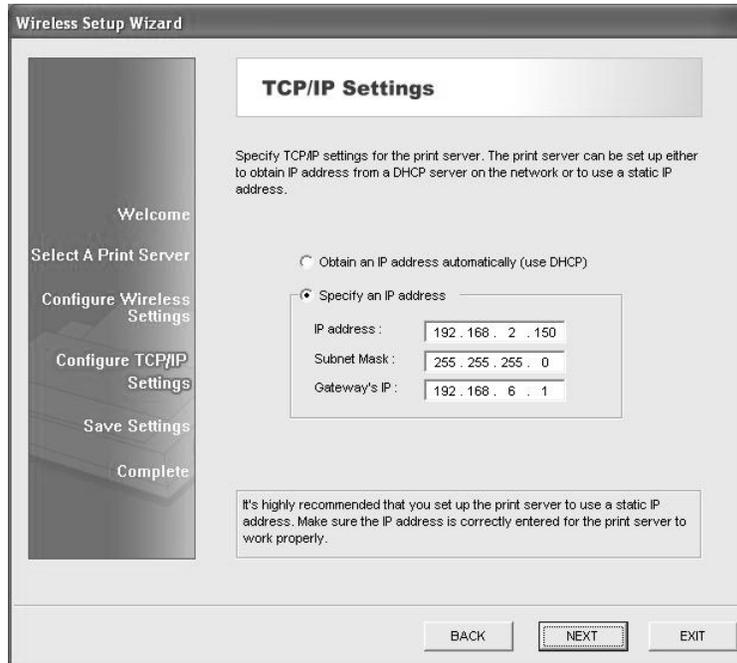
Note: In order to use some features of the print server (like the embedded web server), you will need to know the IP address of the print server. It is recommended that you choose to specify an IP address to your print server. If you choose to specify an IP address, make sure it meets the IP addressing requirements of the network segment.

8. When your TCP/IP settings have been saved, click **Next**.

9. If you have not already installed the drivers for your printer, you may see the following screen:
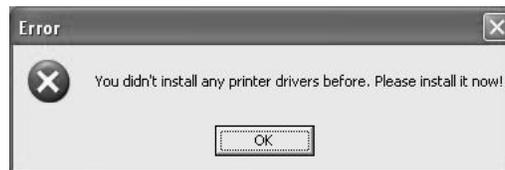
Click OK, then follow the instructions provided by your printer manufacturer to install the drivers for your printer.

10. Return to the print server software. You should now be on the Select a Printer screen. If your printer is not listed, click on **Add New Printer** and follow the instructions that appear on your screen.
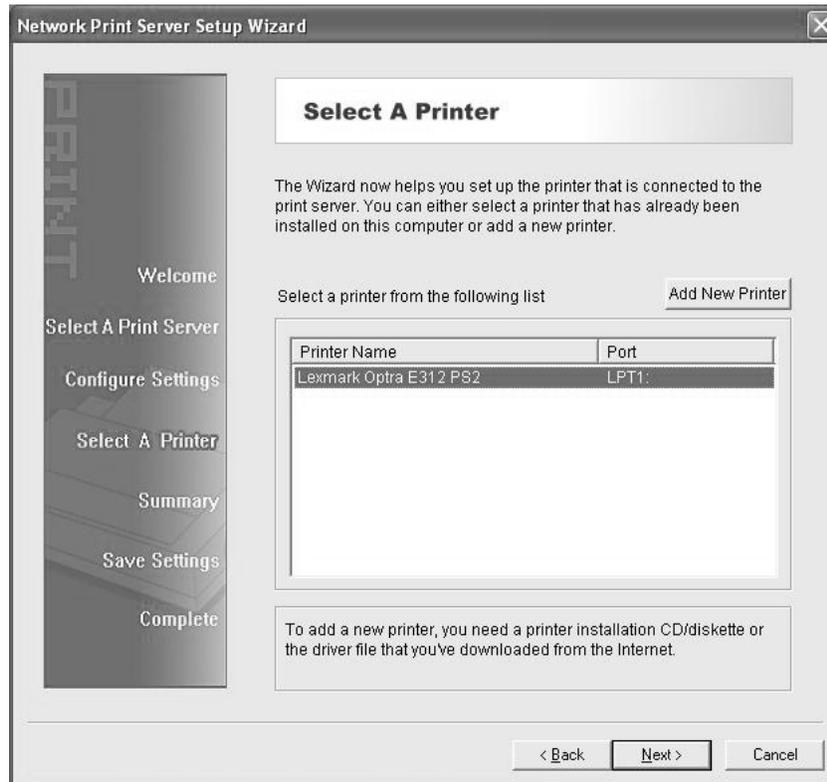
11. When you are finished, select the printer from the list and click **Next**.

12. You are now on the Summary screen. This screen displays a summary of your printer's configuration. Click **Next**, then **Finish** to complete the installation.

You have now completed the installation of the printer server. You can begin to use your printer on your network.

Using the PSAdmin Software

1. Insert the driver disk into your disk drive.

2. The Autorun program should automatically start. If the setup program does not start automatically, run **Autorun.exe** in the root folder from the driver disk.

3. Choose **Manual Installation**. Follow any onscreen prompts to complete the installation.

4. When installation is complete, there will be a Network Print Server Program folder in your program files. Click on the PSAdmin file in this folder.
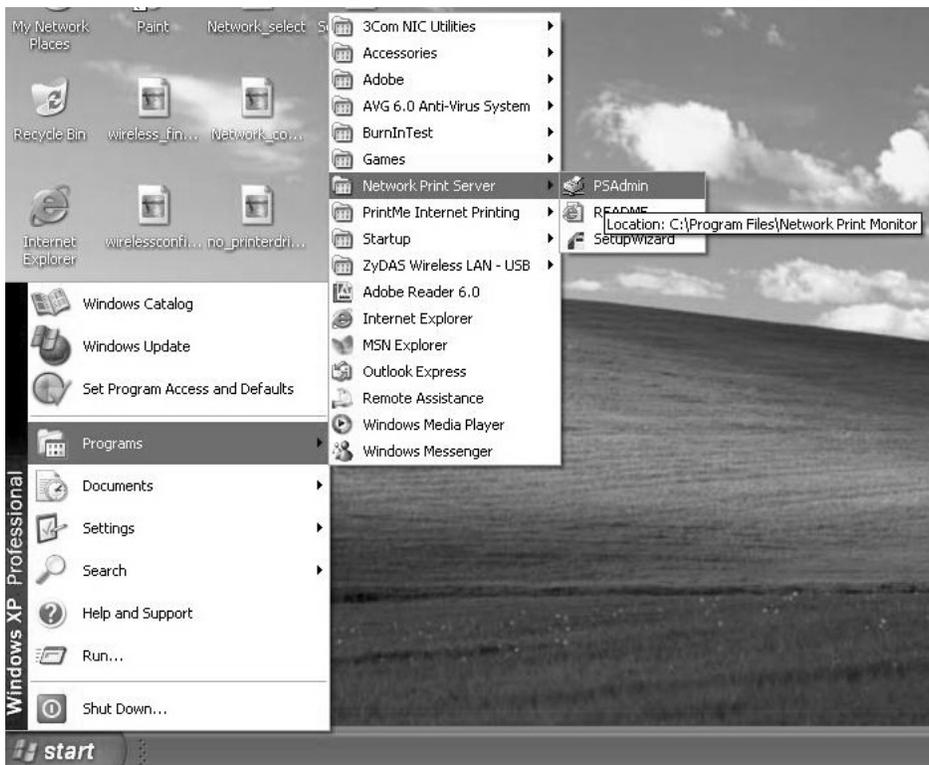
Using PSAdmin
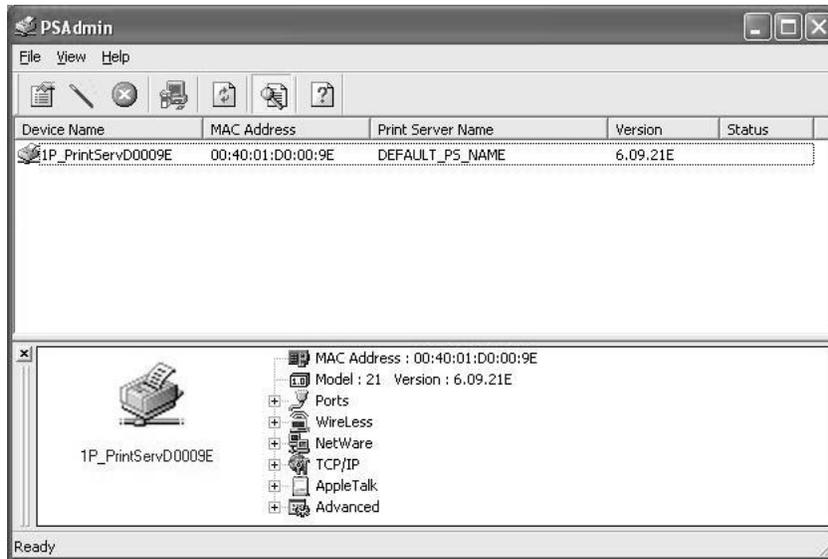
The PSAdmin software opens on the View page. All print servers that feature a Novell NetWare function on the LAN that will be displayed alongside the following information:

- **Device Name:** The name of the printer used for identification purposes.

- **MAC Address:** The Ethernet address of the print server.

- **Printer Server Name:** The name of the print server to which the device is attached.

- **Version:** The firmware version of the print server.

- **Status:** The current status of the printer.

You use the toolbar at the top of the PSAdmin window to navigate the PSAdmin software.
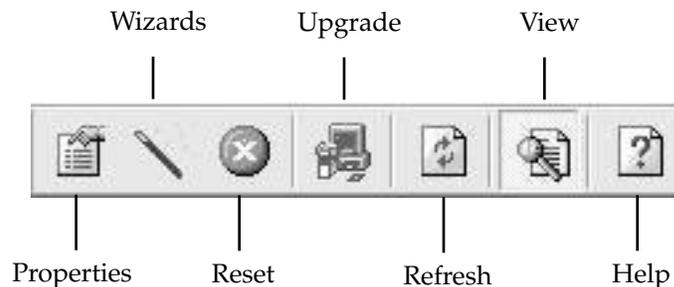
PSAdmin: The Wizard

The Wizard is a configuration program that can assist you in setting up the necessary parameters for your printer to function.

TCP/IP Wizard

1. Click on the **Wizard** button and select **TCP/IP Wizard**.

2. If you have a DHCP server on the network, you can select "Obtain an IP address automatically." If you want to use specific information, click "Specify an IP address" and input the following:

    IP Address: An IP address for the print server to use. It must meet the IP addressing requirements for the network segment.

    Subnet Mask: The subnet mask that your LAN or network segment is configured to use. (Optional)

    Gateway IP Addresses: Enter the IP address of the gateway (optional).

3. When you are finished, click **OK**. The program will save the settings.

NetWare Wizard

1. Log into your NetWare file server as a Supervisor (Admin.) or equivalent.

2. Click the **Wizard** button and select **NetWare Wizard**.

3. Type in a print server name.

3. Select the NetWare file server that the print server will be attached to.

4. Type in a print queue name. Each print queue corresponds to the port on the print server.

5. When you are finished, click **OK**.

6. From your NetWare client computer, create a printer that is connected (or redirected) to the NetWare print queue.

PSAdmin: Properties

The Properties tab is a configuration program designed for more experienced users of **NetWare.**

1. Run **PCONSOLE** in NetWare 3.x or NetWare 4.x and create the necessary parameters. Refer to your Novell NetWare print server/Services manual for details, if necessary.

2. Log into your NetWare file server as a Supervisor (Admin.) or equivalent. From your Windows 95/98/Me, run **PSAdmin**.

3. Select the print server that you wish to configure (if necessary).

4. Click **Properties** in the tool bar and click the NetWare tab.
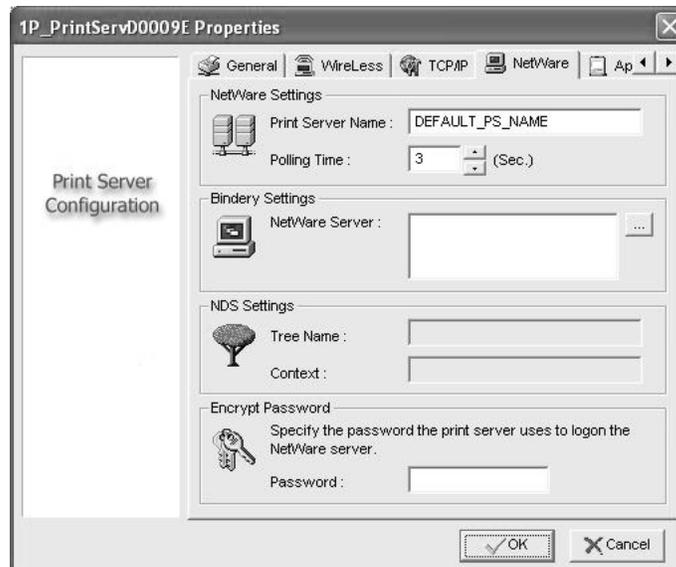
5. In NetWare Settings, type in the print server you created with PCONSOLE.

6. (Optional) In Bindery Settings, select the NetWare Bindery file server(s) name.

7. (Optional) In NDS Settings, select the NetWare NDS file server(s) name (NetWare 4.x or later).

8. When you are satisfied with your settings, click **OK**.

9. From your NetWare client computer, create a printer that is connected (or redirected) to the NetWare print queue.

TCP/IP Options

The TCP/IP settings allow you to modify the print server's TCP/IP settings. It is recommended that you specify a static IP address for the print server.

Run PSAdmin and select the print server that you wish to configure (if necessary). Click **Properties** in the tool bar and click the TCP/IP tab.

The values that appear in the fields are the current settings for the print server. You can
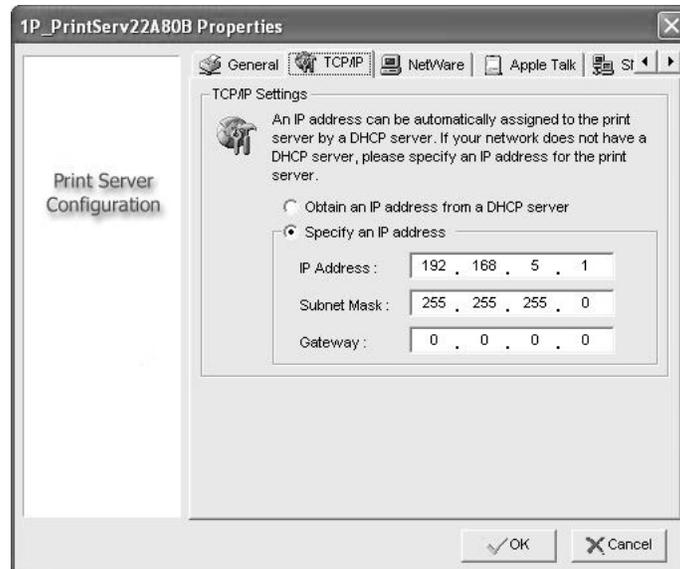
choose from one of the following:

Obtain an IP address from a DHCP server: This option enables the DHCP feature of the print server. When this option is enabled, the print server will obtain an IP address automatically from the DHCP server on your LAN.

Specify an IP address: You can assign a fixed IP address for the print server.

> **IP Address:** An IP address for the print server to use. It must meet the IP addressing requirements for the network segment.

> **Subnet Mask:** (Optional) The subnet mask that your LAN or network segment is configured to use.

> **Gateway IP Addresses:** (Optional) Enter the IP address of the gateway.

PSAdmin: Upgrade

Upgrade allows the user to upgrade the print server device. Firmware upgrades for this device may be available from StarTech.com. Check with our website for details.

1. From the PSAdmin software, click on the **Upgrade icon**.

2. Select "General Upgrade" and click **Next**. Make sure that the upgrade file is located in the same directory as PSAdmin.

PSAdmin: Reset

Reset allows the user to reset the print server in order to establish a new connection or to allow new settings to take effect. Click the **Reset** icon to reset the print server.

PSAdmin: Refresh

Refresh searches the network for all attached print servers. Click the **Refresh** icon to refresh the print server.

Multiple Print Queues Configuration

You can configure the print server to service multiple print queues.

1. Log into your NetWare file server as a Supervisor (Admin.) or equivalent.

2. Run **PSAdmin**.

3. Select the print server that you want to configure.

4. Click the **Wizard** icon in the tool bar. Select the NetWare Wizard.

5. Type in a Print Server and a Print Queue Name.

6. Run NetWare's **PCONSOLE** and create additional print queues.

7. Select the print server name you specified in Step 5.

8. Select the "Print server Configuration" option and select the "Queue Serviced by Printer" option (For NetWare 4.*x*'s PCONSOLE, please select "Printers" option and select "Printer 0" instead).

9. Select the "Printer 0" and press the **Insert** key to add the print queues you created in Step 6 into the list (For NetWare 4.*x*'s PCONSOLE, please select "Print queues assigned" option instead).

10. Reset the print server by clicking the **Reset** icon in PSAdmin.

Please refer to NetWare's Print server/Services manuals for detailed PCONSOLE commands, if necessary.

Uninstalling PSAdmin

PSAdmin comes with an Uninstall Wizard that can remove the software from your computer.

1. Go to your Control Panel and double-click **Add/Remove Programs**.

2. Select the **Change or Remove Programs** tab.

3. Select "Network Print Monitor for Windows 95/98/NT/2000/XP" and click Change/Remove.

4. The un-installation program will be launched. Follow the onscreen prompts to uninstall the software.

Internet Printer Connection

IPP Overview

This print server supports the Internet Printing Protocol (IPP). Using the appropriate software on your system, you can create an IPP print path from your system over the Internet.

Note: For incoming path requests, your network administrator will have to configure your firewall to accept incoming IPP requests.

Windows XP/2000/2003

For Windows XP, 2000, or Server 2003, you can use a supported web browser (for example, Netscape or Internet Explorer) to view the embedded web server on the print server. Contact your administrator to get the IP address or URL of the printer and browse to the print server's web page.

For example, to install Windows 2000 by IPP service you must follow below information:

1. Click **Start** button.

2. Select **Settings**, and then select "Printers" option.

3. Click **Add Printer** icon. Click **Next**.

4. Select **Network Printer** and click **Next**.

5. Select "Connect to a printer on the Internet or on your intranet" and enter the print server's IP address, followed by **/lp1**.
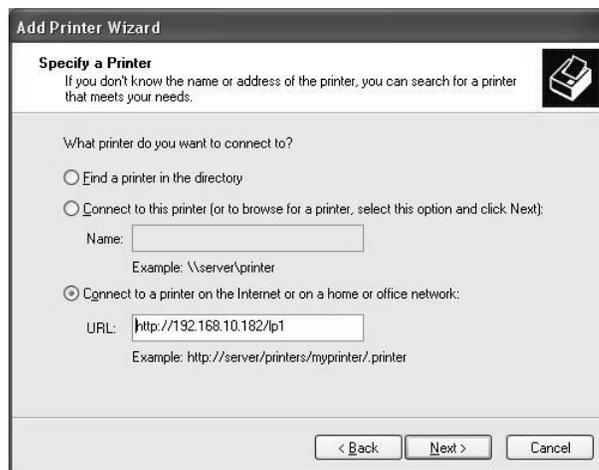
6. The program will automatically search for an HP printer. If it does not find one, it will display a message asking if you to install the driver on your local computer. Click **OK**.

7. Select the appropriate printer manufacturer and printer type and click **Next**.

8. Choose whether you want Windows to use this printer as the default and click **Next**.

9. Click **Finish** to complete the process.

HP Web JetAdmin

HP Web JetAdmin allows you to use a Web browse to revise, view, manage and diagnose devices connected to the print server or any standard printer MIB devices. For more information about a procedure or Windows in the HP Web JetAdmin software, see about HP's relation document.

System Requirements

HP Web JetAdmin software runs on Microsoft Windows NT, HP-UX, Solaris, Red Hat Linux and SuSE Linux system, and others. It is recommend that you use Internet Explorer or Netscape Navigator version 4 or higher. For more information, go to http://www.hp.com/go/webjetadmin.

Note: When installed on a supported host server, HP Web JetAdmin can be accessed from any client through a supported Web browser by browsing to the HP Web JetAdmin host.

Before installing the HP Web JetAdmin software, you must have domain administrator or root privileges.

Download the installation files from HP at http://www.hp.com/go/webjetadmin.

Follow the instructions on the screen to install the HP Web JetAdmin software.

Note: Installation instructions are also contained in the HP Web JetAdmin install file.

Confirming Installation and Supply Access

Confirm that the HP Web JetAdmin software is correctly installed by navigating to it with your browser. For example, http://server domain port/ where "server domain" is the host name of your web server and "port" is the port number assigned during installation.

Supply users access to HP Web JetAdmin software by adding a link to your web server's home page that is addressed to HP Web JetAdmin's URL. For example: http://server.domain:port/

Configuring and Modifying a Device

Using your browser, navigate to HP Web JetAdmin's URL. For example: http://server.domain:port/

Follow the instructions on the appropriate home page to configure or modify your printer.

Note: You can also substitute the server domain with TCP/IP address.

Removing HP Web JetAdmin Utility

To remove HP Web JetAdmin software from your web server, use the uninstall program provided with the software package.

The Embedded Web Server

The print server contains an embedded web server that can be accessed through a supported web browser on a LAN. Internet Explorer 4.0 or Netscape 4.0 or higher are recommended.

The embedded web server gives you access to the configuration and management pages for the print server and the connected peripheral device.

Using the Embedded Web Server

Note: Before you can use the embedded web server, the print server must be configured with an IP address. You can set an IP address for the print server using the PSAdmin utility. See the "Using the PSAdmin Software" on page 9 for more information.

From your web browser, enter the IP address of the print server as the URL, for example, 192.168.1.2. The print server's home page will appear in the web browser.

Note: Depending on the firmware version you are running, the screens seen in the following section may not be identical to the screens you see on system.

The Status Tab

The Status tab lets you view information about your print server and your network.

Status: System

Device Name: Displays the print server's device name.

System Contact: Displays the print server contact's name.

System Location: Displays the location of the print server. This confirms where the print server is located in your office's LAN.

System Uptime: Displays the uptime of the print server. This is the amount of time that has passed since you turned on the print server.

Firmware Version: Displays the firmware version of the print server.

MAC Address: Displays the MAC Address or Node ID of the print server.

Email Alert: Displays whether the email alert is been enabled or disabled.

Status: Printer
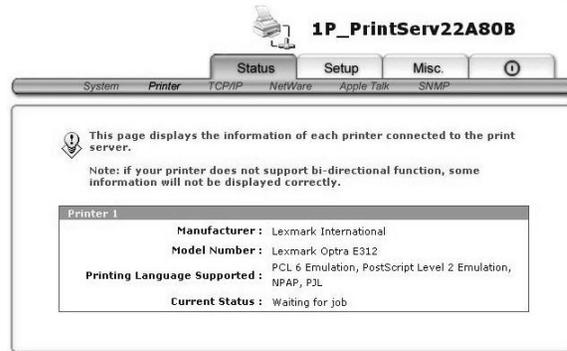
Manufacturer: Displays the name of the printer manufacturer.

Model Number: Displays the model of the printer.

Printing Language Supported: Displays the printing languages supported by the printer.

Current Status: Displays the current status of the printer.

Status: TCP/IP
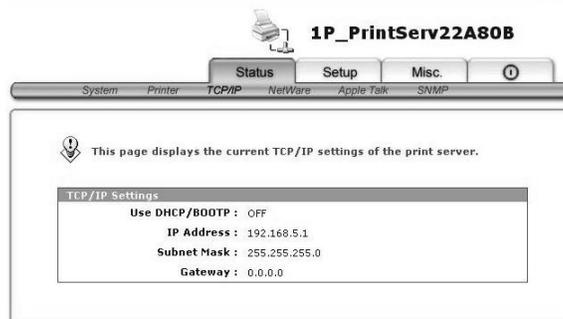
Use DHCP/BOOTP: Displays the DHCP/ BOOTP status. When ON, the print server is obtaining IP-related settings automatically from your DHCP server.

IP Address: Displays the print server's IP address.

Subnet Mask: Displays the printer server's subnet mask.

Gateway's IP: Displays the print server's gateway IP address.

Status: NetWare

Print Server Name: Displays the print server's name as configured by the PSAdmin utility.

Polling Time: Displays the polling time from the print server. This function is search for NetWare Server by per time.

Use NDS Mode: Displays whether NDS is enabled or disabled.

Name of the NDS Tree: Displays the name of the NDS tree.

Name of the NDS Content: Displays the name of the NDS content.

Current Status: Displays whether NetWare NDS is connected or disconnected.

Use Bindery Mode: Displays whether bindery mode is enabled or disabled.

Name of the File Server: Displays the name of the Bindery file server.

Current Status: Displays whether NetWare bindery is connected or disconnected.

Status: AppleTalk
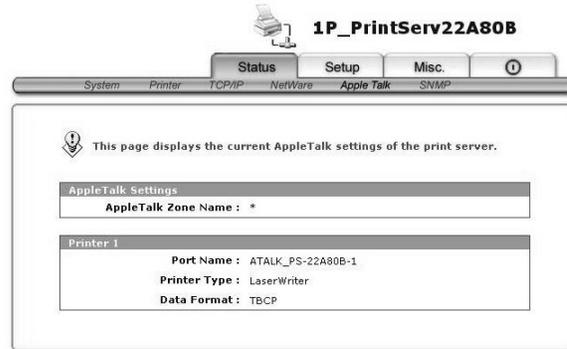
Zone Name: Displays the AppleTalk zone name. If no zone exists, the print server displays the zone name as an asterisk (*).

Port Name: Displays the AppleTalk port name in the form: ATALK_PS-xxxxxx-1, where xxxxxx represents the last six digits of the print server's MAC Address (or Node ID).

Printer Type: Displays the printer type. If you are using a PostScript printer you can select the LaserWriter 8 icon from your Mac computer.

Data Format: Displays the data format from the print server.

Status: SNMP
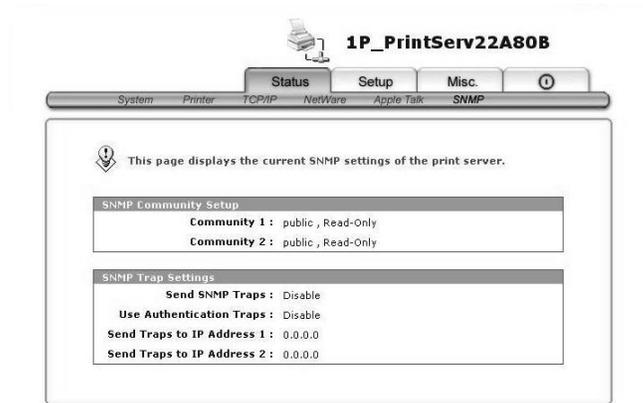
SNMP Communities: Displays the SNMP communities from the print server. There are two communities that control messages.

SNMP Trap Settings: Display SNMP trap information.

Setup

The Setup tab allows you to configure your print server settings.

When you first access the Setup tab, you may be prompted for a User Name and Password. Enter **admin** as the user name and leave the password field blank. Click **OK**.

Setup: System

Email Alert: Choose to Enable this option if you want to send an e-mail to an administrator when the printer is ready or offline. If you have Enabled this option, you will have to enter the proper information in the SMTP Server IP Address and Administrator E-mail Address fields.

Device Name: This option allows you to change the device name of the print server.

System Contact: This option allows you to change the contact name for the print server.

System Location: This option allows you to change the location information about the print server.

Password/Re-type Password: This option allows you to change the print server's password. The next time you access the web configuration Setup menu, you will be prompted to enter a user name ("admin") and this password.

Setup: TCP/IP

Obtain TCP/IP settings automatically (use DHCP/BOOTP): This option allows you to select how IP information is assigned to your print server. If there is a DHCP/BOOTP server on your network, you can choose "Obtain TCP/IP settings Automatically" and the printer server will automatically be assigned IP information from the DHCP server.

Use the following TCP/IP settings: This option allows you to enter specific IP information. If you choose "Use the following...", you will have to enter the proper information in following fields:

IP Address: Enter an IP address for the print server. The IP address must meet the IP addressing requirements of the network segment.

Subnet Mask: Enter a subnet mask for the print server. The address must meet the addressing requirements of the network segment.

Gateway: Enter a gateway IP address for the print server.

Setup: NetWare

Print Server Name: Enter a name for the print server. This name is usually configured by PSAdmin utility or PCONSOLE program.

Polling Time: Enter a time interval in which the print server unit polls the file server for servicing of print queues.

Logon Password: This option allows you to input an encrypted password for the print server.

NDS Mode: Enable NDS Mode if you want to set up an NDS environment. If you've enabled NDS mode, you'll also have to select the Name of the NDS Tree and enter a context name in the Context box.

Bindery Mode: Enable Bindery Mode if you want to setup a Bindery environment. If you have enabled Bindery mode, you will need to fill the Name of File Server field.

Installing the Print Server on NetWare 4.x/5.x

Due to its architecture and functionality, the print server works under NetWare 4.x/5.x NDS Bindery Emulation. When you install the NetWare file server for the first time, by default the installation program will automatically setup the **Bindery Emulation** function for you by adding "SET BINDERY CONTEXT =" in the AUTOEXEC.NCF file. By default, the bindery context will only be set on you organization (O) object.

If you have ever modified this line, or if you have ever added any organizational units (OU) to your NDS tree after the NetWare system was installed, please read the following section before installing the print server.

For the purpose of illustration, we assume the NDS tree structure is as follows:

```
[ROOT]
   |
   └── (O) ABC
            |
            ├── (OU) ABC-USA ──┬── (OU) Sales
            |                  |
            ├── Admin          └── (OU) Tech
            |
            └── FileServer-1
```
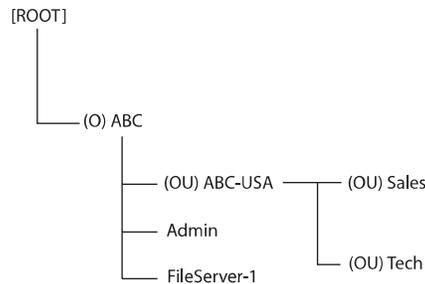
Installation Procedure

1. At your file server console, type "**load install**".

2. Select "NCF files options".

3. Select "Edit AUTOEXEC.NCF file".

4. Add or modify the "SET BINDERY CONTEXT=" line to include the NDS organization unit (OU) objects where users are located. For example:
   SET BINDERY CONTEXT = O=ABC; OU=SALES.OU=ABC-USA.O=ABC; OU=TECH.OU=ABC-USA.O=ABC;

5. When done, save the AUTOEXEC.NCF file. Restart your NetWare file server in order for the new settings to take effect immediately.

6. Refer to the "Auto Setup" section in this chapter to finish installing the print server.

7. Log on to your NetWare file server as a Supervisor (Admin) or equivalent via a Bindery connection.

8. Run NetWare's PCONSOLE and add user to the "Queue Users" list.

9. From your NetWare client computer, such as Windows 95/98/Me, create a printer that is connected (redirected) to the NetWare print queue serviced by the printer server.

Note: Please refer to NetWare's Print Server/Services manuals for detailed PCONSOLE commands.

Setup: AppleTalk

The print server can print jobs submitted from Macintosh workstations connected to an Ethernet using AppleTalk protocol. The basic configuration is for the print server in an AppleTalk environment is performed simply by opening the Chooser (OS 9 and earlier) window and selecting a printer that is connected to the print server.

Zone Name: In this option, type an AppleTalk Zone name that you want the print server to belong to or leave it in default (This enables the print server to automatically search and link itself to the default zone that is set on the AppleTalk router, if found). We also assume that at least one AppleTalk Zone exists on the network. If no zone exists, the print server itself displays the zone name as an asterisk (*) in the current AppleTalk Status of the print server in the web browser.

Port Name: In this option, type a name for identification purpose or just leave it as the default (recommended).

The default print server's Chooser name is as shown as follows: <ATALK_PS>-xxxxxx-1, where xxxxxx represents the last six digits of the device's MAC Address. For example: ATALK_PS-40EEED-1. You may also change the <ATALK_PS> to a name you like for identification purposes, but the print server will append the last six digits of the MAC Address to the name you specify.

PrinterType: By default, LaserWriter is listed as the printer type (recommended).

Data Format: Choose a printer data format. The list includes ASCII, TBCP, and BCP.

Setting Up a Macintosh Computer

1. From your Macintosh computer, pull down the Apple Menu and select Chooser.

2. The Chooser window will display an Apple Zone list. Select the Zone name you specified when configuring the print server.

Note: If you select a Zone that the Print Server doesn't belong to, no N7119+ will be displayed in Step 4.

3. If you are using a PostScript printer, select the Laser Writer 8 icon.

4. The Chooser window displays the Print Server featuring the AppleTalk protocol, along with its default Chooser Name in the right-hand "Select a PostScript Printer'' dialog box.

Note: You may change the default Chooser name and Zone name of a Print Server by using your web browser before proceeding with your installation. If you are using OS 8.x or 9.x, make sure that your printer supports PostScript.

5. Click **Setup...** and choose the PPD file matching your printer and click OK. If our printer does not appear in the PPD file list, please contact your printer manufacturer. You may also use the Generic PPD if you do not need any printer-specific features.

6. Close the Chooser window.

Setup: SNMP

IP networks use a standard management protocol called Simple Network Management Protocol (SNMP). SNMP is widely used in the industry as a solution for remote network management and monitoring of networking devices. SNMP actually includes a protocol, a database structure specification, and a set of database objects. The database objects are contained in a standard database called Management Information Base (MIB) that is stored on the networking device called SNMP agent. The print server's SNMP implementation runs in a TCP/IP environment.

A host on the network running Network Management System (NMS) software can access the print server device by reading and writing the MIB objects stored in the device. The Network Management Systems are available from many third-party vendors, such as Hewlett-Packard's OpenView.

When accessing (traversing) MIB objects in the print server using NMS software called SNMP manager, you need to provide a community name in each SNMP request for authentication purposes. The print server supports up to two community names. The default community name is public (case-sensitive), with Read Only access right in default.

When an unusual condition or activity occurs, the SNMP agent alerts the SNMP manager through SNMP traps. The following list summarizes SNMP trap messages that the print server will send out:

Link Up or Link Down: When the network interface on the print server fails, a Link Down trap message is generated; if the network interface comes back to life, a Link Up trap message is sent.

Cold Start or Warm Start: When the print server restarts, the Cold Start or Warm Start trap message is generated.

Authentication Failure: When the print server receives an SNMP request with a community name that does not match the community name the print server is configured with (stored in the print server's memory), an Authentication Failure trap message is generated.

In the print server's SNMP implementation, the following MIB objects are available for updating.

system.sysContact: Indicates the network administrator's name.

system.sysName: Indicates the print server's name for identification.

system.sysLocation: Indicates the location of the print server.

snmp.snmp EnableAuthenTraps: Enables or disables the function of sending SNMP Authentication Failure trap message to the network administrator, if the community name within a SNMP request is not correct.

SNMP Community: The print server supports up to two community names. The default community name is public (case-sensitive), with Read Only access right in default.

Support HP WebJetAdmin: Choose to disable/enable the support for HP WebJetAdmin.

SNMP Traps: Enable the function of sending SNMP Authentication Failure trap messages to the network administrator, if the community name within a SNMP request is not correct.

Network Print Monitor

The print server supports TCP/IP, IPX/SPX and NetBEUI protocols under Windows. Please make sure that the following steps have been completed before proceeding with installation under Windows PC. For information on installing these protocols, see your Windows help center.

Windows 95/98/Me/NT/2000/XP Installation Procedure

Please perform the steps as follows to ensure a smooth installation:

1. Run **Setup** from the print server's NetWare, Win 95/98/Me/NT/2000/XP Setup diskette.

2. The Network Print Monitor for Windows 95/98/Me Setup will then appear. Click **Next**.

3. A message reading, "Setup is complete. You may add the Network Print Port by using the PSAdmin" will appear. Click **OK**.

4. Click **Start**, point to **Settings**, and select **Printers**.

5. Double-click the **Add Printer** icon.

6. Select Local Printer and click **Next**.

7. Select the appropriate printer manufacturer and printer type and click **Next**.

8. Select LPT1 and click **Next**.

9. Type in the Printer Name and click **Next**.

10. A message reading, "After your printer is installed, Windows can print a test page so you can confirm that the printer is set up properly." Select No and click **Finish**.

11. Double-click the newly created Printer Name icon.

12. Select Printer and Properties.

13. Click Details tab and select Add Port.

14. In the Add Port dialog box, select Other.

15. Select the Network Print Port and click **OK**.

16. The Add Port box will then appear, along with the last 6 digits of the print server's MAC Address (located on the back of the print server unit). Select a print server port from the list, which is now connected to your printer.

• By default, the computer will first search for the print server(s) on the network by using the IPX/SPX protocol.

- If the IPX/SPX protocol is installed, the print server will be displayed along with its Node ID, as shown in Node column. (The last 6 digits of the MAC Address, located on the back of the print server unit). Select one of the print server's ports from the list.

- If the IPX/SPX protocol is not installed, no print server will be shown in the display box. Then please select TCP/IP or NetBEUI alternatively.

The system continues to search for the print server on the network by using the protocol you specified in the step above. When finished, the print server will be displayed along with its Node ID (the last 6 digits of the MAC Address, located on the back of the print server unit). Select one of the print server's ports from the list.

Uninstalling Network Print Port on Windows 95/98/Me/NT/2000/XP

The Network Print Port software comes with un-installation wizard program to help users remove the software components from their Windows 95/98/Me/NT/2000/XP systems in minutes. Please follow the directions listed below to proceed with the un-installation procedure.

After the Network Print Port is removed, the print server is no longer accessible via the Network Print Port. You have to re-install the Network Print Port on your system in order to access the print server again.

1. Click **Start**, point to **Settings**, and select **Control Panel**.

2. Double click the **Add/Remove Programs** icon.

3. Click the Add/Remove tab.

4. Select Network Print Monitor and click the **Add/Remove** button.

5. The un-installation wizard program will be launched.

6. Follow the directions on the screen to complete the un-installation procedure.

Note: We recommend you restart your computer after un-installation is finished.

TCP/IP LPR Port Printing Installation

Basic TCP/IP Installation Overview

When installing your print server in a TCP/IP environment, IP addresses are essential as a basic means of communication. It is necessary to first assign an IP address to your print server unit. After assigning an IP address, the print server can be configured accordingly.

Assigning an IP Address

You must assign the print server an IP address and other related TCP/IP settings before the print server can function. You can use the following two methods to specify an IP address the print server.

- Use the Network Print Monitor utility.

- Manually specify an IP address for the print server (using DOS commands or UNIX text-mode commands. This applies to Windows NT/2000/XP and UNIX systems).

Note: The Network Print Monitor can only search for the print server(s) on the same network segment as the Windows NT/2000/XP/UNIX computer.

DHCP

The print server supports DHCP, allowing the print server to obtain an IP address and related TCP/IP settings automatically from a DHCP server. While the print server supports DHCP, we recommend you manually specify a fixed IP address to the print server. By default, the print server's DHCP function is disabled.

Windows NT LPR Port Printing Installation

1. Click **Start**, point to **Settings**, and select **Printer**.

2. Run Add Printer.

3. The Add Printer Wizard screen will appear, select My Computer and click **Next**.

4. Click **Add Port**.

5. From the Printer Ports box, select the LPR Port.

6. The Add LPR compatible printers box will appear. Type in the IP address assigned to the print server in the "Name or address of server providing lpd" box.

7. In the "Name of printer or print queue on that server" box, type in a printer name, for example, lp1. Click **OK**.

8. In the Printer Ports box, select **Close**.

9. Click **Next**.

10. Select the appropriate printer manufacturer and printer type list and click **Next**.

11. Select Shared. Type in a new Share Name or leave it in default and click **Next**.

12. A message reading, "After your printer is installed, Windows can print a test page so you can confirm that the printer is set up properly." Select "Yes (Recommended)" and click **Finish**.

Windows 2000/XP Standard TCP/IP Port Printing Installation

1. Click **Start**, point to **Settings**, and select **Printer**.

2. Run Add Printer and click **Next**.

3. The Add Printer Wizard screen will appear. Select Local Printer and click **Next**.

4. From the "Create a new port box", select the Standard TCP/IP Port, click **Next** and **Next** again.

5. The Add Standard TCP/IP Printer Port Wizard box will then appear. Type in the IP address assigned to the print server in the "Printer Name or IP Address" box, and click **Next**.

6. In the Add Standard TCP/IP Printer Port Wizard box, select Custom. Click the **Settings** button, and click **Next**.

7. In the Configure Standard TCP/IP Port Monitor box, select LPR form Protocol, and type in a queue name, for example, lp1 for Port 1.

8. Click **OK**, and **Next**.

9. Click **Finish**.

10. Select the appropriate printer manufacturer and printer type list and click **Next**.

11. Type in a new Printer name or leave it as the default, and click **Next** button.

12. A message reading, "To confirm that the printer is installed properly, you can print a test page." Select "Yes (Recommended)" and click **Finish**.

UNIX Installation

After the IP address is assigned, the Print Server is ready to be configured. For some popular UNIX systems (SCO OpenServer and UnixWare, Sun Solaris, IBM AIX, and Linux), we have include the installation procedures below. If you can't find the installation procedure corresponding to your UNIX system, please refer to your UNIX manual for details about setting up a "remote printing system."

SCO UNIX (OpenServer 5.0.x)

1. Login root.

2. Type "arp -s <IP address> <Print server's node ID>"

   The Print servers node ID (or MAC address) can be found from the white label on the backside of the Print Server.

   For example: arp -s 192.72.214.103 00-40-01-05-01-8c

3. Type "ping <Print server's IP address>"

   For example: ping 192.72.214.103

(You should get responses from the print server).

4. Type "tftp < Print server's IP address>"

   For example: tftp 192.72.214.103

   At the tftp prompt, type "get config.txt" to retrieve the Print Server's configuration file.

   For example: tftp > get config.txt

5. Quit from tftp, and then use your editor to modify the "05 BoxIPAddress" field in the config.txt file from 0.0.0.0 to the IP address you specified in Step 2.

6. (Optional) Modify the "06 Gateway" field from 0.0.0.0 to your gateway's IP address.

7. (Optional) Modify the "07 SubnetMask" field from 0.0.0.0 to the subnet mask.

8. When done, save the new config.txt.

9. Type "tftp < Print server's IP address>"

   At the tftp prompt, type "put config.txt" to save the new configuration file back to the Print Server.

   For example: tftp > put config.txt

10. Type "mkdev rlp"

    After this step, the Remote Printer Configuration appears. Answer the questions as follows:

    a. Do you want to install or remove printing (i/r/q) ? [q] : -----> i

b. Do you wish to change the printer description file /etc/printcap (y/n) [n] ? ----> y

c. Enter information for remote printers or local printers accepting remote printing requests:

Please enter the printer name (q to quit): --->printer-1

You can enter a printer name you like in this option.

d. Is xxxx a remote printer or a local printer (r/l) ---------> r

e. Please enter the name of the remote host that xxxx is attached to: ---------> (the Print server's IP address you specified in Step 2, for example, 192.72.214.103)

Note: You can add the host name associated with the IP address in the /etc/hosts file. If you have done this, please use the host name instead of the IP address.

f. Printer xxxx is connected to host 192.72.214.103

Is this correct? (y/n) ---------> y

g. You will see some messages, then the following question will appear:

If you're not sure, answer "n"? (y/n) [n] --------> n

h. Would you like this to be the system default printer? (y/n) [n]------->Choose whether you want this printer to be your default printer.

i. Do you want to install or remove printing (i/r/q)? [q] : -------> q

j. Do you want to star remote daemon now (y/n) --------> y

11. Submit print jobs by using "lp" or "lpr" command.

For example: lp -d printer-1 /etc/printcap

SUN Solaris 2.x

1. Login root

2. Type "arp -s <IP address> < Print server's node ID>"

    The node ID can be found from the white label on the backside of the Print Server.

    For example: arp -s 192.72.214.103 00-40-01-05-01-8c

3. Type "ping < Print server's IP address>"

    For example: ping 192.72.214.103

    (You should get the responses from the Print Server).

4. Type "tftp < Print server's IP address>"

    For example: tftp 192.72.214.103

At the tftp prompt, type "get config.txt" to get the Print Server's configuration file.

For example: tftp > get config.txt

5. Quit from tftp, and then use your editor to modify the "05 BoxIPAddress" field in the config.txt file from 0.0.0.0 to the IP address you specified in Step 2.

6. (Optional) Modify the "06 Gateway" field from 0.0.0.0 to your gateway's IP address.

7. (Optional) Modify the "07 SubnetMask" field from 0.0.0.0 to the subnet mask.

8. When done, save the new config.txt.

9. Type "tftp < Print server's IP address>"

At the tftp prompt, type "put config.txt" to save the new configuration file back to the Print Server.

For example: tftp > put config.txt

10. Type "lpsystem -tbsd <Print server's IP address>"

For example: lpsystem -tbsd 192.72.214.103

Note: You can add the host name associated with the IP address in the /etc/hosts file. If you have done this, please use the host name instead of the IP address.

11. Type "lpadmin –pprinter-1 -s <Print server's IP address>"

where printer-1 represents the Print Server's parallel port. You can enter a printer name you like.

For example: lpadmin –pprinter-1 -s192.72.214.103

12. Type "accept printer-1" For example: accept printer-1

13. Type "enable printer-1" For example: enable printer-1

14. Submit print jobs by "lpr" command. For example: lpr -Pprinter-1 /etc/hosts

IBM AIX 4.xx

1. Login root.

2. (Optional) Edit the /etc/hosts file. Add a line of the Print Server's host name and its associated IP address.

Note: Before this step, please make sure you have manually assigned an IP address to the Print Server.

3. Under the prompt sign, type "smit" and press Enter.

4. Select Device.

5. Select Printer/Plotter.

6. Select Printer Spooling.

7. Select Add a Print Queue.

8. Select Remote.

9. Select Standard Process.

10. In the Queue Name option, type in a printer name. For example: printer-1

11. In the Host Name option, type in the IP address of the Print Server.

Note: You can add the host name associated with the IP address in the /etc/hosts file. If you have done this, please use the host name instead of the IP address.

12. In the Name of Queue on Remote Server option, type in a print queue name. For example: printer-1-q.

Redhat Linux 9

The Print Server can work under any Linux-based systems, including Slackware, RedHat, etc, without any problems.

Basically, the Linux's printing system is based on BSD system. Although many commercial Linux systems are available in the market and their commands will vary slightly depending on which version is used, the functionality of the Linux-based variants is the same.

Following are the outlined procedures (recommended for all users) on Red Hat Linux 7.2/7.3 or later with X-Window system installed.

a. Make sure that the TCP/IP is well configured on your RedHat system, including network interface card's driver and IP-related settings like IP address, subnet mask, and gateway IP).

b. Log in root.

c. Assign Print Server an IP address. At shell mode:

    c.1.   arp -s <the IP address you want to assign to the Print Server> < Print Server 's Node ID>

    c.2.   Execute tftp < Print Server 's IP> get config.txt and quit tftp.

    c.3.   Edit the config.txt and modify the IP address, subnet mask, and gateway IP. When done, save the config.txt.

    c.4.   Execute tftp <Print Server 's IP> put config.txt and quit tftp.

d. Start X-windows by typing startx at the shell mode.

e. Open Printer Configuration.

f. Click New button.

g. Click Forward button.

h. In the Name field, type a user-defined name, click Forward.

i. In the Queue Type field, choose Networked UNIX.

j. In the Server field, type the IP of print server

k. In the Queue field, type a print server's port name, which connect to the printer. For example: lp1.

l. Click Forward button.

m. In the Printer field, choose Postscript Printer.

n. Choose the model of printer and click Forward.

UnixWare 7

1. Login root.

2. Run CDE (Common Desktop Environment).

3. Open the subpanel under the SCO icon in the Front Panel.

4. Select SCO Admin.

5. Select Print Setup Manager from System Administration window.

6. Click LPD icon in the tool bar of Print Setup window.

7. In Name field, type a name for the printer for identification purpose.

8. In Protocol field, select lpd(BSD).

9. Select your printer's make and model from the Make/Model list.

10. In Printer Connection Type, select On Remote Server.

11. It then appears as a new Remote System option. Type the IP address of the print server.

12. In Remote Printer field, type a name for the print server's print port. For example, Port1.

13. When done, click **OK**.

Now run Printer Manager. You'll see an icon for the printer that is connected to the print server device.

Upgrading the Print Server

Upgrading the print server allows you to replace the firmware inside the print server with a newer version. Check with StarTech.com for firmware upgrades.

Note: 1. Before you upgrade the print server, ensure that the necessary binary file is located in your current working directory.

Note 2. Before upgrading print server, please ensure print server is not printing. Wait until the current print job is finished before proceeding.

Upgrading the print server from PSAdmin

1. Log into your NetWare file server as a Supervisor (Admin.) or equivalent.

2. Ensure the bin file is located in the PSAdmin directory.

3. Run **PSAdmin** from your Windows PC.

4. Click the **Upgrade** icon in tool bar.

Upgrading the print server from Windows NT/2000/XP (Through TCP/IP)

1. Ensure that the bin file is located in your current working directory.

2. At NT/2000/XP's DOS prompt, and type "tftp <print server's IP address > get upgrade".

3. Type "tftp –i <print server's IP address> put mpsXX.bin".

4. Wait for the "Transfer successful" message.

Upgrading the print server from UNIX (Through TCP/IP)

1. Log in as root

2. Ensure that the bin file is located in your current working directory.

3. Type "tftp <print server's IP address>".

4. At tftp prompt, type "get upgrade".

5. Change to binary mode.

6. At tftp prompt, type "put mpsXX.bin".

7. Wait for the file transfer to complete.

8. Quit from tftp.

Upgrading the print server from Browser

1. Ensure that the bin file is located in your current working directory.

2. Enter the IP address of the print server as the URL.

3. Click Misc, and then choose **Upgrade From Browser**.

4. Click **Upgrade from Browser** and select the firmware file.

5. Click **Upgrade**.

Troubleshooting

LED Light Indicators

The print server is equipped with LEDs to assist in diagnosing problems that are the result of the network and/or the print server hardware itself.

Status (Orange): When the print server unit is powered on, the Status LED will flash five times as part of the unit's Power On Self Test (POST). This indicates that the print server hardware is properly configured. This LED, however, may flicker when data is being transmitted and printed.

Flow/Link (Green: 100M; Orange: 10M): If the network cabling is Twisted-Pair Cable, and when either of these LEDs are ON, the cable connection is clear.

Cable Related Problems: In most cases, the print server fails to send and receive network data due to incorrect use of the network cable and/or connector problems. Twisted-Pair Cable is 10BaseT/100BaseT 8-wire Unshielded Twisted-Pair Cable. The pin assignments for the RJ-45 connector used for this cable must conform to UTP cable specifications.

Power Related Problems: The print server requires an external AC power adapter in order for it to function. If you have a power problem, check to see whether the power cord or its connectors are damaged. More importantly, check to see that the AC power adapter included with the print server matches the AC voltage in your country or area. Using an incorrect AC adapter will damage your print server.

USB Port Related Problems: Printing data failure may be caused by a loose connection of the print server to the USB port of the printer. Check to see if the USB connectors are damaged. In addition, check the cable connection.

Windows 95/98/Me/NT/2000/XP Troubleshooting

Multi-Segment LAN Environment Installation (through the Network Print Port)

If your print server and Windows 95/98/Me/NT/2000/XP are located on two different segments and your Windows NT server is used as the router/gateway, you will need to implement the following procedures in order for your print server to function properly:

- Add the RIP for NWLink IPX/SPX compatible transport. See RIP for NWLink IPX/SPX compatible transport Installation Procedure later in this section.

- Add the frame type 802.2 for both Ethernet adapters. See Multi-Segment Frame Type 802.2 Installation later in this section.

RIP for NWLink IPX/SPX compatible transport Installation Procedure

1. From your Windows NT server that is used as a router, select **Start**, then **Settings**, then **Control Panel**.

2. Double-click the **Network** icon.

3. Select **Services**.

4. Select **Add**.

5. In the Select Network Service box, select the RIP for NWLink IPX/SPX compatible transport. Click **OK**.

6. Follows any on-screen prompts to complete the installation.

Multi-Segment Frame Type 802.2 Installation

1. From your Windows NT server that is used as a router, select **Start**, then **Settings**, then **Control Panel**.

2. Double-click the **Network** icon.

3. Select Protocols. Select the NWLink IPX/SPX Compatible Transport and select Properties.

4. Select your (first) network interface card and select Manual Frame Type Detection and click **Add**.

5. In the Frame Type field, select Ethernet 802.2.

6. In the Network Number field, type in a unique 8-digit hexadecimal network number. For example: 12345ABC.

7. Select **Add**.

8. Repeat the Steps 5-7 for the other Ethernet adapters.

9. Restart the computer.

Moving the print server to a New Segment

If the print server is moved from one network segment to another after the initial installation, through the Network Print Port, the print server must be reconfigured on the original Windows NT server or on each Windows 95/98 computer using this print server in order for the print server's driver on each computer to re-establish a new connection.

Print Server Reconfiguration Procedure on Windows 95/98/Me

1. Click **Start**, then **Settings**, then **Printers**.

2. Select the printer connected to the print server, and right-click the printer icon. Select Properties.

3. Click Details tab.

4. Click Port Settings as shown in the picture below. The print server will be displayed on the next print server's configuration screen. Find your original print server according to its Port Name or other distinguished name and click this print server.

5. Click **OK** and to return to the printer's Properties page.

6. Click **OK** again.

Print server Reconfiguration Procedure on Windows NT

1. Click **Start** on the bottom left hand corner of the screen, then **Settings** then **Printers**.

2. Select your printer connected to the print server, and right-click the printer icon. Select Properties.

3. Click Ports tab.

4. Click **Configure Port**. The print server will be shown on the next screen.

5. Find your original print server according to its Port Name or other distinguished name and click this print server.

6. Click **OK** and it returns to the printer's Properties page.

7. Click **OK**.

Moving Your Computer to A New Segment

If you are using the print server through the Network Print Port on your NT or Windows 95/98/Me computer and your computer is going to be moved onto another segment, you have to reconfigure the print server on your computer. This situation is like moving the print server to a new segment. Please refer to the "Moving the print server to a new segment" section for more detailed reconfiguration instructions.

Novell NetWare Troubleshooting

Many printing problems can be traced back to incorrect or incomplete print server installations. It is always wise to check the installation configurations first.

If necessary, delete the print server, print queue(s), or other setting(s). Next, recreate the necessary parameters or reconfigure the print server by running the **PSAdmin** program.

TCP/IP Troubleshooting

When you are configuring a new print server on your NT/UNIX server through LPR Port printing under TCP/IP protocol, you might encounter the following problem in your initial installation steps:

" I can do the "arp" command. However, when I ping or tftp the print server, it always shows "Request timed out." I have checked the print server's power and it passed the POST. The network cabling is also OK. As such, I can't do tftp command to get the print server's configuration file and save its IP address permanently. I can't, therefore, continue installing the print server."

Regarding this problem, there are three possible causes:

A. The print server's Node ID (MAC Address) you specified in the "arp" command is not correct.

If this is the case, please ensure the Node ID field in the corresponding entry of the print server's IP address in NT's ARP cache table is correct by typing the following command at NT's DOS prompt: "arp -a"

If the Node ID shown on the screen doesn't match the print server's Node ID, please follow the instructions below to reset the entry:

1. At NT's DOS prompt, type "arp -d <print server's IP address>" to delete the current entry.

2. Type "arp -s <print server's IP> <print server's Node ID>" to specify a new ARP entry.

B. The print server's IP address is the same as another computer's IP address on the network.

If this is the case, please consult your network administrator to obtain an unused IP address for your print server. Assign this new IP address to your print server using the procedure's outlined previously in the manual.

C. The print server is on one segment and your Windows NT server is on the other segment. (This troubleshooting guide will also apply to a multiple-segmented network while installing the print server)

For example, assuming the print server is on Segment A, NT server is on Segment B, and there is a gateway computer between Segment A and Segment B. The network might be a complete TCP/IP network, or a hybrid of TCP/IP and IPX/SPX network.

If this is the case, you have to adopt the following steps, depending on which platform the gateway computer is.

a. If the gateway computer is an NT/UNIX server:

   You have to do the same "arp" command to specify an entry on the NT/UNIX computer as a gateway in order for it to forward your subsequent "ping" and/or "tftp" commands to the print server.

b. If the gateway computer is a Novell NetWare file server:

   1. Due to the presence of this NetWare file server, the IPX/SPX protocol might be used on your network. Therefore, we strongly suggest you run the PSAdmin from any client computer and select "Manual Setup" to specify the print server's IP address.

   2. If the solution described above is not applicable, you have to follow the instructions below to set up the print server's IP address:

For the purpose of explanation, we assume the NT server is on Segment A and its IP address is 192.72.214.66 (subnet mask: 255.255.255.224), the print server is going to be installed on Segment B, with an IP address of 192.72.214.100.

1. Find an unused IP address on Segment A for temporary use in the following steps, for example, 192.72.214.68.

2. Connect your print server to Segment A as a networked node.

3. On your NT server, type, for example, "arp -s 192.72.214.68 00-40-01-3F-02-AB". Please note, in this arp command you have to type 192.72.214.68 on purpose. Do not type this IP address as 192.72.214.100.

4. Type "tftp 192.72.214.68 get config.txt". The configuration file will then be retrieved and transferred to your NT server.

5. Type "edit config.txt" to modify this configuration file.

6. In your editor, modify "BoxIPAddress" field from "0.0.0.0" to "192.72.214.100." Leave the other options as default and do not change their values. When done, save this new file and quit from your editor. Please note, in this step you must specify an IP address which is valid on Segment B, such as 192.72.214.100 in this example, rather than 192.72.214.68.

7. Type, for example, "tftp 192.72.214.68 put config.txt" to save this new configuration back to print server.

8. Move the print server back to the Segment B.

Frequently Asked Questions

Print jobs are sent to the print queue successfully, but fail to be sent to the printer.

Possible explanations:

- The Print server Name/Print Queue configuration in PCONSOLE is incorrect. Check all the information in PCONSOLE.

- The Print server name specified and stored in the print server memory doesn't match the same one set in PCONSOLE. Check all the information of the print server by running PSAdmin.

- The network cable or power adapter connected to the print server is loose or disconnected. Check to see that if the network cabling and power adapter are properly connected.

- The printer is off-line, jammed or out of paper. Recheck the print server connection by running the PSAdmin. It should read "Connected."

Print jobs start printing, but prints very slowly or prints unknown characters.

Possible explanation:

- A printer driver is missing or is incompatible with that printer. Using a print driver that is not specific for the printer can cause printing errors. Install the proper printer drivers. If these printer drivers are not available to you, please contact your printer manufacturer.

The upgrading process bar stops and does not proceed again.

Possible explanation:

- There might be a network problem causeing the upgrading procedure to fail. Check the network cabling, especially from the workstation running PSAdmin to the print server unit. Run PSAdmin and upgrade the print server again.

The Status LED light keeps blinking after POST.

Possible explanation:

- The last upgrade process was not completed. The print server must be upgraded again by using the PSAdmin.

The PSAdmin reports "Create Print server Error", "Create Printer Error", or "Create Print Queue Error" while using Auto Setup.

Possible explanation:

• The print server name, the printer name, or the print queue name you specified in the Auto Setup dialogue box contains a space. Check to see if there is a space in the print server name, the printer name, or the queue name. Type in a new name without a space between two characters or replace a space by a dash (-) or an underscore (_).

The PSAdmin reports "Print server Already Exists", "Printer Already Exists", or "Print Queue Already Exists" after specifying the print server name, or the print queue name in Auto Setup.

Possible explanation:

• A same print server name or queue names exist in the specific NetWare file server as the one you specified in the Auto Setup dialogue box. Specify a new print server name or queue name in the Auto Setup.

Technical Specifications

Ports	**PM1110U:** 1 x 4-pin (male) USB 1 x 10/100 Mbps RJ45 (female) **PM1110P:** 1 x 36-pin Centronics (male) 1 x 10/100 Mbps RJ45 (female)
Standards	IEEE 802.3, IEEE 802.3u, IEEE1284 (PM1110P), USB V1.1 (PM1110U)
Data transfer rate	10/100 Mbits/sec
Management	SNMP
LEDs	Port status
Network Protocols	TCP/IP, IPX/SPX, NetBEUI, Apple Talk
Software Drivers	Novell NetWare 3.12, 4.x, 5.x (Bindery, NDS and NDPS), Microsoft Windows 95/98/Me/NT/2000/XP/2003, Apple EtherTalk (Postscript printer only), UNIX /Linux system, Internet (via Internet Printer Connection software)
Power Adapter	**PM1110U:** 3.3V (2A) **PM1110P:** 5V (2A)
Weight	**PM1110U:** 45 grams (0.10lbs) **PM1110P:** 67 grams (0.15lbs)
Dimensions	**PM1110U:** 2.16 x 1.97 x 0.87" (55 x 50 x 22 mm) **PM1110P:** 2.36 x 2.36 x 0.87" (60 x 60 x 20 mm)
Safety Standards	FCC & CE

Technical Support

The following technical resources are available for this StarTech.com product:

On-line help:

We are constantly adding new information to the *Tech Support* section of our web site. To access this page, click the *Tech Support* link on our homepage, **www.startech.com**. In the tech support section there are a number of options that can provide assistance with this product.

Knowledge Base - This tool allows you to search for answers to common issues using key words that describe the product and your issue.

FAQ - This tool provides quick answers to the top questions asked by our customers.

Downloads - This selection takes you to our driver download page where you can find the latest drivers for this product.

Call StarTech.com tech support for help:
    USA/Canada: 1-519-455-4931
    UK/Ireland/Europe: 00-800-7827-8324
Support hours: Monday to Friday 9:00AM to 5:00PM EST (except holidays)

Warranty Information

This product is backed by a one-year warranty. In addition, StarTech.com warrants its products against defects in materials and workmanship for the periods noted, following the initial date of purchase. During this period, the products may be returned for repair, or replacement with equivalent products at our discretion. The warranty covers parts and labor costs only. StarTech.com does not warrant its products from defects or damages arising from misuse, abuse, alteration, or normal wear and tear.

Limitation of Liability

In no event shall the liability of StarTech.com Ltd. and StarTech.com USA LLP (or their officers, directors, employees or agents) for any damages (whether direct or indirect, special, punitive, incidental, consequential, or otherwise), loss of profits, loss of business, or any pecuniary loss, arising out of or related to the use of the product exceed the actual price paid for the product.

Some states do not allow the exclusion or limitation of incidental or consequential damages. If such laws apply, the limitations or exclusions contained in this statement may not apply to you.

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