4400 and 6400 Series Printers

Printer Management Utility User's Manual

First Edition (September 2001)

This edition of the Printer Management Utility is to be used with the IBM 6400 Series Line Matrix Printers and 4400 Series Thermal Printers.

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4400 and 6400 Series Printers

Printer Management Utility User's Manual

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1 *Overview*

The Printer Management Utility

The IBM* printer management utility (PMU) allows you to organize all of the printers in your office remotely in a single database, download software and printer settings from a host computer with a single mouse click, and use a virtual operator's panel to configure printers in the same room or on the other side of the world.

Requirements

Running the PMU requires:

- an IBM 6400 Series Line Matrix or 4400 Series Thermal Printer
- a host computer running the Microsoft** Windows** (95, 98, Me, NT, or 2000) or UNIX** (such as AIX*, Linux**, or Solaris**) operating system
- the host computer must be running a Java** Virtual Machine (JVM) that is fully 1.3 compliant. Sun** Microsystems provides a Solaris, Linux, and Windows 1.3 compliant JVM known as the Java 2 Runtime Environment, Standard Edition (JRE) at:
  http://java.sun.com/j2se/
- for Windows 98, a minimum hardware configuration of a 450MHz Pentium** with 64 MB of RAM

The printer must be attached to the host system via an Ethernet** Interface. Refer to your printer *User's Manual* for information on connecting interfaces.

To install and edit the database, it is not necessary to have the printers connected. When starting a session with a printer, the printer must be connected and turned on.

Installing the PMU

The PMU software is only available on CD. Follow the on-screen instructions to install the software.

Printer Setup

Your printer uses the diagnostic port to communicate with the PMU. The diagnostic port must be configured to interact with the Ethernet Interface. Follow the instructions below for your printer model to check the diagnostic port setting.

6400 Series Line Matrix Printers

1. On the printer control panel, press the **Stop** key to take the printer offline.
2. Press the **Scroll** ↑ and **Scroll** ↓ keys at the same time to unlock the Enter switch.
3. Press the **Scroll** ↑, **Scroll** ↓, **Enter**, and **Return** keys at the same time to enter the `Service` menu.
4. Press **Scroll** ↑ until the `PRINTER MGMT` menu appears.
5. Press the **Enter** key until the `DIAGNOSTIC PORT` option displays.
6. Press the **Enter** key again to see the current selection. If the `DEBUG ETHERNET` option is already marked with an `*` (asterisk), continue with step 9.
7. Press the **Scroll** ↑ key until the `DEBUG ETHERNET` option appears.
8. Press the **Enter** key to select it.
9. Press the **Scroll** ↑ and **Scroll** ↓ keys at the same time to lock the Enter switch.
10. Press the **Start** key to put the printer back online.

4400 Series Thermal Printers

1. On the printer control panel, press the **PAUSE** key to take the printer offline.
2. Press the ↓ and ↵ keys at the same time to unlock the ↵ switch.
3. Press the **+**, **-**, ↓, and ↑ keys at the same time to enter the `Factory` menu.
4. Press ↓ to enter the `Diagnostic Port` menu.
5. Press the **+** key until the `Debug Ethernet` option displays. If the `Debug Ethernet` option is already marked with an `*` (asterisk), continue with step 7.
6. Press the ↵ key to select it.
7. Press the ↓ and ↵ keys at the same time to lock the ↵ switch.
8. Press the **PAUSE** key twice to put the printer back online.

Set Password

See page 41 to learn how to set passwords.

If the password is unknown you must clear it first. Go into the `PRINTER MGMT` menu (6400 Series) or `Factory` menu (4400 Series), then into the `Diagnostic Port` menu. Move forward until you reach `Clear Password`. Unlock the keyboard, then press **ENTER** (↵) to clear both passwords.

Under the Security tab in Printer Properties, delete any passwords that already exist. Now you may set the new passwords as mentioned above.

Check Port Number

Make sure your printer port number has the same setting as the Ethernet Interface. To check the port number using the PMU, see page 15. To check the port number on the printer, check the `PMU Port Number` in the `PRINTER MGMT` menu (6400 Series) or `Factory` menu (4400 Series). The default port number is 3001.

Getting Started

This section provides a short tutorial on how to set up and access a printer using the PMU.

1. This tutorial assumes the host computer running the PMU and the printer you want to access are connected by a network. You must know the printer's IP Address and Port Number.
2. From your operating system, launch the PMU. Click the splash screen to see the main window of the Printer Database more clearly. See Figure 1.

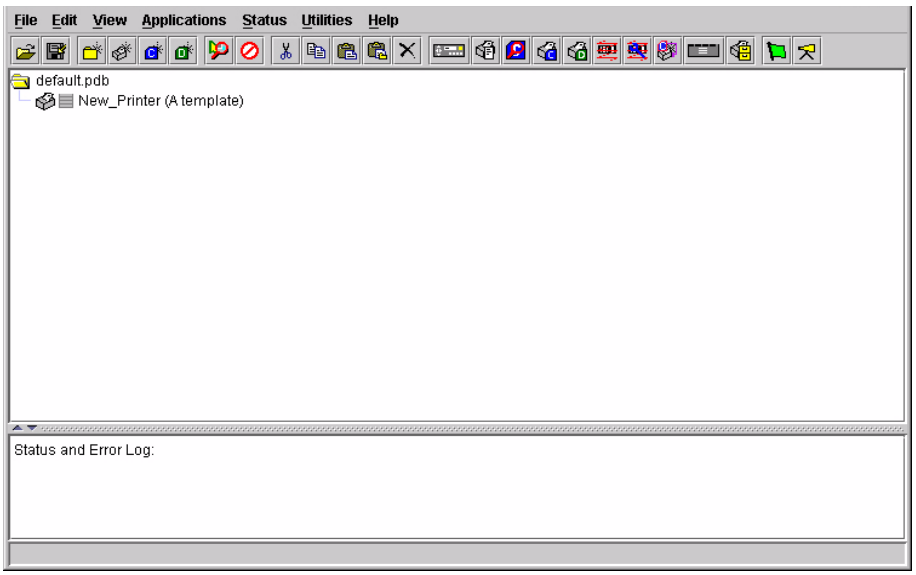


Figure 1. Printer Database Main Window

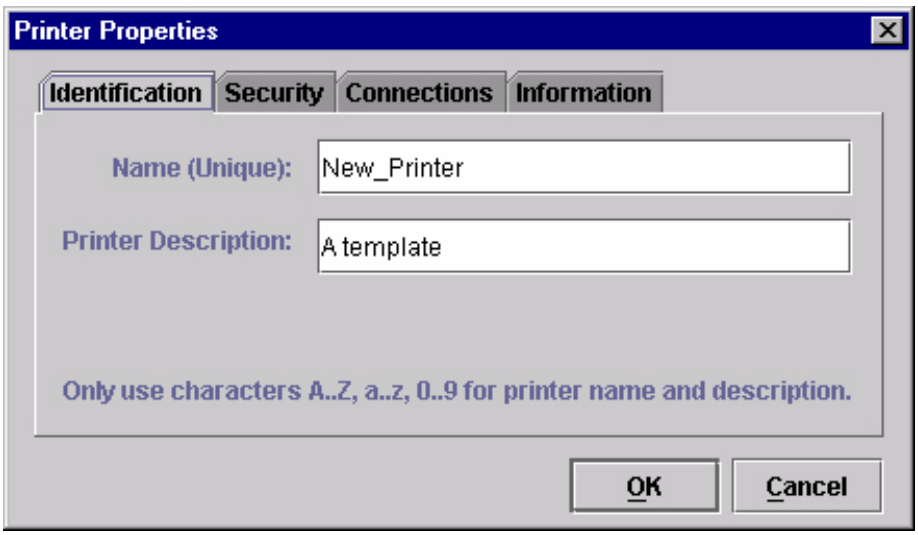


Figure 2. Printer Properties: Identification Tab

3. Double-click **New_Printer (A template)**. The Printer Properties dialog box opens. See Figure 2.
4. Assign a name to your printer. Delete the words “New_Printer” in the Name (Unique) field, and then type **`Tutorial`**.
5. Assign a description to this printer. Delete the words “A template” in the Printer Description field, and then type **`My First Connection`**.

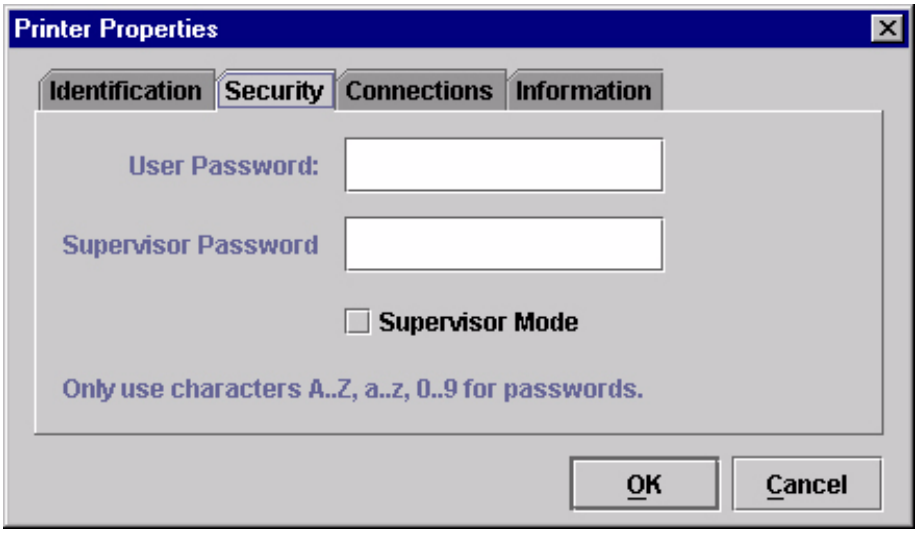


Figure 3. Printer Properties: Security Tab

6. Click the **Security** tab. See Figure 3.
7. If you are using the PMU for the first time, it is likely that no passwords are assigned to this printer. If you are unsure, contact your system administrator.

- If no password is assigned, leave both password boxes empty.
- If a User password is necessary to access this printer, type the password in the User Password field.
- If a Supervisor password is necessary to access this printer, type the password in the Supervisor Password field, and check the Supervisor Mode check box.

  In either case, an asterisk (*) character appears in the field after each letter you type to preserve password secrecy.

  For more details on setting up and changing passwords, see page 41.

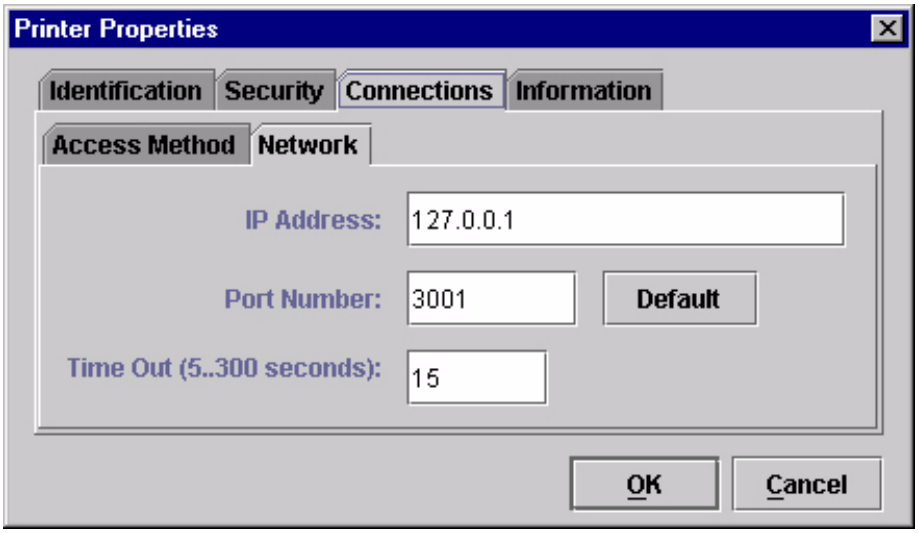


Figure 4. Printer Properties: Connections – Network Tab

8. Click the **Connections** tab. By default, the Network tab displays.
9. Click the **IP Address** field and then type the IP Address of the printer you want to access. Follow the format shown in Figure 4.

   The Port Number field must be set to the same port as the printer. Leave it set at 3001. Leave the Time Out (5..300 seconds) field set at 15 seconds.

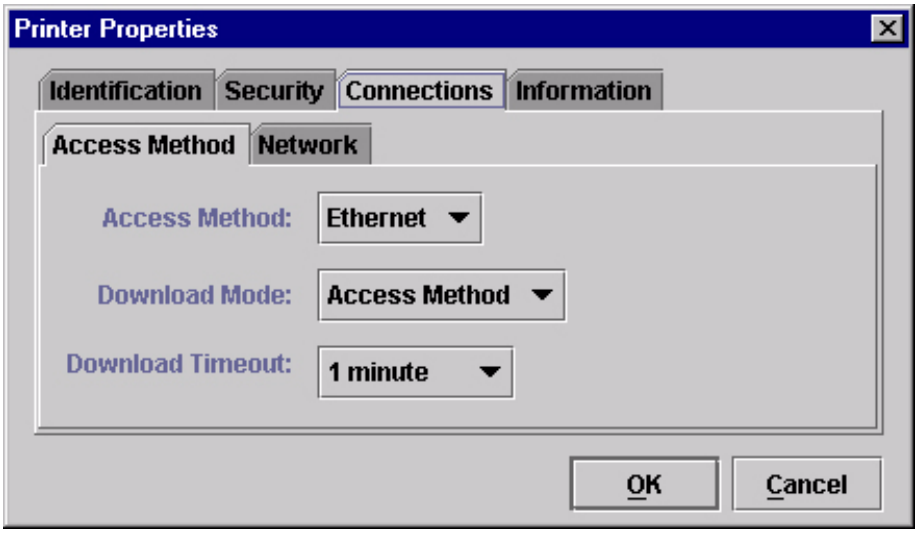


Figure 5. Connections: Connections – Access Method Tab

10. Click the **Access Method** tab. See Figure 5.

    The Access Method tells the PMU how the host computer communicates with the printer. Make sure it is set to Ethernet. Ignore “Download Mode” and “Download Timeout” for now. These options are covered in “Access Method Tab” on page 51.

11. Click **OK**. The Printer Properties dialog box closes and you return to the Printer Database main window. Your printer is now set up in the PMU database.

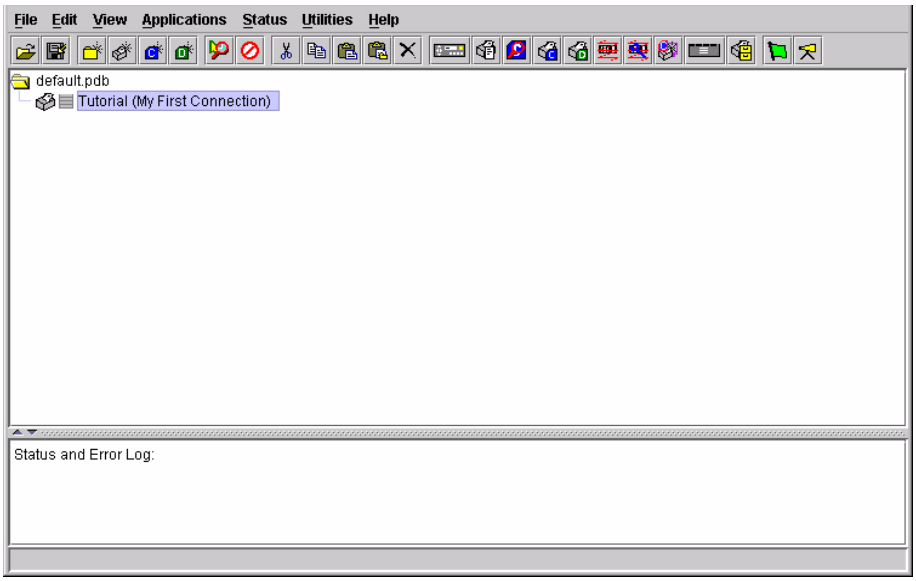


Figure 6. Printer Database Main Window

12. Try to access the printer's virtual operator panel as a test to see if the information you input is accurate. Follow this procedure:

    a. "Tutorial (My First Connection)" should be highlighted in blue, as shown in Figure 6. If it is not highlighted, click it to select it.

    b. Select **Applications ▸ Operator Panel**. The printer's virtual operator panel appears (see page 59). If not, an error message appears in the Status and Error Log pane. Check your password to make sure it is correct. If the error continues, contact your system administrator.

2 Printer Database

Overview

When you start the PMU, the Printer Database window appears first. The Printer Database tool organizes and controls printers, configuration files, and download files. Figure 7 shows how the database looks when the PMU launches for the first time.

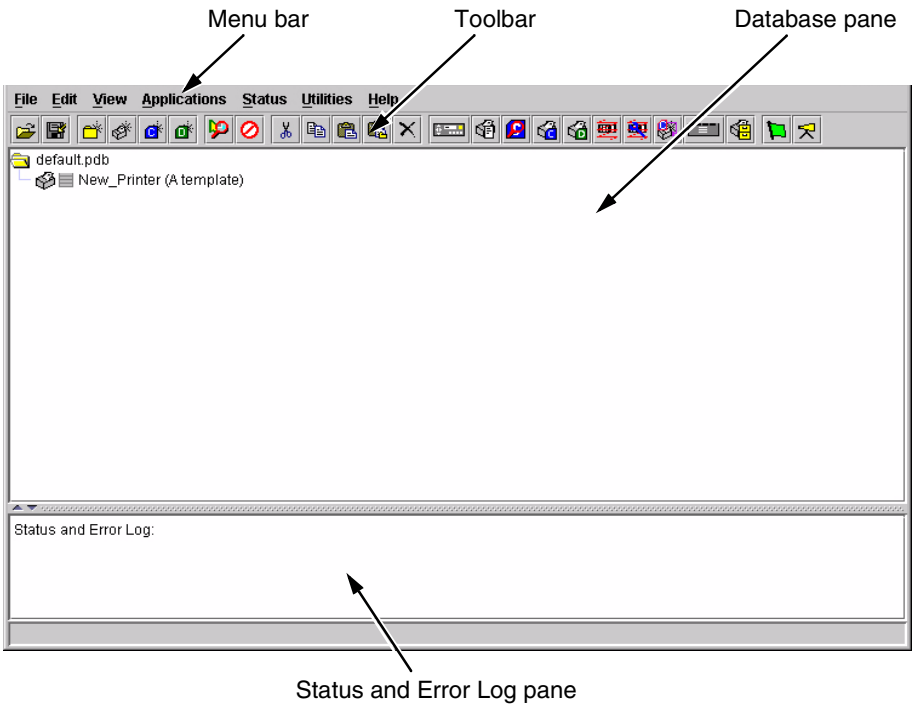


Figure 7. Printer Database Main Window

The menu bar contains all the menus used to control the functions of the program. The menus are described later in this chapter.

The toolbar contains buttons for the most commonly used menu functions. See page 45 for descriptions of the Toolbar buttons.

Use the Database pane to access and control your printers in a tree format. The first line of the database tree displays the database file name. In Figure 7, the default file name for this database is `default.pdb`. From there, your database tree branches out to include printers, folders, configuration files, and download files, which you can organize into groups. With a single mouse click, you can download a file to several printers at once. In addition, you can

use as many databases with the PMU as you wish. Databases save as `.pdb` files on your local hard drive.

NOTE: You can open only one printer database at a time.

The Status and Error Log scrolls status and error messages as you work through the program. If the PMU does not function properly, look at this pane for error messages. Use the scroll bar on the side of the pane to reference previous status and error messages. The status and error messages relate to the current PMU session, not to the specific database. When you quit the PMU, these messages will be deleted.

The Menu Bar

The Printer Database menu bar is located at the top of the window (see Figure 7). Use the menu bar to access all the functions of the PMU.

The following are descriptions of each of the options located on the menu bar.

The File Menu

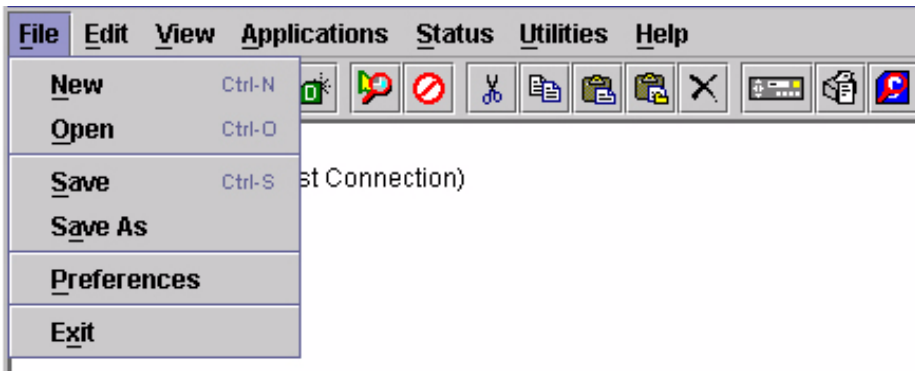


Figure 8. File Menu

New: Creates a new database file. Since the PMU allows only one database file to be open at a time, it asks if you want to save your changes to the current database before it creates a new one.

Open: Opens a database file. Since the PMU allows only one database file to be open at a time, it asks if you want to save your changes to the current database before it opens a different one.

Save: Saves the active database file using its current name.

Save As: Prompts you to enter a name for the current database file before the PMU saves it. Use Save As if you do not wish to overwrite the current database file.

Preferences: Opens the Preferences dialog box. See Figure 9.

Exit: Exits the PMU.

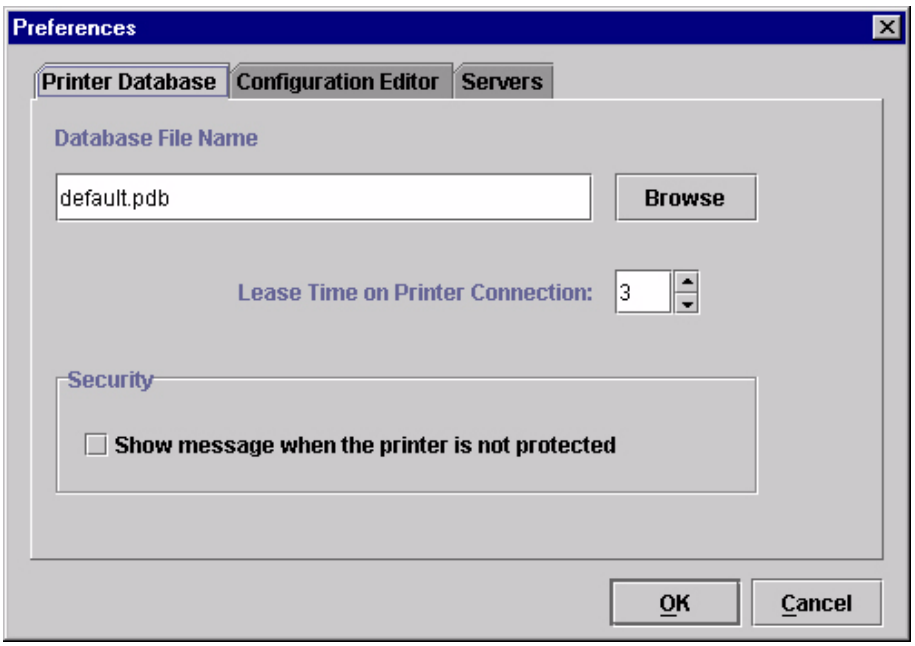


Figure 9. Preferences: Printer Database Tab

The Preferences dialog box has three tabs: Printer Database, Configuration Editor, and Servers.

The Printer Database tab controls database features.

Database File Name: Enter the name of the default database file. The PMU opens this database file when the program starts. To select a new default database file, type it into the Database File Name field, or click **Browse** to locate a file on your network.

Lease Time on Printer Connection: Enter an amount (in seconds) to set the maximum amount of time a printer connection can remain open without any communication. The default is three seconds.

Security: Check the **Show message when the printer is not protected** check box to enable a warning message that informs you when a selected printer does not have an assigned password.

0

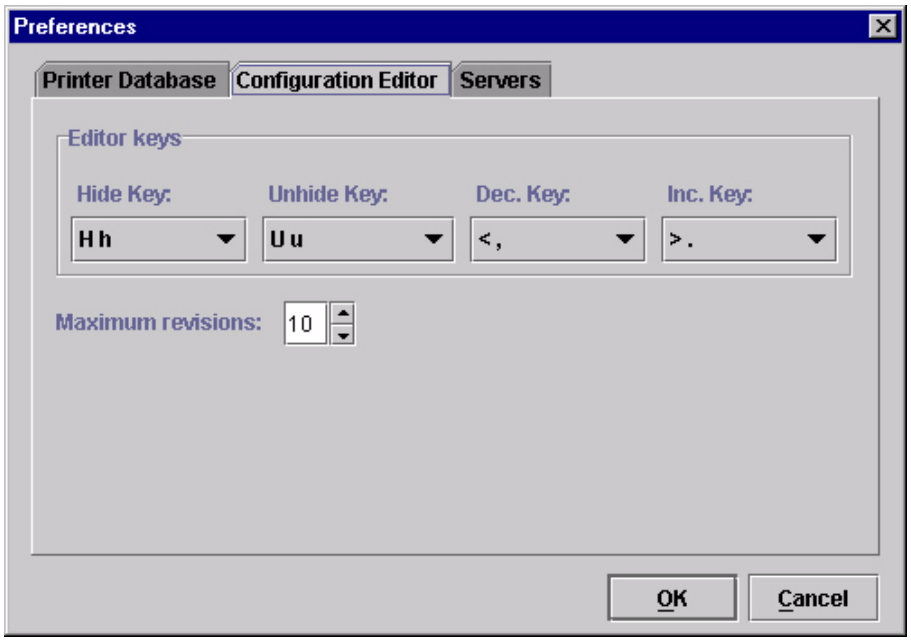


Figure 10. Preferences: Configuration Editor Tab

The Configuration Editor tab controls features of the Configuration Editor utility.

Hide Key/Unhide Key: Assigns which keys hide and unhide menu items in the Configuration Editor menu tree (see page 64). The default for Hide is “H h”. The default for Unhide is “U u”.

Dec./Inc. Key: Assigns which keys will decrement and increment menu items in the Configuration Editor menu tree (see page 64). The default for decrement is “< ,”. The default for increment is “> .”.

Maximum revisions: Sets the maximum allowed number of reverted Configuration Editor sessions to be saved by the PMU. For detailed information on the Revert feature, see page 69. The Maximum revisions setting ranges from 1 to 20. The default setting is 10.

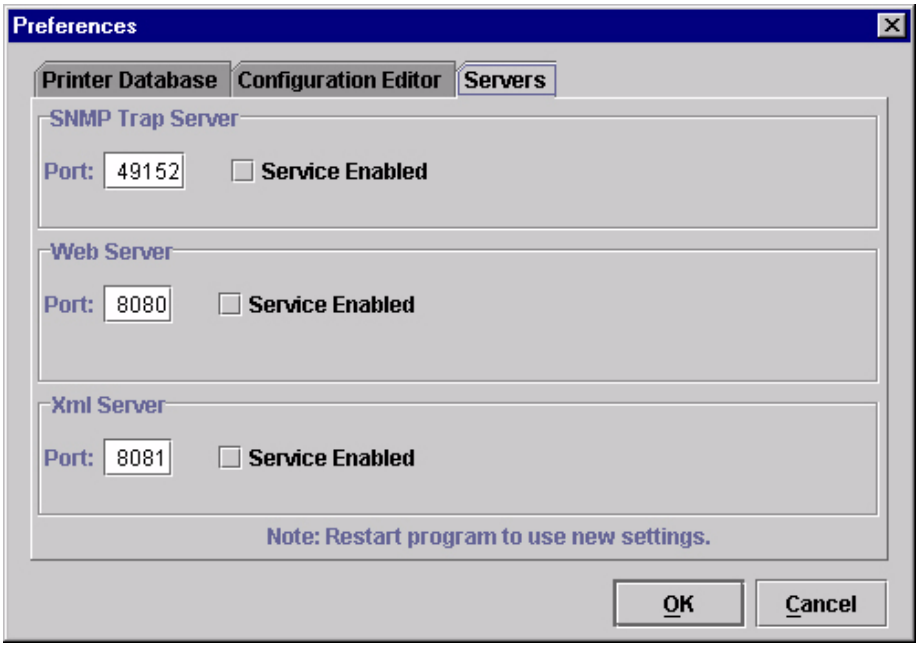


Figure 11. Preferences: Servers Tab

The Servers tab allows you to assign port values for the SNMP Trap Server, the Web Server, and the Xml Server. Click **Service Enabled** next to the corresponding server to turn it on.

NOTE: You must restart the PMU to use the new settings and enable the servers.

SNMP Trap Server: The service that enables the PMU to receive alerts from the printer when its status changes. Once the PMU receives the alert, the PMU creates an instant status poll to reflect the change in the database pane. For instance, if you turn the printer offline, the printer sends an alert to the PMU causing it to change the printer status instantly. In the database pane, the printer status changes to offline.

NOTE: The SNMP Trap Server works only if the printer's Ethernet Interface is configured correctly. See your *Ethernet Interface User's Manual*.

Web Server: Allows you to view the active PMU using a web browser. See "Web Access" on page 75.

NOTE: If you wish to use the Web Server service, you must also enable the Xml Server service.

Xml Server: The PMU uses XML to communicate with its web server.

The Edit Menu

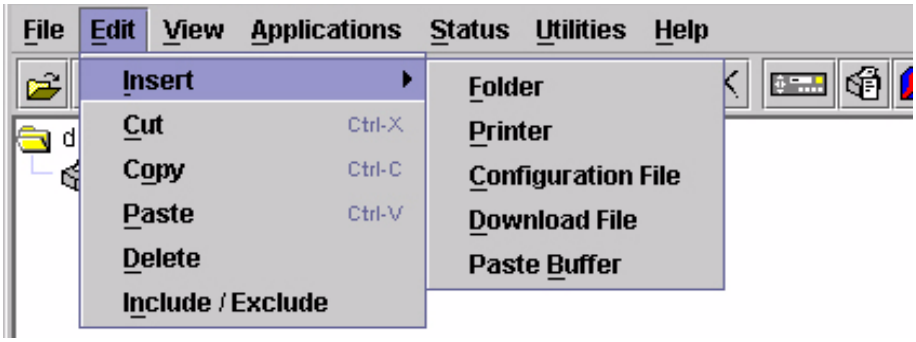


Figure 12. Edit Menu

Use the Edit option on the menu bar to build your database. The options in the Edit menu are described below.

Insert

Adds a folder, printer, configuration file, or download file into your database. You must select an existing database item to create a folder, printer, or file. You can also paste the contents of the paste buffer (the last item that was copied or cut) into the database. The new icon appears one level below the selected database item. If there are items below the selected database item, the new item appears at the end.

Inserting an item involves three steps:

1. Select a database item. (The new icon will appear below the item you select.)
2. Define which type of icon you wish to add. Select **Edit ▸ Insert ▸** and then select the item you wish to add. A new icon appears in the database.
3. Define what printer, folder, or file this icon represents.
   a. To define a printer, see “Defining Printer Properties” on page 48.
   b. To define a folder, double-click **New Folder**. The Folder Name dialog box opens. Type the name of the folder and click **OK**.
   c. To define a configuration or download file, double-click **New Config File** or **New Download File**. The Open dialog box opens. Locate the configuration or download file, select it, then click **Open**. The database displays the path and name of the configuration or download file.

Cut

Removes a selected folder, printer, or file from the database and places it in the paste buffer.

Copy

Copies a selected folder, printer, or file from the database to the paste buffer, leaving the original intact.

NOTE: The PMU cuts or copies only one database item at a time. If you select multiple database items using the SHIFT key and then cut or copy, only the first selected database item copies to the paste buffer.

Paste

Places the item in the paste buffer on the database tree. To paste, you must select a database item. The pasted item appears on the same level as the selected database item.

NOTE: If you select **Edit ▸ Paste**, the pasted item appears on the *same level* as the selected database item. However, if you select **Edit ▸ Insert ▸ Paste Buffer**, the pasted item appears *one level below* the selected database item.

Delete

Permanently removes a selected folder, printer, or file from the database.

Include/Exclude

Deactivates a selected folder, printer, or file. Inactive database items display a red circle with a slash through it on top of the item's icon.

You cannot send information to or receive information from excluded database items using the following Applications and Status menu options: Flash File Manager, CST Manager, File Download, Configuration Download, Configure Printer Servers, and Update Status.

To activate a database item, select the inactive item and then select **Edit ▸ Include/Exclude**.

The View Menu

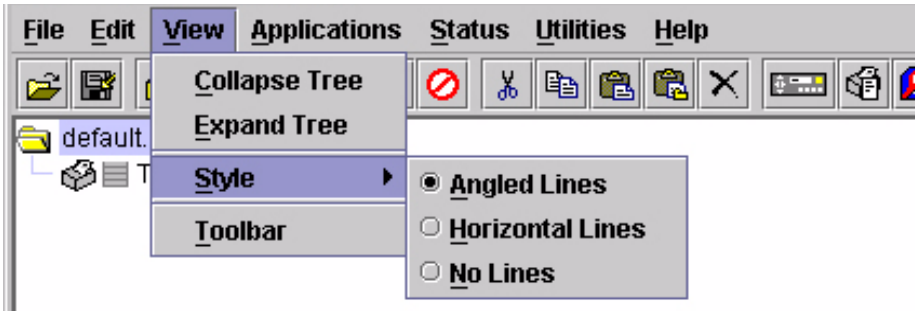


Figure 13. View Menu

Collapse Tree

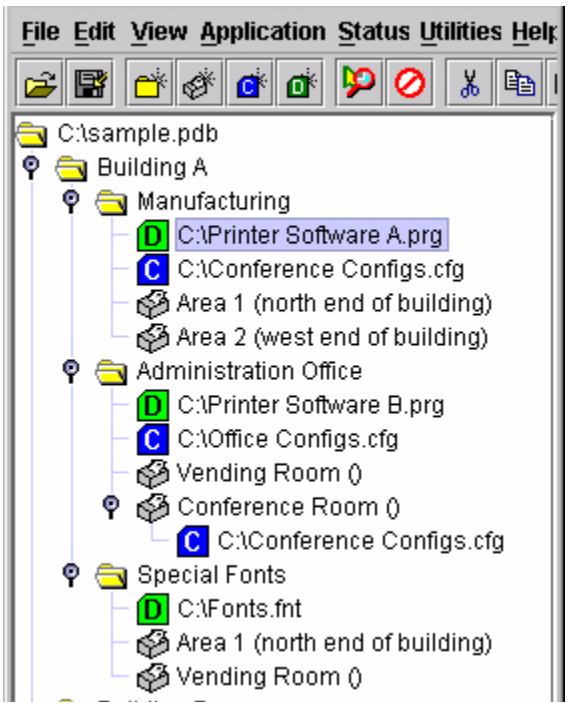
Collapses all folders on the database menu tree. Only folders display.

Expand Tree

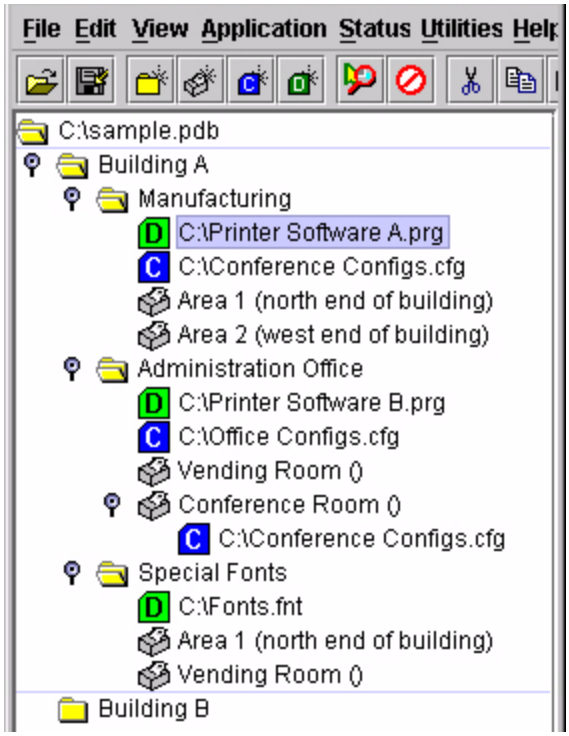
Expands all folders and printers on the database menu tree. All folders, printers, printer configuration files, and download files display.

Style

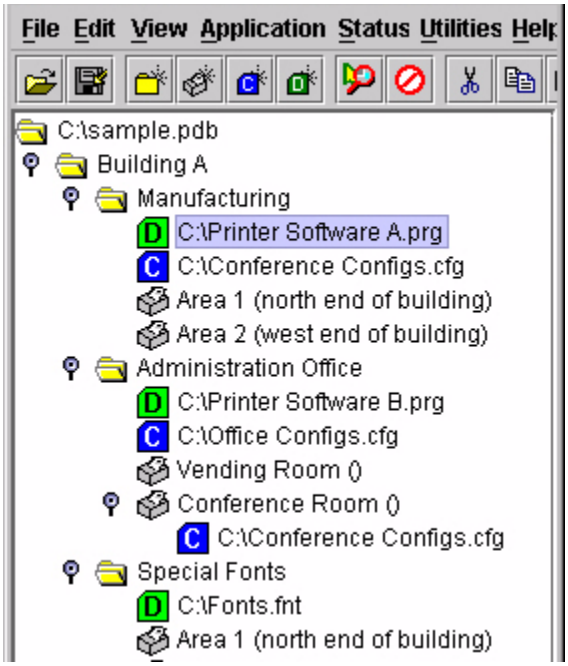
Angled Lines: Shows the links between database items using angled lines.



Horizontal Lines: Shows the links between folders using horizontal lines.

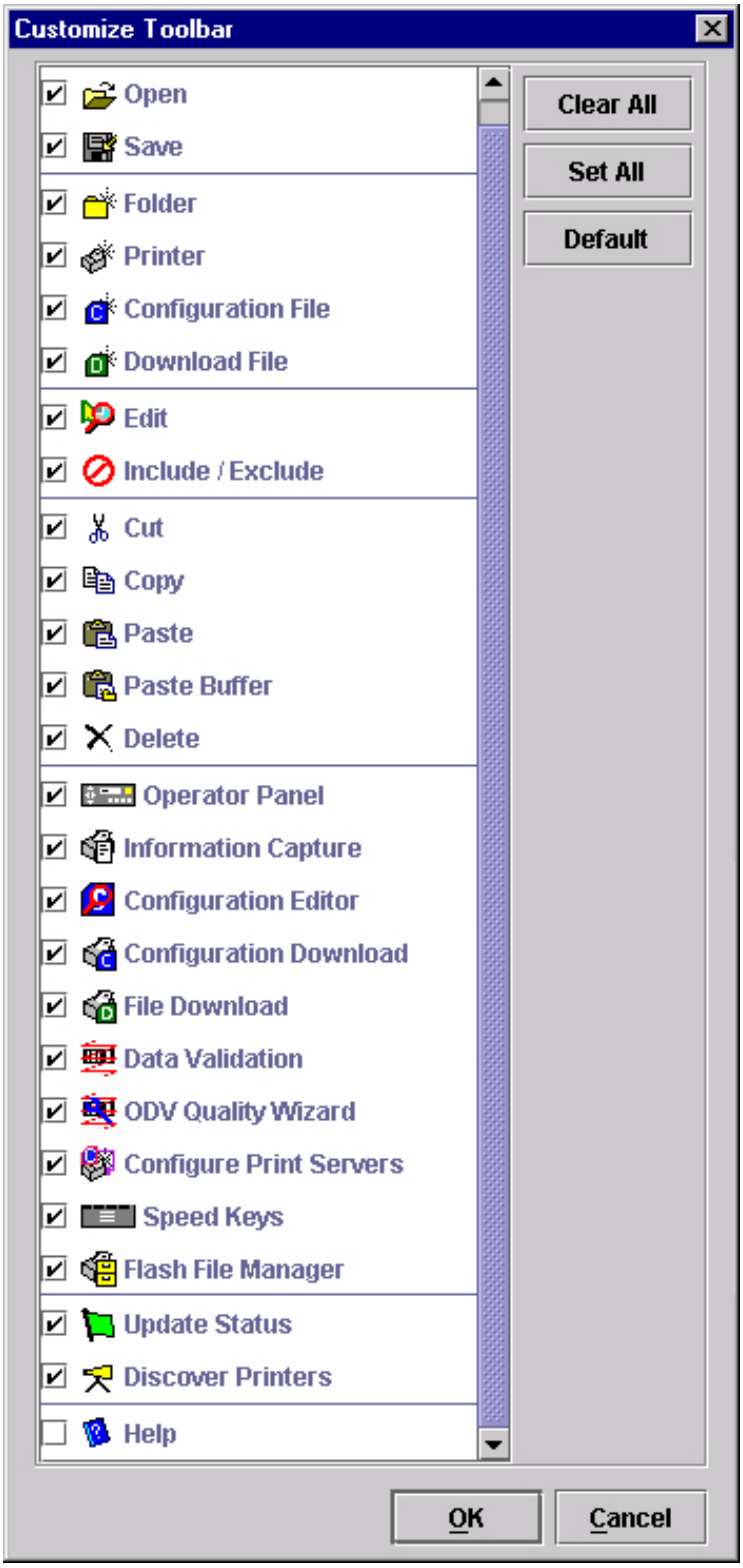


No Lines: Shows no links between database items.



Toolbar

Allows you to select which buttons display on the toolbar.



The Applications Menu

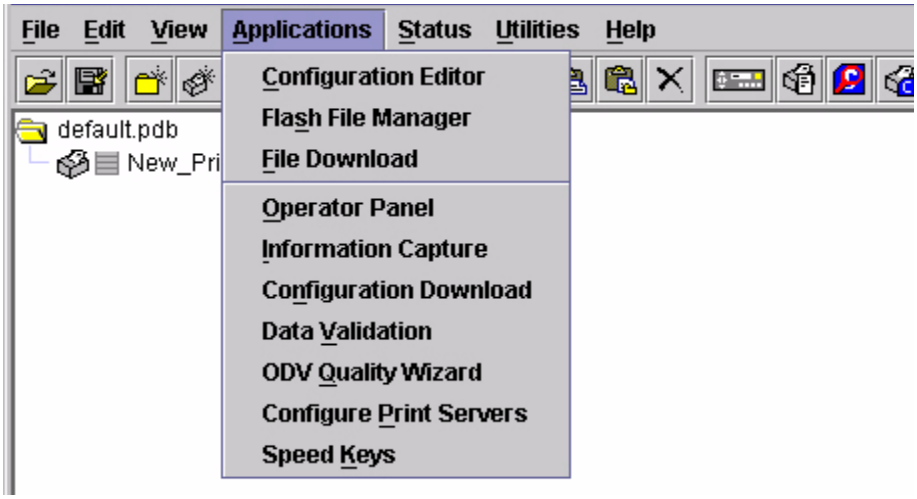


Figure 14. Applications Menu

For an explanation of the Applications menu options, find the menu option in Table 1 and go to the corresponding page.

Any applications listed below “File Download” connect to the printer when executed.

Table 1. Applications Menu Options

Menu Option	Page #
Configuration Editor	page 64
Flash File Manager	page 70
File Download	page 53
Operator Panel	page 59
Information Capture	page 62
Configuration Download	page 53
Data Validation	page 71
ODV Quality Wizard	page 72
Configure Print Servers	page 73
Speed Keys	page 74

The Status Menu

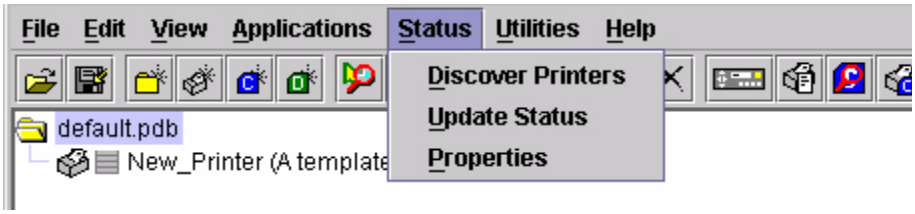


Figure 15. Status Menu

Discover Printers

Discover Printers starts the printer discovery process (see “Properties” on page 32). If Polled Discovery is enabled (see page 33), a progress dialog box appears while the PMU discovers printers. See Figure 16.

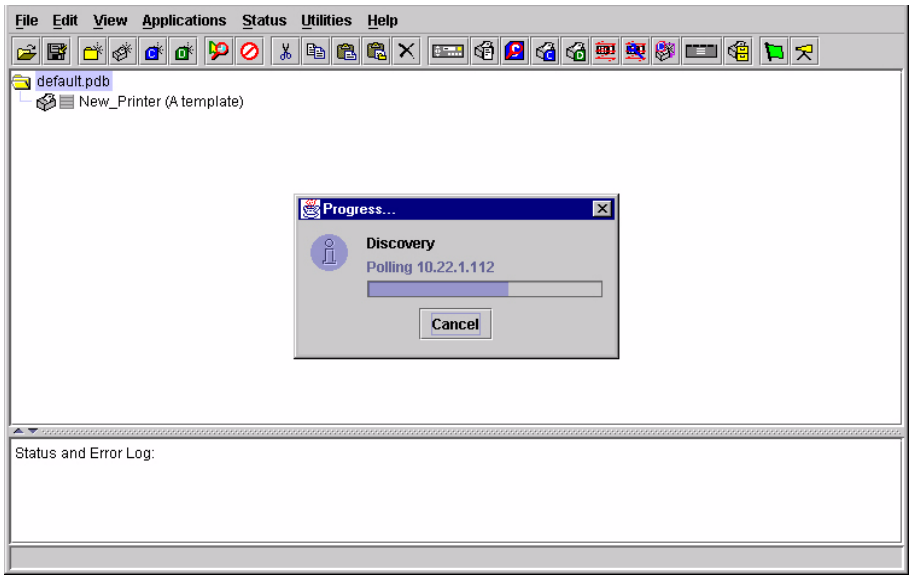


Figure 16. Discovery Polling in Progress

Update Status

Figure 17 shows an updated status for a printer.

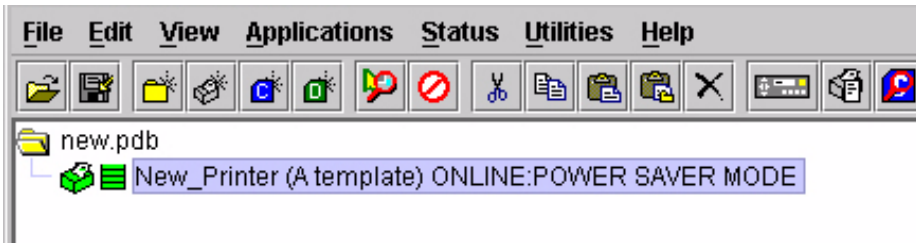


Figure 17. Update Status

Update Status shows the condition of the printer at the time the status is checked. To update the status of a printer, select **Status ▸ Update Status**, or click the (green flag) button at the right of the toolbar.

When the printer status updates, the (printer) icon may change color:

- Red indicates the printer is not functioning properly and cannot print
- Yellow indicates a warning, but the printer can print
- Green indicates the printer is functioning properly and can print

The message to the right of the printer icon is identical to the message on the front panel of the printer.

If you enable status polling, the printer status updates automatically.

The (stacked bar) icon indicates the amount of ribbon available on the printer. If the icon is gray, the ribbon availability feature is not supported on the printer.

Properties

Select **Status** ▸ **Properties** to open the Status Monitoring Properties dialog box. The dialog box contains three tabs: Discovery, Polling, and Alert Delivery.

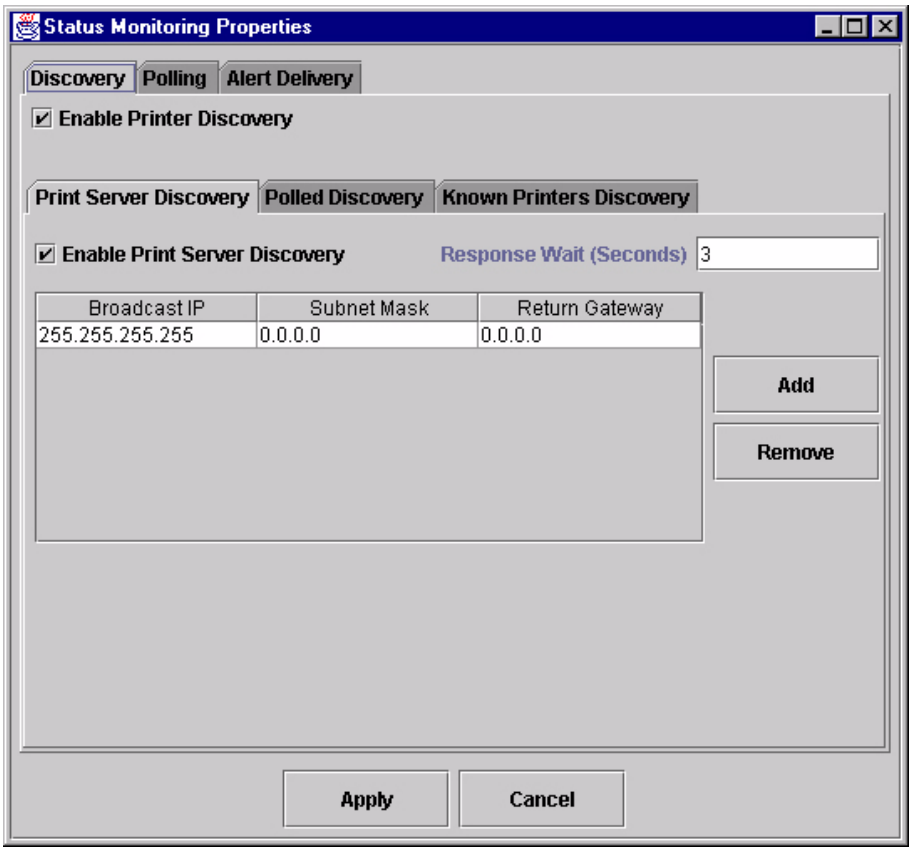


Figure 18. Status Monitoring Properties: Discovery – Print Server Discovery Tab

Discovery

You can discover printers on a network in three ways:

1. **Print Server Discovery:** This option allows you to discover all IBM 4400/6400 Series Ethernet Interface-equipped Printers on a subnet. To enable the option, check the **Enable Print Server Discovery** check box in the Status Monitoring Properties dialog box (see Figure 18), then click **Apply**. The results of the search display in the database pane.

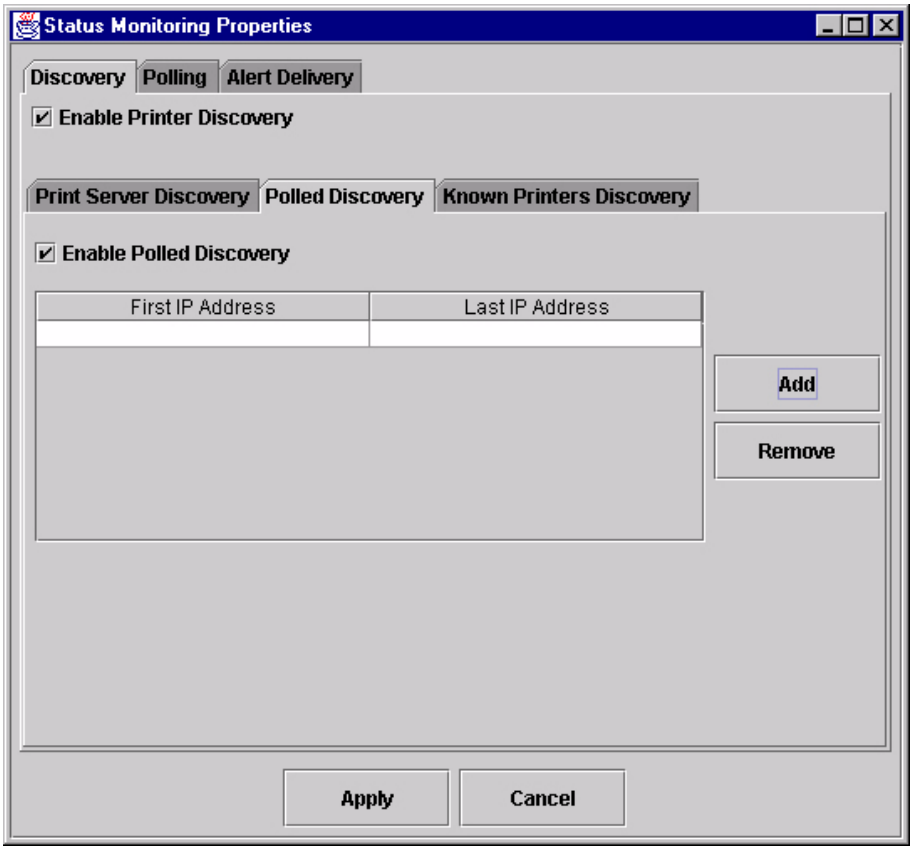


Figure 19. Status Monitoring Properties: Discovery – Polled Discovery Tab

2. **Polled Discovery:** This option allows you to select a range of IP addresses to poll. To enable the option, click the **Polled Discovery** tab and check the **Enable Polled Discovery** check box, then click **Add** (see Figure 19). In the First IP Address field, enter the beginning IP address range. In the Last IP Address field, enter the last IP address range. Click **Apply**. The PMU polls the printers within your specified range and displays the results in the database pane.

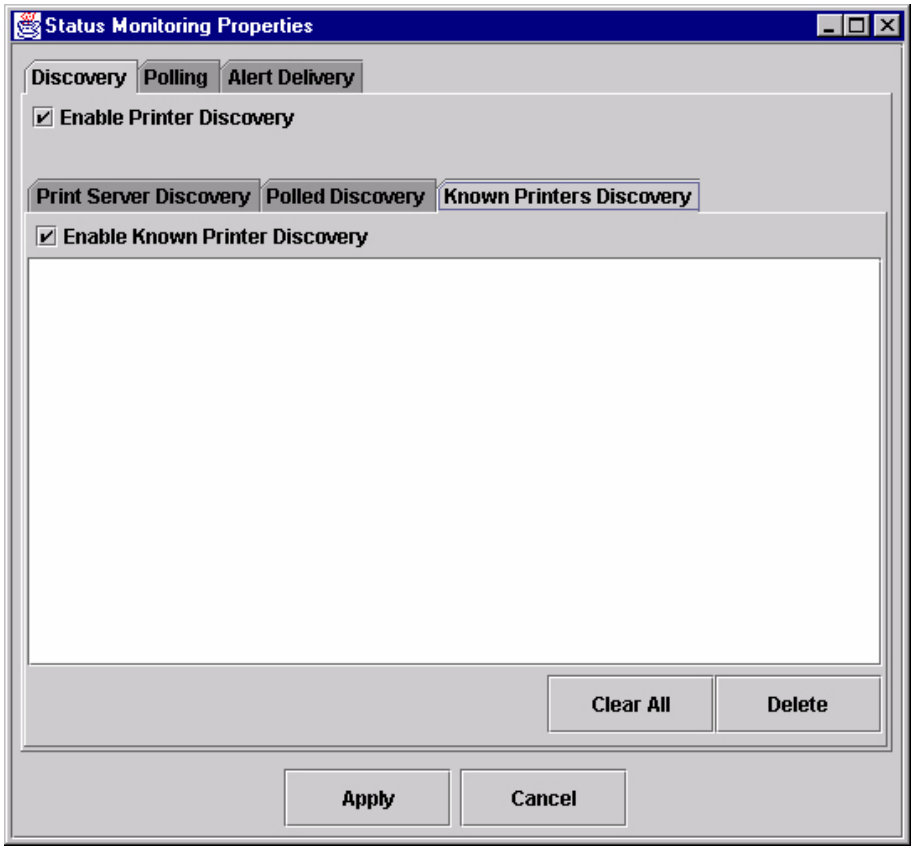


Figure 20. Status Monitoring Properties: Discovery – Known Printers Discovery Tab

3. **Known Printers Discovery:** This option records and logs previously discovered printer IP addresses. From this log, you can select and delete previously polled discoveries to create a new polling list to target your printer search. To enable the option, click the **Known Printers Discovery** tab and check the **Enable Known Printer Discovery** check box (see Figure 20). From the polled list of IP addresses, narrow your search by keeping or deleting found IP addresses. Click **Apply** to start a new poll based on your specification.

NOTE: You cannot manually add an IP address to this list. If you delete an IP address, it is lost until the polling process rediscovers it.

Polling

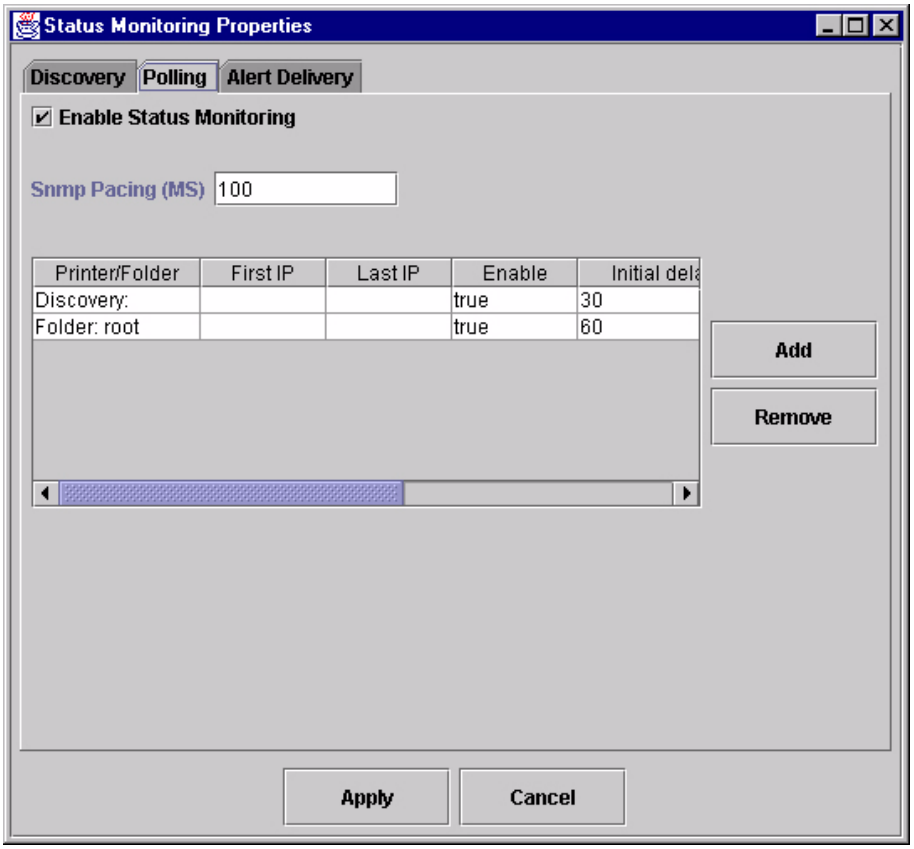


Figure 21. Status Monitoring Properties: Polling Tab

The Polling option allows you to control the way the PMU polls printers on the network. For instance, you can create a timed interval for the PMU to poll every 30 seconds or every two minutes. You can also specify a range of IP addresses.

To enable the option, check the **Enable Status Monitoring** check box in the Polling tab (see Figure 21). The Snmp Pacing (MS) value places a delay between each snmp request. This feature minimizes the network load. By default, the value is set at 100 milliseconds (.1 second).

NOTE: If Discovery is enabled, then a discovery also occurs, based upon the settings in the Discovery tab (see “Discovery” on page 32).

Now you can set parameters to a new task. The parameters include:

Printer/Folder: To select which printer or folder you want the PMU to poll. Click the field to select options from a drop-down menu.

First IP: To set the beginning IP address in a polling range. Use this option if you select **Range:** as the Printer/Folder option.

Last IP: To set the last IP address in a polling range. Use this option if you select **Range:** as the Printer/Folder option.

Enable: To select whether or not you want to enable polling of a specific task. If you want the PMU to poll the printers according to the specifications of your first task, select **true**. Otherwise, select **false**.

Initial Delay (S): To specify the time delay from when the PMU starts to when the PMU polls printers. The time delay is calculated in seconds.

Polled Interval (S): To poll printers automatically with timed intervals calculated in seconds. Use this option to periodically poll for new printers every few seconds.

Response Wait (MS): To specify the time delay the PMU waits between SNMP responses. By default, the value is set at 300 milliseconds (.3 seconds).

NOTE: If you enter a low value for slow networks, you may receive no response. In this case, increase the Response Wait (MS) value.

Alert Delivery

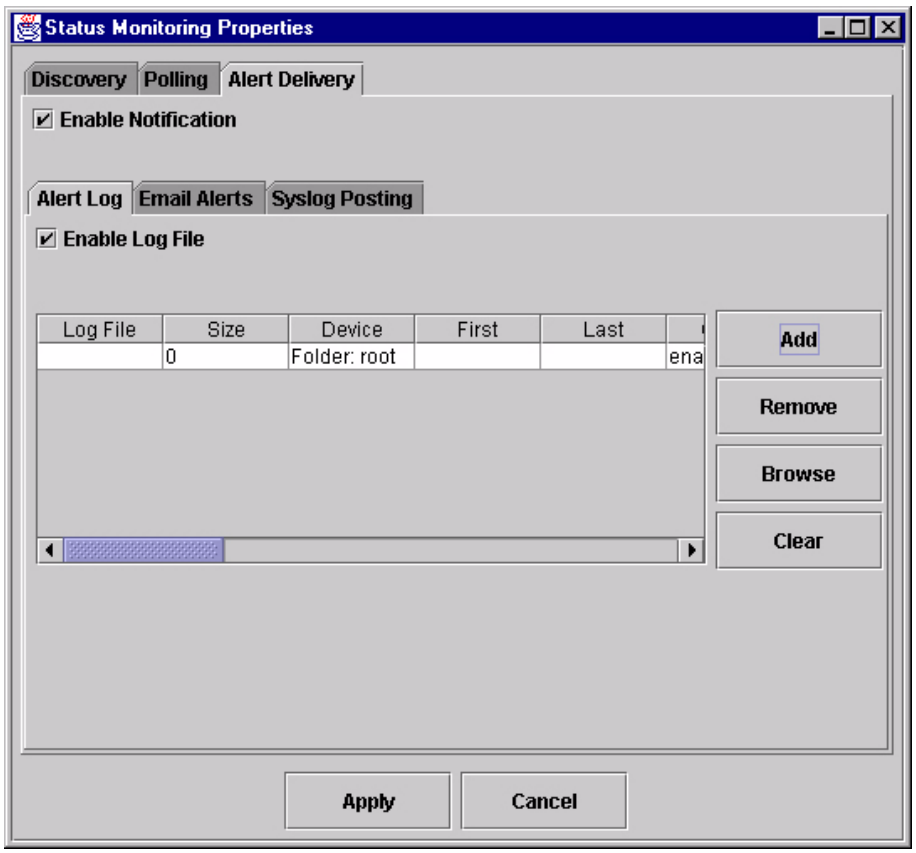


Figure 22. Status Monitoring Properties: Alert Delivery – Alert Log Tab

Select **Status ▸ Properties** to open the Status Monitoring Properties dialog box. Click the **Alert Delivery** tab. Check the **Enable Notification** check box to enable the option. The Alert Delivery properties allow you to customize the way the PMU notifies you of potential printer errors. Descriptions of the three alert types follows:

1. **Alert Log:** Allows the PMU to log alerts to a file located in the PMU directory. To log alerts, check the **Enable Log File** check box, then click **Add** (see Figure 22). A task item adds to the log list. In the task item, specify the following as applicable, then click **Apply**.

   Log File: To name the log file.

   Size: To set the maximum file size.

   Device: To choose a device item you want the PMU to monitor, such as a folder, specific printer, or a range of IP addresses.

   First: To set the beginning IP address in a polling range. Use this option if you select **Range:** as the Device option.

   Last: To set the last IP address in a polling range. Use this option if you select **Range:** as the Device option.

NOTE: In the remaining alert option fields, select **enable** or **disable** as desired.

Offline, **Warning**, **Media Input**, **Media Output**, **Media Path**, **Cutter**, **Barcode**, **Scanner**, **Label**, **Intervention Needed**, and **Consumables:** For a description of the alert groups and printer events, refer to the Alert Groups table in chapter three of the *Ethernet Interface User's Manual*. All options are enabled by default.

Comment: Enter comments as needed.

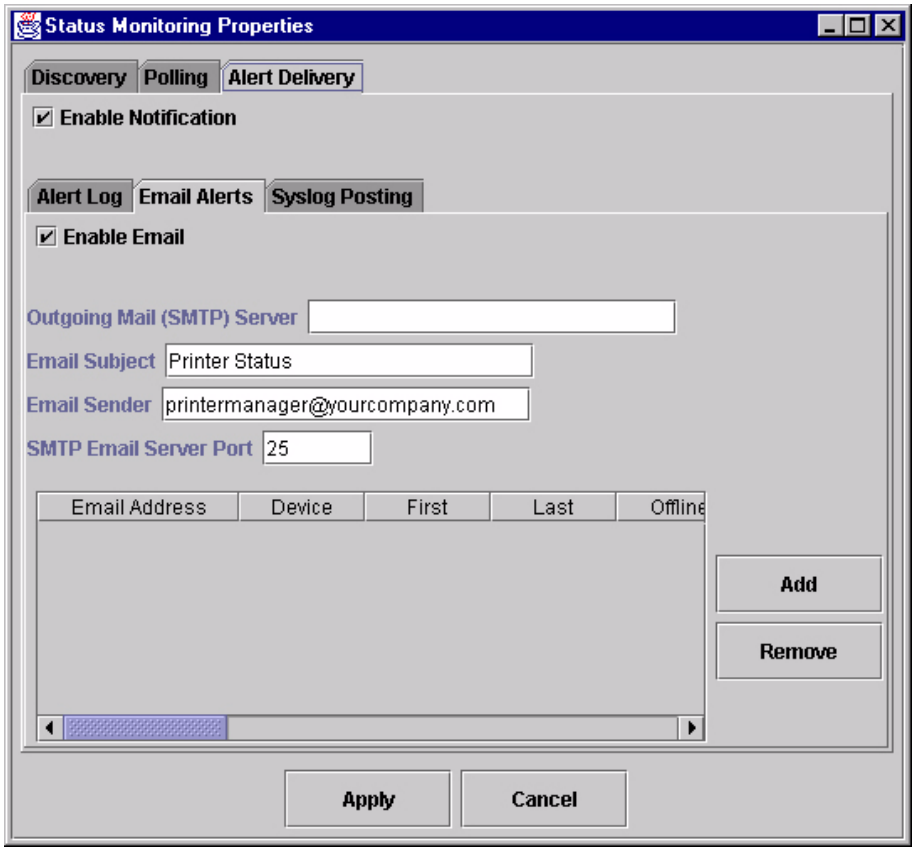


Figure 23. Status Monitoring Properties: Alert Delivery – Email Alerts Tab

2. **Email Alerts:** The PMU sends you an alert e-mail if a printer error occurs. To set up Email Alerts, check the **Enable Email** check box. Enter information in the following fields:

   Outgoing Mail (SMTP) Server: See your system administrator.

   Email Subject: Enter the subject of e-mail.

   Email Sender: Enter your e-mail address.

   SMTP Email Server Port: See your system administrator.

Next, click **Add** to define a new task (see Figure 23). In the new task item, specify the following information, then click **Apply**.

Email Address: Enter the e-mail address where you want the PMU to send the alert messages.

Device: To choose a device item you want the PMU to monitor, such as a folder, specific printer, or a range of IP addresses.

First: To set the beginning IP address in a polling range. Use this option if you select **Range:** as the Device option.

Last: To set the last IP address in a polling range. Use this option if you select **Range:** as the Device option.

NOTE: In the remaining alert option fields, select **enable** or **disable** as desired.

Offline, **Warning**, **Media Input**, **Media Output**, **Media Path**, **Cutter**, **Barcode**, **Scanner**, **Label**, **Intervention Needed**, and **Consumables:** Refer to Table 4 in chapter three of the *Ethernet Interface User's Manual*. All options are enabled by default.

Comment: Enter comments as needed.

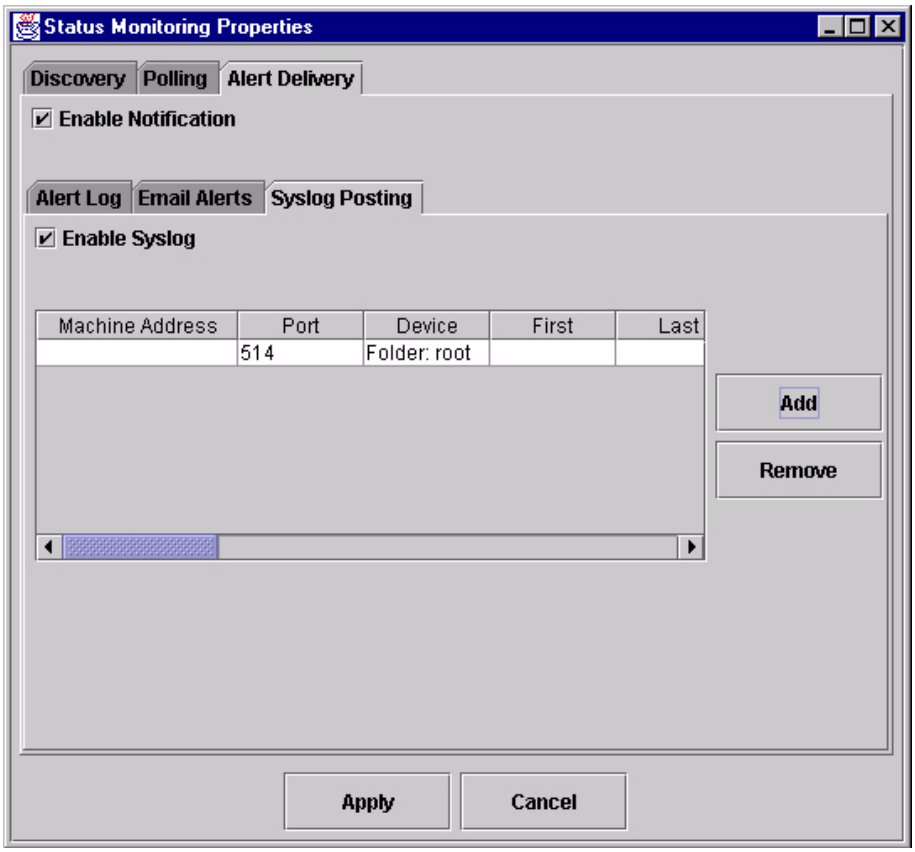


Figure 24. Status Monitoring Properties: Alert Delivery – Syslog Posting Tab

3. **Syslog Posting:** Used in a Unix operating system, it allows the PMU to log alerts to a file located in the PMU directory. To log alerts, check the **Enable Syslog** check box, then click **Add** (see Figure 24). A task item adds to the log list. In the task item, specify the following as applicable, then click **Apply**.

   Machine Address: The Unix IP Address.

   Port: See your system administrator.

   Device: To choose a device item that you want the PMU to monitor, such as a folder, specific printer, or a range of IP addresses.

   First: To set the beginning IP address in a polling range. Use this option if you select **Range:** as the Device option.

   Last: To set the last IP address in a polling range. Use this option if you select **Range:** as the Device option.

NOTE: In the remaining alert option fields, select **enable** or **disable** as desired.

Offline, **Warning**, **Media Input**, **Media Output**, **Media Path**, **Cutter**, **Barcode**, **Scanner**, **Label**, **Intervention Needed**, and **Consumables:** For a description of the alert groups and printer events, refer to Table 4 in chapter three of the *Ethernet Interface User's Manual*. All options are enabled by default.

Comment: Enter comments as needed.

The Utilities Menu

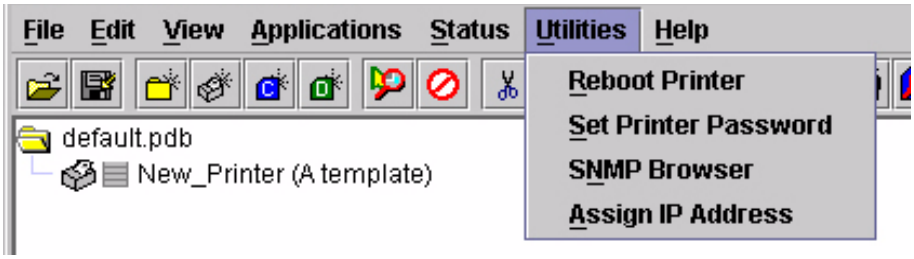


Figure 25. Utilities Menu

Reboot Printer

Reboots the selected printer.

Set Printer Password

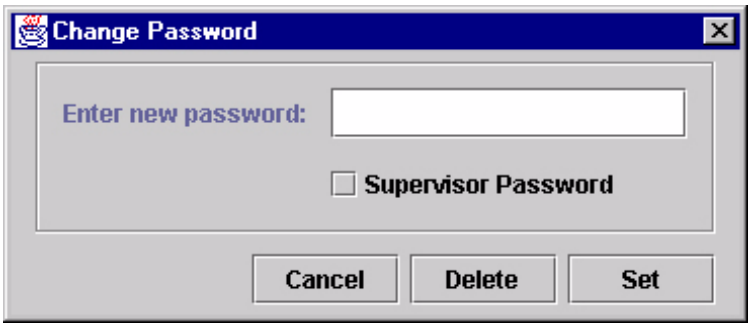
The PMU does not allow passwords to change unless the supervisor password matches the password in the Printer Properties.
See “Security Tab” on page 50.

To set the printer password:

1. Double-click the printer name. The Printer Properties dialog box opens.
2. Click the **Security** tab.
3. Type the User Password and Supervisor Password.
4. Check the **Supervisor Mode** check box.
5. Click **OK**.

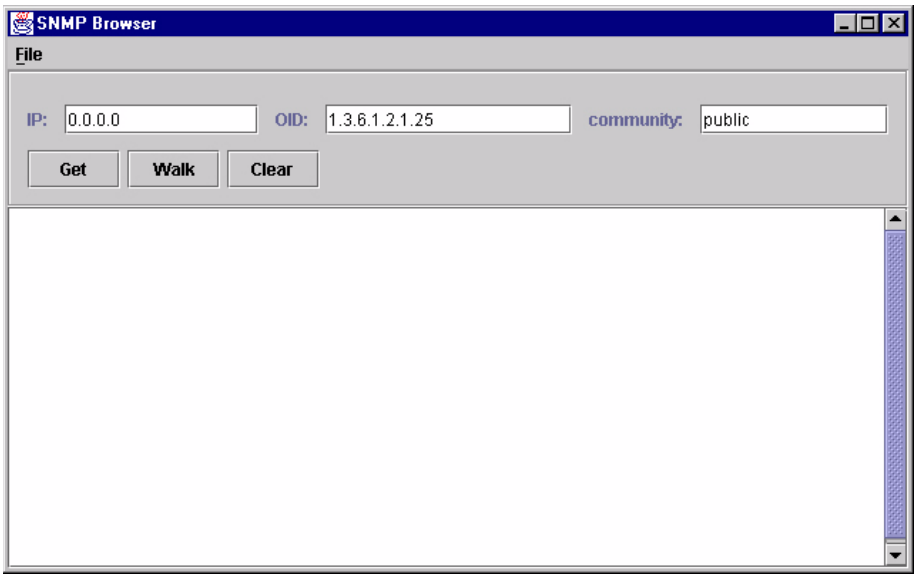
To change the printer password:

1. Click the printer name to select it.
2. Select **Utilities** ▸ **Set Printer Password**. The Change Password dialog box opens.



3. Type the new password.
4. For a new supervisor password, check the **Supervisor Password** check box. For a new user password, leave this box unchecked.
5. Click **Set**.
6. If you entered a new supervisor password, double-click the printer name. The Printer Properties dialog box opens.
7. Click the **Security** tab.
8. Type the same password you entered in step 3 in the Supervisor Password field.
9. Click **OK**.

SNMP Browser



The SNMP (Simple Network Management Protocol) Browser enables you to view attribute values in the Printer MIB managed by the Ethernet Interface. You can retrieve an attribute value of a specific MIB Object ID (OID), or you can “walk” or traverse the MIB. Three inputs are required before you can use the SNMP Browser. They are: IP, OID, Community.

In the IP field, enter the IP address of the target printer. The OID field defines either the specific MIB object ID you want to view, or the starting location for the MIB walk. The Community field defines the access Community defined in the Ethernet Interface. The default is public.

The Get button retrieves the attribute and attribute value for the specific OID entered. If the OID entered is invalid, you will receive the “Error: SNMP error” message. The Walk button traverses the MIB starting with the OID entered. The display is in the format: OID=Attribute_Value. The Clear button clears the current display.

The File menu allows you to open a previously saved SNMP Browser session, save the current session to file, or send the current session to a printer.

Assign IP Address

Allows you to assign IP addresses remotely to Ethernet Interfaces that have not been used before.

IMPORTANT **This utility requires expert network knowledge. If you assign incorrect network parameters to the printer, then other devices on the network may operate improperly, possibly causing the whole network to be unusable.**

The Assign IP Address utility has five fields:

- **Reply IP Address:** To enter a subnet broadcast number or a direct IP address to find the printer.
- **Hardware Address:** To enter the MAC (Machine Access Code) on the Ethernet Interface.
- **New IP Address:** To assign the printer its new IP address. Make sure this address is correct and do not enter an already existing IP address.
- **New Mask:** To enter the new mask address, if necessary. If you need the same mask, type the mask number.
- **New Gateway:** To enter the gateway number the new printer uses.

Once you click Assign, a BOOTP packet is sent to the Reply IP Address.

IP assignment will work only once, and then only if another BOOTP/DHCP has not already set the IP address.

The Help Menu

Figure 26. Help Menu

About: Displays the PMU About dialog box. The About dialog box shows the program's part number and version information.

The Toolbar

The PMU toolbar contains buttons that perform functions. See below for a description of each button. Refer to the specified page for a more detailed description.

You can select which buttons display on the toolbar. See page 28.

Button	Description
	Open: Opens a new printer database.
	Save: Saves the current printer database.
	Folder: Inserts a new folder into the printer database (page 24).
	Printer: Inserts a new printer into the database (page 24).
	Configuration File: Inserts a new Configuration file into the database (page 24).
	Download File: Inserts a new Download file into the database (page 24).
	Edit: Defines the properties of the selected item (page 48).
	Include/Exclude: Deactivates a selected folder, printer, or file (page 25).
	Cut: Removes a selected folder, printer, or file from the database and places it in the paste buffer (page 25).
	Copy: Copies a selected folder, printer, or file to the paste buffer (page 25).
	Paste After: Pastes the item in the paste buffer after the selected item (page 25).
	Paste Into: Pastes the item in the paste buffer into the selected item (page 25).
	Delete: Removes the selected item (page 25).
	Operator Panel: Virtual control panel that allows you to make selections via the PMU as if you are using the actual printer control panel (page 59).
	Information Capture: Allows the PMU to capture information sent between the computer and the printer (page 62).

Button	Description
	Configuration Editor: Allows you to edit the data sent from the computer to the printer before the printer receives it (page 64).
	Configuration Download: Allows you to download a configuration to the printer (page 53).
	File Download: Adds a download file to your printer database (page 53).
	Data Validation: Opens the Data Validation window (page 71).
	ODV Quality Wizard: Opens the ODV Quality Wizard window (page 72).
	Configure Print Servers: Opens the Configure Print Servers window (page 73).
	Speed Keys: Opens the Speed Keys window (page 74).
	Flash File Manager: Opens the Flash File Manager window (page 70).
	Update Status: Marks a printer or printers for status updates (page 31).
	Discover Printers: Searches for new printers (page 30).
	Help: Opens the Help window (page 44).

Managing the Database

To organize your databases easily and effectively, use the Edit option on the Printer Database menu bar. You can add, delete, and assign printers, configuration files, and download files to your database tree. You can also organize them using folders. All Edit menu functions have buttons on the toolbar (see page 45).

Database Items

Folder: Use folders to group the elements of your database.

Printer: See “Defining Printer Properties” on page 48.

Configuration file: A file created in the Configuration Editor (see page 64) and stored on your host computer. A configuration file contains user-defined printer configurations that you can download to your printer using either the Printer Database or the Configuration Editor.

Download file: A file stored on your host computer (i.e., software) that you can download to the flash SIMM memory of a printer or group of printers.

Defining Printer Properties

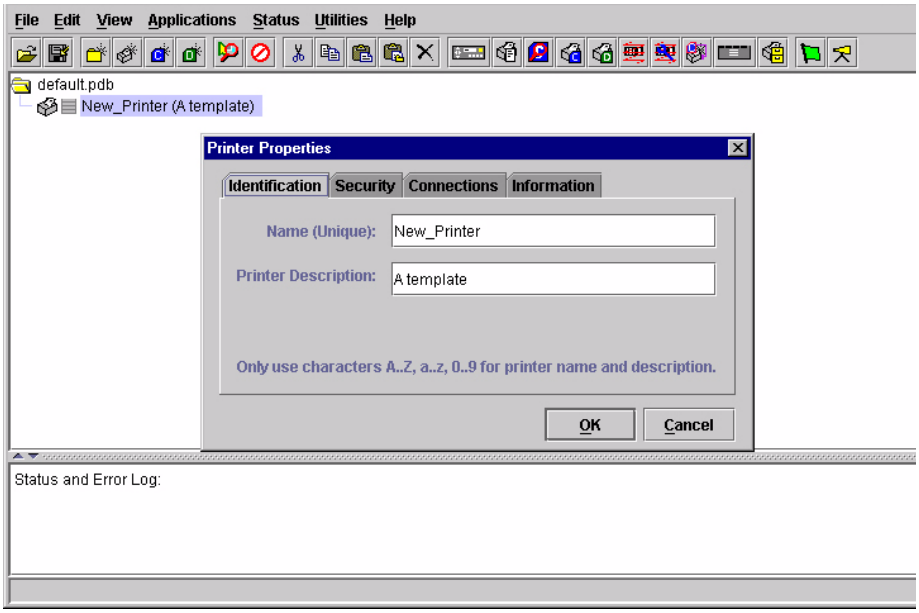


Figure 27. Defining Printer Properties

Before you can use any of the PMU applications, you must define the printer's properties. You must identify the printer and configure how the printer communicates with the PMU. To define a printer, double-click the printer's name or click the (edit database entry) button. The first time you run the PMU, double-click **New_Printer (A template)**. The Printer Properties dialog box opens. See Figure 27.

The Printer Properties dialog box contains four tabs: Identification, Security, Connections, and Information, described in the next sections.

Identification Tab

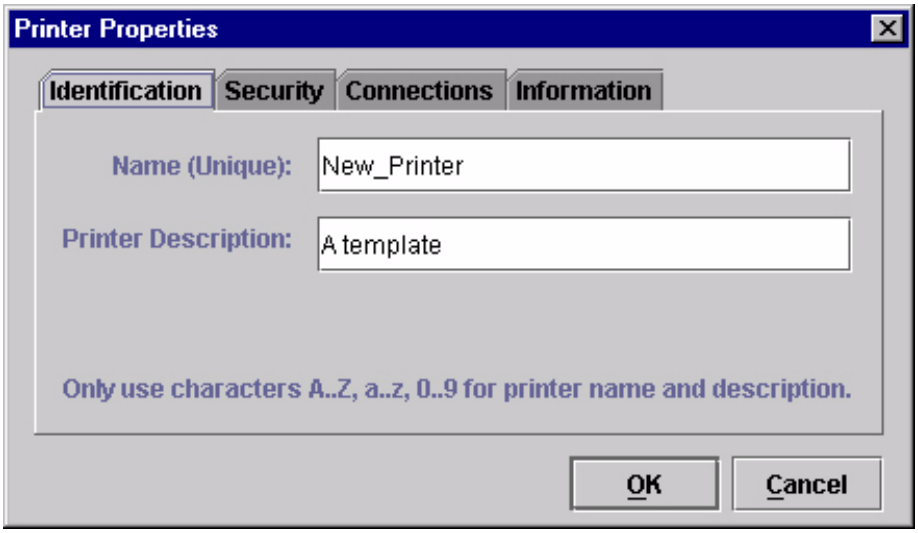


Figure 28. Printer Properties: Identification Tab

Name (Unique)/Printer Description: Assigns a name to your printer to identify it in the Printer Database. You can also assign a printer description, which appears in parentheses to the right of the printer name in the database.

When you assign a printer name and description, use only the alphanumeric characters A-Z, a-z, and 0-9. Underscores and spaces may be used to separate words.

Security Tab

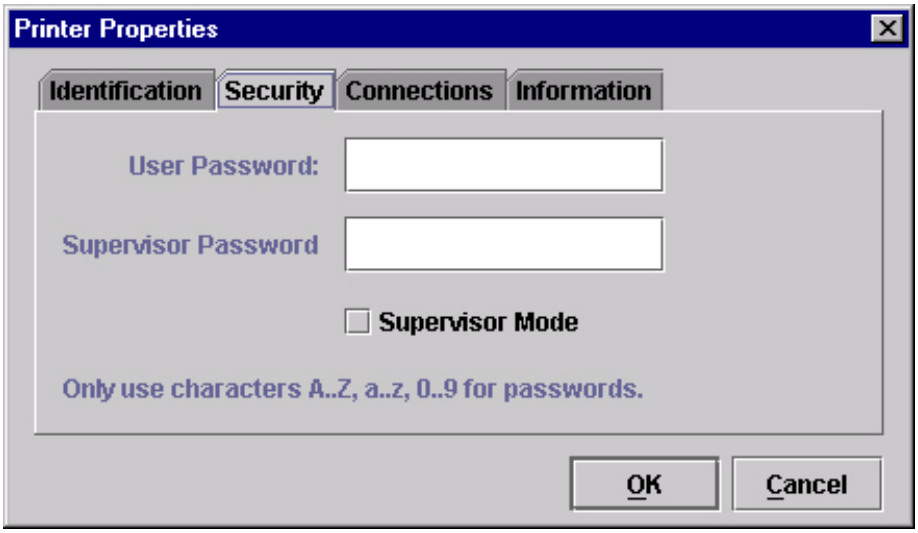


Figure 29. Printer Properties: Security Tab

User/Supervisor Password: Enter the printer's password, if appropriate. The password feature restricts access to certain functions of the PMU. In User mode, the PMU does not allow the following functions: downloading files, configurations, or configuration names to the printer; clearing the error log; and setting passwords. Supervisor mode allows unrestricted access to all functions of the PMU.

Passwords are only recognized up to 9 characters, and are displayed as *****, one * for each character typed. Use only the alphanumeric characters A-Z, a-z, and 0-9 for passwords. Underscores and spaces may be used to separate words. To set up a password, see page 41.

Connections Tab

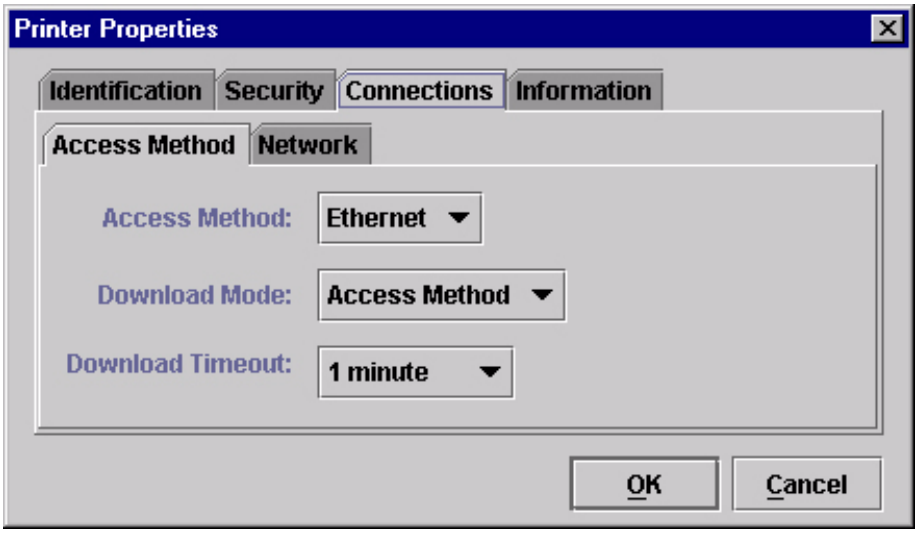


Figure 30. Printer Properties: Connections – Access Method Tab

The Connections tab contains two sub-tabs: Access Method and Network.

Access Method Tab

Access Method: Identifies how the PMU accesses the printer. “Ethernet” is the only option available. See the *Ethernet Interface User’s Manual* to set up the Ethernet Interface for your printer.

Download Mode: Identifies how the PMU downloads files and configurations to the printer. “Access Method” is the only option available. All downloads will use the Ethernet Interface.

Download Timeout: Specifies the number of minutes the printer waits for data while downloading a file from the host computer. If a stall lasts for more than the specified time, the printer times out and the download terminates. If you have a slow connection between the PMU and the printer, you may need to define a longer Download Timeout period. Define the Download Timeout between 1 and 60 minutes (the default is 1 minute).

Network Tab

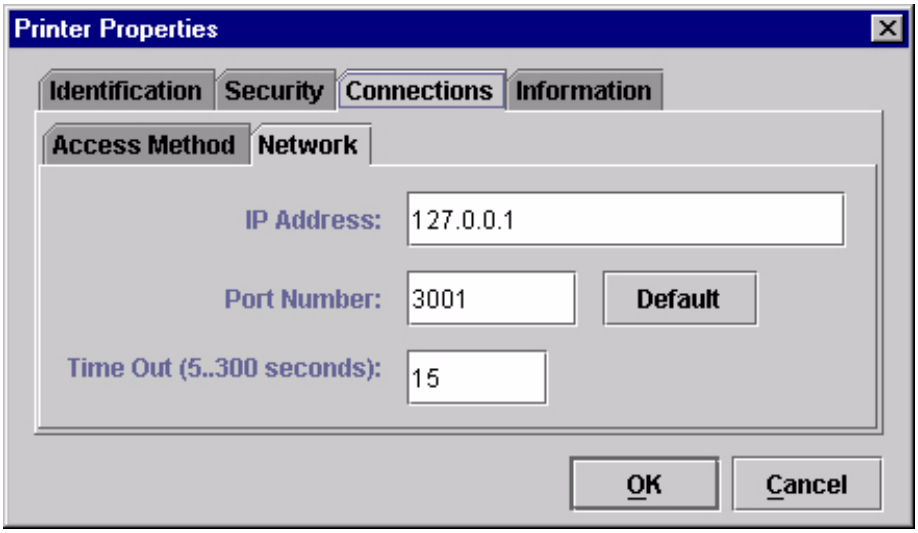
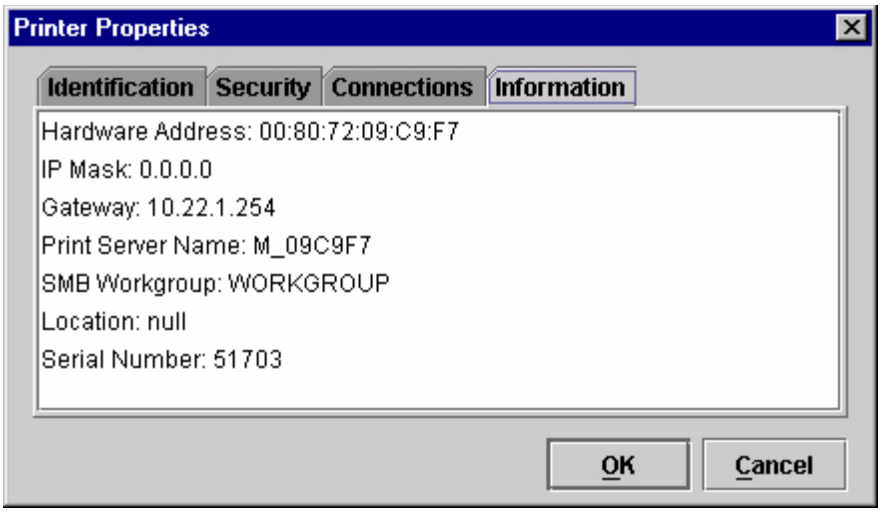


Figure 31. Printer Properties: Connections – Network Tab

Enter the printer's IP Address and Port Number. (Click **Default** to reset the Port Number to 3001.) The Time Out option sets the amount of time, in seconds, the PMU waits for a response from the printer after sending a command. If there is no response in the specified amount of time, an error message appears in the Status and Error Log pane. If you have a slow connection between the PMU and the printer, you may need to define a longer Time Out period. Define the Time Out between 5 and 300 seconds (the default is 15 seconds).

NOTE: The Network settings must match the settings in the printer's front panel menu. See the "ETHERNET PARAMS" section in the *User's Manual*.

Information Tab



Contains information about your printer.

Downloading Files

NOTE: The terms “download” and “upload” as used here and in the software indicate the printer’s point of view. Therefore, when you download a file using the PMU, you are sending information to the printer (the printer downloads). When you upload a file, you are receiving information from the printer (the printer uploads).

The PMU allows you to download Configuration and Download files to either a single printer or to a group of printers. To download a Configuration or Download file to a single printer, place the (Configuration file) or (Download file) icon below the printer (one level lower than the printer). To download a Configuration or Download file to a group of printers, insert the proper icon on the same level as the printers (in the same folder containing the printers). Insert additional Configuration or Download file icons if you wish to download multiple files or configurations.

Once you define Configuration and Download files on your database, you must download them to your printer in order for them to affect the active print state. Use the Printer Database to download as many files to as many printers as you want.

NOTE: Each emulation used by the printer has its own list of valid flash files it can use. Refer to the appropriate *Programmer’s Reference Manual* for details about valid flash files.

To download a Configuration file that is on the same level or one level lower than the target printer on your database tree, select the printer to receive the download and select **Applications ▸ Configuration Download**. To download a Download file that is on the same level or one level lower than the target printer on your database tree, select the printer to receive the download and select **Applications ▸ File Download**.

Once you choose your download option, a dialog box opens that shows all the files that will download to each printer. Confirm that the correct files will be sent to the appropriate printers. Click **Upgrade** to begin the download. Click **Cancel** to cancel the download and start over.

You can also download a series of files to several printers at once using folders. Select a folder and select either **Applications ▸ Configuration Download** or **Applications ▸ File Download**. All of the appropriate files inside the selected folder download to all of the printers inside that folder.

NOTE: Downloading a Configuration file does not immediately update the printer’s active configuration. You must activate a downloaded configuration using the “Load Config.” setting in the printer’s operator panel. See your printer’s *User’s Manual* for details.

See page 54 for examples of using the Printer Database to download files.

Downloading Files Examples

Figure 32 shows a sample database.

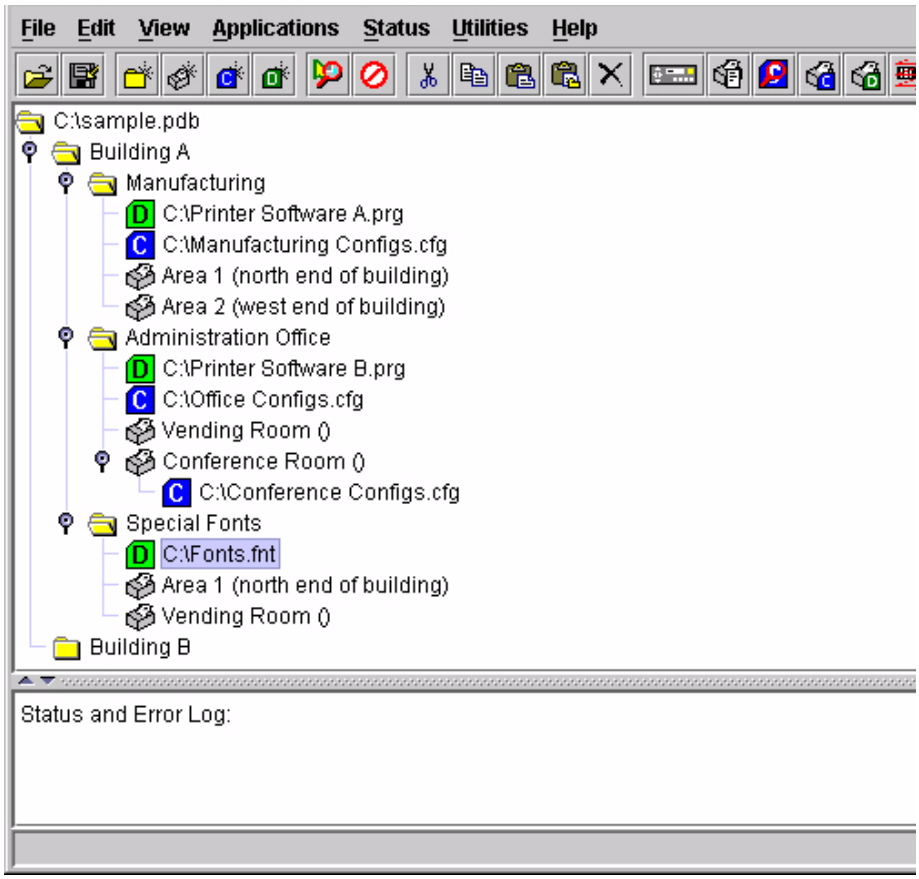


Figure 32. Sample Database

In the sample database, the printers are organized according to different parts of the building. Each area contains its own printers, Configuration files, and Download files.

Example 1

In the following example, the user selected the Conference Room printer, then selected **Applications ▸ Configuration Download** or clicked the (configuration download) button. The Configuration Download dialog box opens.

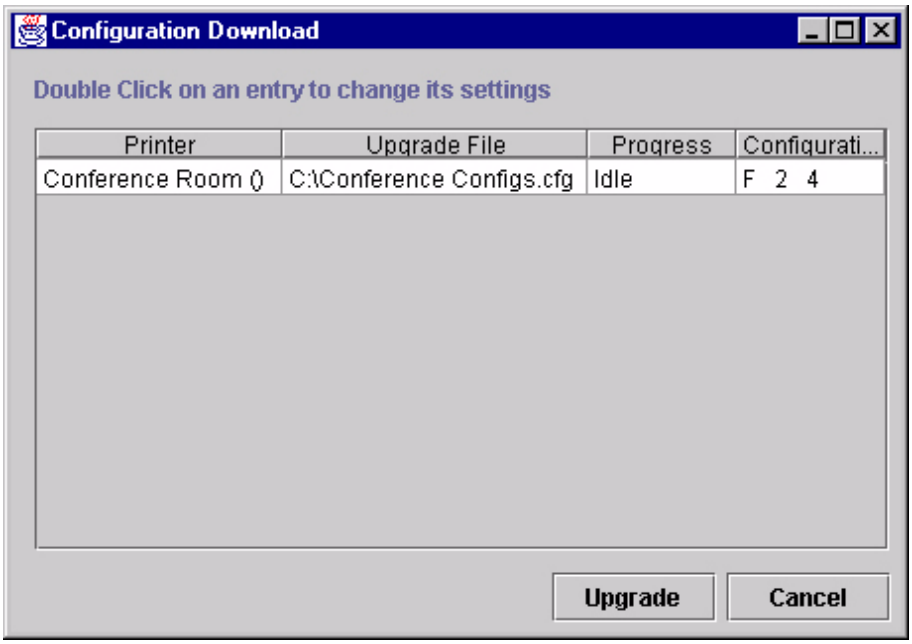


Figure 33. Configuration Download: Conference Room Printer

The Configuration Download dialog box displays the printer receiving the file, the name of the file being sent, the progress of the download, and the configurations contained within the file. If the user clicks **Upgrade**, the `Conference Configs.cfg` file is sent to the Conference Room printer. The dialog box indicates the progress of the file as it downloads.

Example 2

In the following example, the user selected the Manufacturing folder, then selected **Applications ▸ Configuration Download** or clicked the (configuration download) button. The Configuration Download dialog box opens.

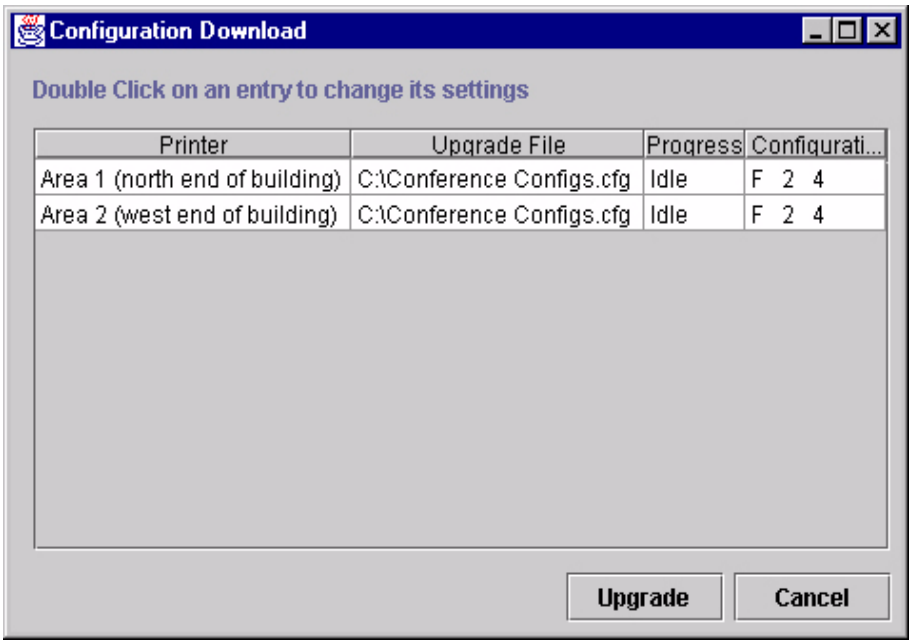


Figure 34. Configuration Download: Manufacturing

The PMU sends all configuration files inside the Manufacturing folder to all printers inside the Manufacturing folder. If the user clicks **Upgrade**, the `Manufacturing Configs.cfg` file is sent to printers Area 1 and Area 2.

You can also specify which configurations within the file you wish to download. Double-click the name of the printer you want to make adjustments to, and a dialog box opens that allows you to select or deselect specific configurations. Only the selected configurations download.

Notice that the `Printer Software A.prg` file, located inside the Manufacturing folder, is not on the download list. The PMU downloads Configuration and Download files separately. To download the `Printer Software A.prg` file to these printers, select the Manufacturing folder, then select **Applications ▸ File Download**.

Example 3

In the following example, the user selected the Building A folder, then selected **Applications ▸ File Download** or clicked the (flash file download) button. The File Download dialog box opens.

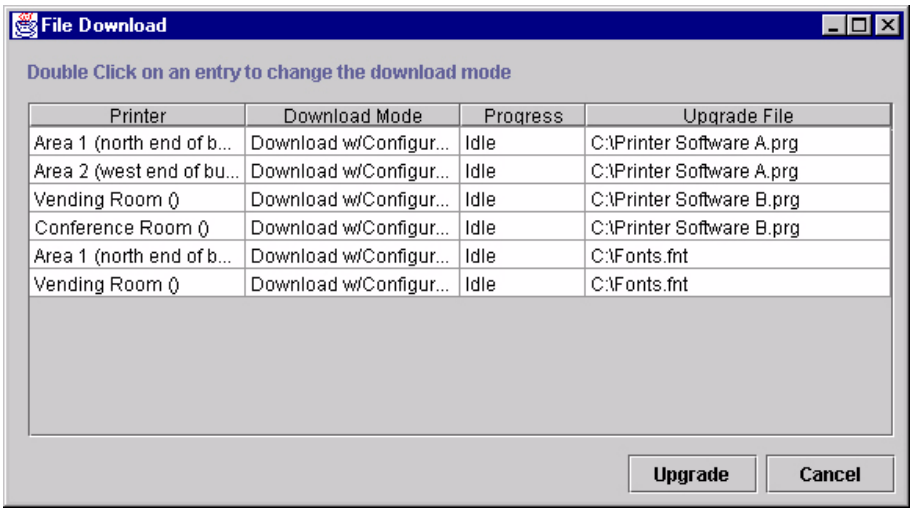


Figure 35. File Download Window

The PMU downloads files from the selected folder, as well as its sub-folders. If the user clicks **Upgrade**, the `Printer Software A.prg` file is sent to printers Area 1 and Area 2, the `Printer Software B.prg` file is sent to the Vending Room and Conference Room printers, and the `Fonts.fnt` file is sent to the Area 1 and Vending Room printers.

The options in the Download Mode column can be changed. Double-click the printer you wish to change, and the File Download – Download Mode window appears. See Figure 36.

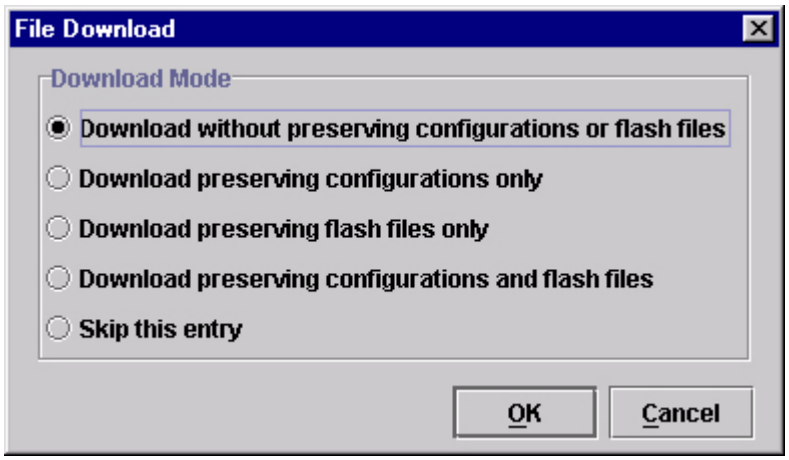


Figure 36. The File Download – Download Mode Window

Download without preserving configurations or flash files: When the firmware file downloads, all configurations are reset to their original, factory settings.

Download preserving configurations only: When the firmware file downloads, the configurations saved in the printer are preserved.

Download preserving flash files only: When the firmware file downloads, the flash files are preserved.

Download preserving configurations and flash files: When the firmware file downloads, the configurations and flash files are preserved.

Skip this entry: As the PMU moves through the download queue, any files marked “Skip this entry” do not download.

3 Applications and Web Access

Operator Panel

The PMU includes a virtual operator panel that simulates all the functions of the actual operator panel on your printer. Figure 37 shows the operator panel for a 6400 Series Line Matrix Printer, and Figure 38 for a 4400 Series Thermal Printer.

The layout of the operator panel changes to visually simulate the printer being used (line matrix, thermal, or laser), but the keys and indicators function as described on page 61, regardless of the type of printer used.

To access the operator panel, select the appropriate printer from the Printer Database and then select **Applications ▸ Operator Panel** or click the (operator panel) button.

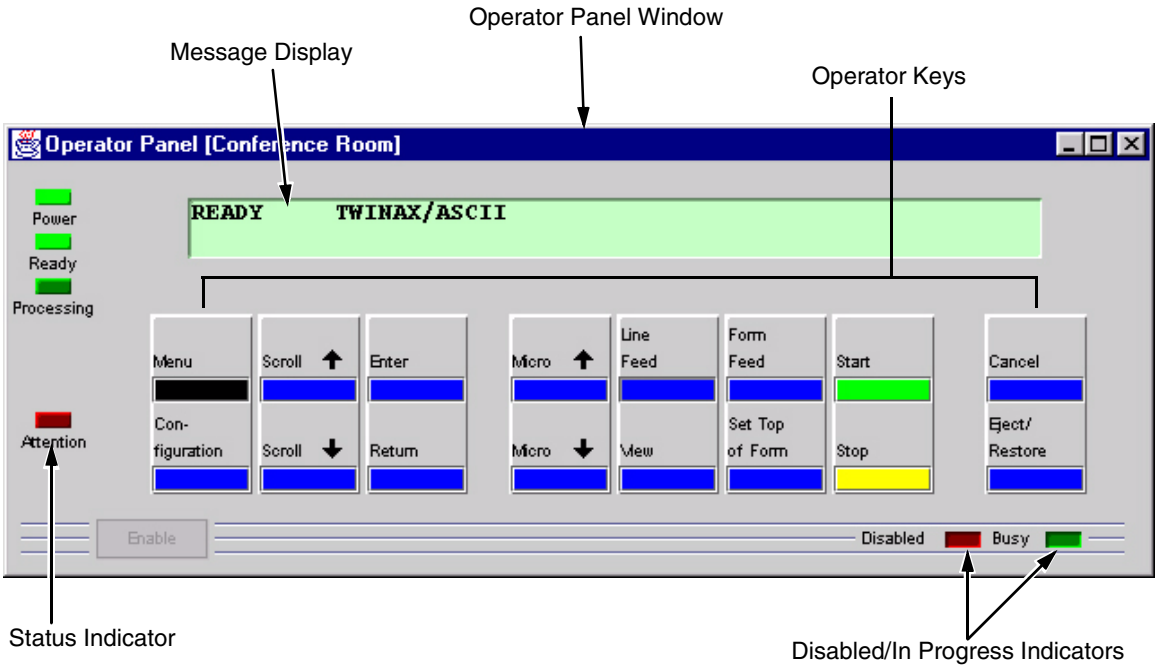


Figure 37. 6400 Series Line Matrix Printer Operator Panel

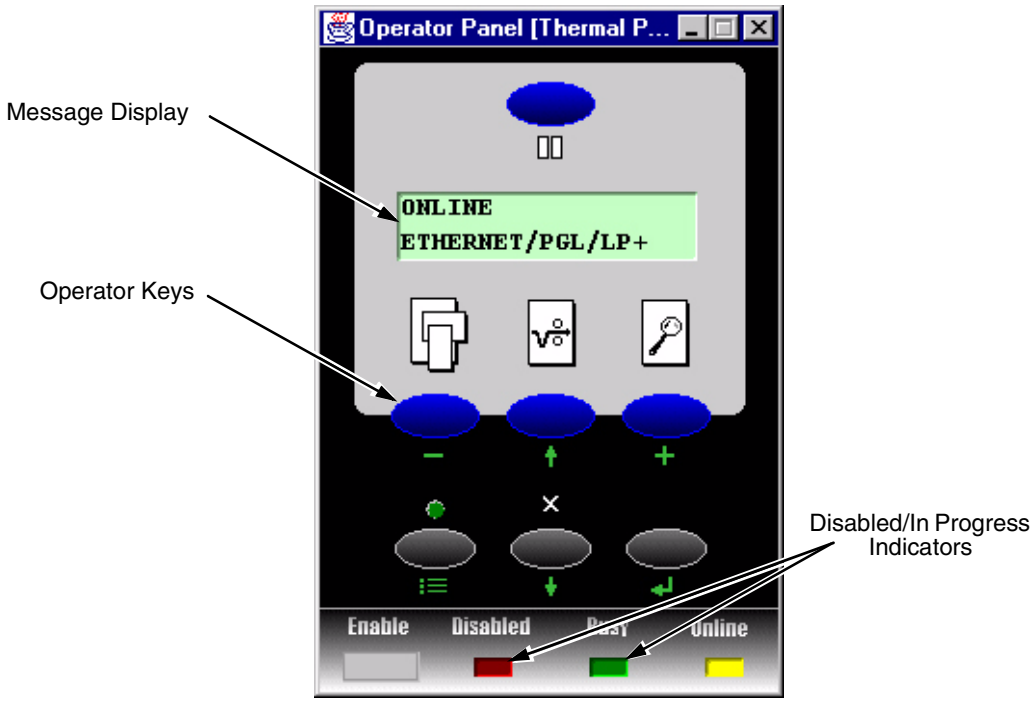


Figure 38. 4400 Series Thermal Printer Operator Panel

Primary/Secondary Operator Keys

Clicking the primary and secondary operator keys in the operator panel causes the printer to perform the same actions as if you were physically pressing the keys on the printer's operator panel. For example, when the printer is online, click the **Stop** key (the **PAUSE** key on thermal models) to take the printer offline. Click the **Start** key to place the printer back online.

Some functions require pressing multiple keys at the same time. To simulate this, hold down the **SHIFT** key on your host keyboard as you select each key. Release the **SHIFT** key, and the selected keys on the operator panel activate as if they were pressed simultaneously.

For example, to unlock the Enter key on your printer, hold down the **SHIFT** key on your keyboard, then click **Scroll** ↑ and **Scroll** ↓. Release the **SHIFT** key, and the ENTER key unlocks.

NOTE: For an explanation of the functions of each primary and secondary operator key, see your *User's Manual.*

Message Display

The message display shows what is displayed on the printer's LCD. Use the message display to configure menu options and read error messages.

Status Indicator

The status indicator displays the current operating mode:

Online mode: The indicator displays bright green.

Offline mode: The indicator displays black.

Fault mode: The indicator flashes.

Disabled Indicator

Normally, when you control the printer via the operator's panel, the Disabled light is off, and the Enable button underneath the status indicator is grayed out. While the PMU has control of the printer, the message `CAUTION PRINTER MANAGER HAS REMOTE CONTROL` appears on the printer's LCD display to alert others that the printer is being controlled remotely.

However, if someone presses a key on the printer, the virtual operator panel disables. The Disabled indicator lights up, and the Enable button activates. Click the Enable button to give control of the printer back to the virtual operator panel.

In Progress Indicator

This light flashes when the printer is working on a job or moving paper.

Information Capture

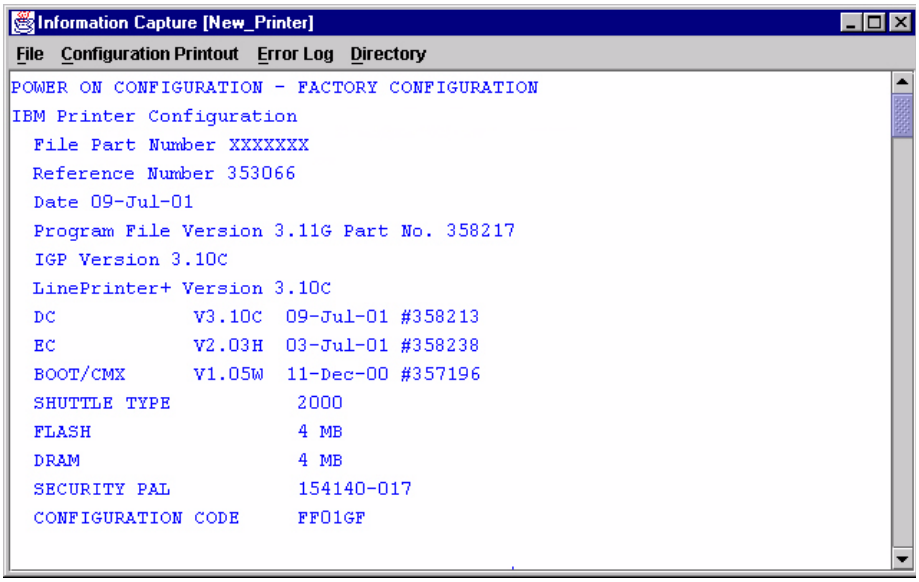


Figure 39. Information Capture Window

To access the Information Capture application, select a printer from the Printer Database and select **Applications ▸ Information Capture** or click the (information capture) button. The Information Capture application allows you to view the configurations or error logs saved in the printer's memory and save them as a text file to your local hard drive.

Loading a configuration into the Information Capture does NOT change the active configuration — this is a *view only* application. If you wish to change the active configuration, use the Configuration Editor (see page 64) or the operator panel.

The following are descriptions of the Information Capture menus.

File

Save As: Saves the configuration or error log displayed in the Information Capture window as a `.txt` text file on your local hard drive. This `.txt` file can be opened in any word processing program.

Print: Prints the text of the information captured to the host computer's default printer.

Clear Window: Clears the Information Capture window of any displayed configurations or error logs.

Close: Closes the Information Capture window.

Configuration Printout

Current/Factory/Power-Up/All/1-8: Choose which configuration you wish to view. If you choose more than one configuration without clearing the window, each additional configuration adds to the end of the display.

Error Log

All Errors: Displays the printer's error log.

Clear: Clears all errors from the printer's memory.

NOTE: The printer's error log and the Status and Error Log at the bottom of the main printer database window of the PMU are separate. Clearing the printer's error log does *not* clear the Status and Error Log.

Directory

Flash File System: Displays the file system information for your printer.

Configuration Editor

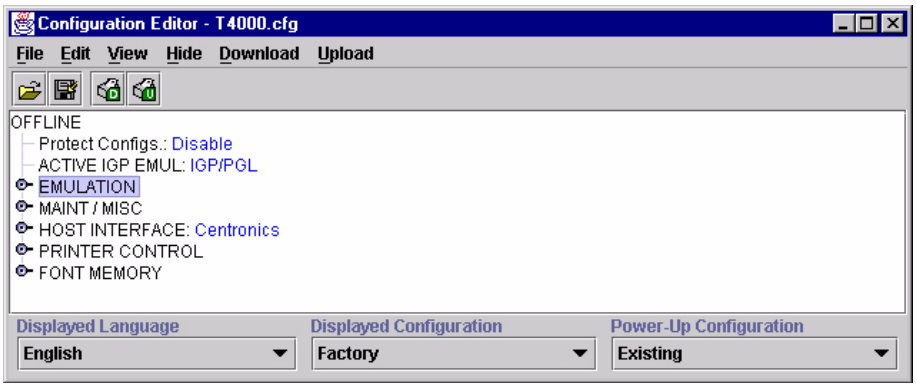


Figure 40. Configuration Editor Window

To access the Configuration Editor application, select a printer from the Printer Database and select **Applications ▸ Configuration Editor** or click the (configuration editor) button. Select **Upload ▸ All** to upload configurations from the printer. The active configuration uploads from the printer and displays in the Configuration Editor window. See Figure 40.

The Configuration Editor supports offline editing, allowing the editing of stored configurations. If you start the Configuration Editor without connecting to a printer, the screen will be blank. A configuration will not display until you load a configuration file from a disk or computer.

The Configuration Editor allows you to upload, modify, and download eight user-defined configurations and the factory default configuration (only if modification of the factory configuration has been enabled; see the Note on page 65). You may also save sets of configurations to your local hard drive so that they can be easily downloaded to the printer at any time.

The Configuration Editor does not change the current configuration or the active printer status until the configurations are downloaded to the printer.

Menu Tree

The Configuration Editor displays the printer configurations in a tree format (see Figure 40). The top level of the tree is the OFFLINE menu. From this level, the tree branches into the printer's submenus. Menu items that have a or (handle) next to them have further submenus below them. Click the handle to expand or collapse the submenus below. (You may also use the Expand Tree/Collapse Tree options in the View menu to expand or collapse submenus.)

The Configuration Editor has three drop-down menus at the bottom. The Displayed Language option allows you to select from five different languages to display the configuration information. The Displayed Configuration option lets you choose between the available configurations to display. The Power-Up Configuration allows you to assign which configuration loads whenever the printer turns on.

Creating Configurations

Along with the factory configuration, your printer allows up to 8 user-defined configurations that can be downloaded to your printer's memory. You may create configurations using the printer's operator panel, or by using the Configuration Editor.

To create a configuration using the Configuration Editor:

1. Select **Edit ▸ Copy From:**. A list of configurations appears. Undefined configurations appear gray. Choose one of the configurations.
2. Click **Edit**. (Notice that the configuration you chose in step 1 now appears next to the Copy From: menu item.) Move your mouse down to **Copy To**. A list of configurations appears. Choose the number of the configuration you wish to create. This new configuration is created with the settings from the configuration you chose in step 1.

NOTE: If you choose to **Copy To** a configuration which already exists, that configuration will be erased.

3. You may now edit the configuration settings. See the next section, "Changing Configurations."

Changing Configurations

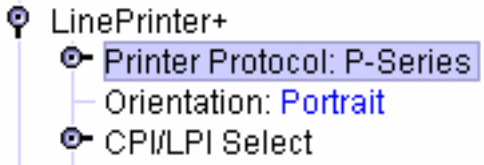
Configuration settings in the Configuration Editor can be changed two ways:

- make the changes directly on the menu tree
- use the Menu Editor

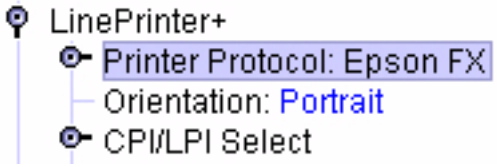
NOTE: Normally, the factory default configuration cannot be changed. However, you can enable modification of the factory configuration. Select **Edit ▸ Enable Factory Edit**. It is strongly recommended that you do *not* modify the factory default configuration. If you choose to modify the factory configuration, you should first upload it from the printer, and then save it. This way, you will have a backup copy of the factory configuration. To disable modification of the factory configuration, select **Edit ▸ Disable Factory Edit**.

Making Changes on Menu Tree

1. Using the Displayed Configuration menu at the bottom of the window, click the drop-down arrow to choose the configuration to change.
2. Expand the submenus until the configuration setting you wish to change displays.
3. Select the menu item you wish to change. A selection box surrounds your choice.



4. Use the < and > keys to toggle through the available options. (You may change these keys in the Printer Database window: select **File ▸ Preferences**, then click the **Configuration Editor** tab. See page 22.)



Menu Editor

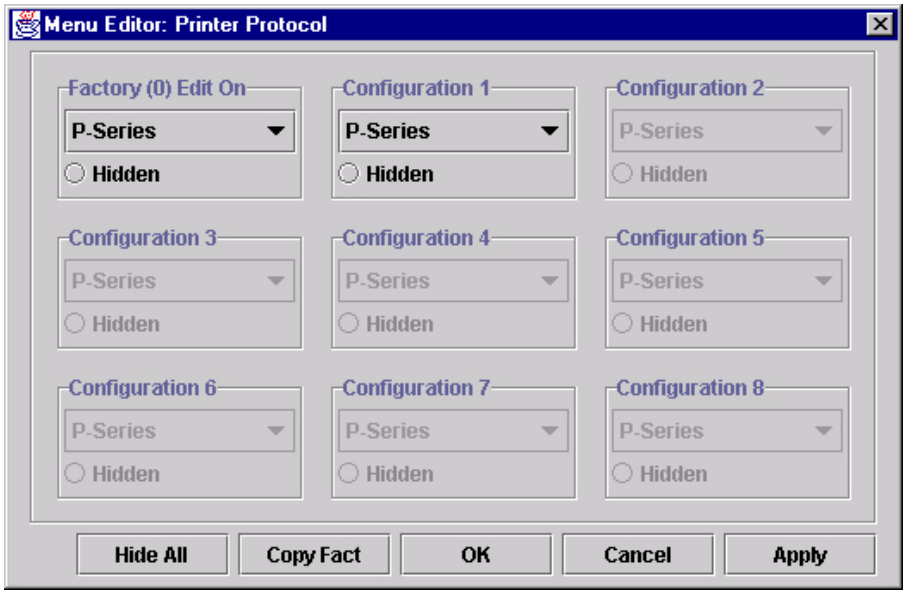


Figure 41. Menu Editor

Double-click any menu item to open the Menu Editor window. Figure 41 shows the screen you see when you double-click the Printer Protocol option. By using the Menu Editor, you may view and adjust the settings of all nine of the printer configurations at once. To change a setting, click the drop-down arrow underneath the corresponding configuration and choose an option. Grayed out configuration names and settings do not exist; you must create the configuration before you can edit it (see page 65).

To hide a menu item in the operator panel, select Hidden under a configuration. Click **Hide All** to hide this menu item in all configurations. (For more information on hiding, see page 67.)

Select **Copy Fact (1-8)** to set all configurations to the same value as the factory or user-defined configuration currently selected under the Edit ▸ Copy From: menu in the Configuration Editor (see page 65).

Click **Cancel** to exit the Menu Editor without saving your changes.

Click **Apply** to save your changes without exiting the Menu Editor.

Click **OK** to save your changes and exit the Menu Editor.

Deleting Configurations

To delete any of the configurations (except the Factory Configuration), select **Edit** ▸ **Delete** ▸ and choose the number of the configuration to be deleted.

Naming Configurations

You may give a 15-character, alpha-numeric name to any of the 8 user-defined configurations. Select **Edit** ▸ **Names** to open the Edit Configuration Names window.

Choose the configuration you want to name, then click **OK** to assign the name change, **Cancel** to exit this window without saving your changes, or **Reset** to restore the original configuration numbers.

Hiding/Unhiding Menu Items

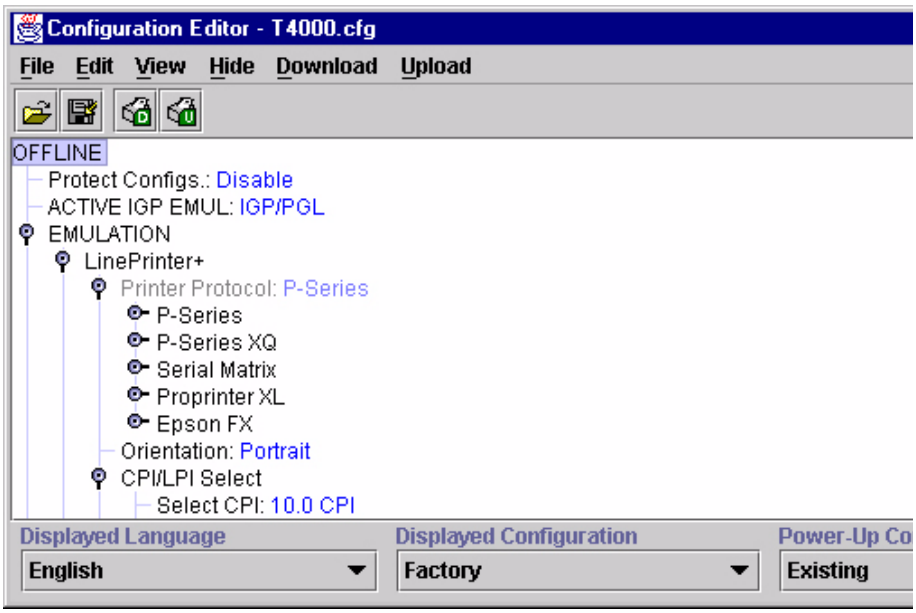


Figure 42. Hiding a Menu Item

The Configuration Editor allows you to hide menus to make the operator panel menus easier to use, or to restrict printer operators from accessing certain printer configuration menu items. If you choose to hide a menu item in the Configuration Editor, the hidden menu item still loads into the printer when the configuration downloads to it. However, the hidden menu item does not appear on the printer's front panel.

The Configuration Editor displays hidden menus in gray on the menu tree. When a menu item is hidden, all of its sub-menus are hidden as well. In Figure 42, the Printer Protocol menu item is hidden. The Printer Protocol menu item, as well as its sub-menus (P-Series, P-Series XQ, etc.) cannot be changed from the printer's operator panel.

You can still change hidden menu items using the Menu Editor.

You can hide or unhide menu items in three ways:

1. Using the keyboard. From the menu tree, select a menu item. A selection box appears around the selected menu item. Press **H** to hide the menu item or **U** to unhide the menu item. (To change these keys, select **File ▸ Preferences** in the Printer Database window. See Figure 10 on page 22.)
2. Using the Menu Editor. See page 67.
3. Using the Hide option on the Configuration Editor menu bar. With this menu option, you may hide or unhide individual items, sub-menus or the entire configuration.

Saving Configuration Files

Normally, your printer can save only nine configurations in its memory. You change these configurations through the printer's operator panel. However, using the PMU, you can store a nearly unlimited number of configurations on your host computer.

Once you have made your changes, you can save your configurations as a `.cfg` file on your local hard drive. This way, you can open any set of configurations from your host computer and download them into your printer quickly and easily.

To save configurations to your local hard drive, select **File ▸ Save As**. Be sure to save your configuration as a *`filename`*`.cfg` file.

Opening Configuration Files

To open a configuration file, select **File ▸ Open**. The Configuration Editor loads the settings from the file you choose.

Remember, these settings do not affect the current configuration or the active printer status until the configurations are downloaded to the printer.

NOTE: The Configuration Editor displays only one configuration file at a time. Be sure to save any changes before opening another configuration file.

Downloading Configurations

You may use the Configuration Editor to download into your printer any configurations you have created. Open the configuration file you wish to use, then use the options under the **Download** menu to send individual configurations, all configurations, or just the configuration names.

Downloading a configuration deletes the corresponding configuration currently stored in the printer. If you wish to save the configurations currently stored in the printer before overwriting them, upload them into the Configuration Editor first, and then save them as a `.cfg` file on your local hard drive.

Uploading Configurations

The Configuration Editor can upload configurations from a printer. Once the configurations upload, you can save them to a file. Now you can select another printer from the database and upload its configurations. The PMU prompts you to save the previously uploaded configuration before the new configuration uploads.

Revert

The Configuration Editor allows you to revert to a previously uploaded printer configuration.

Each time you start the Configuration Editor, the current configuration settings upload from your printer's memory. The Configuration Editor saves this information, and assigns a date and time to it.

Select **File ▸ Revert**, and a list of previous Configuration Editor sessions appears. Choose the date/time stamp of any session to restore the configuration settings that were uploaded from the printer at that time.

To set the maximum number of revert sessions allowed, select **File ▸ Preferences** in the Printer Database window. The default is 10.

NOTE: Revert only works when editing online. When editing offline, you do not need to select a printer.

Flash File Manager

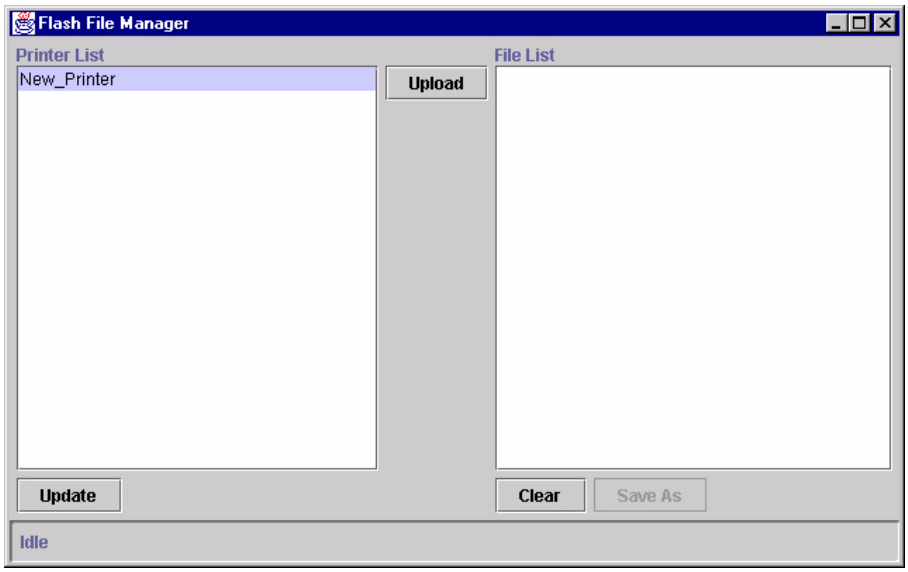


Figure 43. Flash File Manager Window

The Flash File Manager is a tool that allows you to upload all unprotected files from the flash memory of a selected printer. Select **Applications ▸ Flash File Manager** or click the (flash file manager) button.

The Printer List pane displays a list of printers. Depending on what is selected, different printers appear. If you select one printer, it appears alone in the list. If you select a folder, all active printers in the folder appear.

If you select another printer or folder, click **Update** in the lower-left corner to update the Flash File Manager and display the newly selected printer(s).

NOTE: Cloned printers or different folders that link to the same printer do not display. Only the original printer displays.

Click **Upload** to upload unprotected files from the printer's flash memory. Progress displays on the status bar at the bottom of the window.

After the file uploads, it appears in the File List pane. You can save all files together as one downloadable file. Click **Clear** to clear the file list.

Configuration Download/File Download

To download configurations and files using the Printer Database, see page 53.

Data Validation

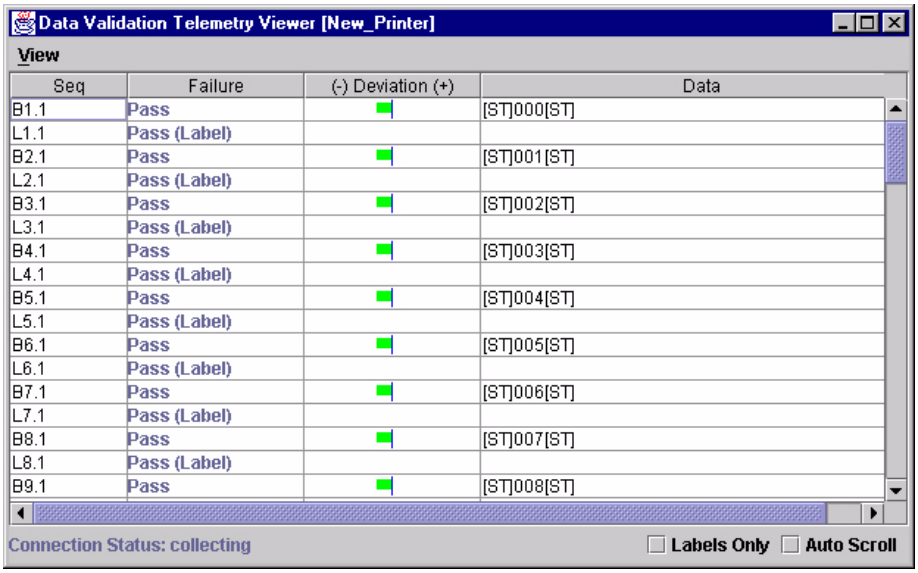


Figure 44. Data Validation Window

Use the Data Validation application for printers equipped with a barcode validator. Validation data transmits over an Ethernet connection to the PMU, which interprets the data and displays statistical information based on the data received.

To access the Data Validation application, first select a printer from the Printer Database that has a barcode validator. Then select **Applications ▸ Data Validation** or click the **Data Validation** button.

Figure 44 shows an example of the Data Validation screen after a print job runs. The printer sends the barcode report to the PMU.

The “Failure” column indicates if each barcode passes validation standards. If one does not, the reason for the failure appears. The “Deviation” column gives a graphic representation of the barcode deviation. The “Data” column indicates the barcode data.

For more information, click a bar code and select **View ▸ Barcode Details**. Figure 45 shows the details for barcode number 12 from Figure 44.

NOTE: You cannot save validation data to a file.

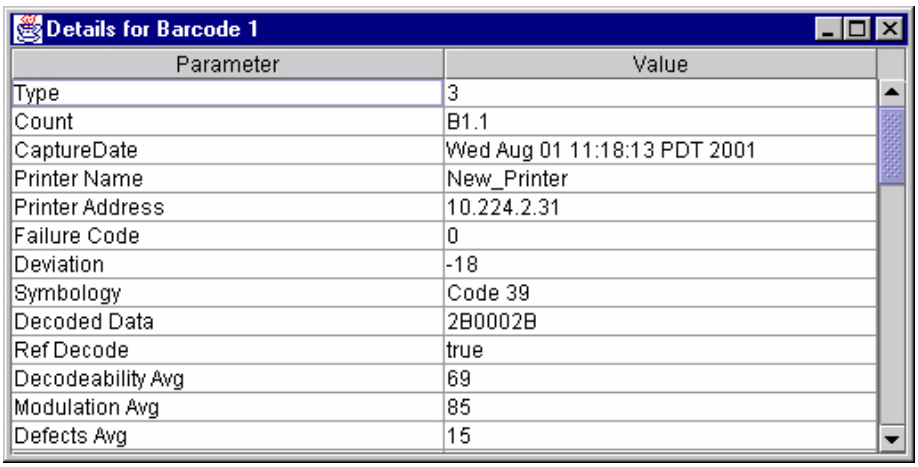


Figure 45. Barcode Details Window

ODV Quality Wizard

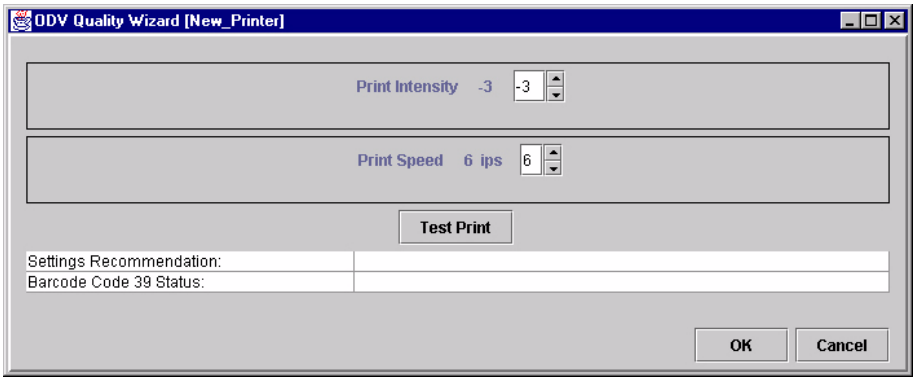


Figure 46. ODV Quality Wizard Window

The ODV (Online Data Validation) Quality Wizard is a function that helps you select the best combination of print speed and print intensity that will produce optimal bar code output. It displays controls that allow you to select a print speed and a print intensity.

Click the **Test Print** button to print and validate a test bar code pattern. Based on the validation results, the ODV Quality Wizard changes settings to optimize the bar code quality.

Click **OK** to save these changes in Configuration 1. Configuration 1 then becomes the Power-Up configuration (see page 64). Click **Cancel** to not save the changes.

Configure Print Servers

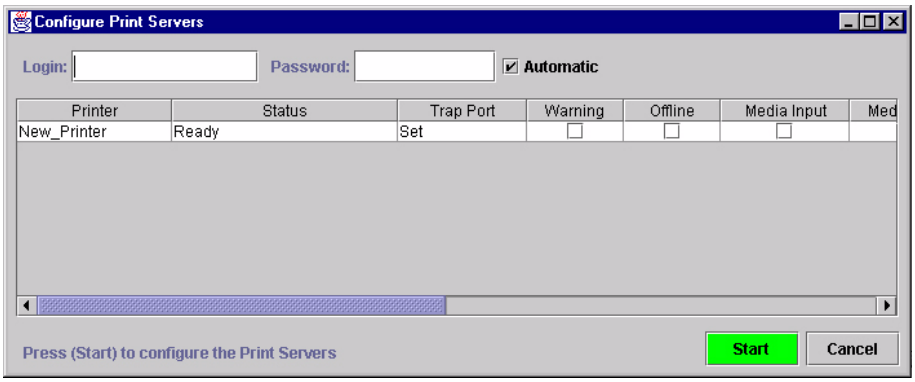


Figure 47. Configure Print Servers Window

To access the Configure Print Servers application, select one or several printers from the printer database then select **Applications ▸ Configure Print Servers** or click the **Configure Print Servers** button. The Configure Print Servers window appears (see Figure 47).

The Configure Print Servers application allows you to select alert groups. To select an alert group, click the check box(es) of the corresponding option(s). The alert group options include:

- Warning
- Offline
- Media Input
- Media Output
- Media Path
- Marker
- Cutter
- Barcode
- Scanner
- Intervention
- Consumable
- Label

Click **Start** to configure the print servers. When your printer encounters a problem that falls within the parameters of the selected alert options, the corresponding alert message appears. Refer to the Alert Groups Table in chapter three of the *Ethernet Interface User's Manual* for descriptions of the alert message options.

NOTE: To check the print servers configuration, go to the Ethernet Interface web page as discussed in chapter three of the *Ethernet Interface User's Manual*.

Speed Keys

The Speed Keys are single buttons that allow you to perform a specific operation without having to traverse the printer's front panel menu structure. The Speed Keys assist you in performing repetitive functions associated with printer configuration or maintenance.

To access Speed Keys, select a printer then select **Applications ▸ Speed Keys** or click the **Speed Keys** button.See Figure 48.

Changes made using Speed Keys are changed in the printer and saved in Configuration 1. Configuration 1 then becomes the Power-Up configuration (see page 64).

NOTE: Speed Keys are printer specific, and not all printer models have Speed Key support. Printers without Speed Key support return the error message:

```
Operation not allowed on this type of printer.
```

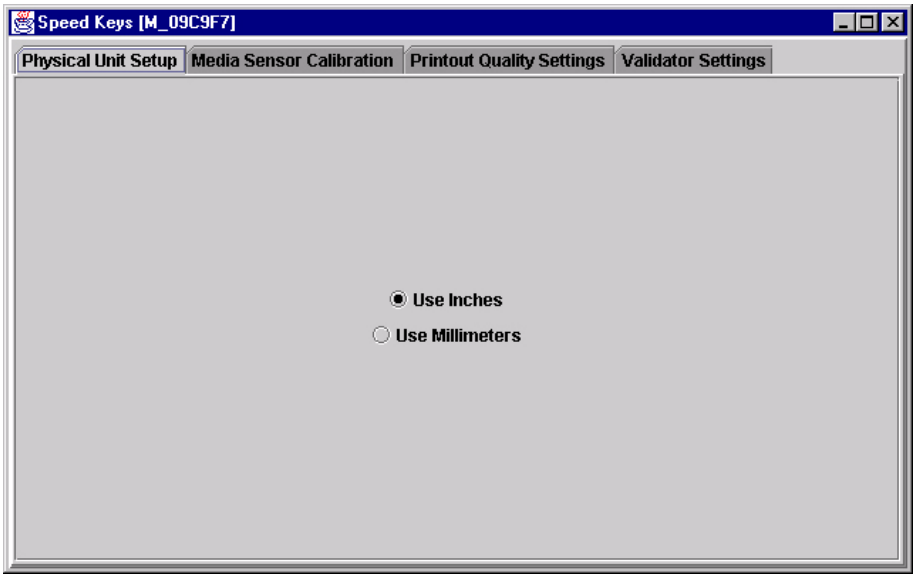


Figure 48. The Speed Keys Window

The Speed Keys are grouped according to their use:

- Physical Unit Setup
- Media Sensor Calibration
- Printout Quality Settings
- Validator Settings

NOTE: For an explanation of the functions the Speed Keys perform, see your *User's Manual.*

Web Access

You can access your printers using a web browser. You can monitor the status, open an operator panel, check the configurations, access Speed Keys, open the ODV Quality Wizard, and access the printer web page.

NOTE: To access your printer using a web browser, you must enable the Web Server and Xml Server services (see page 23). Remember to exit and restart the PMU to enable the service.

The PMU Web Site URL Address

Open a web browser. In the URL address field, type **`http://`**, followed by the host name (computer name, not case-sensitive) or the host IP address of the workstation running the PMU, followed by a **`:`** (colon), and then the port number.

For example:

```
http://lab21042:8080
```

or:

```
http://10.224.5.121:8080
```

NOTE: Make sure the port number does not conflict with another port number designated for a different purpose.

Press **Enter**, and the web page for your designated printer appears. See Figure 50.

(To find the host name using Windows, right-click **Network Neighborhood** on your desktop and select **Properties**. The Network dialog box opens, and the computer name appears in the Identification tab. See Figure 49.)

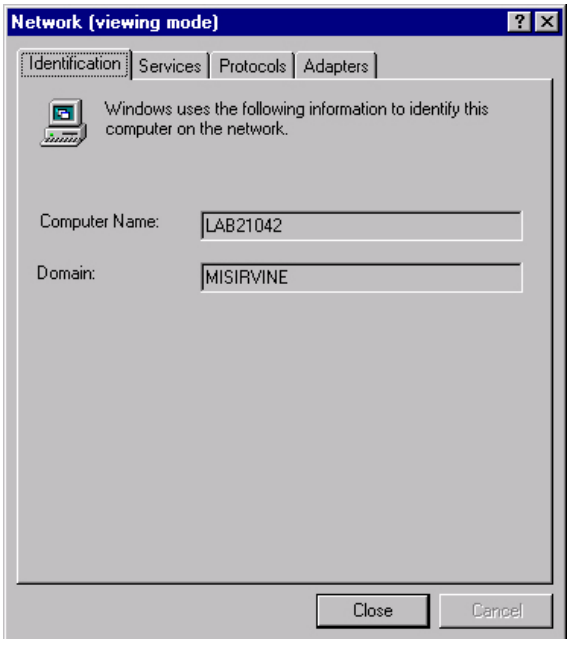


Figure 49. Finding Your Host Name In Windows

Login To The PMU Web Site

Figure 50. The PMU Web Site

By default, three categories of login privileges are available. See Table 2 for a list of categories and their corresponding user names and passwords.

Table 2. User Login Options

Login Category	User name	Password
Standard	standard	standard
Supervisor	super	super
Administrator	admin	admin

Type **admin** for the user name and password, then click **Login**. The Select Desired Page web page appears. See Figure 51.

Figure 51. The Select Desired Page Web Page

Changing The User Password

You can change the default password. Click **Change Password Page**, and the Change Password web page appears. See Figure 52.

Figure 52. The Change Password Web Page

Enter a new password in the New Password and Retype Password fields, then Click **Change Password**. Your password changes and you return to the Select Desired Page web page.

The Printer List Page

Click **Printer List Page**. The Printer List web page appears and lists the same printers found in the database pane. See Figure 53.

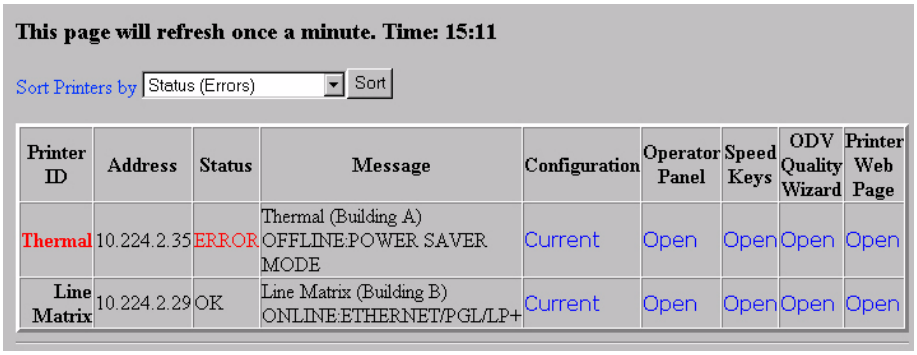


Figure 53. The Printer List Web Page

By default, printers are sorted by Status (Errors). You can also sort printers by Status (Warnings), Status (Online), Address (Ascending), and Address (Descending).

In the above example, the thermal printer displays an error because it is offline. Any printer not ready to print displays an error status.

For an explanation of the Printer List Page options, find the option in Table 3 and follow the corresponding reference.

Table 3. Printer List Page Options

Web Page Option	Reference
Configuration	displays the printer's current configuration
Operator Panel	page 59
Speed Keys	page 74
ODV Quality Wizard	page 72
Printer Web Page	opens the IBM network adapter home page; refer to chapter three of the *Ethernet Interface User's Manual*

NOTE: Administrators and Supervisors can access all five options. Standard users can access only Configuration and Printer Web Page.

Changing User Settings, IP Addresses, and IP Address Ranges

The PpmLogin.xml file, located in the PMU program directory, contains user settings and the included/excluded IP addresses and IP address ranges. Open this file with any standard text editor. See Figure 54.

IMPORTANT **The PpmLogin.xml file should only be modified by expert users. Incorrect entries in this file could render the Web Server service unusable.**

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ppmXML [
    <!ELEMENT ppmXML (LoginDatabase)>
    <!ELEMENT LoginDatabase (UserDatabase, MachineDatabase)>
      <!ELEMENT UserDatabase (userid*)>
      <!ELEMENT userid (#PCDATA)>
      <!ATTLIST userid password CDATA #IMPLIED>
      <!ATTLIST userid privilege (admin|standard|super) "standard" >
      <!ELEMENT MachineDatabase (ipAddressIncluded* , ipAddressExcluded*, ipAddressIncludeRange*, ipAddressExcludeRange*)>
      <!ELEMENT ipAddressIncluded (#PCDATA)>
      <!ELEMENT ipAddressExcluded (#PCDATA)>
      <!ELEMENT ipAddressIncludeRange (#PCDATA)>
      <!ATTLIST ipAddressIncludeRange start CDATA #IMPLIED>
      <!ATTLIST ipAddressIncludeRange end CDATA #IMPLIED>
      <!ELEMENT ipAddressExcludeRange (#PCDATA)>
      <!ATTLIST ipAddressExcludeRange start CDATA #IMPLIED>
      <!ATTLIST ipAddressExcludeRange end CDATA #IMPLIED>
]>
<ppmXML>
   <LoginDatabase>
      <!-- For some user to access the printer information, they need to be added by userid. -->
      <!-- The IP address of their machine also needs to be authorized. -->
     <UserDatabase>
      <!-- All the user names, their privilege type (standard, super, admin) needs to be added here -->
      <userid password="standard" privilege="standard">standard</userid>
      <userid password="super" privilege="super">super</userid>
      <userid password="admin" privilege="admin">admin</userid>
     </UserDatabase>
     <MachineDatabase>
      <!-- Individual address can be included or excluded from accessing the printer information. -->
      <!-- ipAddressIncluded and ipAddressExcluded are used for individual addresses. -->
      <ipAddressIncluded>10.22.1.121</ipAddressIncluded>
      <ipAddressExcluded>100.100.100.100</ipAddressExcluded>
      <!-- Use ipAddressIncludeRange and its start and end attributes to define the access range. -->
      <ipAddressIncludeRange start="00.00.00.00" end="255.255.255.255"></ipAddressIncludeRange>
      <!-- Use ipAddressExcludeRange and its start and end attributes to define the invalid access range. -->
      <ipAddressExcludeRange start="00.00.00.00" end="00.00.00.1"></ipAddressExcludeRange>
     </MachineDatabase>
   </LoginDatabase>
</ppmXML>
```

Figure 54. The PpmLogin.xml File

User Settings

The user name, password, and privilege category are defined in the `<UserDatabase>` section of the file.

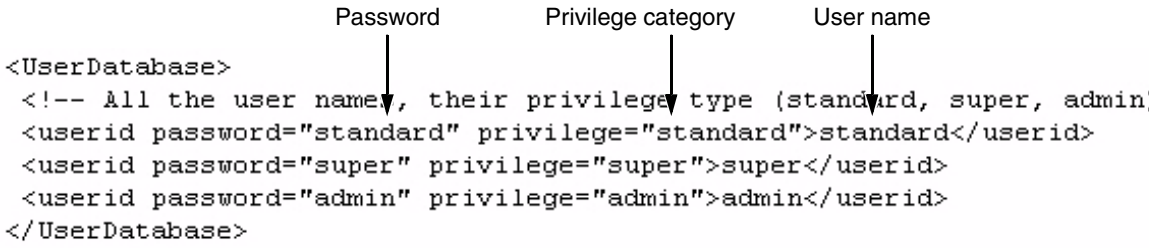


Figure 55. User Login Parameters

Password: Defines the password for the designated user name. When you change the password using the Change Password web page, this information updates.

Privilege Category: Defines the privilege for the designated user name. The available options are: standard, super, and admin.

User name: Defines the user name. You can only change the user name by modifying this attribute.

You can add additional users by duplicating the following line in the `<UserDatabase>` section:

```
<userid password="standard" privilege="standard">
standard</userid>
```

IP Addresses and IP Address Ranges

You can define which IP addresses are available to the PMU for access. Any IP address not included or defined in the included range will be unavailable to the PMU. In addition, any IP address excluded or defined in the excluded range will also be unavailable. The included and excluded IP addresses are defined in the `<MachineDatabase>` section of the file.

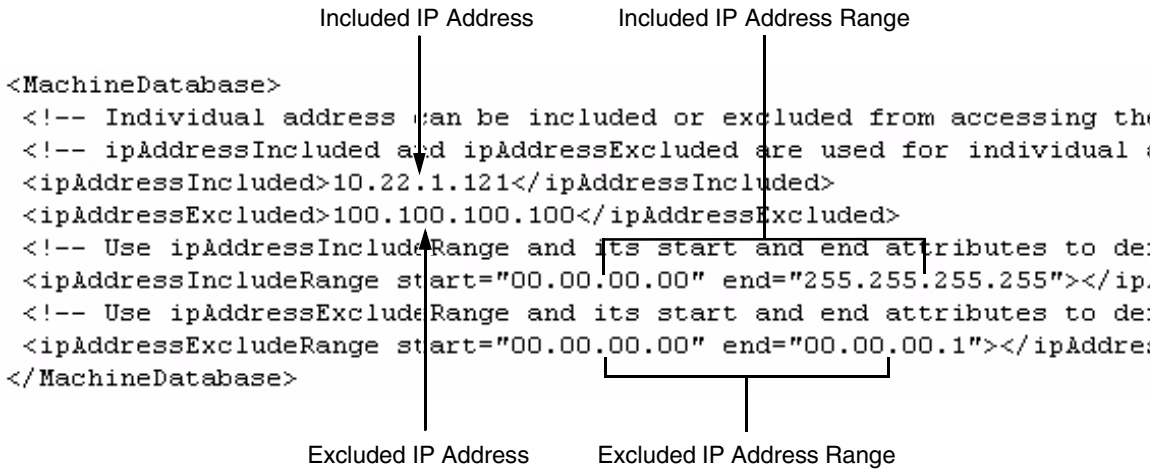


Figure 56. Include/Exclude IP Address Options

Address Included: Defines which IP address to include.

Address Excluded: Defines which IP address to exclude.

Address Include Range: Defines the range of IP addresses to include.

Address Exclude Range: Defines the range of IP addresses to exclude.

You can add additional included/excluded IP addresses or IP address ranges by duplicating the corresponding lines in the `<MachineDatabase>` section:

```
<ipAddressIncluded>10.22.1.121</ipAddressIncluded>

<ipAddressExcluded>100.100.100.100</ipAddressExcluded>

<ipAddressIncludeRange start="00.00.00.00"
end="255.255.255.255"></ipAddressIncludeRange>

<ipAddressExcludeRange start="00.00.00.00"
end="00.00.00.1"></ipAddressExcludeRange>
```

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