

Mini Print Server



SMALL, CONVENIENT, STAND-ALONE PRINT SHARING

User Guide

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Section 1 - Introduction

The NetComm Mini Print Server has been designed to provide a simple and efficient network printing solution and allowing one printer to be shared between multiple computers. It is packed with features, including:

- **Versatility.** The Print Server supports up to four protocols: TCP/IP, SMB (Service Message Block), AppleTalk (EtherTalk), and NetBEUI. It features an Ethernet interface ports and operating system support includes Unix, NetWare (NDPS LPR printing), and Microsoft Windows.
- **Easy Installation.** The Print Server makes adding printers or plotters to your network simple. The auto-sensing feature on the LAN interface means that there is no need to set jumpers or perform software configuration to select the network interface used.
- **Easy Setup.** A number of utility programs are supplied to simplify setup. For Windows 95/98/Me/NT/2000/XP users, the BiAdmin program makes it easy to configure the Print Server for a variety of network and server configurations.
- **Web-based Interface.** The Web-based interface provides an easy method of configuration in TCP/IP networks to every model.
- **Compact Size.** This allows the Print Server to be used even where space is limited.
- **Remote Management Tools.** A variety of software tools are provided. In most environments, both the Print Server and attached bi-directional printers can be configured remotely.
- **SNMP Support.** The Print Server can act as a SNMP agent, with it own MIB. This allows TCP/IP users to monitor, configure and troubleshoot the Print Server using their existing SNMP management tools.
- **Internet Printing Protocol (IPP) Support.** Some Print Server models can act as an IPP (Internet Printing Protocol) Server, allowing clients, suppliers, colleagues and others to print to your printer from anywhere on the Internet. Windows IPP Client software is also supplied.

Section 2 - Connecting your Mini Print Server

This section describes how to install the Print Server in your Local Area Network.

1. Preparation

- Ensure the power is OFF. Do not connect the Print Server while power is On.
- Find the Default Server Name for your Print Server. The Default Server Name is shown on a sticker on the base of the device. It consists of 8 letters and/or digits. Record this name; it may be needed during configuration.

2. Connect the Printer

Connect the printer or plotter by plugging Print Server directly into the parallel port on the printer.

3. Connect the Network Cable

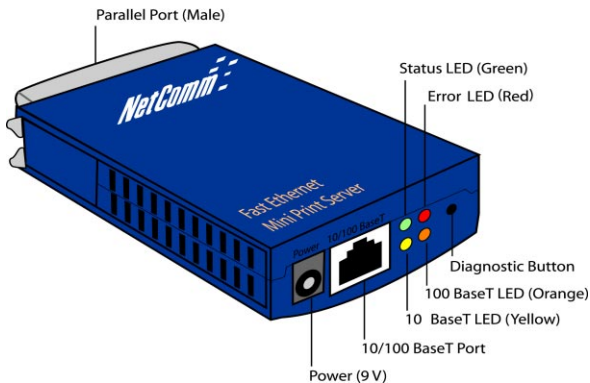
- Connect the network cable to the proper connector on the Print Server. The Print Server will automatically recognize whichever connector is used.

4. Power Up

Plug in the power adapter cable and power up. Start-up will take only a few seconds.

5. Check the LEDs

- The Red Error LED should flash, then turn Off. When the Red LED goes off and the Green LED remains lit or flashes, the Print Server is ready.
- If your model supports 10BaseT and 100BaseT, check the 10/100BaseT link LED or LEDs next to the LAN connection. If the auto negotiation Fails, the LED (or both LEDs, if there are 2) will be Off.



Diagnostic Push Button

The Print Server is fitted with a Diagnostic Push Button. The button is recessed; a pin or paper clip can be used to press it. This button has 2 functions:

- Restore the factory default settings
- Print a test page containing all current settings.

To restore the factory default settings:

1. Turn the Print Server OFF.
2. Press and hold the diagnostic button. While pressing the button, switch the Print Server ON.
3. If you continue pressing the button for 10 seconds, a diagnostic page will be printed, showing the new (default) settings.

To generate a Diagnostic print out

1. Ensure that both the Print Server and the printer attached to port 1 are ON.
2. Press the diagnostic button, and hold it in for 2 seconds.
3. The test page, containing the current settings, will be printed.

Note: PostScript printers are unable to print this page. If you have a PostScript printer on Port 1, the test page will not be printed.

LED Indicators

The Mini Print Server has four LED indicators; status, error, 10 BaseT and 100BaseT. The LED indicator modes are described in the following table:

Green LED	Red LED	Description
Off	Off	No power.
Off	On	Printer not on.
On	On	Hardware error.
Flashing	Flashing	Firmware upgrade in progress.
On	Off	Normal operation.
Flashing	Off	Normal operation - transmitting or receiving packets from the network.
Yellow LED	Orange LED	Description
On	Off	Connected at 10BaseT.
Off	On	Connected at 100BaseT.

Section 3 - Configuring your Mini Print Server

This section provides an overview of the configuration process for Windows operating systems.

Overview

The Print Server is designed to support many different platforms, and the configuration required would depend upon the environment in which it is installed.

- The Print Server usually requires configuration, but if there's a DHCP server on your network, then the device is just plug-and-play. A Windows-based setup Wizard is provided on the CD-ROM to simplify this task. This configuration is not required if you are using a Macintosh computer.
- Computers wishing to use the printer attached to the Print Server always require configuration. See Section 4- Configuring your Computer for details.
- If you wish to use a queue-based printing system using Windows NT Server/Windows 2000/Windows XP, the Network Server must be configured as detailed in Appendix B - Network Server Configuration. However, it is not necessary to use a Network Server-based queue; client computers can print directly to the Print Server using the Peer-to-peer Printing installed by the User setup option on the CD-ROM.

Configuration Methods

The following methods are available to perform the required Print Server configuration:

- Windows-based Wizard.
- BiAdmin management utility program.
- Web-based setup.

Advanced Configuration and Management

The BiAdmin management utility is provided for advanced configuration and management. This program is installed by default when the **Administrator** install option is chosen. See Section 5 for details on using BiAdmin.

Web Based Configuration and Management

The Mini Print Server can be accessed directly through a web browser for advanced configuration and management. See Section 6 for details on using Web Based Configuration.

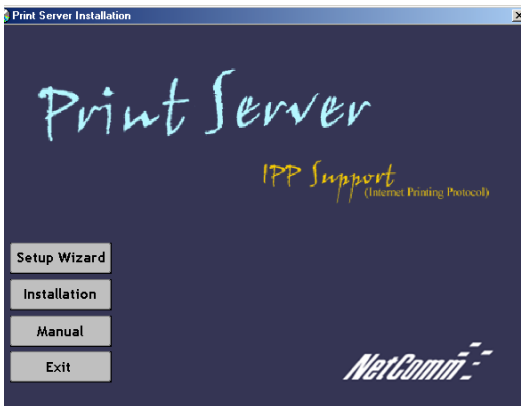
Using the Windows Wizard

The Windows-based Wizard is supplied on the CD-ROM, and runs on Windows 95, 98, NT4.0, ME, Windows 2000 and Windows XP.

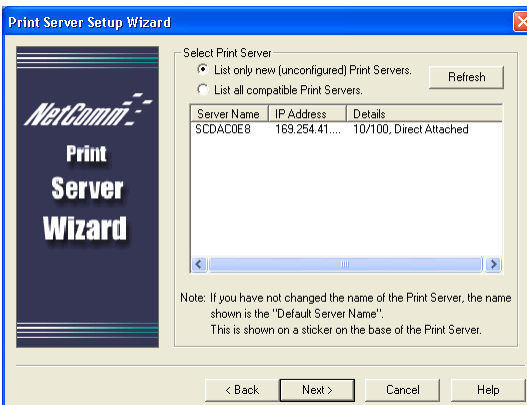
Using this Wizard is the recommended method to configure the Print Server. It can be used to configure the Print Server for your Network environment, even if the Print Server does not have a valid IP address.

Procedure

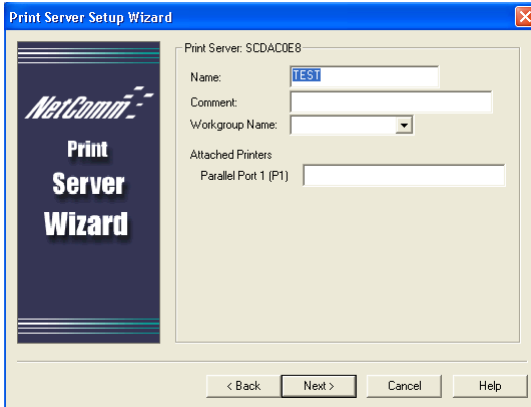
1. Insert the supplied CD-ROM into your drive. If the setup program does not start automatically, run **SETUP.exe** in the root folder.
2. On the first screen, shown below, click **Setup Wizard**.



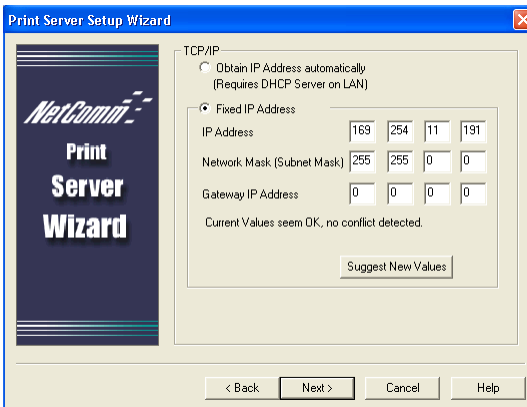
3. Click **Next** on the first screen of the Wizard, to view a list of Print Servers on your LAN.
4. Select your new Print Server, then click **Next** to continue.



5. Enter the required data on the following screen.



- Name of the Print Server can be changed if you wish.
 - Comment is optional.
 - Select or enter the Workgroup name for this Print Server.
6. Click **Next** to configure the TCP/IP Screen:



- Select Obtain IP Address automatically if your LAN has a DHCP Server, otherwise select Fixed IP Address.
 - For Fixed IP Address, enter an unused address from the range used on your LAN, or click the Suggest New Values Button.
 - Use the same Network Mask and Gateway as computers on your LAN.
7. Click **Finish** to save the data to the Print Server .

Note: To install the Wizard on your computer, use the "Installation" option.

If the desired Print Server is not listed:

- Check all cables to the Print Server .
- Check the Print Server's LEDs:
- The Red LED should be OFF and the Green LED should be ON or flashing.
- Check the 10/100BaseT link LED next to the LAN connection. If the auto negotiation fails, the 10/100BaseT Link LED will not light when the device is powered up.
- Check that your computer and the Print Server are on the same LAN segment. (If you don't have a Router or Gateway on your LAN, you only have 1 segment.)
- Check that your computer has either the TCP/IP or NetBEUI network protocols installed. See Checking your Network Protocols on page 11 for details.

Section 4 - Configuring your Computers

This Section details the client configuration required on LAN computers to use the printer attached to the Print Server.

Overview

Before performing client configuration, the Print Server must be installed on your LAN, and configured as described in the previous section. Both the Print Server and the attached printer must be powered ON.

Printing Methods

The Print Server supports a number of printing methods:

- **Peer-to-peer Printing** means that the print jobs are stored (queued) on your computer, and sent directly to the Print Server when it is available.
- **Windows SMB printing** is a Microsoft standard for using a "Network Printer". No additional software needs to be installed on your Windows computer, and printing from MS-DOS programs is supported. However, because the Print Server can not store files, large print jobs may cause problems.
- **Server-based Print Queue** means that all print jobs are stored (queued) on the Network Server (e.g. Windows NT/2000) and then sent to the Print Server. This allows the Network Administrator to modify the Print Queue. For example, an important job can be moved to the head of the queue.
- **AppleTalk** is also supported, and normally no configuration of the Print Server is required. See the Macintosh section of this section for details of client configuration.

Which printing method should I use?

- If using Windows 95, 98, NT, Me, 2000, or XP, the easiest method to use is Peer-to-peer Printing.
- If using Windows, and you need to print from MS-DOS programs, or you don't wish to install additional software, use SMB.

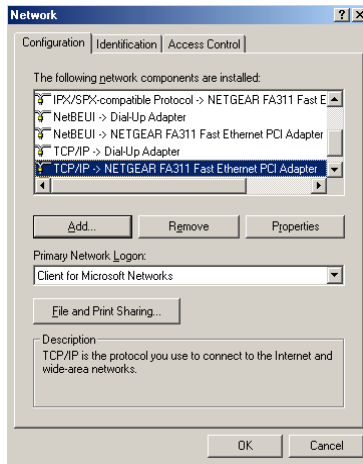
SMB is not suitable for large, complex documents. If you need to print large documents, as well as MS-DOS printing, you should install BOTH Peer-to-peer Printing and SMB printing. MS-DOS programs can use the SMB printer, Windows programs should use Peer-to-peer Printing.

- If your LAN has Network Servers (e.g. Windows NT, Windows 2000 Server) use the method advised by your Network Administrator. The Print Server can print via a queue located on a Network server, if desired.
- Unix users - refer to the Unix Manual on the CD-ROM, in the Manual/Unix directory.
- Macintosh users - refer to the Macintosh section of the User Guide.

Checking your Network Protocols (Windows 9x)

Your computer must have EITHER the TCP/IP or NetBEUI protocols installed. (All versions of Windows after Windows 95 have TCP/IP installed by default.)

- If using the Peer-to-peer Printing, the installation program will check this for you.
 - If using other methods, you must check manually, as follows:
1. Select the **Settings -> Control Panel -> Network** option on the Start Menu. You should see a screen like the one following:



- The highlighted line (TCP/IP -> PCI Fast Ethernet Adapter) indicates that TCP/IP is installed. Your computer will show the name of your Network card rather than "PCI Fast Ethernet Adapter".
 - The line in the list (NetBEUI -> PCI Fast Ethernet Adapter) indicates that the NetBEUI protocol is also installed on this computer. Your computer will show the name of your Network card rather than "PCI Fast Ethernet Adapter".
2. If neither line is present:
 - Install the NetBEUI protocol by selecting **Add -> Protocol -> Microsoft -> NetBEUI -> OK**. You may be prompted for your Windows CD-ROM.
 - If required, you can also install TCP/IP. However, depending on your LAN environment, TCP/IP may require further configuration.
 3. If either protocol is already installed, proceed with installation.

Windows Peer-to-peer Printing

With this printing method, print jobs are stored (queued) on your computer, and then sent to the Print Server when it is available.

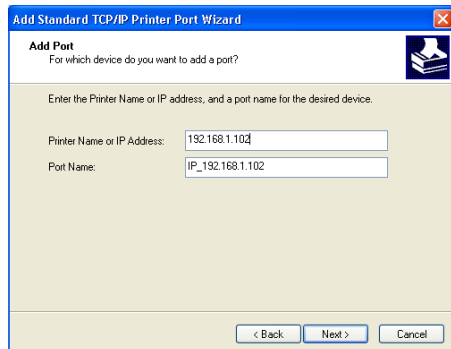
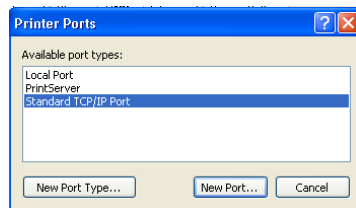
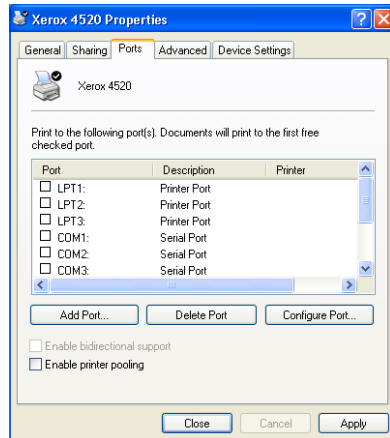
Note: Windows 2000 & XP require no additional software.

For other versions of Windows, the supplied PTP (Peer-to-Peer) Printer Port software must be installed on each computer.

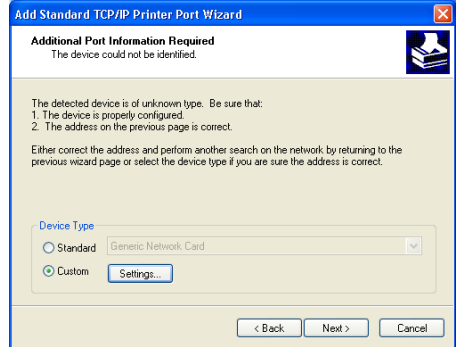
Windows 2000/XP Setup

The recommended printing method is to use LPR, as follows:

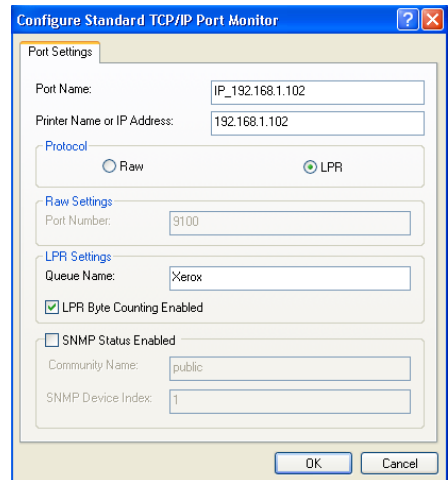
1. Open your Printers folder, right-click the desired printer and select Properties.
2. Select the Ports tab and click the Add Port button.
3. Choose Standard TCP/IP Port, then click New Port.
4. The Add Standard TCP/IP Printer Port Wizard will appear. Click next to continue and when prompted, enter the IP Address of the Print Server in the Printer Name or IP Address field, then click Next.



5. On this screen, select Custom, and click the Settings button.



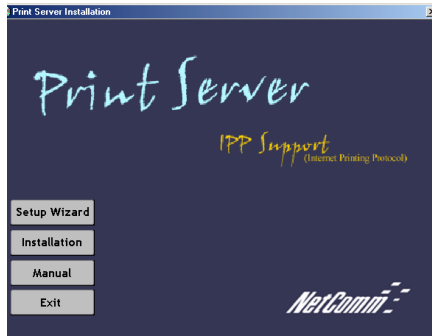
6. On the Port Settings screen:
 - Choose LPR in the Protocol section
 - Enter a Queue name
 - Ensure the LPR Byte Counting Enabled setting is Enabled.
 - Click OK to confirm your changes, then click Next to continue.
7. Follow the prompts to complete the Wizard.



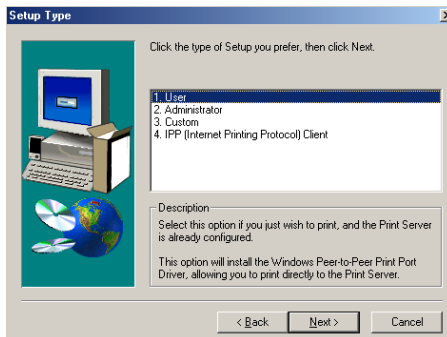
Windows 9x/ME Setup

Before performing the following procedure, the Print Server must be installed on your LAN, and configured as described in Section 3. Both the Print Server and the attached printer should be powered ON.

1. Insert the supplied CD-ROM into your drive. If the setup program does not start, run **SETUP.exe** in the root folder.



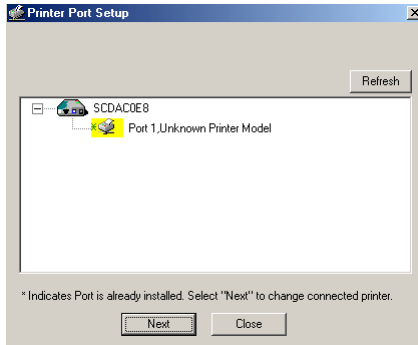
2. Click **Installation** button, then select **User Install**.



3. Follow the prompts to complete the installation of the Peer-to-peer Printer Port Driver. (Refer to the Windows section of Section 8 - Troubleshooting if there is a problem with the installation.)
4. The Print Driver Setup will then run.

In future, you can use **Start -> Programs -> PrintServer Driver -> Printer Port Setup** to run the program again.

5. After prompting you to check that both the printer and print server are on and the cables connected correctly, the program will search for Printer Servers on the network, and a screen like the following will be displayed.

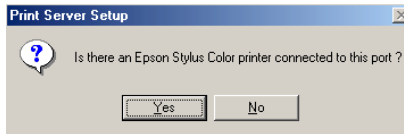


- If desired, click **Refresh**.
- The name of the attached printer will be displayed if possible. If "No printer" is displayed, check that the printer is properly connected and powered on.

If your Print Server is still not listed:

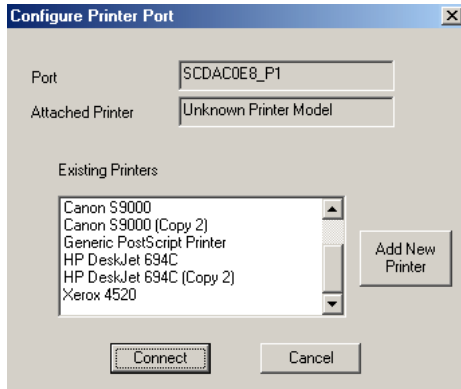
- Click the "Refresh" button.
- Check that both the Print Server and the printer are properly connected, and powered on.
- Check that the Print Server has been configured. (Use the Setup Wizard on the CD-ROM.)
- If using TCP/IP, try installing the NetBEUI protocol. (See the earlier section on Checking your Network Protocols for details.)
- Then try again.

6. Select the desired port on a Print Server , then click **Next**.



7. If using the Epson Spooler Manager, this program must be disabled, as follows:
 - a. Run the Epson Spooler Manager.
 - b. Select "Queue Setup" from the menu.
 - c. Click "Use Print Manager for this port".
 - d. Click "OK" to exit.

8. The printer port will be created, then a screen like the following will be displayed.



9. Select the correct Windows printer in the Existing Printers list, and click the Connect button.

If the correct printer type is not listed, click "Add New Printer" to run the Windows Add Printer wizard. Step through the Wizard and install the required printer:

- Select the correct Printer Manufacturer and Model, or use the "Have Disk" option if appropriate.
- We recommend changing the Printer name to indicate which device is on. (e.g. HP2100 on SCA43600_P1)
- If prompted about Sharing the printer, do NOT enable Sharing.
- When the Printer installation is finished, it will be listed in the Configure Printer Port screen above. Select it and click Connect.

10. Installation is now complete. You can now print using this printer.

- Use the Start menu to run this program in future. The default installation is **Start -> Programs -> PrintServer Driver -> Print Driver Setup**.

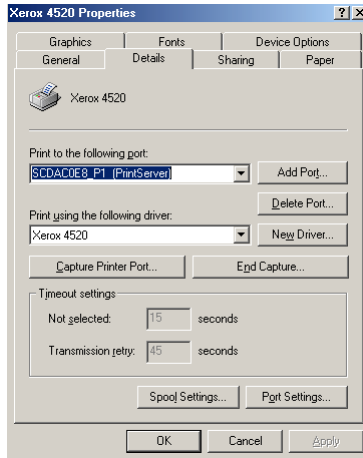
Management

- Print jobs can be managed like any Windows printer. Open the Printers folder (**Start -> Settings -> Printers**) and double-click any printer to see the current print jobs.
- If the printer attached to the Print Server is changed, just run this program again, and select the correct printer.
- To delete a port created by this setup program, use the Windows Delete Port facility:
 - Right-click any printer in the Printers folder, and select Properties.
 - Locate the Delete Port button. This button is on the Details or Ports tab, depending on your version of Windows.
 - If the Print Server's IP Address is changed, and you can no longer print, delete the port (see procedure above) and re-install it.

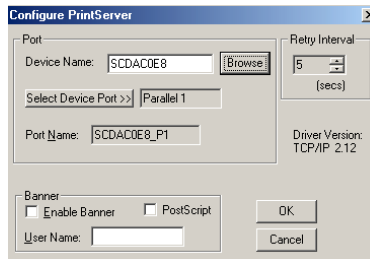
Advanced Port Options

The options for the Peer-to-peer Printing are accessed via the Port Settings button.

1. Select **Start -> Settings -> Printers** to open the Printers folder, then right-click the Printer, and select Properties. The Port Settings button is on the Details or Ports tab, depending on your version of Windows.
2. Click on the Port Settings button to display the following screen:



Items shown on this screen are as follows:



Port

If desired, click Browse to select a different Print Server. If the selected device has multiple ports, the Select Device Port button can be used to select the port. The Port Name can not be changed after installation. This name is shown in the Printer's Properties.

Banner

Check this option to print a banner page before each print job.

- If using a PostScript Printer, check the PostScript box.
- The User Name will be printed on the banner page.

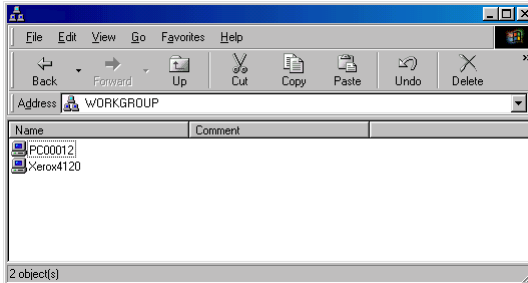
Retry Interval

Sets how often Windows will poll the Print Server to establish a connection when the printer is busy. Increase this value if you get too many warning messages.

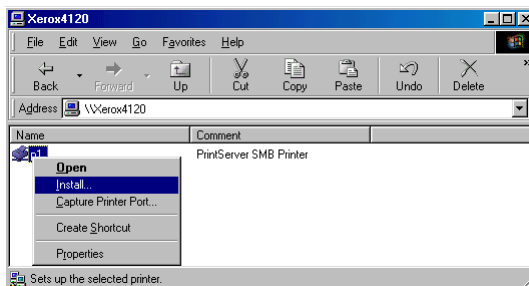
Windows SMB Printing

This method requires no additional software to be installed, but the NetBEUI or TCP/IP protocol must be installed on your computer. Use the following procedure to install the Print Server's printer as a Windows SMB network printer:

1. Double-click the Network Neighborhood icon on the desktop.
2. On the View menu, select Details.
3. Locate the desired Print Server , as shown below:



- If it is the same Workgroup as your computer, it will be listed on screen.
 - If it is in a different workgroup, double-click Entire Network, then double-click the appropriate Workgroup to open it.
4. Double-click the Print Server icon to view a Printer icon for each printer port. The "Comment" field may indicate what type of printer is connected to the port.
 5. To install a printer, right-click the desired printer icon, and choose "Install", as shown below. This will start the Add Printer wizard.



6. Follow the prompts to complete the installation.
 - For information about the question "Do you print from MS-DOS programs?", see Printing from MS-DOS Programs below.
 - Select the Printer Manufacturer and Model to match the printer connected to this port on the Print Server , and complete the Wizard.

7. This printer will now appear in your Printers folder (Start - Settings - Printers) and can be used like any other printer. However, SMB printing is not suitable for large complex print jobs - you should use the Peer-to-peer Printing instead.

Printing from MS-DOS Programs

Windows can redirect print data from a parallel port on your computer (e.g. LPT1) to a network printer. This redirection is called "Capture Printer Port", and is useful for MS-DOS programs.

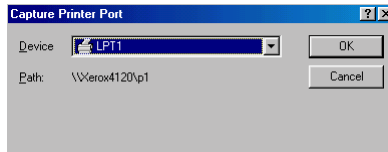
The MS-DOS program is configured to use LPT1 (parallel port 1 on the computer), but Windows "captures" the print data and sends it to the network printer.

Capture Settings

Capture settings can be set by:

- Saying "Yes" to the prompt "Do you print from MS-DOS programs?" when installing a Network Printer.
- OR, using the Capture Printer Port menu option.

This will result in a dialog like the following, where you can select the port on the computer to be captured. Normally, this will be LPT1 (parallel port 1 on the computer).



The File menu in the Printers folder also has options for Capture Printer Port and End Capture.

Windows with Server-based Print Queues

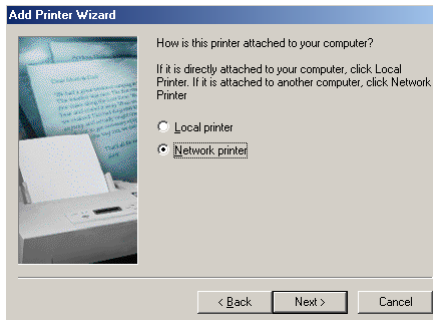
With a Server-based Print Queue, the Print Server is installed on an existing Network Server (Windows, Unix, or NetWare), and is invisible to your computer.

If your Network Administrator chooses to use this system, the required setup procedure on each Windows client is as follows:

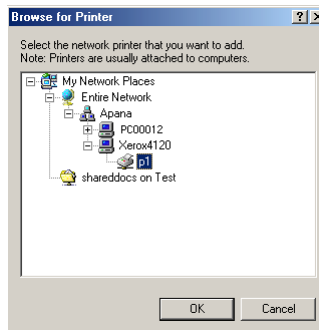


Add Printer

1. Open your Printers folder, and start the Add Printer Wizard and click **Next** to continue.
2. When prompted, select Network Printer.



3. When prompted for Network Path or Queue Name, click the **Browse** button, and locate the Server and Printer (or Print Queue) which your Network Administrator advised you to use.



4. Click **OK**, then **Next**.
5. Select the correct printer Manufacturer and Model, as advised by your Network Administrator, and click **Next**.
6. Follow the prompts to complete the Wizard.

The new printer will be listed with any other installed printers, any may be selected when printing from any Windows application.

Windows LPR Printing

1. Open your Printers folder, right-click the desired printer and select **Properties**.
2. When prompted, choose the **Ports** tab and click the **Add Port** button.
3. Choose **Standard TCP/IP Port**, then click **New Port**.
4. Enter the Printer Name or IP Address, click **Next**.
5. Enable Custom, and click the **Setting** button.
6. Choose LPR in the Protocol section, then enter Queue name and enable the LPR Byte Counting.
7. Follow the prompts to complete the Wizard.

The new printer will be listed with any other installed printers, any may be selected when printing from any Windows application.

Macintosh (AppleTalk)

The Print Server supports AppleTalk (EtherTalk), PAP, ATP, NBP, ZIP and DDP protocols, enabling Macintosh computers on the network to view and use the Print Server as a regular AppleTalk printer.

Normally, no configuration is required.

Software Requirement: System 9.x OS or newer.

AppleTalk Setup

1. Click the apple icon and choose Control Panel - AppleTalk.
2. Ensure that Ethernet is selected under AppleTalk Connection.
3. Click Chooser. The Chooser panel will open.
4. Click on either the LaserWriter 8 icon (recommended) or the LaserWriter 7 icon. LaserWriter 8 makes use of the fonts installed in the printer itself, so the printing response time is quicker. LaserWriter 7 uses the fonts installed in the computer, which increases network traffic and takes more printing time.
5. Choose a PostScript printer from the list.
6. Click Create and it will search PPD automatically.
7. Select a printer description from the list.
8. Click Select.

Configuration is now complete.

Printing

Printing with the Print Server installed in an AppleTalk network is identical to normal printing. Just select File - Print and choose the desired printer.

Advanced Setup and Management

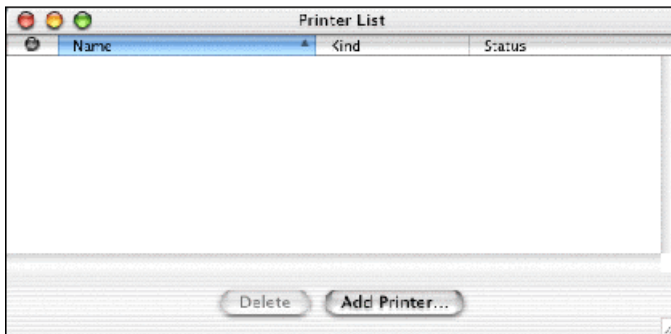
In a mixed Windows computer/Macintosh environment, you can use BiAdmin to configure the Print Server. See Section 5 for details on installing and using BiAdmin. Alternatively use the Web Based Management detailed in Section 6.

Macintosh OS X

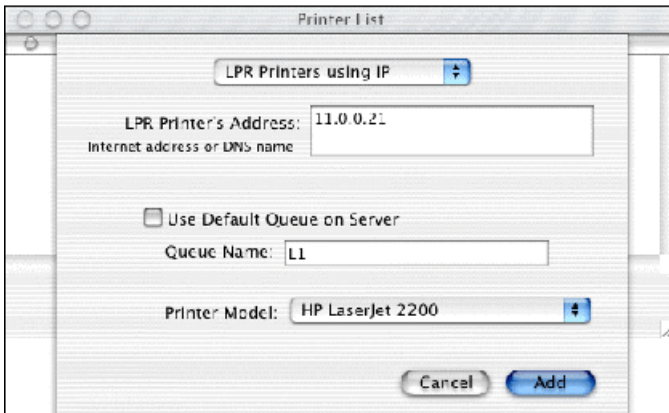
If using LPR printing, you need to ensure the Print Server has a valid IP address before configuring your Mac as follows.

LPR printing Setup

1. Select the Printer List icon.



2. Click the Add Printer button.
3. Choose LPR Printers Using IP.



4. Enter the IP address of the Print Server in the LPR Printer's Address field, and enter the Queue Name (e.g. L1, L2, L3).
5. Select the Printer Model from the drop-down list.
6. Click Add.

Configuration is now complete.

Section 5 - BiAdmin Management Utility

This section describes the installation and operation of the BiAdmin Configuration & Management program.

Requirements

This program requires:

- Windows 95, Windows 98 or ME
- Windows NT 3.51, Windows NT 4.0, Windows 2000 or XP

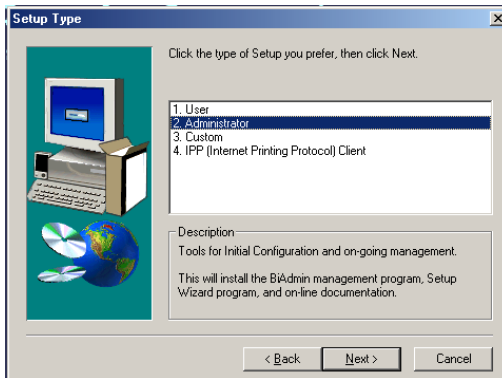
Additional Recommendations:

- Screen resolution of 800x600 or greater.

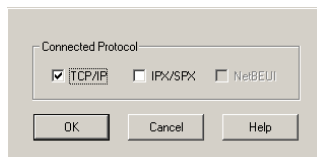
Installation

Use the supplied CD-ROM. This CD-ROM will usually auto-run. If auto-run is disabled on your computer, run the SETUP.exe program in the root folder.

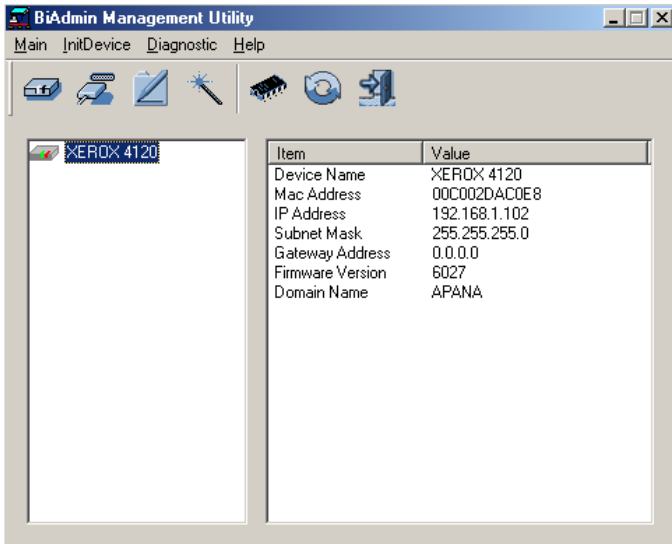
- 1 Click on the Installation button and select 2. Administration. BiAdmin is always installed if the Administrator option is chosen.



- 2 Start the program by using the icon created by the setup program. Select the connected protocol and click OK.



- 3 When run, the program searches the network for all active Print Servers, then lists them on screen, as shown by the example screen below.



The left panel displays a list of all Print Servers found on the network. When a Print Server is selected from the list, its details are displayed in the right panel.

Note: If the IP address is "Null", please click the Refresh icon to get the value again.

If the desired Print Server is not listed, try the following:

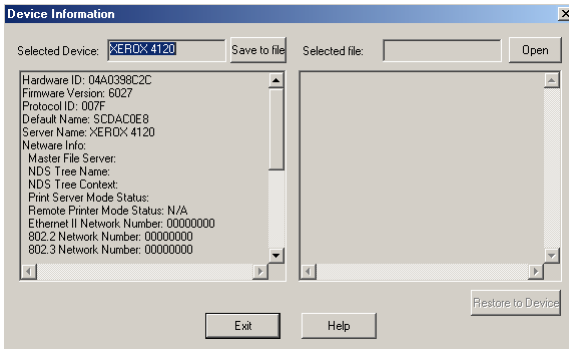
- Check that the device is installed and ON, then Refresh the list.
- If the Print Server is on another LAN segment, use the InitDevice - Attached Remote menu option to locate and display the Print Server.

Icons

Device Status



Menu equivalent: Main - Device Status

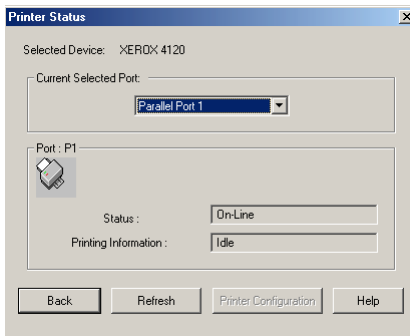


All of the settings for the current device are displayed in a read-only scrollable list in the left panel. You can use the "Save to File" and "Restore to Device" buttons on this screen to save a copy of the selected device's CONFIG file to your computer, or restore a previously saved file to the selected Print Server .

Printer Status



Menu equivalent: Main - Printer Status



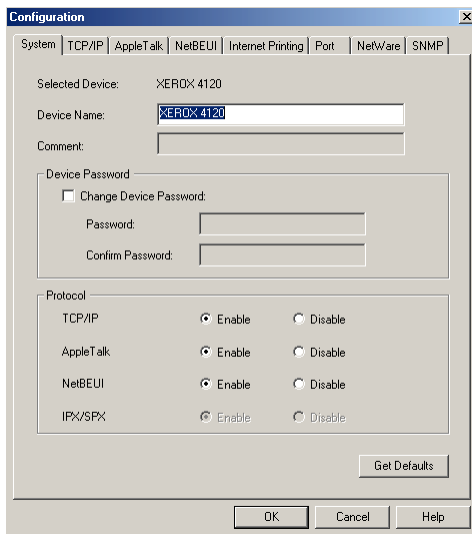
After selecting this icon, a Detail button will be available to show more information about the printer. Select the desired port from the drop-down list to display the current status of the printer attached to the port. Possible states are:

- Status - On-line, Off-line, or Out of Paper
- Printing Information - Idle, Printing If the printer is Bi-directional, and is not busy, the Configuration button will be available, allowing you to change the configuration of the attached printer. This button will be grayed out if the printer does not support this option, or if the printer is busy printing.

Configuration



Menu Equivalent: Main - Configure



This option allows you to configure the selected Print Server. See the following section for details.

Wizard

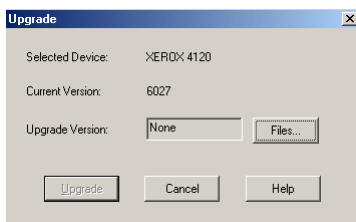


This Print Server Wizard allows you to do the basic configuration for the selected device. The screens are similar to the Wizard run from the CD-ROM, as described in Section 3.

Upgrade



Menu Equivalent: Main - Upgrade



This option allows you to upgrade the firmware for the selected Print Server. Before using this option, you need to obtain the .BIN file for the firmware upgrade, and copy it to the same directory as BiAdmin.

Refresh



Menu Equivalent: Main - Refresh

Select this icon to update the Print Server device listing after changing the name or IP Address.

Exit



Menu Equivalent: Main - Exit

Exit the BiAdmin program. This does not save any changes you have made; you must Save to Device on each screen.

Menus

Main Menu

Device Status	Same as Device Icon.
Printer Status	Same as Printer Status Icon.
Configure	Same as Configure Icon.
Upgrade	Same as Upgrade Icon.
Refresh	Same as Refresh Icon.
Exit	Same as Exit Icon.

InitDevice Menu

Reset Device	This will cause the device to reboot. This should be done after making any configuration changes, or if the device stops responding after some problems.
Restore to Factory Default	This will restore ALL device values to their factory defaults. To restore only the current screen, use the Set to Default button on the screen.
Attached Remote	This is used to connect to a Print Server device on another LAN segment. You need to know the IP address of the remote Print Server. If your LAN does not have a Router, you can ignore this option.
Connected Protocol	This option allows you to designate which LAN protocol will be used for communication between the selected device and this application. You should select ONE protocol only.

Diagnostics menu

Print Test Page	Use this option to print a test sheet from the selected Print Server port. The test print out will include status information.
-----------------	--

Configuration

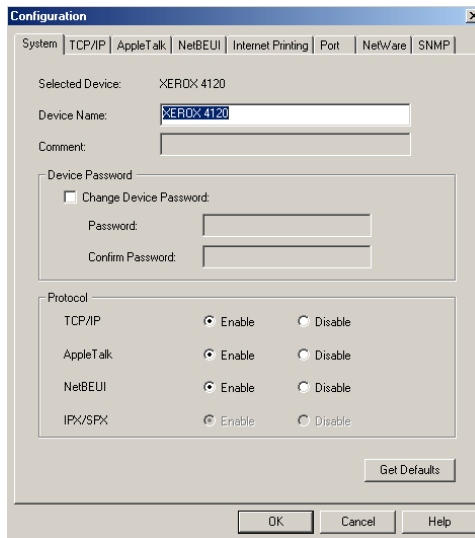
When the Configuration icon is clicked, or the Configure option on the Main menu is selected, a tabbed window will open. The tabs available will vary depending on the Print Server model selected. The possible tabs are:

- System
- TCP/IP
- AppleTalk
- NetBEUI
- Internet Printing
- Port
- NetWare
- SNMP

System Tab

This screen allows you to:

- Change the name of the Print Server .
- Change the "Password" for the Print Server .
- Set the Network Protocols used the selected Print Server . (Any protocols not used on your LAN may be disabled. This may improve performance.)



The screenshot shows a 'Configuration' dialog box with the following elements:

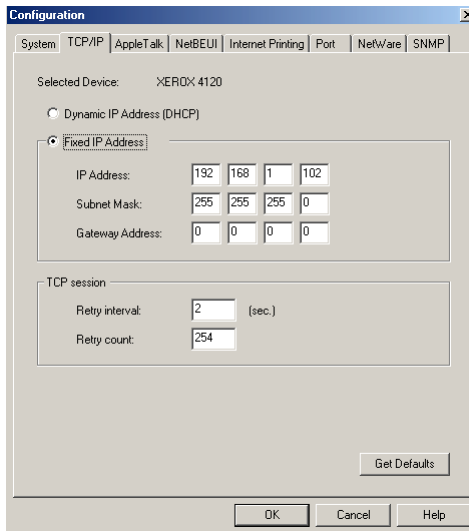
- System Tab:** Selected Device: XEROX 4120; Device Name: XEROX4120; Comment: (empty).
- Device Password:** Change Device Password; Password: (empty); Confirm Password: (empty).
- Protocol:**
 - TCP/IP: Enable, Disable
 - AppleTalk: Enable, Disable
 - NetBEUI: Enable, Disable
 - IPX/SPX: Enable, Disable
- Buttons:** Get Defaults, OK, Cancel, Help.

TCP/IP Tab

Selecting this tab will allow configuration for the TCP/IP network protocol. The basic options are:

- **Dynamic IP Address (DHCP)** - The IP address is obtained automatically, from a DHCP Server on your network.
- **Fixed IP Address** - You must enter the IP address, Subnet Mask, and Gateway Address.
- **IP Address** - Select an unused IP address from the address range used on your LAN.
- **Subnet Mask** - Use the same values as computers on your LAN (or on the same LAN segment, if you have a Router).
- **Gateway** - Use the same values as computers on your LAN (or on the same LAN segment, if you have a Router).

Some Print Server models also support the Auto-IP function. If the Print Server is set to Dynamic IP Address, but there's no DHCP server found on the network, the Print Server will get an IP from the range of 169.254.1.1 ~ 169.254.254.254 automatically. In this case, even though the Print Server was initialized with an Auto-IP, it will change to DHCP whenever a DHCP server is detected.



Configuration

System | TCP/IP | AppleTalk | NetBEUI | Internet Printing | Port | NetWare | SNMP

Selected Device: XEROX 4120

Dynamic IP Address (DHCP)

Fixed IP Address

IP Address: 192 168 1 102

Subnet Mask: 255 255 255 0

Gateway Address: 0 0 0 0

TCP session

Retry interval: 2 (sec.)

Retry count: 254

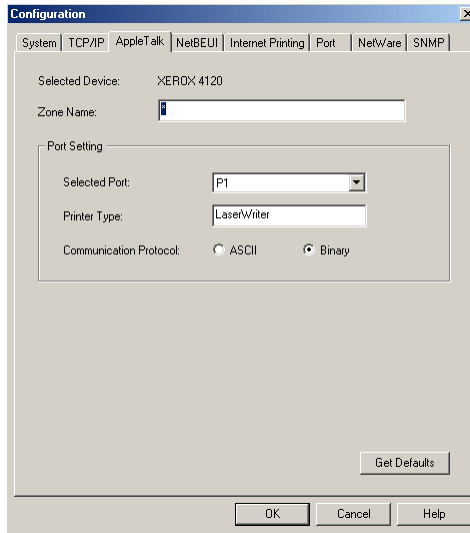
Get Defaults

OK Cancel Help

The TCP session parameters should only be changed if advised to do so by your Network Administrator or Print Server Technical Support.

AppleTalk Tab

Generally, no Print Server configuration is required in order to use AppleTalk.



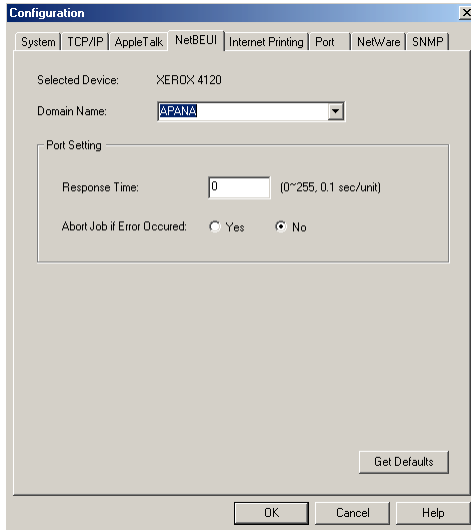
This screen allows you to:

- Set the Zone Name field to determine which Apple systems can gain access to this printer.
- The Printer Type field is used to describe the printer driver used for each port.
- Set Communication Protocol to ASCII or Binary. This must match the setting on the Apple computer systems using the Print Server .

NetBEUI Tab

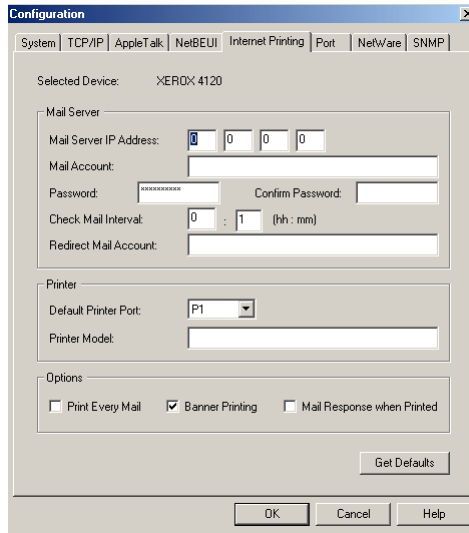
This screen allows you to:

- Choose the Domain name for the selected Print Server .
- Set how fast jobs are sent to the printer by using the Response Time field.
- Set the desired option for the Abort Job if Error Occured setting.
- YES causes a print job to be terminated if a printing error occurs.
- NO (default) will try to continue but may cause print errors.



Internet Printing Tab

The Internet Printing feature allows you to send print jobs to the Print Server using Internet E-mail.



Configuration

System | TCP/IP | AppleTalk | NetBEUI | **Internet Printing** | Port | NetWare | SNMP

Selected Device: XEROX 4120

Mail Server

Mail Server IP Address: 0 0 0 0

Mail Account: _____

Password: _____ Confirm Password: _____

Check Mail Interval: 0 : 1 (hh : mm)

Redirect Mail Account: _____

Printer

Default Printer Port: P1

Printer Model: _____

Options

Print Every Mail Banner Printing Mail Response when Printed

Get Defaults

OK Cancel Help

Please refer to Section 7 - Special Features for Internet Mail Printing Configuration details.

Port Tab

This screen has 2 panels - Physical Port and Logical Port.

Physical Port

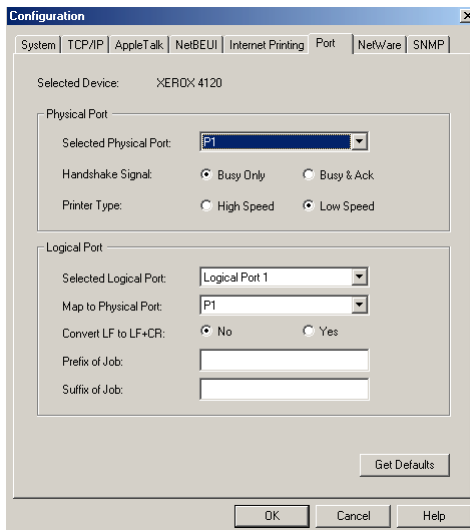
The following settings are available:

- Selected Physical Port - Select the Physical Printer Port you wish to configure.
- Handshake Signal - Select Busy Only or Busy & Ack for the Physical Port.
- Printer Type - Select High Speed or Low Speed for the Printer Type.

Logical Port

Logical Ports (printers) can be used in the Unix environment. The following settings are available:

- Selected Logical Port - Select the Logical Printer Port you wish to configure. (The number of Logical Port depends on the number of physical port the device has. The Maximum available number is 8)
- Map to Physical Port - Select the physical Printer Port which the Logical printer will use.
- Convert LF to LF+CR - If checked, LF (line feed) characters are changed to CR+LF (carriage return + line feed).
- Prefix of Job - The printer control string (in hex) to be sent to the printer before each print job. This string cannot exceed 15 characters.
- Suffix of Job - The printer control string (in hex) to be sent to the printer after each print job. This string cannot exceed 15 characters.



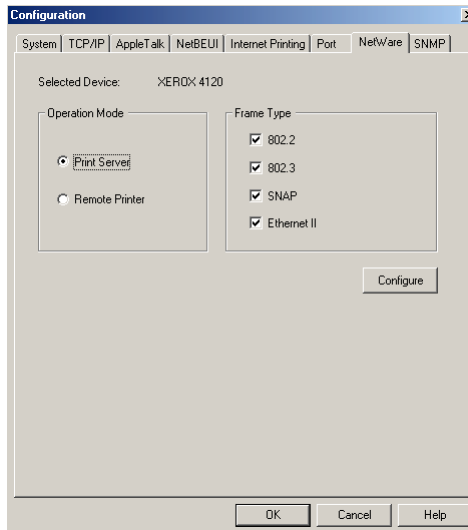
The Get Defaults button will reset all settings to their factory-default values.

NetWare

BiAdmin supports configuration of both the Print Server and Novell NetWare servers.

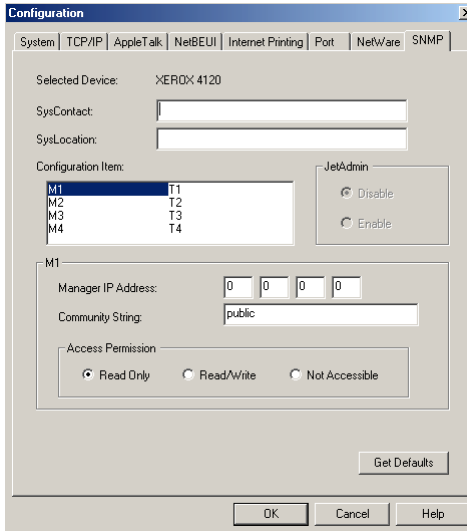
- You need to be logged into the NetWare server(s) with ADMIN rights.
- The screens you will see, and the operations which can be performed, depend on whether or not you have Novell NetWare Client 32 installed.
- If Novell NetWare Client 32 is installed on your computer, BiAdmin allows you to configure both the Print Server and the NetWare server from within BiAdmin.
- If this Novell NetWare Client 32 is NOT installed, you can configure only the Print Server itself, not the NetWare server.

The NetWare Manual (in the Manual\NetWare folder on the CD-ROM) contains detailed information on using BiAdmin with NetWare Servers.



SNMP Tab

Configuration is only required if using the Simple Network Management Protocol.
Refer to the section on Configuring the Print Server for SNMP for details.



Section 6 - Web-Based Management

This section explains how to use your Web Browser to configure the Print Server models

Overview

The Print Server models incorporate the HTTP server. This allows you to connect to the Print Server and configure it using your Web Browser. Most browsers should work, provided they support tables and forms.

Preparation

Because it supports dynamic IP Address allocation using DHCP, BOOTP, or RARP, the Print Server ships with an IP Address of 0.0.0.0. This is NOT a valid IP Address.

Therefore, you must do ONE of the following:

- Check your DHCP server (if you have one), and determine the IP Address allocated to the Print Server .
- Use the Diagnostic Button (if fitted) to print a report which includes the current IP address. (Press the Diagnostic Button, and hold it for 2 seconds.)
- Use the Setup Wizard, BiAdmin or another Print Server utility to allocate a valid IP Address to the Print Server .
- Add an entry to the arp table to associate the hardware address of the Print Server with the desired IP address, as follows:

```
arp -s IP_Address 00:c0:02:xx:xx:xx (Unix)
```

```
arp -s IP_Address 00-c0-02-xx-xx-xx (Windows)
```

Where:

IP_Address is the IP Address you wish to assign to the Print Server .

00:c0:02:xx:xx:xx is the hardware address of the Print Server .

Example (Unix):

```
arp -s 192.168.0.21 00:c0:02:12:34:56
```

Example (Windows):

```
arp -s 192.168.0.21 00-c0-02-12-34-56
```

Note: The hardware address of the Print Server is shown on a sticker on the base of the device.

Connecting to the Print Server

1. Start your Web Browser.
2. In the Address box, enter HTTP:// followed by the IP Address of the Print Server. e.g.http://192.168.0.21
3. You will then be prompted for the password. If no password has been set, the Status screen will appear.
4. Use the menu bar to navigate the different configuration screens. Remember to save each screen before changing to a different screen.

Configuration Screens

Server Status

This screen shows server system data and the current settings for all of the other screens. It is read-only; no data can be input on this screen.

Status	View the current status of this Server.
Server Details:	<p>Hardware ID: 04A0398C2C Firmware Version: 6027 Protocol ID: 007F Default Name: SCDAC0E8 Server Name: XEROX 4120 Network Info: Master File Server: NDS Tree Name: NDS Tree Context: Print Server Mode Status: Remote Printer Mode Status: N/A Ethernet II Network Number: 00000000 802.2 Network Number: 00000000 802.3 Network Number: 00000000 SNAP Network Number: 00000000 AppleTalk Info: Printer Type: XEROX 4120:LaserWriter TCP/IP Info: IP Address: 192.168.1.102 Subnet Mask: 255.255.255.0 Gateway Address: 0.0.0.0 Email Server IP Address: 0.0.0.0 Printing Account Name: N/A Redirect Account Name: N/A SMB Info: Domain Name: APANA</p> <p><input type="button" value="Refresh"/></p>

Printer Status

This screen displays the current status of each port. For each port, the following data is listed:

Printer Status	Check the status of the attached printer.
	<p>Connected Printer: P1</p> <p>Status: On-Line</p> <p>Printing Information: Idle</p> <p style="text-align: center;"> <input type="button" value="Print Test Page"/> <input type="button" value="Refresh"/> </p>

- Connected Printer** The model name of the printer connected to the port, if the printer name is known. (If the printer is not bi-directional, this information is unavailable.)
- Status** The current status of the printer (On-line, Off-line, Out of paper)
- Printing Information** This will show either Idle or Printing.

Configure Server

Configure Server	The password protects the configuration data. Unused protocols can be disabled.
Print Server Name:	Print Server Name: <input type="text" value="XEROX 4120"/>
Password:	Device Password: <input type="password" value="AAAA"/>
	Verify Password: <input type="password"/>
Protocols:	Enable: <input checked="" type="checkbox"/> AppleTalk <input checked="" type="checkbox"/> NetBEUI
	<input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>

- Print Server Name** Change the default name if you wish. The new name must not contain any spaces or blanks.
- Password** Enter the device password, and again in the Verify field. Once a password is entered, it is required in order to gain access and change the configuration.
- Enable Protocols** Non-TCP/IP may be disabled if they are not required on your LAN. The available protocols depend on the Print Server model.

AppleTalk

AppleTalk	
	The zone determines which Macs have access to the printer. Communication parameters must match your Mac computers.
AppleTalk zone:	AppleTalk zone <input type="text"/>
Communication:	Printer Object Type: <input type="text" value="LaserWriter"/> Communication Protocol: <input type="radio"/> ASCII <input checked="" type="radio"/> Binary
	<input type="button" value="Retrieve Defaults"/> <input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>

- | | |
|------------------------|---|
| AppleTalk zone | This determines which Apple systems can gain access to this printer. |
| Printer Object Type | These are text fields, used to describe the printer driver used for each port. The Print Server is designed to work with LaserWriter (or 100% compatible) printers. |
| Communication Protocol | Sets whether the port uses ASCII or Binary Communication Protocol. The default is Binary. |

NetBEUI

NetBEUI	Set the Workgroup name to match your PCs. Other settings normally do not need to be changed.
Domain Name:	<input type="text" value="APANA"/>
Options:	Response Time (0.1 secs): <input type="text" value="0"/> (0.255) Abort Print Job if Error: <input type="radio"/> Yes <input checked="" type="radio"/> No
<input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>	

- | | |
|--------------------|---|
| Domain Name | Enter the designated work group to be serviced by the Print Server . This field is not case sensitive, so names with different case will be considered to be the same name. |
| Response Time | Set how fast jobs are sent to the printer. The default value of zero (0) delay should be increased only if your printer cannot cope with no delays. |
| Abort Job if Error | YES terminates a print job if a printing error occurs. NO (default) will try to continue but may cause print errors. If print errors occur, try setting this value to YES. |

TCP/IP	Settings for the TCP/IP network protocol. Using a fixed IP Address is recommended.															
IP Address:	IP Address: <input type="radio"/> DHCP Client <input checked="" type="radio"/> Fixed IP Address: <table border="1" style="margin-left: 20px;"> <tr> <td>IP Address</td> <td>192</td> <td>168</td> <td>1</td> <td>102</td> </tr> <tr> <td>Subnet Mask</td> <td>255</td> <td>255</td> <td>255</td> <td>0</td> </tr> <tr> <td>Gateway Address</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table>	IP Address	192	168	1	102	Subnet Mask	255	255	255	0	Gateway Address	0	0	0	0
IP Address	192	168	1	102												
Subnet Mask	255	255	255	0												
Gateway Address	0	0	0	0												
Connection:	Delay before reconnection attempt (secs) <input type="text" value="2"/> (0..255) Number of reconnection attempts <input type="text" value="254"/> (0..255)															
<input type="button" value="Retrieve Defaults"/> <input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>																

- IP Address IP Address assigned to this device. If using dynamic IP Addresses (DHCP, BOOTP, rarp), this should be left at 0.0.0.0.
- Subnet Mask (Network Mask) If the Router (Gateway) Address is 0.0.0.0, the Subnet Mask should also be left at 0.0.0.0. If you have a router, enter the Subnet mask for the segment to which the Print Server is attached.
- Gateway Address If your network segment has a router or gateways, enter its IP Address here. Otherwise, leave the address as 0.0.0.0.

Connection

Delay before reconnection attempts

Sets how long the Print Server should wait before retrying a TCP/IP connection which is lost. Allowable values are from 0 to 255 seconds, with 2 as the default.

Number of reconnection attempts

Sets how many attempts at reconnection will be made. After that, the TCP/IP session will be terminated. Allowable values are from 0 to 255, with 254 as the default.

NetWare

NetWare		Configure for use with NetWare Servers. Using Print Server mode is recommended.
General:	NetWare mode:	<input checked="" type="radio"/> Print Server Mode <input type="radio"/> Remote Printer Mode
	Frame types:	<input checked="" type="checkbox"/> 802_2 <input checked="" type="checkbox"/> 802_3 <input checked="" type="checkbox"/> SNAP <input checked="" type="checkbox"/> Ethernet II
Remote Printer Mode:	NetWare Printer Server for parallel port:	<input type="text"/>
Print Server Mode:	NDS Tree Name:	<input type="text"/>
	NDS Context:	<input type="text"/>
	Master File Server:	<input type="text"/> (Bindery Mode only)
	NetWare Password:	<input type="text"/>
	Job Notification:	<input type="radio"/> Originating Workstation only <input checked="" type="radio"/> All log-ins
	Polling Queue Interval:	<input type="text"/> (1..255)
		<input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>

General

NetWare Mode

Select Print Server or Remote Printer, as appropriate. The default is Print Server.

Frame Type

Select the frame types used by your network. (Ethernet 802.2, Ethernet 802.3, Ethernet SNAP, and Ethernet II) By default, all frame types are enabled.

Remote Printer Mode

Novell Printer Server for P1

NetWare print server to service the Print Server's parallel port 1.

Novell Printer Server for P2

NetWare print server to service the Print Server's parallel port 2 (P2), if fitted.

Print Server Mode

NDS Tree Name

(NDN mode only) The File Server's NDS tree name. (root name)

NDS Context

(NDS Mode only) Path to the NDS Context. This does not include the Context itself, and each OU should be separated by a period. e.g. department.company

Master File Server

(Bindery Mode only) Name of the Print Server's master file server.

NetWare Password

The password on the NetWare Server. The Print Server device needs this password to connect to the NetWare server.

Job Notification

The options are:

- Job notification at only the workstation where the print job originated
- Job notification at all workstations that you have logged into.

Polling QueueInterval

Defines how often the Print Server will poll the queues to be serviced.

SNMP (Simple Network Management Protocol)

The data below is essential if using SNMP. The required MB is on the CD-ROM. Save your data after each change.

SNMP

General:

SysContact

SysLocation

Management Stations:

Station No.

IP Address

Community

Access

Trap Receivers:

Receiver No.

IP Address

Community

Enable with Severity level:

SysContact

Text Field - Name of the contact person.

SysLocation

Text Field - Location of the contact person.

Management Stations

Station No.

Select the Management station (1..4), and click the Get Data button to update the display for the selected item.

IP Address

Enter the IP Address of the management station, which has the SNMP program installed.

Community

This is a text field. Enter the name of the community.

Access

Select the desired level of access.

Trap Receivers

Receiver No.

Select the Trap Receiver number (1..4), and click the Get Data button to update the display for the selected item.

IP Address

Enter the IP Address of the Trap Receiver, which will be sent the Trap message.

Community

This is a text field. Enter the name of the community.

Enable

Check to enable; select the severity level. Note: Currently, all traps are level 1.

Logical Printers

Logical Printers (ports) can be used under Unix. For each Logical Printer, the following fields are available:

Logical Printers	Logical Printers can be used with NetWare or Unix. The names for Logical Printers are L1 to L3.
Select Printer:	Logical Printer No: <input type="text" value="1"/> <input type="button" value="Get Data"/>
Details:	Pre-string (Hex): <input type="text"/>
	Post-string (Hex): <input type="text"/>
	<input type="checkbox"/> Convert LF to CR/LF
	<input type="button" value="SAVE"/> <input type="button" value="CANCEL"/>

Logical Printer(Port)	Select the Logical Printer Port you wish to configure. (L1 to L3 or L1 to L8, depending on your model)Click the Get Data button to update the display with the current data for the selected logical printer.
Port	Select the Printer Port which the Logical printer will use.
Pre-string	The printer control string (in hex) to be sent to the printer before each print job. This string cannot exceed 15 characters.
Post String	The printer control string (in hex) to be sent to the printer after each print job. This string cannot exceed 15 characters.
Convert LF to CR+LF	If checked, LF (line feed) characters are changed to CR+LF (carriage return + line feed).

Internet Printing

See Internet Mail Printing in Section 7 for details of this feature.

Internet Printing	<p>This feature allows remote users to print to the printer, via the Internet. E-Mail is used as the transport mechanism.</p>
Mail Server:	<p>Mail Server IP Address: <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/></p> <p>Account Name: <input type="text"/></p> <p>Account Password: <input type="password" value="password"/></p> <p>Verify Password: <input type="password"/></p> <p>Check Mail every: <input type="text" value="0"/> : <input type="text" value="1"/> (Hr:Min)</p> <p>Redirect unprintable Mail to: <input type="text"/></p>
Printer:	<p>Printer Model: <input type="text"/></p> <p>Printer Port: <input type="text" value="Parallel 1"/></p>
Options:	<p><input type="checkbox"/> Print every E-Mail</p> <p><input checked="" type="checkbox"/> Print Banner Page</p> <p><input type="checkbox"/> Mail response when printed</p>
	<p><input type="button" value="SAVE"/> <input type="button" value="CANCEL"/></p>

Section 7 - Special Features

This section covers the special features of the Print Server .

Overview

The Print Server supports the following three (3) special features:

- IPP (Internet Printing Protocol).
- Proprietary Internet Mail Printing system.
- SNMP (Simple Network Management Protocol).

Internet Printing Protocol (IPP)

IPP (Internet Printing Protocol) is a new standards-based system to allow remote printing from a computer to any accessible printer. Normally, the printer will be attached to a computer or other device which functions as an IPP Server.

For client computers, it is necessary to install a compatible IPP Client program. The Client must also know the IP Address or URL or the IPP Server.

IPP Server Configuration

The Print Server contains the necessary firmware to act as an IPP Server. No additional configuration is necessary. However, the following requirements must be met.

- The Print Server must have a valid IP Address. For printing via the Internet, the Print Server's IP Address must be external (allocated by your ISP), rather than an IP Address on your local LAN.
- Any Router, Gateway or Firewall linking your LAN to the Internet must NOT block the IPP protocol.
- You must advise clients of the correct URL or IP Address of the IPP Server. To use a URL rather than an IP Address, you need to register the domain name for the URL.
- Unless clients are using Windows 2000, you must provide your clients with the supplied IPP Client software. If it is not convenient to provide the CD-ROM, supply the IPP_CLIENT.EXE file, located in the IPP folder.

IPP Client Setup - Windows 95/98/Me/NT 4.0/XP

The IPP Client Software can be installed on any of the following systems:

- Window 95/98/Me/2000/XP
- Windows NT 4.0

Installing from the CD-ROM

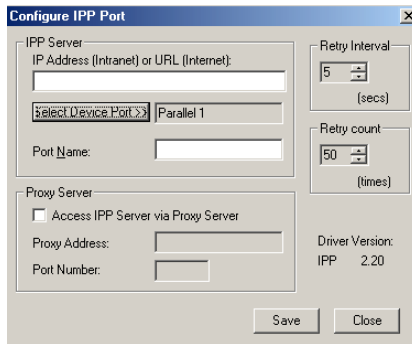
1. Insert the CD-ROM in your drive. If the program does not start automatically, run the SETUP program in the top-level folder.
2. Follow the prompts until you reach the Select Installation screen, and select **IPP Client**.
3. At the next screen, select the **Install IPP Client** option.
4. Click Next, and step through the remaining screens to complete the installation.

Installing using IPP_CLIENT.EXE

1. Run this program to unzip the included files.
2. The IPP Setup program will then run.
3. Follow the prompts to complete the installation.

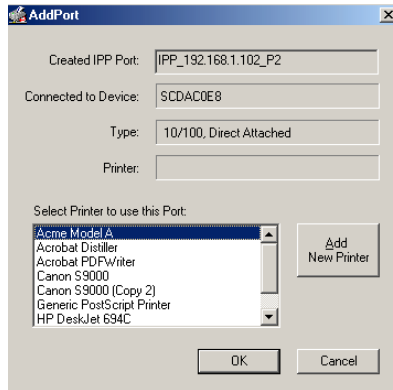
IPP Client Configuration (Windows 95/98/ME/2000/XP/NT 4.0)

1. Run the "Add IPP Port" program entry created by the installation. A screen like the following will be displayed.



2. If Internet access from your location is via a Proxy Server, check Access IPP Server via Proxy Server, and enter details of your Proxy Server. (This will be the same as your Browser configuration.)
3. Enter the IP Address or URL of the IPP Server.
4. Click Select Device Port to view the available ports on the IPP Server, and select the appropriate port. A connection to the IPP Server will be established at this time.

5. Click Save to create the IPP port on your system. You will see a message confirming that the port has been created, then the following dialog:



6. Either select an existing printer to use the new port, and click OK.

OR

Click the Add New Printer button to create a new printer to use the IPP port. This will start the Add Printer wizard. Follow the prompts to complete the process. Ensure that the new printer uses the IPP port.

Installation is now complete.

- To create additional IPP Ports, repeat the entire procedure.
- The Proxy Server and other options are set individually for each IPP Port.

Changing the IPP Port Settings

After the IPP port is created, you can reach the IPP Port screen using the Windows Port Settings button:

1. Open the Printers folder (Start - Settings - Printers)
2. Right-click the IPP Printer, and select Properties.
3. Locate and click the Port Settings button (Details or Port tab, depending on your version of Windows).

There are 2 settings - Retry Interval and Retry Count - which can be adjusted if you have problems connecting to the IPP Server.

- **Retry Interval** sets the time interval (in seconds) between connection attempts. Increase this number if you have a poor connection, or the remote server is very busy.
- **Retry Count** sets how many connection attempts will be made. Increase this number if you have a poor connection, or the remote server is very busy.

IPP Client Setup - Windows 2000/XP

Windows 2000 has its own IPP Client, and there is no need to install the supplied IPP Client Software. To use Windows 2000's IPP Client with the Print Server, follow this procedure:

1. Start the Add Printer wizard.
2. Select Network Printer, and click "Next" to see the Locate your Printer screen, as shown below.
3. Select Connect to a printer on the Internet or on your Intranet, and enter the URL of the IPP Server as follows, where ip_address represents the IP Address of the IPP Server, and 631 is the port number.

Port 1	ip_address:631/ipp/P1
Port 2 (if exists)	ip_address:631/ipp/P2
Port 3 (if exists)	ip_address:631/ipp/P3

These entries are case sensitive. They must be entered as shown, with "ipp" in lower case, and P1, P2 and P3 in UPPER case.

4. If the connection can be established, and the printer on that port is on-line, the following dialog will be displayed.
5. Click "OK", and then select the printer manufacturer and model to match the printer connected to the port on the IPP Server.
6. Click "Next", and complete the Wizard.

The IPP printer is now ready for use.

Using IPP Printers

The IPP Printer can be selected and used like any other Windows printer. If the IPP Server is not on your network, your Internet connection needs to be active.

If you wish to check the availability of the remote IPP Server, you can use the Query IPP Printer program installed with Add IPP Port.

An IPP Server may be unavailable for any of the following reasons:

- It is powered off.
- A printer problem has caused the IPP Server to cease responding, and a restart (reboot) is required.
- The Server's IP Address has changed.
- The Internet connection for the IPP Server is down.
- Network congestion causes the connection attempt to time out.

If using the supplied IPP Client software, there are 2 settings - Retry Interval and Retry Count - which can be adjusted if you have problems connecting to the IPP Server.

See the previous section Changing the IPP Port Settings for details.

Internet Mail Printing

The Internet Mail Printing System allows users to print data to your printer across the Internet. Users send the Internet Print Server an E-Mail, with the print job normally sent as an attachment to the E-Mail. The Print Server will retrieve the E-Mail and print it.

System Requirements

Mail Server

- **Accessibility.** The Mail Server must be accessible by the intended clients or users. Normally, this means a permanent connection to the Internet.
- **Protocols.** The Mail Server must support the POP3 and SMTP protocols. The Internet Printing System uses these protocols and the most common E-Mail formatting standards:
 - MIME (Multipurpose Internet Mail Extensions)
 - Base64 Encoding (for mail attachments)

Internet Print Server

- **TCIP/IP Protocol.** The LAN must use the TCP/IP protocol.
- **Mail Server Access.** The Print Server must be able to access the Mail Server using a single IP address.
- **Mail Account.** The Print Server must have a Mail Account. Users print by sending an E-Mail to this mail account.

User (Client) Requirements

- **Internet Connection.** Either through a LAN, or dial-up.
- **E-Mail address.** This is used to notify the user that their print job has been done, or if there are any problems.
- **Printer Driver.** Users must have a printer driver which matches the printer connected to the remote Internet Print Server .
- **Print Capture Software.** To print more than plain text, users require InterNet Printing Port software to capture the print job and convert it into an E-Mail attachment.

The Internet Printing Port software is available for the following operating systems:

- Microsoft Windows 95, 98, or ME
- Microsoft Windows NT 4.0 or Windows 2000

Internet Mail Printing Configuration

The Print Server must be configured with the data in the following table.

The supplied BiAdmin utility program, or the Web interface can be used to set the following entries on the TCP/IP screen.

Mail Server IP Address	The IP Address of the E-Mail Server used by the Print Server .
Mail Account	The name of the E-Mail Account used by the Print Server .
Mail Account Password	Enter the password for the above Mail Account here.
Check Mail Interval	Sets how often to check for mail.
Redirect Mail Account	Jobs which can not be printed will be sent to this account. If blank, unprintable jobs will be discarded.
Default Printer Port	Printer number for all Internet print jobs. Only one port can be selected. Users on the LAN can also use this port.
Printer Model	This text field identifies the printer used for Internet printing. This value is sent to remote users upon request.
Print every E-Mail	If ON, then all E-Mail received is printed. Otherwise, only E-Mail from the InterNet Printing Port will be printed.
Print Banner	If YES (default), a banner page is printed to identify the owner of the print job.
Mail Response when Printed	If YES, all print jobs receive an E-Mail response. If NO, only users who set this option in their InterNet Printing Port software receive an E-Mail.

You will need to reset your Mini Print Server for the changes to take effect. Either power off and then power on the Mini Print Server device or, in the BiAdmin utility program, select **InitDevice -> Reset Device** to reset your Mini Print Server.

User Software

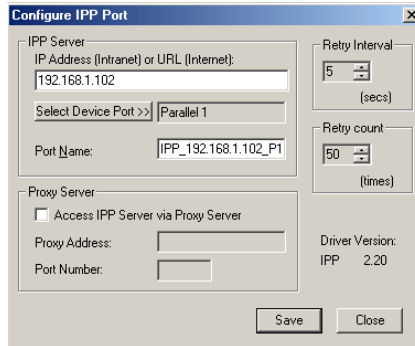
The software provided for remote users (InterNet Printing Port) should be installed by everyone intending to use Internet printing. Otherwise, remote users can print correctly only if:

- They send an E-Mail directly to the Print Server Mail Account, using their normal E-Mail application.
- The E-Mail contains plain text only.
- The Internet Print Server is configured with Print every E-Mail ON.

Installation of the InterNet Printing Port software will create a new printer port. After attaching the correct printer to this port, users can print to the Internet Printer using any Windows application.

Installation - User Software

1. Run the InterNet Printing Port (IPP) installation program SETUP.EXE
2. Default values for the installation are:
 - Directory - C:\Program Files\Internet_Printer
 - Start Menu folder - InterNet Printing Port Driver
3. You will then see the Configure Port screen, as shown in the following screenshot.



4. The following data must be provided.

Port Name	Enter a descriptive name (e.g. "WAN") for the new printer port.
Remote Printer E-mail Address	The E-Mail address for the Internet printer. Your print jobs will be sent to this E-Mail address.
Mail Server Name or IP Address	This is the name or IP Address of your Mail Server. If you are on a LAN, ask the LAN Administrator. If using a dial-up connection, use the data provided by your ISP.
Your Internet E-mail Address	The normal address that people use to send you E-mail.
Retry Interval (Seconds)	If unable to connect to the E-Mail server, retry after this time period (1 to 255 seconds, 30 is usually OK).
Reply Notification Mail	Check to receive an E-Mail when your print job has been processed.

5. On completion, a new printer port will have been created.

Using the new Port

The Windows Control Panel is used to connect the correct printer to the InterNet Printing Port. In Windows 95/NT, the procedure is:

1. Select the Printer which matches the remote printer, then choose Properties.
2. Select the new port as the port for this printer.
 - If you do not have the correct printer driver, or you wish to create another printer using an existing driver, use the Windows Add Printer facility.
 - Using the Windows Port Settings or Configure Port facility will reveal the same Configure Port screen shown on the previous page.
 - If you wish to print to multiple Internet Printers, use the Windows Add Port facility to add a new InterNet Printer port. Ensure that the correct data is entered in each port, and that each port has a unique name.

Checking the Printer Driver

To make sure that the correct printer driver for the remote printer is installed on your system, you can use the InterNet Printing Port to send an E-Mail to the Internet Printer. The procedure is as follows:

1. Connect your default printer to the InterNet Printing Port.
2. Check that "Reply Notification Mail" in the InterNet Printing Port is ON.
3. From Notepad or another text editor, print a short message (e.g. "This is a test print") to the Internet Printer.

You will receive a reply E-Mail containing the "Printer ID" which will identify the printer attached to the Print Server . If this does not match the printer driver you are using, install the correct printer driver.

Printing through the Internet

1. Create or open the document you wish to print.
2. Select the Printer connected to the InterNet Printing Port.
3. If you do not have a permanent Internet connection, establish a connection now. (Note: The InterNet Printing Port will NOT establish a dial-up connection, but it will send the E-Mail the next time you are connected.)
4. Print the document.
5. The InterNet Printing Port will generate an E-Mail and send it to the remote printer. The document will be encoded and sent as an attachment to the E-Mail. You will see a progress screen to advise its progress.
6. Close the Internet connection if you opened it in Step 3.
7. If the "Notify after print job" option is set, you will receive an E-Mail when your job is printed.

SNMP

The Print Server supports SNMP (Simple Network Management Protocol). This allows network supervisors to monitor and control the Print Server using network management platforms such as HP OpenView, IBM SystemView, etc.

The appropriate MIB file must be imported into your SNMP management program using the Import-Compile command. Check your management program for details on this procedure. The MIB files are provided in the Mib folder on the CD-ROM, as follows:

Mib1p.mib	Single port models.
Mib2p.mib	Models with 2 ports

Configuring the Print Server for SNMP

Before using a SNMP Management station to manage the Print Server, the following settings should be assigned to it, in addition to the IP Address, Gateway Address, and Subnet Mask.

SNMP Settings

SysContact	Text Field - Name of the contact person.
SysLocation	Text Field - Location of the contact person.
Management Station IP Address(s)	Up to 4 Management Stations can be entered.
Trap Receiving IP Address(s)	Up to 4 Trap Receiving Stations can be entered.

Management Station Settings

For each Management Station, the following fields are available:

Access Permission	Options are:Read OnlyRead/WriteNot Accessible
Community String	Leaving this blank will disable management by this station.

Trap Receiving Station Settings

For each Trap Receiving Station, the following fields are available:

Community String	Leaving this blank will disable management by this station.
Trap Enable	Use this option to Enable/Disable Trap Receiving by this station.
Trap Severity	In this version, all traps are level 1.

Section 8 - Troubleshooting

This section describes some problem situations, which may arise, and the solutions to them.

Overview

If you encounter printing difficulties, please refer to the appropriate section.

If, after following the advice in these documents, the Print Server still does not function properly, please do not hesitate to contact NetComm's Customer Support Department.

Email: support@netcomm.com.au

Fax: (02) 9424-2010

Web: www.netcomm.com.au

Hardware & LAN Problems

- Problem No. 1 All the Print Server's LEDs are off.
- Solution No. 1 Check the power supply or power connection.
- Problem No. 2 Print Server's status light continuously stays lit.
- Solution No. 2 Reset Print Server by unplugging the power supply and plugging it back in.
- Problem No. 3 Print Server's status light and power light stay on continuously and do not turn off.
- Solution No. 3 Reset the Print Server by unplugging the power supply or by pushing the reset push button, if fitted.
- Problem No. 4 The Print Server unit can not be found on the LAN, so configuration is not possible.
- Solution No. 4 If using 10/100BaseT:
- Check the Hub. The link LED for the port to which the Print Server is connected should be ON. If it is Off, there is a problem in the network cable.
 - On the Print Server , check the LED(s) next to the connector. If the LED is not ON (or neither LED is On, if there are 2), the network connection is not working. Check the Ethernet cable and connectors. If they seem OK, set the DIP Switches of the Print Server to match your LAN environment.
- If using TCP/IP:
- Ensure that there are no routers between the Print Server and the computer used for configuration.
 - Ensure that the computer used for configuration has the TCP/IP network protocol installed. Test its network connection by seeing if you can locate other LAN devices from the computer. (e.g. Use Network Neighborhood and try to browser the network.)
- Problem No. 5 I am using DHCP, and getting an IP Address conflict involving the Print Server .
- Solution No. 5 If the Print Server is left on, but the DHCP server is turned off, then the Print Server will retain its IP Address without the DHCP Server being aware of it. Simply reset the Print Server so it will obtain a new IP Address. This problem would also arise if you assigned static IP Address, which is within the range used by the DHCP server. If so, use another address which is NOT within the range used by the DHCP server.

AppleTalk (Macintosh)

- | | |
|----------------|--|
| Problem No. 1 | Why do I get an incorrect printout? |
| Solution No. 1 | Some possible reasons are: <ul style="list-style-type: none">■ You may have chosen Binary encoding to print the file. Try to use ASCII encoding.■ Some of the fonts, which are in your print file may not be supported by the printer. Try selecting LaserWriter 7 instead of LaserWriter 8. |
| Problem No. 2 | Can't find the Print Server's name in the Chooser. |
| Solution No. 2 | Try the following: <ol style="list-style-type: none">1. Make sure that AppleTalk is on (the button next to Active is highlighted in the Chooser).2. Make sure the printer has been on and in the READY state for a few minutes.3. Make sure the printer has not been renamed since its last appearance in the Chooser.4. If the printer resides on a network with multiple zones, make sure the correct zone is selected from the AppleTalk Zones box in the Chooser. |
| Problem No. 3 | My document didn't print to the right printer. |
| Solution No. 3 | Check the following: <ul style="list-style-type: none">■ Another Print Server with the same name may have received your print job. Use the PStool to reconfigure your Print Server name and ensure all Print Servers have unique names.■ Make sure your application output encode is set to ASCII. If not, change it to ASCII. |
| Problem No. 4 | My file doesn't print with the correct fonts. |
| Solution No. 4 | Try changing your printer driver to LaserWriter 7. |
| Problem No. 5 | My EPS file doesn't print with the correct fonts. |
| Solution No. 5 | This is a problem that occurs in some application programs. Try downloading the fonts contained in the EPS file before printing the saved EPS file. |
| Problem No. 6 | I can't select the "Remaining from:" item in the print dialog box. |
| Solution No. 6 | If you have selected the Layout value, "2 Up", or "4 Up", you cannot access the Remaining from item. Choose other selections. |

-
- Problem No. 7 A cover page prints either on the first or the last page of the document.
- Solution No. 7 Select one of these solutions:
- Turn the cover page feature off.
 - Insert extra page breaks in your document to avoid the cover page printing on the first or last page of your document.
 - Install the Apple LaserWriter 7 driver. You are having trouble printing with the Apple LaserWriter 8 driver.
- Problem No. 8 Why do I have trouble printing with the LaserWriter 8?
- Solution No. 8 Your application software may not be compatible with the LaserWriter 8 driver or your system may not meet the requirements of the LaserWriter 8 driver. Use the Apple LaserWriter 7 driver instead.
- Problem No. 9 The colors on my printed output do not match the colors on my computer screen.
- Solution No. 9 When the printer receives a color file, it tries to match the printed output color to the screen color. Sometimes the printer cannot match up the colors as closely as wanted. To alleviate this problem, perform the following steps:
- Choose "Calibrated Color/Grayscale" in the Print pop-up menu in the Print Options dialog box. The printer will make adjustments to match the colors.
 - Check your monitor to make sure all settings (for example, brightness) are adjusted correctly.
- Problem No. 10 When I send a print job, I get a PostScript Command error or no print out.
- Solution No. 10 Check the communication protocols. The computer, Print Server and printer must all be configured to the same communication protocol.(either Binary or ASCII).To configure your system:
1. Choose which protocol you are going to use. You should check your printer; it may not give you a choice.
 2. Set your printer to the correct protocol.
 3. Use the computer's Print submenu to configure your computer to use the protocol you have chosen.
 4. Configure the Print Server to use the same protocol as the printer and computer.

Novell NetWare

Problem No. 1

My Print Server cannot print the jobs sent to the print queue.

Solution No. 1

Try the following:

1. Check if the printer attached to the Print Server is on-line.
2. Check if your Print Server is logged into the file server (See Problem 2 below.).
3. Check the current status of the queues used by the Print Server, and ensure the queues are active.
4. Check if the NetWare printer number is correct. 0 = parallel port 1 of the Print Server. 1 = parallel port 2 of the Print Server. 2 = parallel port 3.
5. Check to see if the Print Server is a static queue server to the queue. Locate the Print Server Object, and check the Queues Serviced by Printer. Ensure that the correct queues are on the list.
6. The total number of queues to be serviced may be over the limit of 56. If so, reduce the number of queues.

Problem No. 2

My Print Server is configured as a Novell Print Server, and cannot log in to a File Server.

Solution No. 2

The following steps may solve this problem:

1. Check the Novell file server's name. If it is over 20 characters long, rename it using no more than 20 characters.
2. Check that the Print Server's configuration data, especially the password, is correct.
3. Check the NetWare server. If using Bindery mode, check the master file server to see if the login status of the Print Server is Ready. If it is not, check the error message and perform the required corrective action.
4. If the Print Server is servicing more than one file server, check to see that all required file servers are in the list of "File Servers To Be Serviced". If not, insert the required file server name to the list.

Windows Printing Problems

- Problem No. 1 When I tried to install the Printing software for Peer-to-Peer printing, I received an error message and the installation was aborted..
- Solution No. 1 This may be caused by an existing installation of the printer port software. Before attempting another installation:
- Remove the existing installation
 - Restart your computerTo remove an existing printer port installation:
 1. Open Start - Settings - Control Panel - Add/Remove Programs
 2. Look for an entry with a name like "Shared Port", "Shared Printer Port", " Print Server Driver" or " Print Server Port".
 3. Select this item, click "Add/Remove", and confirm the deletion.
- Problem No. 2 On Windows 95, I installed the Print Port Driver for Peer-to-Peer Printing, but when I selected a port on a Print Server and clicked "Add", the printer was not installed.
- Solution No. 2 Try installing the Printer using the standard Windows tools, as follows:
1. Start the Add Printer Wizard.
 2. Select Network Printer when prompted "How is the printer attached to your Computer?", and click Next.
 3. When prompted for the Network Path or Queue, enter a dummy value such as shown below. (Do NOT select Yes for "Do you print for MS-DOS programs?")
 4. The printer wizard will display a message stating that "The Network Printer is off-line". This is OK. Continue the Add Printer Wizard until finished.
 5. Go to the Printers folder (Control Panel-Printers). The printer icon will be grayed out indicating the printer is not ready.
 6. Right-click the Printer, and select Properties. Then select the Details tab, as shown below.
 7. Click the Add Port button. On the resulting screen, select Other, then Printer Server, as the port to add, as shown below.

8. Click OK to see the Print Port Configuration screen, as shown below.
9. Click the Browse Device button, select the desired Print Server, and click OK.
10. Click OK to return to the Printers folders, and right-click on the Printer. Ensure that the Work off-line option is NOT checked. The Printer should no longer be grayed out, and is ready for use.

- Problem No. 3 I connected and configured a WPS (Windows Printing System) printer as described, but I can't get the print job to print.
- Solution No. 3 Printer drivers for WPS printers poll the printer before sending print data. Since the printer is networked, the printer is not found and no data is sent. The solution is to add your printer as a network printer as described in Solution 2 above. Note: The screens shown in Solution 2 are from Windows 95. Other versions of Windows may look slightly different, but the process is identical. If using Window NT or 2000, do NOT enable Sharing for the printer.
- Problem No. 4 When printing from some software applications such as Power Point, it takes a long time and the print out is incorrect.
- Solution No. 4 The problem is due to the printer, which is being configured to Start printing after the first page is spooled. To change this setting: Go to Control Panel - Printers and click on your printer. Then select File - Properties - Details.
- When the Details screen appears, click the Spool Settings button.
 - When the Spool Settings dialogue box appears, choose Start printing after last page is spooled and click OK.
- Problem No. 5 A printing device connected to the Print Server port cannot print or prints garbage.
- Solution No. 5 Check the following:
- Cable connection between Print Server and printer.
 - Printer driver in the application program or Windows matches the printer.
- Problem No. 6 The Configuration button on the Printer Status screen in BiAdmin is grayed out, even though my printer is bi-directional.
- Solution No. 6 The button is unavailable if the printer is busy. You must wait until the printer is idle.

Problem No. 7

When I send a print job, cannot print or prints garbage.

Solution No. 7

The problem may be due to the printer, if the printer you used is an old model with low speed, the following steps may solve this problem: Try the following:

- Open the BiAdmin Utility.
- Click the Printer Status icon.
- Change the Printer Type setting to Low Speed or set the Handshake Signal setting to Ack & Busy.

Section 9 - Network Server Configuration

Windows NT Server

Preparing for TCP/IP Printing

If using Windows NT 3.51 or Windows NT 4.0, Microsoft TCP/IP Printing Support must be installed.

- If it is already installed, proceed to Adding a TCP/IP Remote Printer.
- Otherwise, the procedure to install TCP/IP printing support is as follows.

Windows NT 3.51

1. Start the Network option in Control Panel. When the Network Settings dialog box appears, click the Add Software button to display the Add Network Software dialog box.
2. Select TCP/IP Protocol And Related Components in the Network Software list box, and then click the Continue button.
3. In the Windows NT TCP/IP Installation Options dialog box, check the TCP/IP Network Printing Support option.
4. Click the OK button. Windows NT Setup will display a message asking for the full path to the Windows NT distribution files. Provide the appropriate location and click the Continue button. All necessary files will be copied to your hard disk.
5. If you did not check the Enable Automatic DHCP Configuration option in the Windows NT TCP/IP Installation Options dialog box, you must complete all the required TCP/IP configuration procedures manually.
6. After you finish configuring TCP/IP, the Network Settings dialog box will reappear, click the Close button and then restart your computer for the changes to take effect.

Windows NT 4.0

1. Go to Start-Settings-Control Panel-Network.
2. Click the Service option and ensure that Microsoft TCP/IP Printing is enabled. If it is not enabled, select the Add option and enable it as usual.
3. If you added services in step 2, reboot the computer for the changes to take affect.

Adding a TCP/IP Remote Printer

Windows 3.51

1. From the Printer menu in Print Manager, select Create Printer.
2. In the resulting dialog box, enter data as follows:

Printer Name	Enter a name (up to 32 characters). This name appears in the title bar of the printer window.
Driver	Select the appropriate driver for the attached printer.
Description	Enter a printer description for other network users to reference.
Print To	Select Other.

3. A Print Destinations dialog box will appear after selecting Other. In the Available Print Monitor list, select LPR Port, then OK.
 4. An Add LPR compatible printer window will appear. Enter data in the fields as follows:

Name Or Address Of Host Providing LPD	Enter the IP address of the Print Server .
Name Of Printer On That Machine	Enter the appropriate logical printer number. (e.g. L1)
 5. When the Create Printer dialog box reappears, check the Share This Printer On The Network option.
 6. The resource name shown in the Share Name box can be changed if you wish. In the Location box, you can enter information concerning the printer location. Network users will see this information when browsing to find this printer.
 7. Complete any other configuration information in the Create Printer dialog box, save and exit.
- Client computers can now be configured as described in Section 4 - Client Configuration.

Windows NT 4.0

1. Go to Start-Settings-Printer and invoke the Add Printer wizard.
2. When prompted with This printer will be managed by, select My Computer and click Next.
3. Select Add Port..., then select LPR Port and click New Port.
4. In the Name of Address of server providing lpd: Dialog box, enter the Print Server's IP address.
5. In the Name of printer or print queue on that server dialog box, enter the appropriate logical printer number (L1..L3, or L1..L8, depending on the model) as previously configured on the Print Server .
6. Click OK. When returned to the Printer Ports window, simply select Close and then install your printer driver as usual.
7. When prompted whether or not the printer will be shared, select the Sharing radio button.
8. In the Shared dialog box, enter the shared printer name. (The shared name is how other users will see this printer.) Click OK to save and exit.

Client computers can now be configured as described in Section 4 - Configuring your Computer.

Windows 2000 Server

1. Start the Add Printer Wizard, select Network Printer, then click Next to browse for the Print Server.
2. Locate and double-click the Print Server, select the desired port, and click Next.
3. Click "OK", and select the correct Manufacturer and Model for this printer.
4. Follow the prompts to complete the installation.
5. In the Printers folder, right-click the new printer, and select Sharing.
 - Select "Shared As:" and enter an appropriate name for this printer. Users will see this name when browsing for the printer during installation.
 - If desired, click "Additional Drivers" and install printer drivers for other versions of Windows, such as Windows 98. This will assist users during the installation process.
6. Click OK to close this Window. Configuration is now complete.

Client computers can now be configured as described in Section 4 - Configuring your Computers.

Novell NetWare

The Print Server fully supports both Bindery and NDS Novell systems.

With either Bindery or NDS, two (2) NetWare operating modes are possible -Print Server and Remote Printer. Print Server mode is recommended.

Novell Distributed Printing Services (NDPS) under NetWare 5 is also supported.

Configuration Methods (Bindery or NDS)

The following configuration methods are available. In each case, you must be logged into the required NetWare Server with ADMIN rights.

Also, if using Windows, Novell's Client32 should be installed on your computer. Without Client32, only limited configuration changes can be made on the NetWare Server.

Setup Wizard

Using the Setup Wizard is recommended. This allows configuration of the Print Server in NetWare Print Server Mode, which is the recommended system.

BiAdmin

For more control and flexibility, or to use NetWare Remote Printer Mode, you can use the supplied BiAdmin management utility. Provided you have Novell's Client 32 installed, BiAdmin will allow you to configure the NetWare Server as well as the Print Server.

- BiAdmin is installed by the Administrator menu option on the CD-ROM.
- See Section 5 for general information on using BiAdmin.
- The NetWare Manual (in the Manual\NetWare folder on the CD-ROM) contains detailed information on using BiAdmin with NetWare Servers.

Other Method

If you are unable to use Windows-based programs for configuration, the following method is available to configure the Print Server:

Quickset Command-line DOC program, intended only to configure the Print Server for use with NetWare V2, 3 and 4. This program also has a limited ability to configure the NetWare Server itself.

- The program is provided on the CD-ROM, in the Utility folder.
- The documentation for the program is provided in sub-folders of the Manual folder on the CD-ROM.

Configuration Data

The Print Server requires the following "General" data, and the data for the mode (Print Server or Remote Printer) you are using.

General

Device Name	The device name (Default Server Name) is shown on a sticker on the base of the device. Change this if you wish. The new name MUST NOT exceed 19 characters, nor contain any spaces.
Device Password	Default is NULL (no password).
NetWare Mode	Print Server or Remote Printer.
Frame Type	Select the frame types used by your network. (Ethernet 802.2, Ethernet 802.3, Ethernet SNAP, and Ethernet II) By default, all frame types are enabled.

Novell Remote Printer Mode

Novell Printer Server for P1	NetWare print server to service the Print Server's parallel port 1.
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Novell Print Server Mode

NDS Tree Name	Not applicable.(NetWare NDS mode only)
Print Server NDS Context	Not applicable.(NetWare NDS mode only)

Master File Server	(Bindery mode only) Name of the Print Server's master file server.
Polling QueueInterval	Defines how often the Print Server will poll the queues to be serviced.
Job Notification by Connection ID	Set to Yes to receive a job notification at only the workstation where the print job originated, No to receive a job notification at all workstations that you have logged on.
NetWare Password	The password on the NetWare Server. The Print Server device needs this password to connect to the NetWare Server.

Setup for NDPS (NetWare 5)

Overview

- The Print Server must be configured as a valid device on your TCP/IP network.
- To use NDPS (Novell Distributed Printing Services), the Novell server must be running Novell NetWare 5, and the computers (clients) must be running IntranetWare Client V2.2. or later.

The following procedure is designed to enable Public Access Printing under NDPS. Public Access Printing allows anybody on the network to access the printer.

Creating an NDPS Manager Object

If an NDPS Manager Object already exists, skip this procedure and proceed to Creating an NDPS Printer Agent.

1. Login to NetWare 5.0 Server as Admin and start the NetWare Administrator program Nwadmn32.exe.
2. Select the container on NetWare Administrator where you want the NDPS Manager object to reside. (e.g. TeSupp)
3. Select Create - Object from the menu bar to view the New Object dialog.
4. Select NDPS Manager as the object to create. The Create NDPS Manager Object window shown below will appear.
5. Type a name in the NDPS Manager Name.(e.g. SerMGR in Figure 1 above)
6. Browse the Resident Server and select where you want the NDPS Manager object to be assigned. (e.g. TECH_50.TeSupp in figure 1 above)
7. Browse the Database Volume and select where you want the NDPS Manager database to be assigned. (e.g. TECH_50_SYS.TeSupp in figure 1 above)

8. Click Create. The new NDPS Manager will appear in the main browser window.
 - To start the NDPS Manager in future, enter the following command at the console:
LOAD NDPSMthen select the NDPS Manager object.
 - To start the NDPS Manager whenever you bring up the server, add a command like the following to your server's AUTOEXEC.NCF file:
LOAD NDPSM SerMGR.TeSupp

The last item is the name of the NDPS Manager object you wish to load.

9. After creating an NDPS Manager, you can create NDPS printers by using NetWare Administrator, as explained below.

Creating an NDPS Printer Agent

To create Public Access Printers using the NDPS Manager Object in NetWare Administrator, follow this procedure:

1. Start the NDPS Manager object you will be using to control the Printer Agent.
2. At the Identification page, click the Printer Agent List.
3. Click New to see the Create Printer Agent window, as shown below.
4. Enter the desired name for the Printer Agent (PA) Name.
5. Normally, the NDPS Manager will be the NDPS Manger object you are using.
6. Select Novell Printer Gateway in the Gateway Type. (see figure2 above)
7. Click OK and then select the available printer.
8. Select Remote (LPR on IP) in the Connection Type.
9. Click Next to see the following Configure Port Handler screen.
10. In the Host address IP field, enter the IP Address previously assigned to the Print Server device.
11. In the Printer Name field, enter the Logical Port name on the Print Server. (e.g.: L1)

*Note: For Print Servers with one parallel port, the logical ports are named L1, L2 and L3.
For devices with three parallel ports, the logical ports are named L1 to L8.*

12. Click Finish, then select appropriate drivers for Windows 3.1, Windows 95/98 etc as required.
13. The new Printer Agent will now appear in the Printer Agent List window.

Repeat this procedure for any other ports on the Print Server, or for any other logical printers you wish to use.

Client computers can now be configured as described in Section 4 - Configuring your Computer.

Unix Systems

Your Print Server can be configured using FTP, and it supports the following Unix printing methods:

- LPD
- FTP
- Direct Socket Interface

For full details on using Unix systems with your Print Server, refer to the Unix manual in the / Manual/Unix directory on the CD-ROM.

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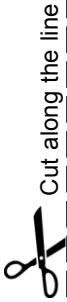
Please note that the images used in this document may vary slightly from those of the actual product. Specifications are accurate at the time of the preparation of this document but are subject to change without notice.

Registering your NetComm Product

To ensure that the conditions of your warranty are complied with, please go to the NetComm web site for quick and easy registration of your product at

www.netcomm.com.au

Alternatively, you can complete the Warranty Registration Form on the following page and mail it to NetComm Limited, PO Box 1200, Lane Cove NSW 2066.



Cut along the line

Warranty Registration Form

Date of Purchase

Name

Company

Address

..... Post Code

Tel No () Fax No ()

E-mail

The following information is vital for your warranty

Please make sure it's correct and complete.

Serial No

Model

Product Type:

PC Card

External

Internal

Other

**Make sure
you fill this
section in!**

I intend to use this modem at:

Home

School/College/University

Business

Government Office

Dealer's Name

Dealer's Address

..... Post Code

Tel No () Fax No ()

How did you find out about our products?

.....

.....

Product Warranty

The warranty is granted on the following conditions:

1. This warranty extends to the original purchaser (you) and is not transferable;
2. This warranty shall not apply to software programs, batteries, power supplies, cables or other accessories supplied in or with the product;
3. The customer complies with all of the terms of any relevant agreement with NetComm and any other reasonable requirements of NetComm including producing such evidence of purchase as NetComm may require;
4. The cost of transporting product to and from NetComm's nominated premises is your responsibility; and,
5. NetComm does not have any liability or responsibility under this warranty where any cost, loss, injury or damage of any kind, whether direct, indirect, consequential, incidental or otherwise arises out of events beyond NetComm's reasonable control. This includes but is not limited to: acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, electricity outages, lightning, power surges, or shortages of materials or labour.
6. The customer is responsible for the security of their computer and network at all times. Security features may be disabled within the factory default settings. NetComm recommends that you enable these features to enhance your security.

The warranty is automatically voided if:

1. You, or someone else, use the product, or attempts to use it, other than as specified by NetComm;
2. The fault or defect in your product is the result of a voltage surge subjected to the product either by the way of power supply or communication line, whether caused by thunderstorm activity or any other cause(s);
3. The fault is the result of accidental damage or damage in transit, including but not limited to liquid spillage;
4. Your product has been used for any purposes other than that for which it is sold, or in any way other than in strict accordance with the user manual supplied;
5. Your product has been repaired or modified or attempted to be repaired or modified, other than by a qualified person at a service centre authorised by NetComm; and,
6. The serial number has been defaced or altered in any way or if the serial number plate has been removed.

Limitations of Warranty

The Trade Practices Act 1974 and corresponding State and Territory Fair Trading Acts or legislation of another Government ("the relevant acts") in certain circumstances imply mandatory conditions and warranties which cannot be excluded. This warranty is in addition to and not in replacement for such conditions and warranties.

To the extent permitted by the Relevant Acts, in relation to your product and any other materials provided with the product ("the Goods") the liability of NetComm under the Relevant Acts is limited to, at the option of NetComm to:

- Replacement of the Goods; or
- Repair of the Goods; or
- Payment of the cost of replacing the Goods; or
- Payment of the cost of having the Goods repaired.

All NetComm ACN 002 490 486 products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option (refer to packaging). To be eligible for the extended warranty you must supply the requested warranty information to NetComm within 30 days of the original purchase by registering on-line via the NetComm web site at www.netcomm.com.au.

NetComm reserves the right to request proof of purchase upon any warranty claim.

Mini Print Server

SHARE A PRINTER WITH EVERYONE ON THE NETWORK
It's mini in size and name, but it packs a maxi punch. Add this pocket-sized powerhouse to your printer and everyone on your network can select and use it.

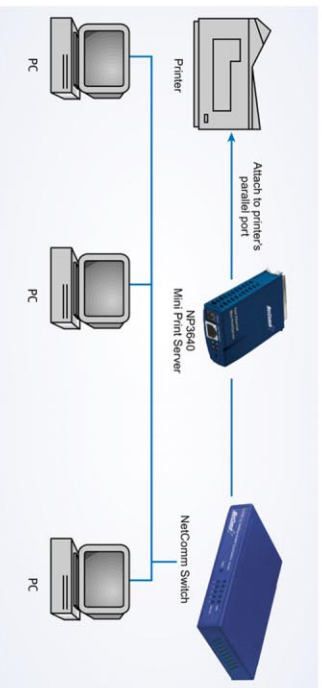
The NetComm NP3640 is a convenient, stand-alone printer server that connects direct to your printer. It works independently of your PC, so it not only doesn't tie up your PC's system resources, it prints faster too!

EASY TO INSTALL
You can install your NetComm NP3640 in minutes. It offers a single port, which connects direct to the printer, and a simplified Wizard, which makes it easy to install and configure in any Windows® environment.

COMPATIBLE WITH MOST PRINTERS
Unlike internal print servers which only support a single printer model, the NetComm NP3640 Mini Print Server supports most parallel port printers and bi-directional printers including laser, colour, bubble-jet and even dot-matrix. This means you don't have to buy a new print server when you upgrade your printer.

SUPPORTS MOST WINDOWS OPERATING SYSTEMS
The NetComm NP3640 Mini Print Server comes complete with all the necessary software and drivers to attach to most PCs. Operating systems supported include Windows® 95/98/2000/NT / Me /XP, Macintosh 9x or higher, Netware 3/4/5.x and Unix.

FITS ALMOST ANYWHERE
The NetComm NP3640 Mini Print Server, is designed to fit well into small network spaces and is an ideal solution for networks ranging from small home networks to small to medium business networks.



Australia connects with NetComm
Australians have relied on NetComm to connect them for over 20 years. You can rely on that record of reliability and quality when you buy the NetComm NP3640 Mini Print Server.

3 YEAR WARRANTY*
1 year warranty out of the box.
Extra 2 years **FREE** with online registration at www.netcomm.com.au
*conditional upon registration online.

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Product Code: NP3640