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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1). Reorient or relocate the receiving antenna, (2). Increase the separation between the equipment and receiver, (3). Connect the equipment into an outlet on a circuit different from that to which the receiver is connected, (4). Consult the dealer or an experienced radio/TV technician for help.

Important Note:

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20 cm (8 inches) during normal operation.
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment."

All contents are subject to change without prior notice.

Part No. 615WU-V0.2.32 DRAFT

1. Introduction

Product Overview

The external print servers enhance capability by letting you place your printers at convenient locations directly on the Ethernet network, and by increasing network printer performance and management. Please note that the print server does not support printing with host-based printers, e.g. CAPT, GDI, PPA.

Network Management

The print servers support the Simple Network Management Protocol (SNMP), which remote printer management and a warning. A standard SNMP agent is permanent on these print servers. Any standard SNMP-based application can be used to access and manage these print servers.

Network configuration

The print servers provide an embedded web server that can be accessed via a proper web browser. We also subsidiary Windows-based PSAdmin utility which help administrator to setup print server environment.

Wireless Specifications

Standard	Complies with IEEE 802.11b/g standard
Radio Frequency	2.4Ghz ISM Band
Media Access Control Method	Carrier Sense Multiple Access / Collision Avoidance (CSMA/CA) with ACK
Modes	Ad-Hoc and Infrastructure (User definable)
Data Transfer Rate	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54Mbps
Output Power	15 ~ 20dBm
WEP (Wired Equivalent Privacy) Encryption	Support 64 and 128 bit Encryption

Components and Features

Print server

- 1 USB2.0 port
- POST (Power On Self Test)
- LED Lights

  Status: Green, indicating Power/POST process

  WLAN Active: Green, indicating the linkage and data transmission via wireless connectivity.

  USB: Green, indicating the linkage and data transmission of USB port.
- 1 setup CD for Windows 95/98/Me/NT/2000/XP/2003
- 1 external AC power adapter(5V/2A)
- Normal and Diagnostic Mode (select by **DIP** switch)
- Built-in Reset Button

Before you start, you should prepare the following items:

- One Windows-based PC with print server setup CD
- One printer with a USB port
- One USB printer cable
- One 802.11b/g Access Point (optional)

Hardware Installation

To install the print servers, you need to complete these steps:

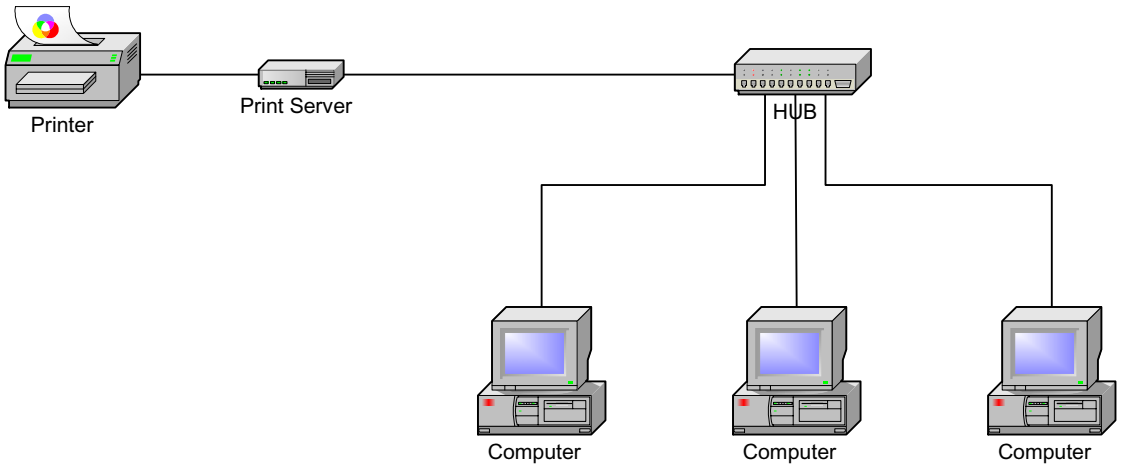
- Confirm that your printer USB port work well.
- Connect the print server to the network and printer and plug in the print server.
- Create a configuration page from the print server.

Follow these instructions to install the print servers, please refer to any peripheral you are connecting to the print server:

1. To ensure your printer work well, do one of the following:
   - Send data through the parallel (USB) port of each printer you are connecting to the print server, or generate a printer self-test page.
2. Turn off the power for each printer.
3. Connect the print server to printer.
4. Plug the AC power adapter into the power receptacle in the side of the print server.
5. Plug the AC power module into the wall out-let, the print server is switched on after you plug it in.
6. Check the LED's marked as **status**. It should be flash **five** times normally, if not, please contact your local dealer for repair or replacement.
7. Turn on the power of your printer to begin printing.

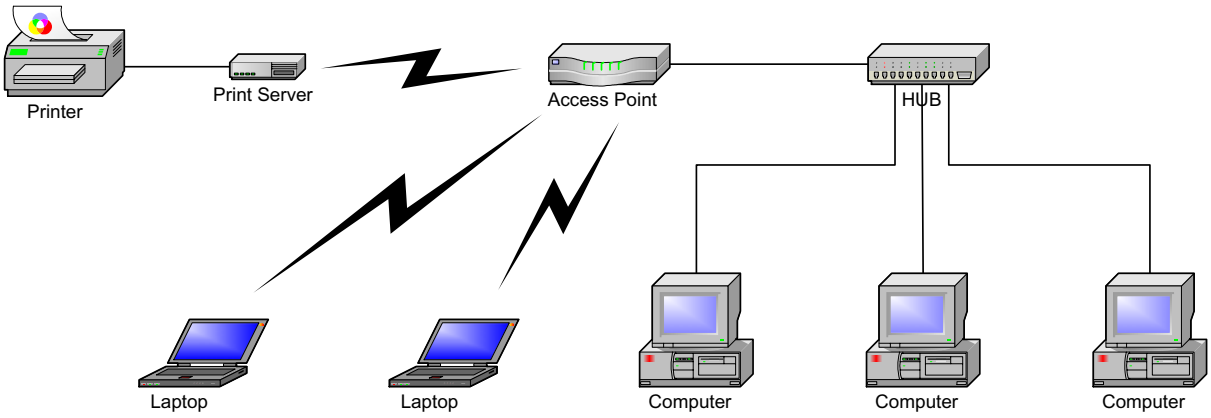
Network Environment

Wired Network with Print Server:

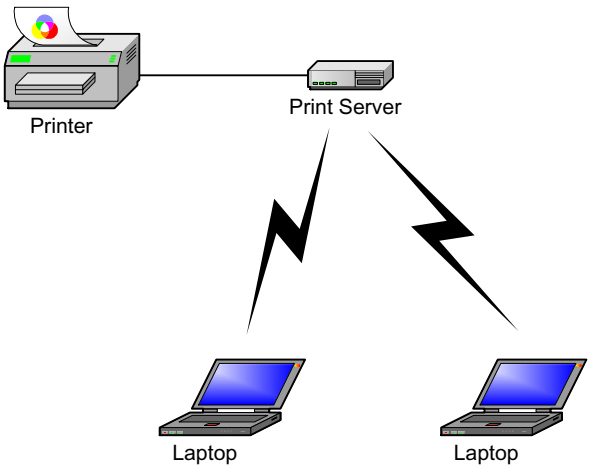


Wireless Network with Print Server:

Infrastructure (Access Point) Mode:



Ad-hoc (PEER-to-PEER) Mode:



2. Print Server Installation

Preparation

To meet users' network printing needs in today's heterogeneous and multiple protocol networking environments, the print server supports industrial standard protocols, including TCP/IP, IPX/SPX, NetBEUI and AppleTalk. This means that the print server supports the most popular network operating systems today, including NetWare, Windows 95/98/Me/NT/2000/XP/2003, UNIX systems and Macintosh computer. As such, there might be several ways to deploy the print server on your network.

Supported Networks

Print server supports a variety of network protocols, including TCP/IP, IPX/SPX, NetBEUI and AppleTalk. In addition, we provide software for network configuration on the following networks:

- Novell NetWare 3.12, 4.x, 5.x (Bindery and NDS)
- Microsoft Windows 95/98/Me
- Microsoft Windows NT/2000/XP/2003
- Apple EtherTalk
- UNIX /Linux system
- Internet (via Internet Printer Connection software)

Configuration Solution Table

Setup Operating System	Function	Remarks
PSAdmin utility		
Windows 95/98/Me Windows NT/2000/XP/2003	Install a single network on a peer-to-peer or client-server network	Easy printer installation runs from print server setup CD
Embedded Web server		
Windows 95/98/Me Windows NT/2000/XP/2003 Mac OS, Linux…	Remote setup print server from private LAN	Follow standard browse, e.g. IE or Netscape
HP Web JetAdmin		
Windows	Remote	Print server solution for continual management of

NT/2000/XP/2003	management of print server, include alert and consumables	multiple printers- anywhere on your LAN
Internet Printing Protocol		
Windows NT/2000/XP/2003	Printing via the internet to Internet Printing Protocol-enabled print server	Allows saving distribution of HQ hardcopy document over Internet, replacing fax, mail

Comment

Configuration solution Table has many installations way to setup Windows 95/98/Me, Windows NT/2000/XP/2003, NetWare, UNIX / Linux system and Mac computer. Firstly, we introduce PSAdmin utility, HP Web JetAdmin program and Internet Printing Protocol solution. Then we will discuss Embedded Web Server Installation with print server.

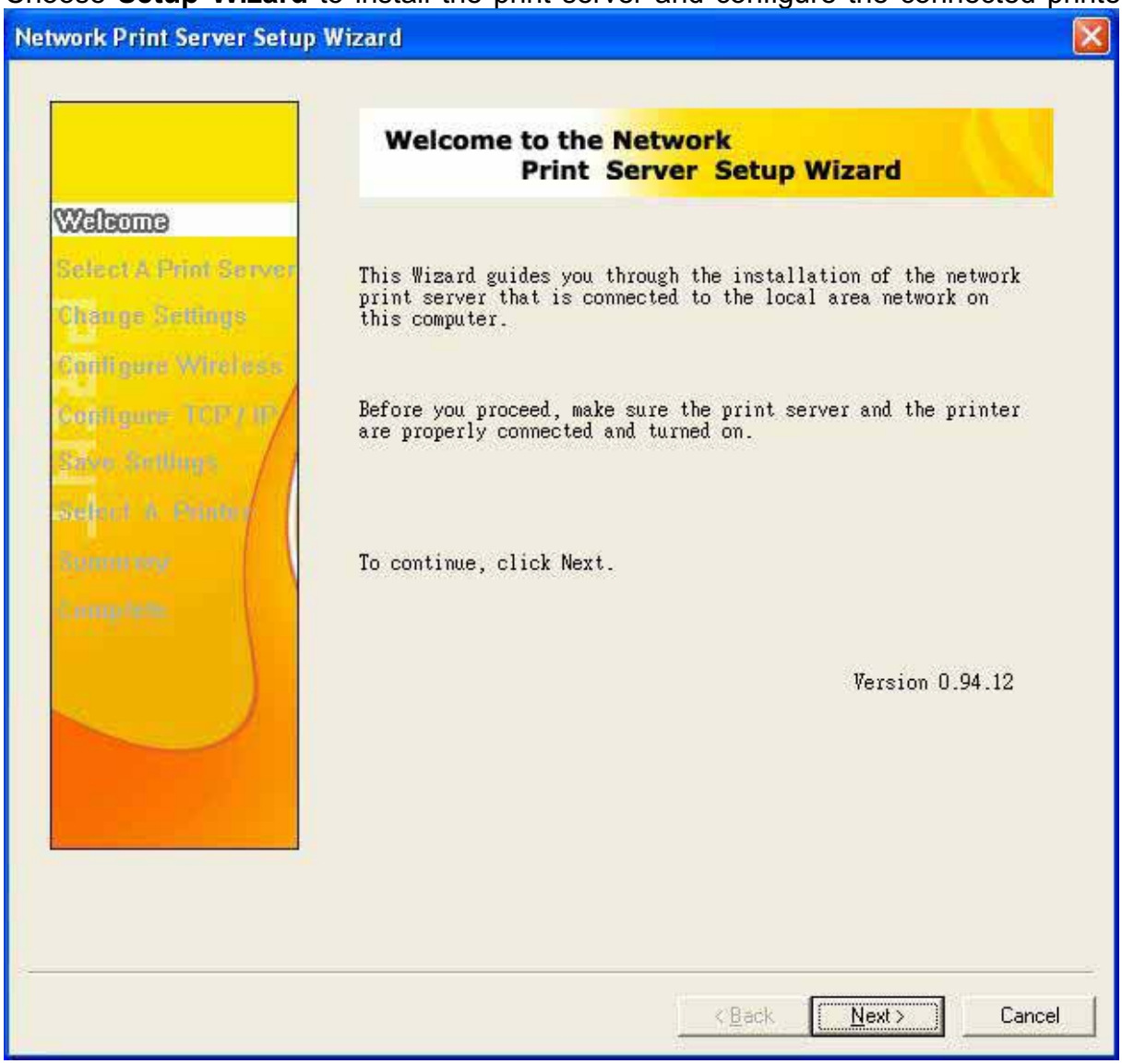
3. Software Installation

The PSAdmin is a proprietary Windows-based management program that can assist you in configuring and managing your print server in NetWare environments. The program can be installed from the setup CD of print server.

Installing the PSAdmin and Print Server's Driver

1. To enable network communication with print server, your computer must have a proper IP address, e.g. 192.168.0.100
2. Insert the setup CD into your CD-drive, and the following message appears:

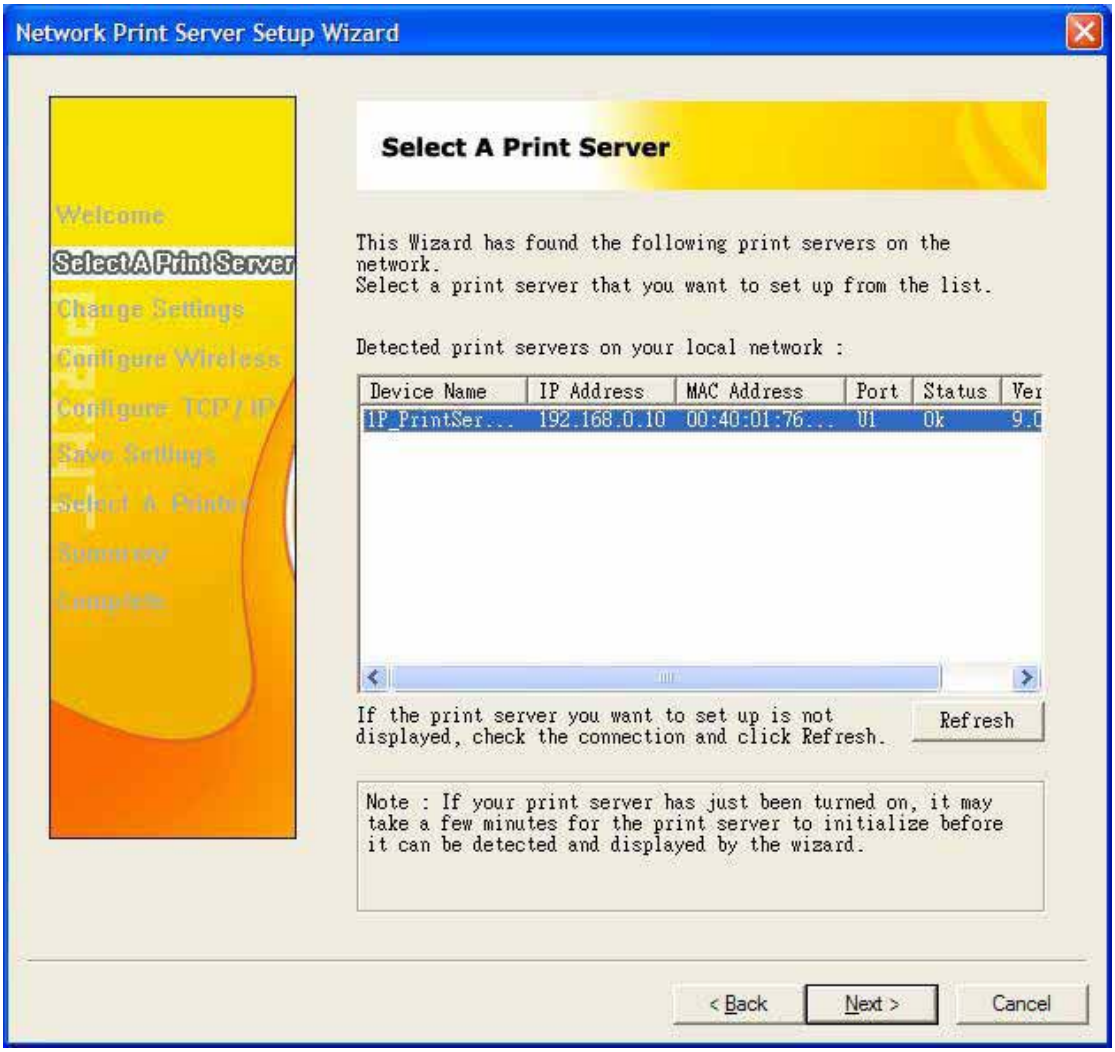
3. Choose **Setup Wizard** to install the print server and configure the connected printer.



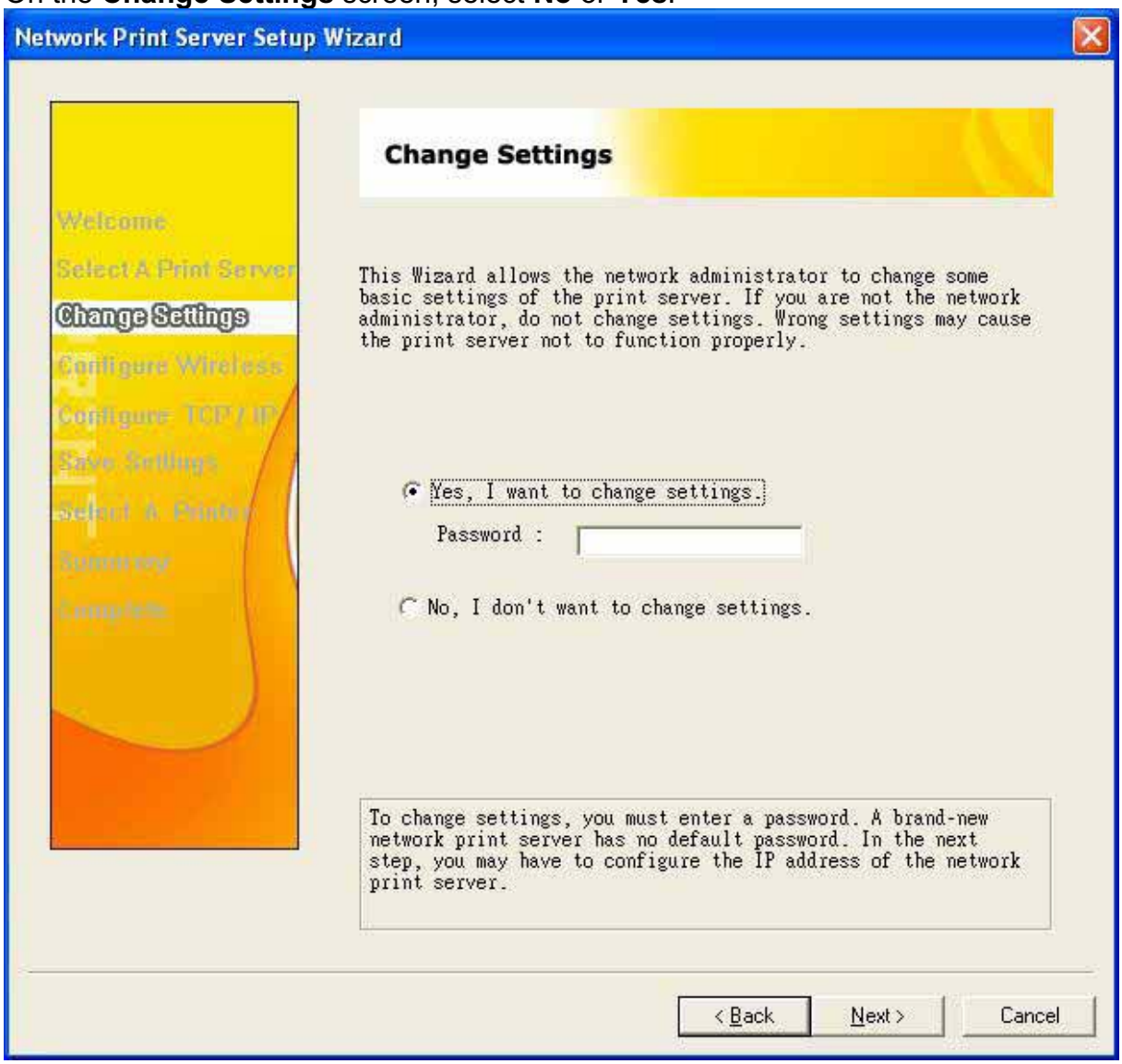
Note:
The setup CD will install the **print server's driver**, **PSAdmin** and **Setup Wizard** into your computer. The default installation directory will be **C:\Program files\Network Print Monitor**.

4. Click **Next**, the wizard will automatically discover the print server.

5. From the **Select A Print Sever** screen, select the print server that you want to configure and click **Next**.


Network Print Server Setup Wizard
Welcome
Select A Print Server
Change Settings
Configure Wireless
Configure TCP / IP
Save Settings
Select A Printer
Summary
Complete
Select A Print Server
This Wizard has found the following print servers on the network.
Select a print server that you want to set up from the list.
Detected print servers on your local network :
Device Name
IP Address
MAC Address
Port
Status
Ver
IP_PrintSer...
192.168.0.10
00:40:01:76...
U1
Ok
9.0
If the print server you want to set up is not displayed, check the connection and click Refresh.
Refresh
Note : If your print server has just been turned on, it may take a few minutes for the print server to initialize before it can be detected and displayed by the wizard.
< Back
Next >
Cancel

6. On the **Change Settings** screen, select **No** or **Yes**:



Click **No** if you want the print server to keep using the default IP address and keep the default Infrastructure settings:

- Infrastructure mode
- SSID: <ANY>
- Channel: 6
- No WEP encryption
- DHCP: Disabled
- IP address: 192.168.0.10

Click **Yes** if you want change wireless settings or assign a static IP address to the print server:

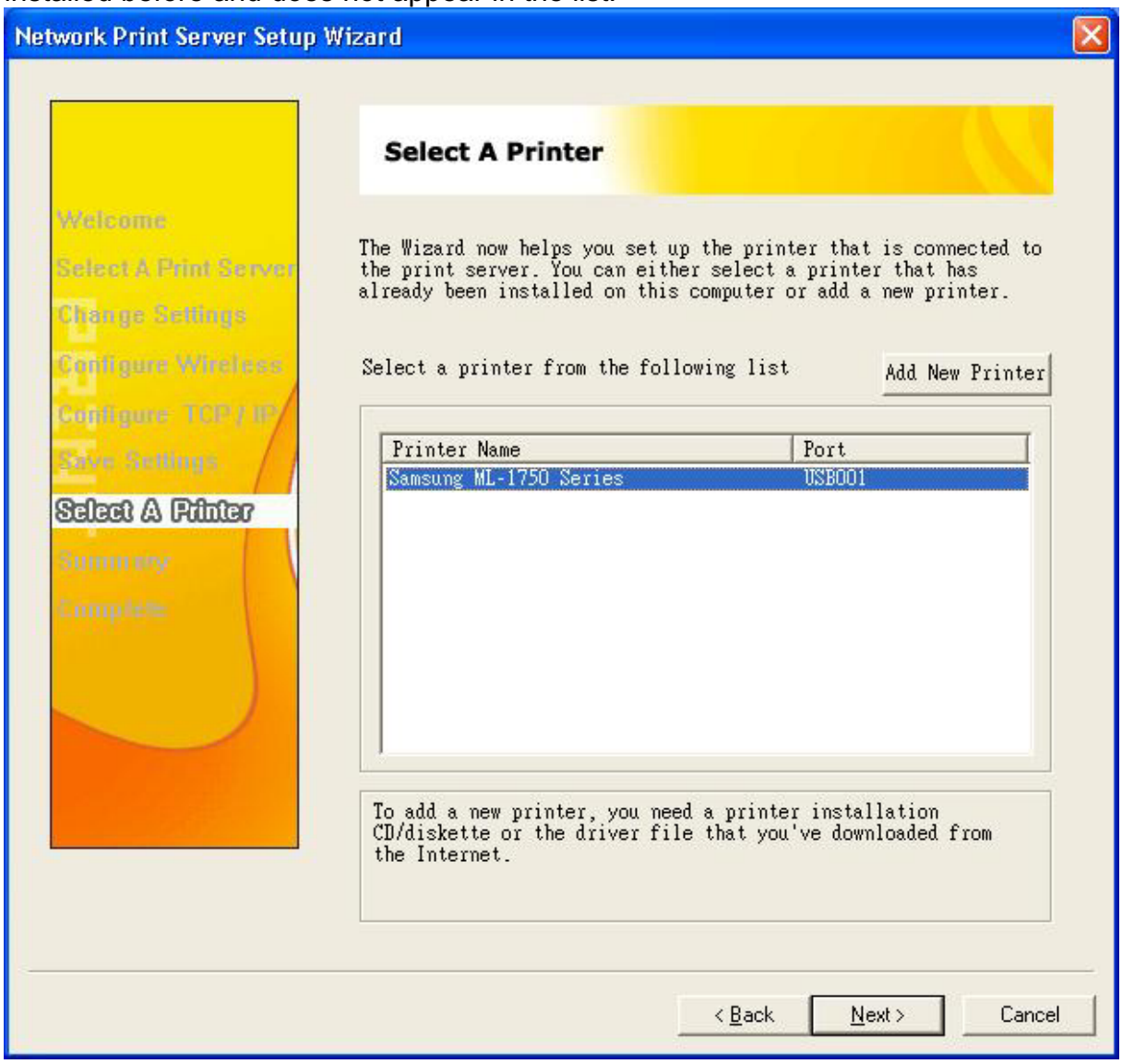
- On the **Basic Wireless Settings** screen, select **Communication Type** according to your network:
  - Infrastructure
  - 802.11b Ad-Hoc
- Enter the proper **SSID** of your wireless network..
  - **Channel**: optional

- **Data Transmit Rates**: select Auto or others

- On the **Security and WEP Encryption Settings** screen, enable or disable WEP encryption, configure according to your wireless network and click **Next**.
- On the TCP/IP Settings screen, specify a fixed or dynamic IP address for the print server, a fixed IP address is highly recommended. Click **Next**.

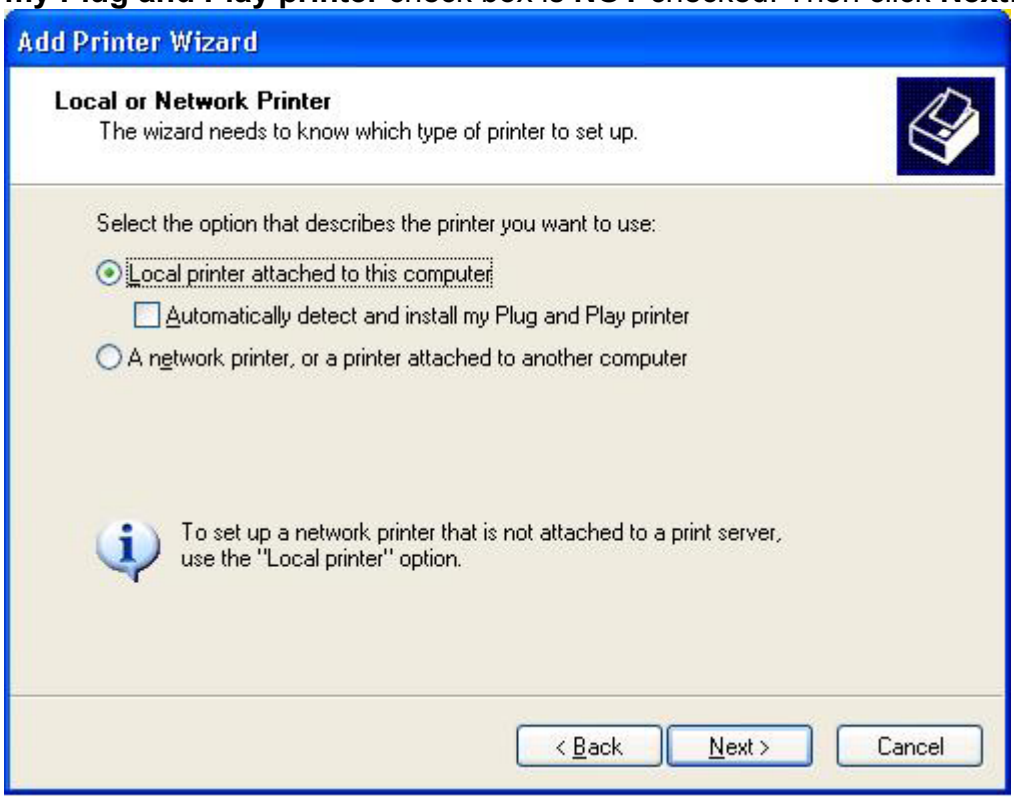
Note:
The IP address of print server must be within the same subnet as your network adapter.

7. In the setup wizard, select an already configured printer from the list, click **Next** and then Finish to complete the installation.
   or
   Select **Add New Printer** if the print server is connected to a printer that hasn't been installed before and does not appear in the list.

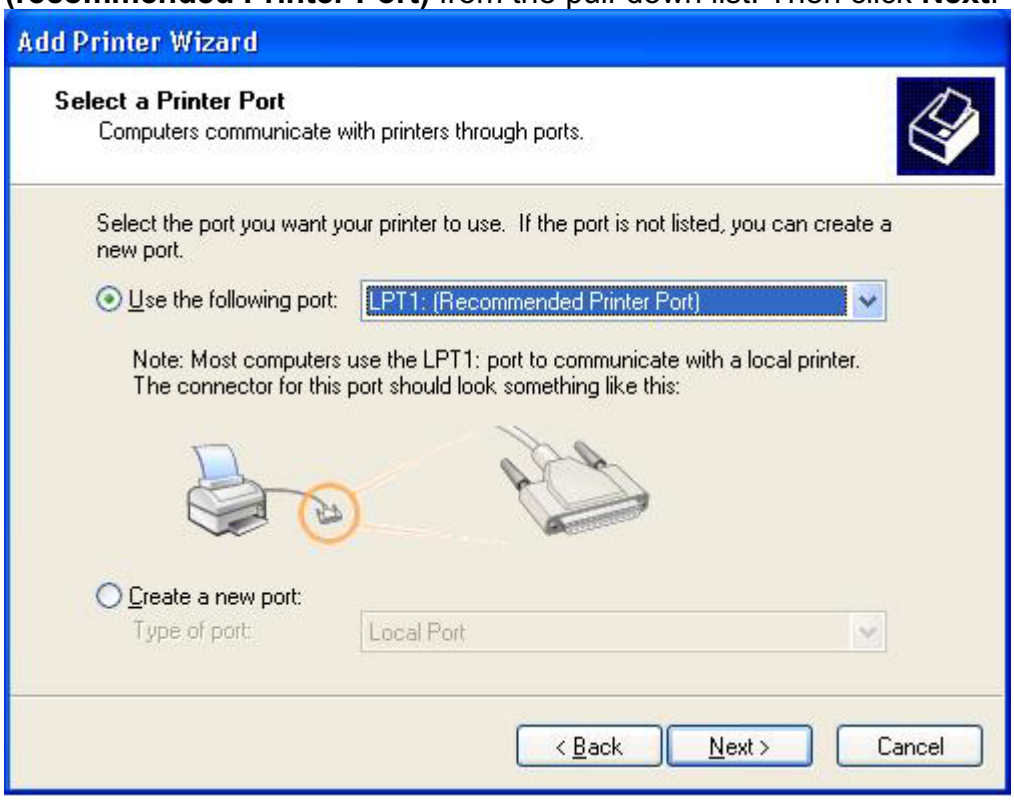


8. Click **Add New Printer** to launch **Windows Add Printer Wizard**.

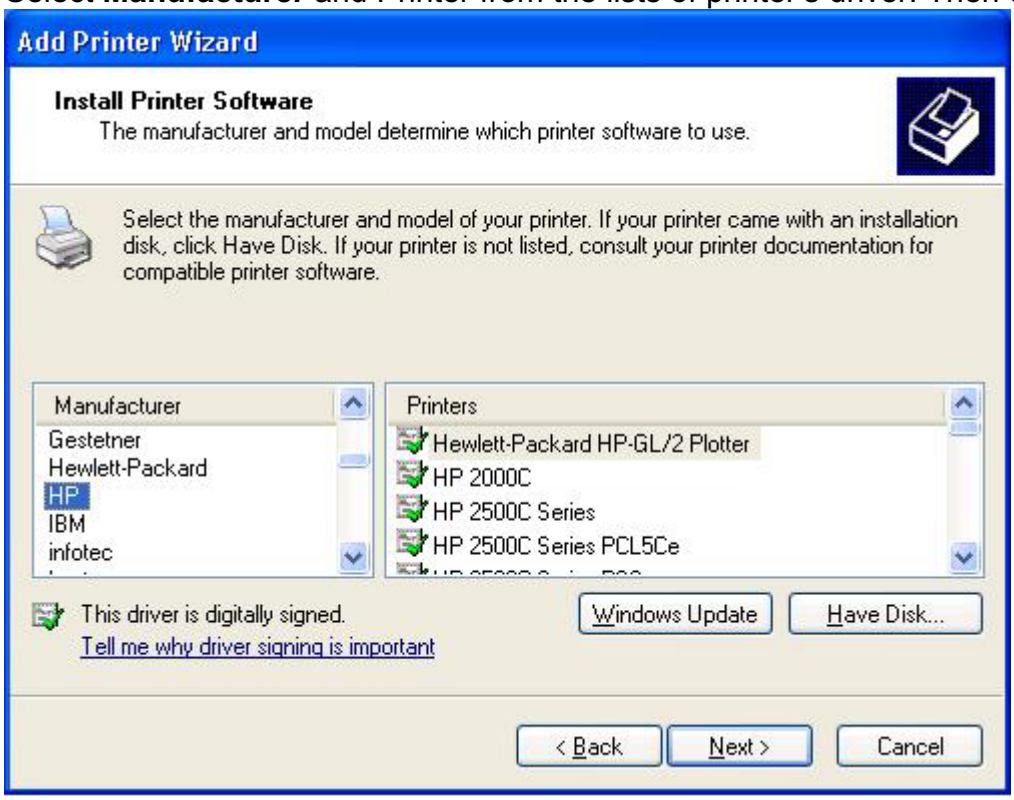
9. Click **Next** and select **Local Printer**, make sure the **Automatically detect and install my Plug and Play printer** check box is **NOT** checked. Then click **Next**.



10. Make sure the **Use the following port** radio-button is clicked and select **LPT1: (recommended Printer Port)** from the pull-down list. Then click **Next**.

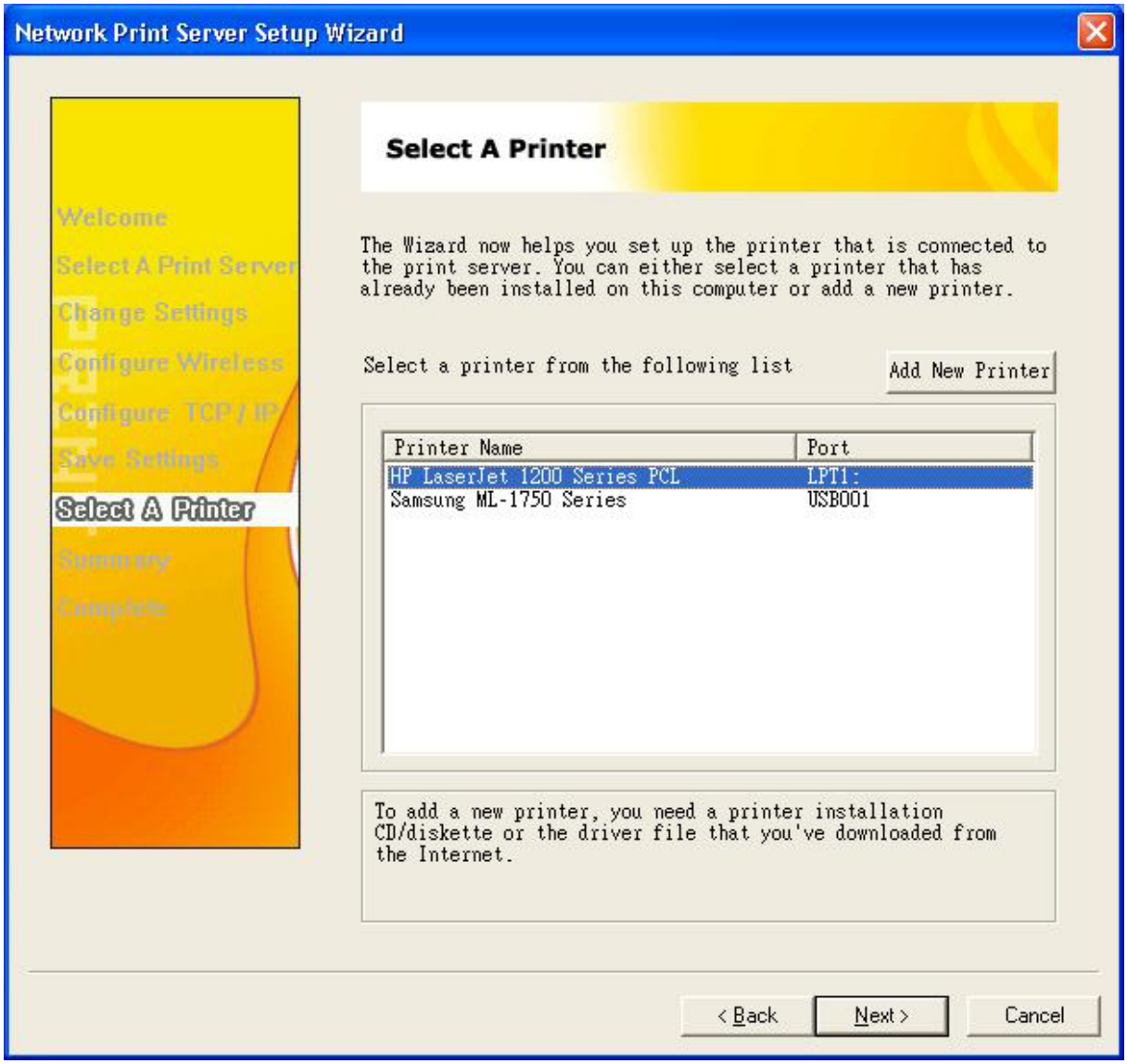


11. Select **Manufacturer** and Printer from the lists of printer's driver. Then click **Next**.

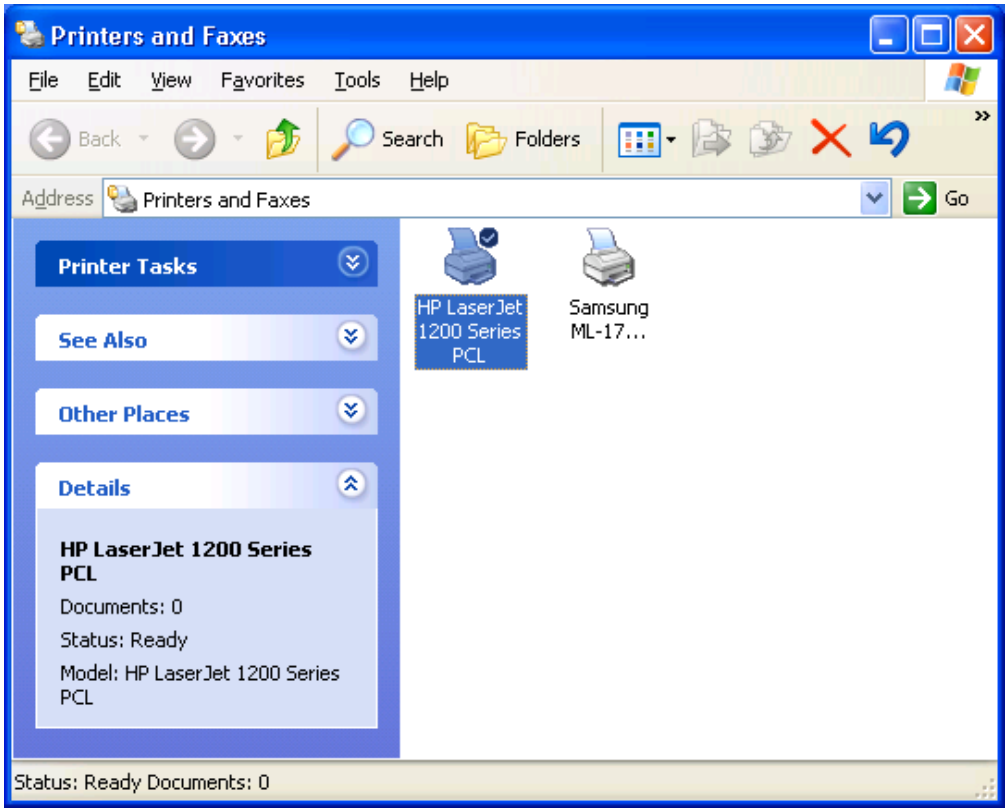


12. If you already have the printer's driver installed, you will be asked whether to keep it or to replace it. Click **Next**. Supply a name for the printer and choose whether you want to make it your default printer. Then click **Next**.

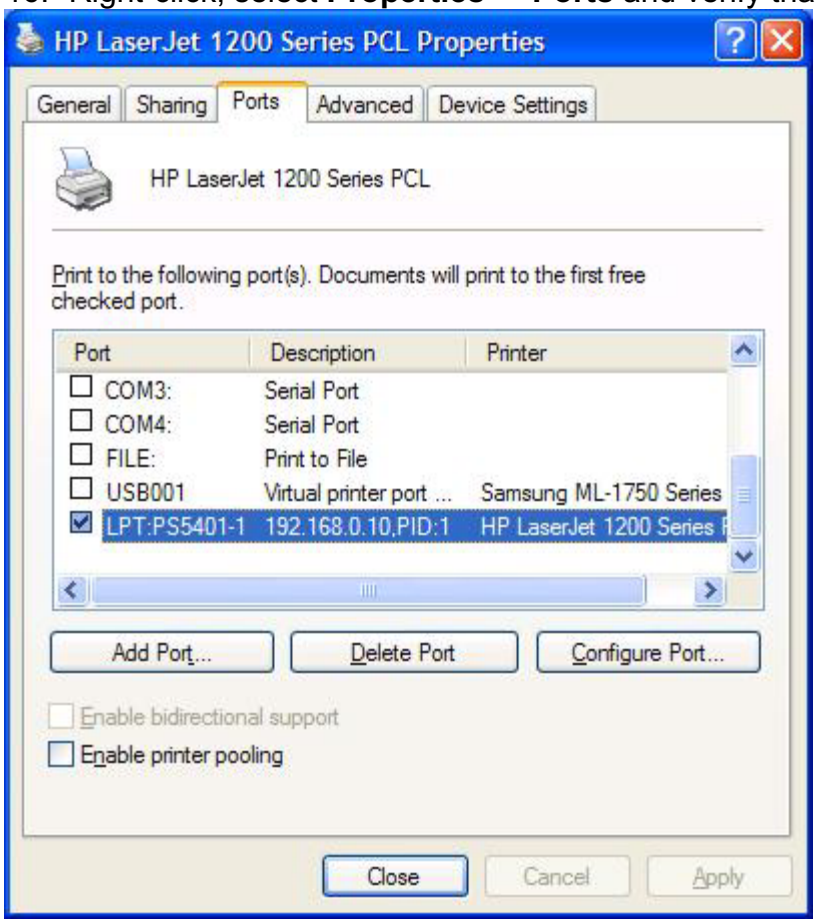
13. Then, choose whether you want to share the printer with other network user, print a test page (please select **No**.), etc. Select the appropriate radio-button and click **Next** and **Finish**.
14. In the setup wizard, finish the installation by highlighting the installed printer in the **Select a Printer** list and click **Next** -> **Finish**.



15. From Windows system, go to **start** -> **Printers and Faxes** and highlight your newly installed printer.



16. Right-click, select **Properties** -> **Ports** and verify that the print server's port appears.



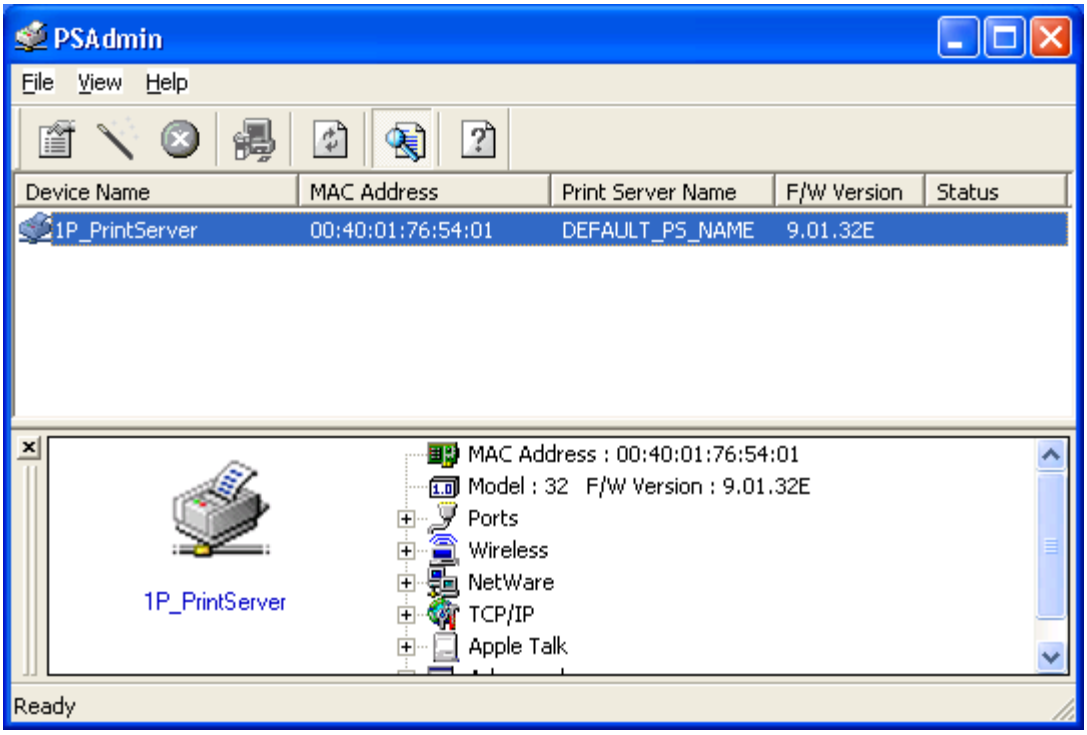
17. Go to **General**; click **Print Test Page** to verify the configuration.
18. Done.

Note:

If you want to install more print servers, start setup wizard from your Windows Start menu: **start** -> **All Programs** -> **Network Print Server** -> **PSWizard** and repeat the installation procedure.

Using PSAdmin

After the software of setup CD is successfully installed, starts PSAdmin utility from your Windows Start menu: **start -> All Programs -> Network Print Server -> PSAdmin**. The screen will then appear as follow picture.



All print server(s) feature Novell NetWare function on the LAN will be displayed along with their respective device name, MAC Address, print server name, firmware version, and status. The terms are defined as follows:

Device Name: The name of the print server hardware used for identification purposes.

MAC Address: The Ethernet address of the print server.

Print server Name: The print server to which the device is attached.

Version: The firmware version of the print server.

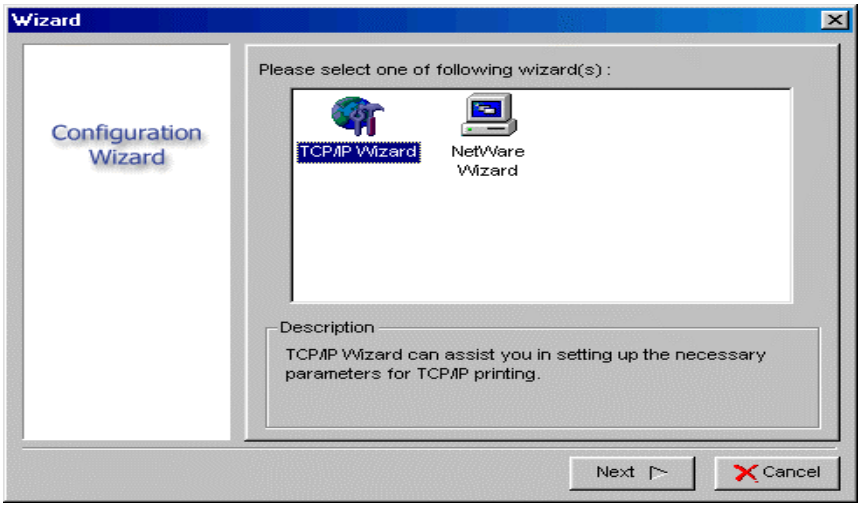
Status: To come up a Printer's status presently.

Wizard

Wizard is a configuration program that can assist you in setting up the necessary parameters for your print server device to function. Setup a print server by using Wizard.

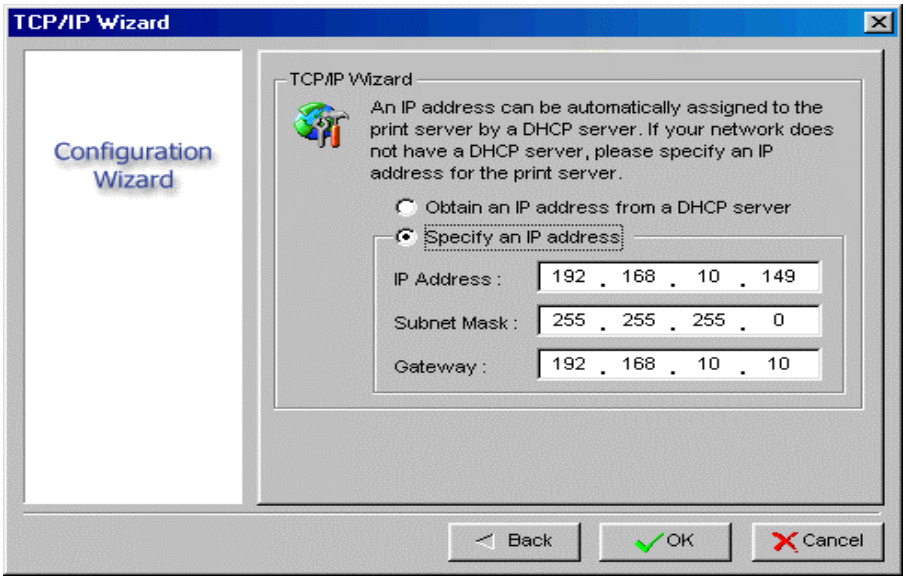
TCP/IP Wizard

1. Click **Wizard** button just like a picture .and select **TCP/IP Wizard**.



2 Select "**Obtain an IP address from DHCP server**". If there is a DHCP server on your network. This option allows the print server to obtain IP-related settings automatically from your DHCP server. This setting, by default, is disabled. If you would like to manually specify an IP address to the device, please skip to the following step.

3 In the **IP Address** option, type an IP address for the print server. The IP address must meet the IP addressing requirements of the network segment.



4 *(Optional)* In the **Subnet Mask** option, type the Subnet Mask your LAN or network segment is currently configured to use.

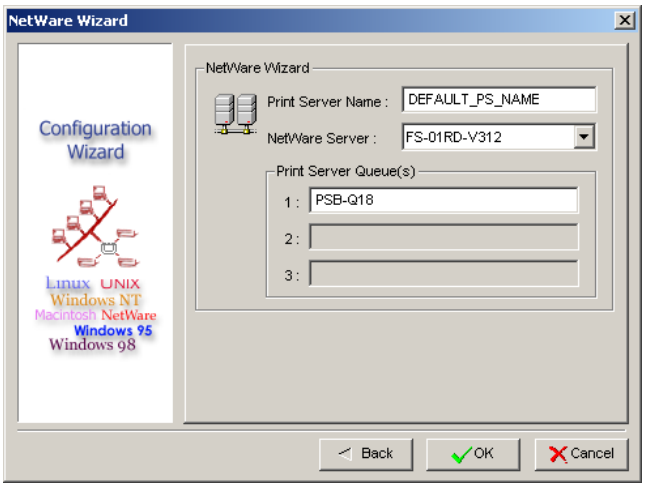
5 *(Optional)* In the **Gateway** field, type the IP address of gateway.

6 When done, click **OK** button. The program will save the above settings into the print server.

7 Done

NetWare Wizard

1. Log into your NetWare file server as a Supervisor (Admin.) or equivalent.
2. Click **Wizard** button just like a picture .and select **NetWare Wizard**, as follow picture.



3. Select the NetWare File Server to which the print server device will be attached.
4. Type in a Print server.
5. Type in a Print Queue Names.

Note: Each print queue corresponds to each print port of the print server.

6. Click **OK**.
7. Done.
8. From your NetWare client computer, such as Windows 95/98/Me, create a printer that is connected (redirected) to one of the NetWare print queues serviced by the print server.

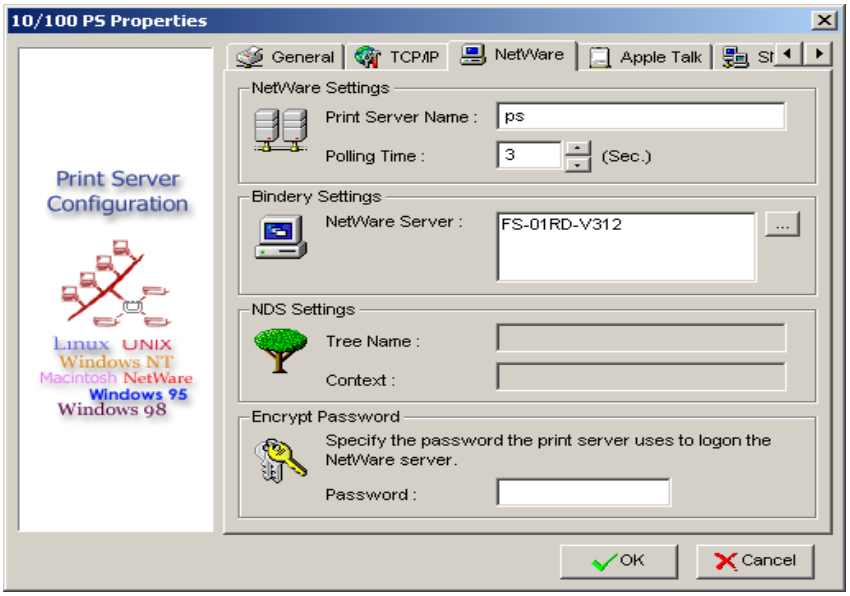
Manual Setup

Manual Setup is a configuration program designed for more experienced users of NetWare. To setup the print server by using Manual Setup follow the steps:

1. Run PCONSOLE in NetWare 3.x or NetWare 4.x and create the necessary parameters (Refer to your Novell NetWare print server/Services manual for details).
2. Log into your NetWare file server as a Supervisor (Admin.) or equivalent. From your Windows 95/98/Me, run PSAdmin.

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

4. Click **Properties** in the tool bar and the following screen will appear, **Properties** button just like a picture , as follow picture.



5. Select **NetWare** and type in the Print server that created during PCONSOLE.

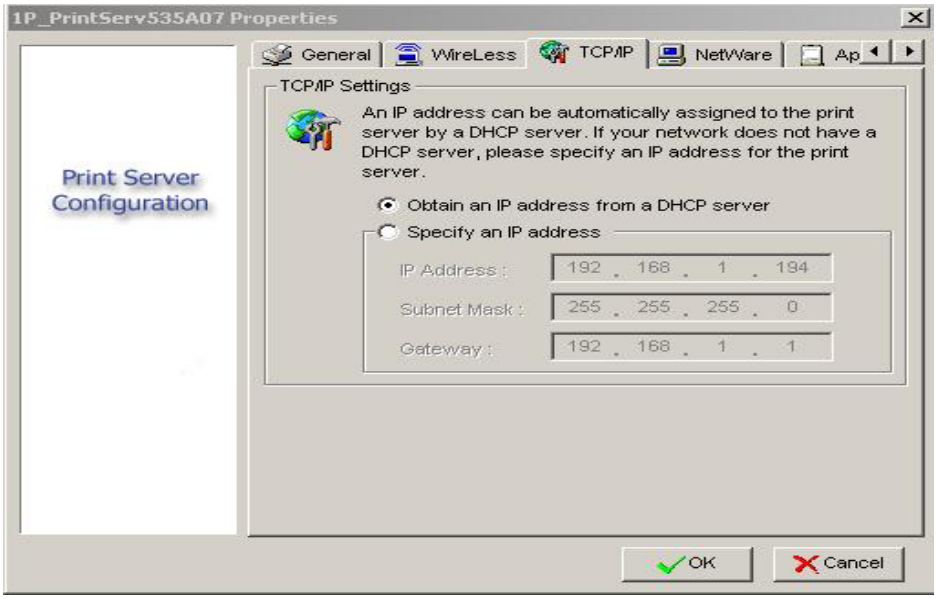
6. *(Optional)* In **Bindery Settings**, Select NetWare file server(s) that print server can do Bindery mode.

7. *(Optional)* In **NDS Settings**, Select NetWare file server(s), NetWare 4.x or later that print server can do NDS mode.

8. Click **OK**. From your NetWare client computer, such as Windows 95/98/Me, create a printer that is connected (redirected) to one of the NetWare print queues serviced by the print server.

Properties –TCP/IP Options

The TCP/IP options allow you to modify the print server's TCP/IP settings. Each option is detailed as follows.



Obtain an IP address from a DHCP server:

This option enables or disables the DHCP feature of the print server. When this option is enabled, the print server will obtain an IP address automatically from the DHCP server on your LAN. **The default value is** "**Disable**".

Note: 1.Once this option is enabled, the following IP address, Subnet Mask, Gateway will be grayed out and are not available for editing.

2.While the print server supports DHCP, we strongly recommend you manually specify a **fixed** IP address to the print server.

Specify an IP address:

IP Address: This option shows the print server's current IP address maybe obtained from your DHCP server or manually specified. This option also allows you to manually specify an IP address to the print server, if DHCP option is disabled.

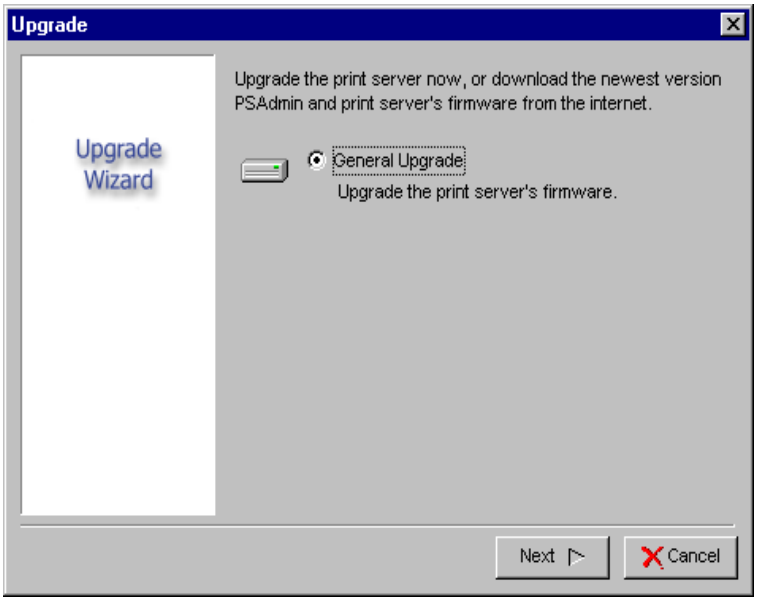
Subnet Mask: This option shows the print server's current subnet mask maybe obtained from the DHCP server or manually specified. This option also lets you manually specify a subnet mask to the print server, if DHCP option is disabled. **This value is optional**.

Gateway: This option shows the print server's current gateway address maybe obtained from the DHCP server or manually specified. The option also allows you to manually specify the IP address of the gateway to the print server, if DHCP option is disabled. **This value is optional**

Upgrade

Upgrade allows the user to upgrade the print server device. In order to upgrade the unit please perform the steps as follows:

1. Click **Upgrade** button just like a picture <>, as shown as follow picture



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

Reset

1. Click **Reset** button just like a picture <>.

2. Reset allows the user to reset the print server device in order to establish a new connection or for new settings to take effect.

Refresh

1. Click **Reset** button just like a picture <>.

2. Refresh searches the network for all attached print server(s).

Note: Configure the print speed in the **Advanced** label, must match the printer's speed which connect to the print server. Undependable configuration will cause printer to abnormal printing.

Multiple Print Queues Configuration

To configure the print server to service multiple print queues, please follow the instructions listed below:

1. Log into your NetWare file server as a Supervisor (Admin.) or equivalent.
2. Run the **PSAdmin** from your Windows.
3. Select the print server and to be configured.
4. Click the **Wizard** icon in the tool bar.
5. Type in a Print server and a Print Queue Name (For more detailed information about **Wizard**, please refer to the "*Wizard*" section in this chapter).
6. Run the NetWare's PCONSOLE and create additional print queues.
7. Select the Print server name you specify in Step 5.
8. Select the "**Print server Configuration**" option and select the "**Queue Serviced by Printer**" option *(For NetWare 4.x's PCONSOLE, please select "Printers" option and select "Printer 0" instead)*.
9. Select the "**Printer 0**" and press the [*Insert*] key to add the print queues you create in Step 6 into the list *(For NetWare 4.x's PCONSOLE, please select "Print queues assigned" option instead)*.
10. Reset the print server by clicking the "**Reset**" icon from the PSAdmin. Done.

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

Uninstalling the PSAdmin on Windows PC

To help users easily remove all installed software components of the PSAdmin from their Windows PC, and the PSAdmin software comes with un-installation wizard program that can automatically remove the software components from their Windows PC systems in minutes. Please follow the directions listed below to proceed with the un-installation procedure.
After the PSAdmin is removed, the print server is no longer accessible via the PSAdmin. You have to re-install the PSAdmin on your system in order to access the print server again.

Procedure:

1. Click **Start**, point to **Settings**, and select **Control Panel**.
2. Double click the **Add/Remove Programs** icon.

3. Click **Change or Remove Programs** tab.
4. Select **Network Print Monitor for Windows 95/98/NT/2000/XP/2003** and click **Change/Remove** button.
5. The un-installation wizard program will be launched.
6. Follow the directions on the screen to complete the un-installation procedure.

4.Internet Printer Connection and HP Web JetAdmin

IPP Overview

Print server(s) support the Internet Printing Protocol (IPP). Using the appropriate software on your system, you can create an IPP print path from your system as Windows PC over the Internet.

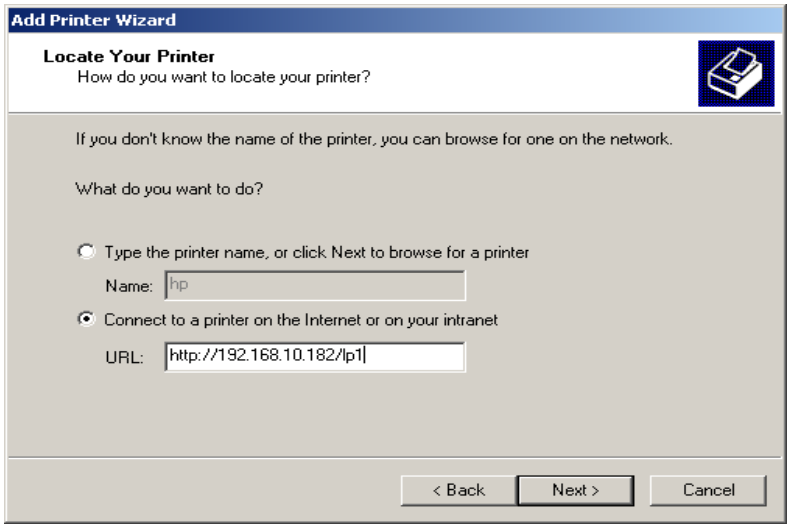
Note: For incoming print path requests, the network administrator have to configure the firewall to accept incoming IPP requests.

Windows NT/2000/XP/2003

For Windows NT/2000/XP/2003, you can use a supported Web Browser, for example, Netscape or IE to view the embedded web server on the print server. Contact your administrator to get the IP address or URL of the printer and browse to the print server's web page.

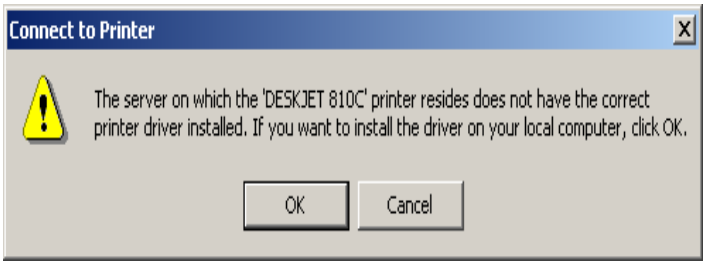
For example, to install Windows 2000 by IPP service you must follow below information:

1. Click **Start** button.
2. Select **Settings**, and then select "**Printers**" option.
3. Click **Add Printer** icon. Appear welcome to the add printer wizard, Click **Next**.
4. Select **Network printer** option, and then click "**Next**".
5. Select **Connect to a printer on the Internet or on your intranet** option, appear as follow picture.

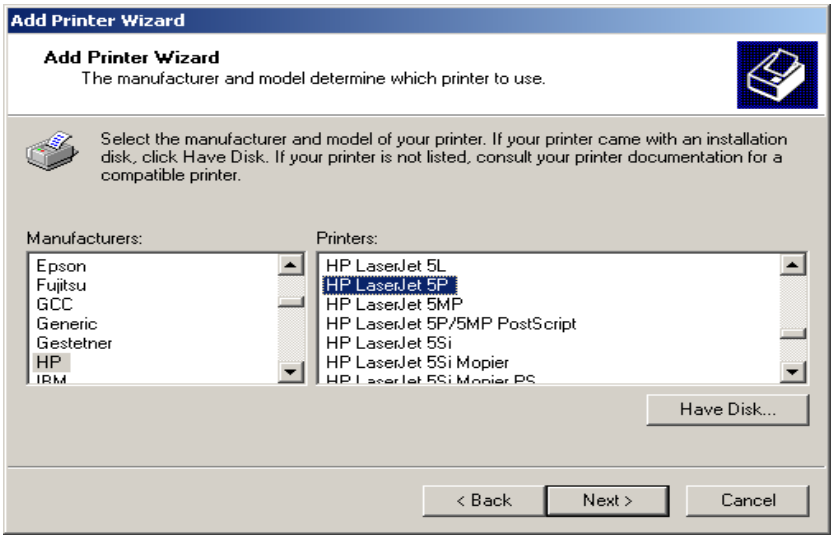


6.In URL's box, input print server's IP address, for example, http://192.168.10.182/lp1. Then Click **Next**.
** One port should be the port name as lp1.
** Three ports should be the port name as lp1, lp2, and lp3.

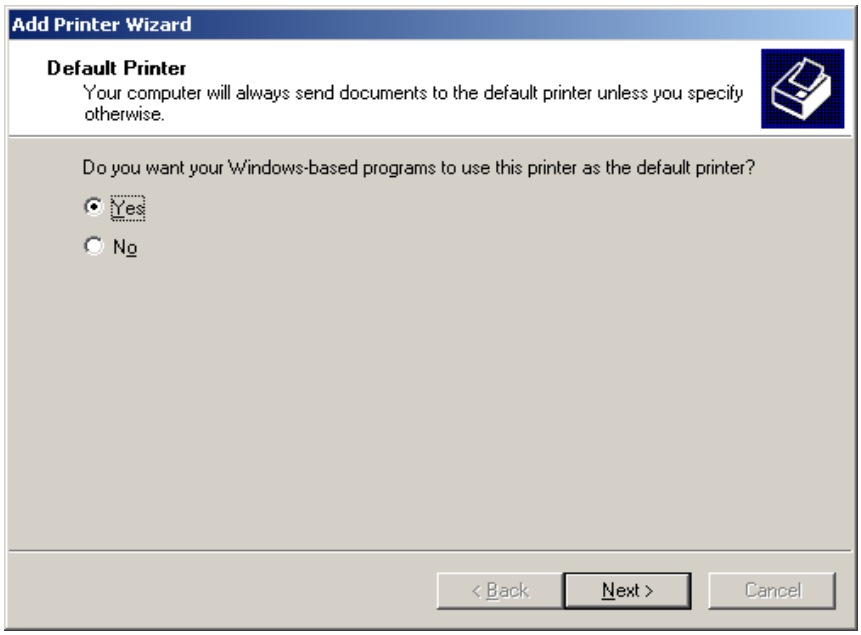
7.It will check print server to connect to HP printer, if not, it will appear as follow picture. Then Click **OK**.



8. Select the appropriate printer manufacturer and printer type and click "**Next**", appear as follow picture.



9.If you want your Windows-based programs to use this printer as the default printer, please select “**Yes**”, and Click **Next**. It will appear as follow picture



19. Click Finish button.
20. Done.

HP Web JetAdmin Overview

HP Web JetAdmin allows you to use a Web browse to revise, view, manage and diagnose devices connected to the print server or any standard printer MIB devices.

For more information about a procedure or Windows in the HP Web JetAdmin software, see about HP’s relation document.

System Requirements

HP Web JetAdmin software runs on Microsoft Windows NT, HP-UX, Solaris, Red Hat Linux and SuSE Linux system. For information on supported operating systems and browser versions, we recommend IE or Netscape version 4 or higher. Please access HP Customer Care Online at http://www.hp.com/go/webjetadmin.

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

Installing HP Web JetAdmin

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

Download the installation files from HP Customer Care Online at http://www.hp.com/go/webjetadmin/.
Follow the instructions on the screen to install the HP Web JetAdmin software.

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

Confirming Installation and Supply Access

- Confirming that the HP Web JetAdmin software is correctly installed by navigating to it with your browser as shown in the following. For example, http:// server domain port/ where server domain is the host name of your web server and port is the port number assigned during installation.
- Supply users access to HP Web JetAdmin software by adding a link to your web server's home page that is addressed to HP Web JetAdmin's URL. For example: http://server.domain:port/

Configuring and Modifying a Device

Using your browser, navigate to HP Web JetAdmin's URL. For example:
http://server.domain:port/
Follow the instructions on the appropriate home page to configure or modify your printer.

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

Removing HP Web JetAdmin Utility

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