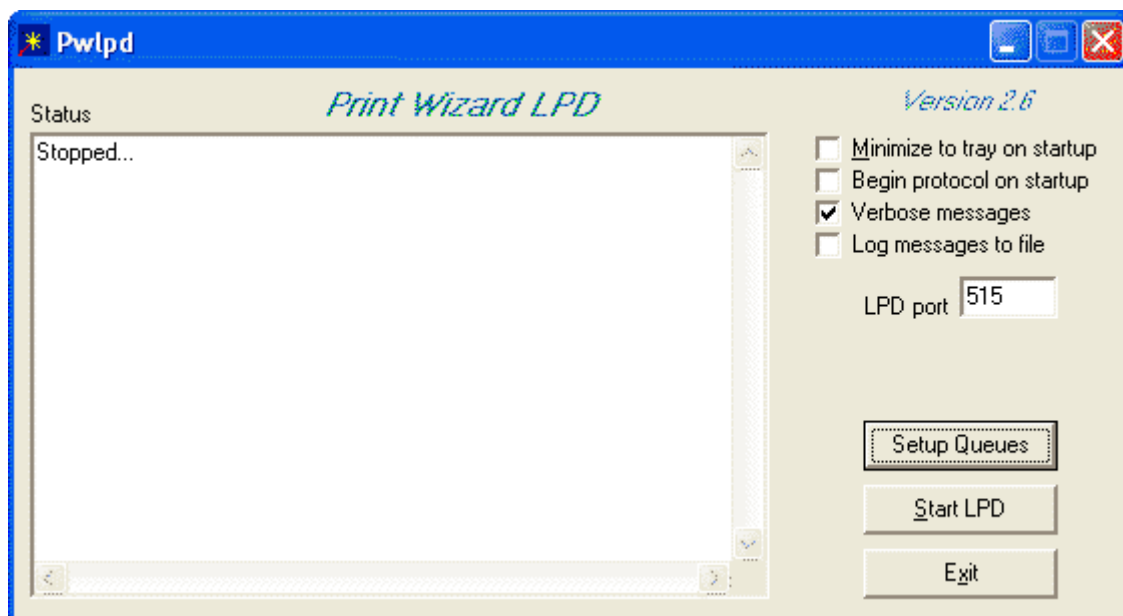# Print Wizard LPD Documentation

Print Wizard LPD is the latest addition to the Print Wizard utilities set. PWLPD runs as a server, waiting for commands from an LPR client on another, remote computer. PWLPD waits and listens for commands using the LPD TCP/IP protocol. PWLPD runs as a Windows system tray application waiting for print jobs to come in from the client.

PWLPD is your typical LPD with a few additions. PWLPD sits and listens on the specified network port for print jobs directed to the particular PC IP address and a particular queue.

Main Screen

The opening screen is shown below. These are the general options for how PWLPD will start and what messages will be logged. Also all messages received are displayed here.

Minimize to tray on startup

If the application is set to "Minimize to tray on startup", the main screen will not display, but will remain on the Windows system tray as an icon.

You can then access the main dialog by double clicking on this icon, or by right-clicking and bringing up the popup menu to Show Window. You can also Start and Stop the application from listening with the popup menu.

Begin protocol on startup

If this is checked, when you start the PWLPD program, it will immediately begin listening for print jobs on the default port.

Verbose messages

When this is checked, additional text messages are displayed in the main window whenever an action takes place. When unchecked, only those messages related to the general state of PWLPD are display.

Log messages to file

When this is checked all messages are logged to a file called "pwlpd.log" in the current working directory.

LPD port

This changes the standard port for the LPD protocol. Normally PWLPD will listen on port 515.

Setup queues

By clicking on this, you can set the default queue, and add or remove print queues from PWLPD. You can also set various properties for the print queues here. See below for more information.

Start/Stop LPD

This button toggles the state of the LPD listener. You can start PWLPD listening or you can stop it.

Exit

This stops the LPD service (if it is listening), saves all parameters and exits from the application.

Setup Queues

From this dialog, you can add, remove or modify the properties of a particular queue. You can also specify which queue is the current default queue.
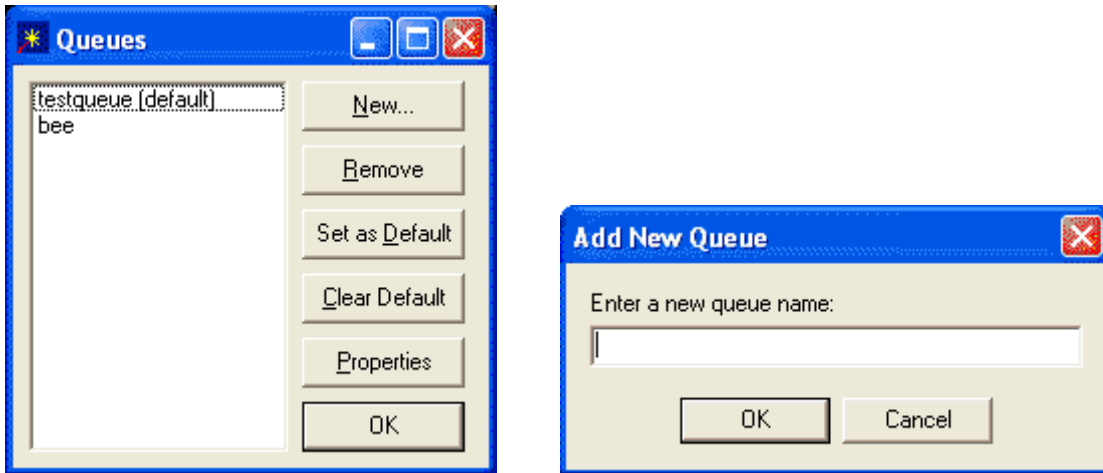
New

By clicking on this button, you can add a new queue. Specify the queue name as it would appear in your LPR configuration. If you add a new queue, you should also click on the Properties button and configure how this queue should behave.

Remove

Remove deletes the currently selected queue from the left side of the dialog. This includes deleting its properties. CAREFUL!

Set as Default

When clicked the selected queue on the left side of the dialog becomes the default print queue.

Clear Default

When clicked the default queue setting is cleared.

Properties

This button brings up the Properties dialog (defined below) which allows you to specify what behavior is associated with a particular print queue.

Properties

Properties are the behaviors associated with a particular print queue. When a job arrives from a client with a specific queue name, the appropriate action is followed.
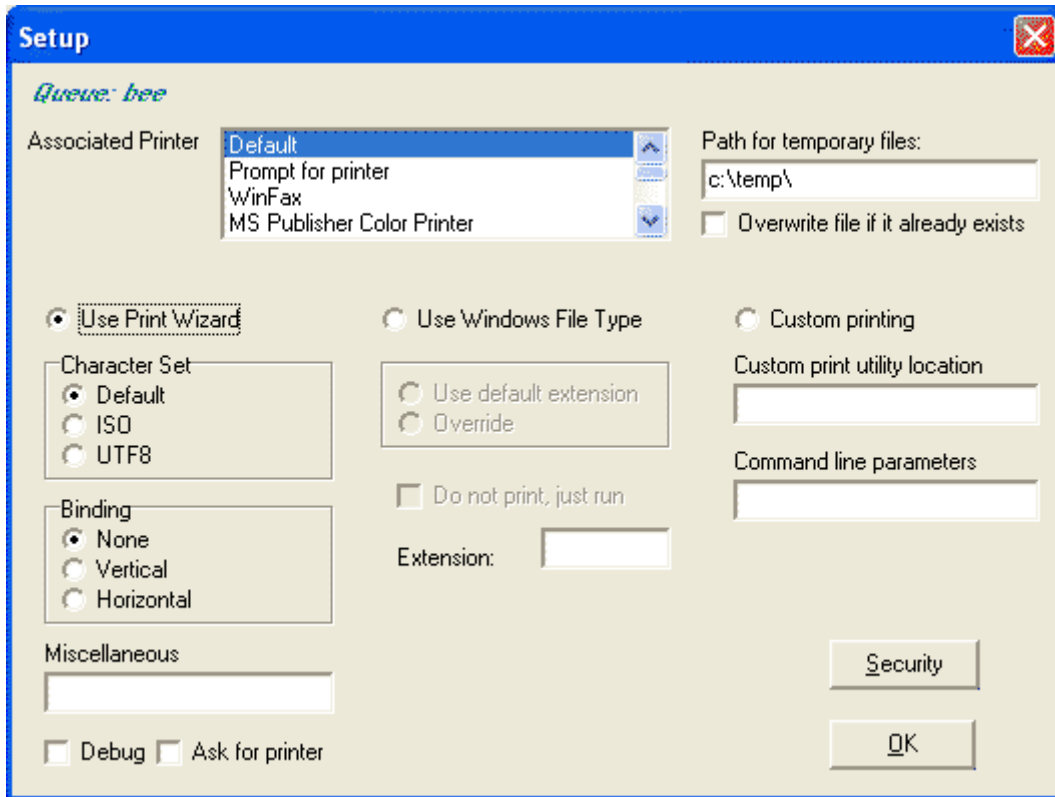
Associated Printer

This lists the printers available to your PC. You can select the printer to associate with the print queue.

Path for temporary files

The directory for temporary files can be specified here. By default, these files are located in your current Windows temporary directory, usually c:\windows\temp\.

Overwrite file if it already exists

By checking this option, if the file name exists in the directory for temporary files as defined above, the file will be replaced. Otherwise incoming files that match a current file are pre-pended with a dollar sign, i.e. \temp\$filename. This is a fail-safe operation only as temporary files should be removed once printed.

Use Print Wizard

This allows you to set the default action to print through the Print Wizard program, printwiz.exe. The default is to look for the program in your current directory. When a print job comes in for this queue, the Print Wizard will print the data for you.

You can specify a Character Set, and a Binding to use for the Print Job. Any miscellaneous command-line switches currently available for Print Wizard can be added in the Miscellaneous field. You can also turn on the Print Wizard debug option, and you can force Print Wizard to always ask you for the printer to print to.

Use Windows File Type

This will print the job through the Windows "print" option. To use this function a) the file name of the file being sent must be found in the Control Record coming from the client for the print job, and b) a file association that understands your extension must exist on your Windows machine for that file – see File Types or Folder Options under your Windows Explorer.

"Use default extension" will simply try to do the print of the original file based on the received file name extension.

If the file name received does not include an extension or you wish to use a different extension on the file, select "Override" and enter an extension in the appropriate space. This extension will then be used on the new file. In this manner, you can force a certain application to perform your printing for you.

With the "Do not print, just run" option, you can specify that you want to run the program associated with the extension, rather than print it. As an example, this would allow you to actually view and edit a spreadsheet being sent from a client.

Custom Printing

Custom printing allows you to specify your own print filter utility. The original client file name is passed automatically as the last command line parameter for the application. You can insert other command-line parameters if you need.

Security

This button, when pressed, will allow you to set up security for the print queue. Various queues can each have their own security settings, based either on the host name or the user name received from in the control record of the print job.
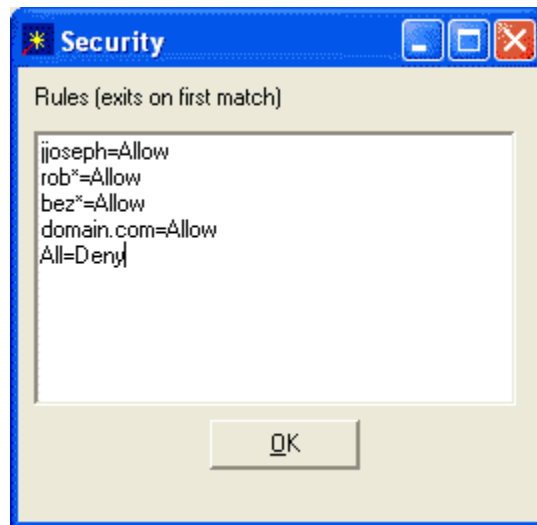
Note: Some LPD implementations do not send the proper host name or user name as part of the control record. If a print job was denied, you will see an "Access denied" message

followed by the user name and the host name, either in the message box or the log file. If no user name or host name shows, then the LPR client on the other end is not sending one. You may then have to delete all your rules for that queue and allow all users access.

How does this work? The general syntax for the rules is quite simple.

The string, the key, is the string to look for in the host name and/or user name. If an asterisk, '*', is found at the end of a string, a wildcard search is performed, assuming the string starts at position one. As soon as a match is found, the rules processing exits and the current status applies. The second part of the string is the value or status. Values should be either "Deny" or "Allow". An equal sign separates the two.

```
* Security                    [_][□][X]

Rules (exits on first match)

jjoseph=Allow
rob*=Allow
bez*=Allow
domain.com=Allow
All=Deny|



                    OK
```

The example above illustrates how to set security for a queue. In the first line, if the user name or host name is 'jjoseph' then there is a match and the print job is allowed.

In the second line, if the user or host name begins with 'rob', then the job is allowed – this means 'robin', 'robert', 'rob', 'robin.com', 'robertson' or 'robertson.com' are all valid and allowed. Likewise with the third line, if the host or user begins with 'bez', then the print job will be processed.

The fourth line, allows any 'domain.com' entries and the final line denies all entries not matching something above.

Files associated with PWLPD

All parameters for PWLPD are stored in a file called pwlpd.ini. This file is located in the same directory as the executable.

Logs are written to the directory containing the executable as pwlpd.log.

Temporary files are created in your default Windows temporary directory, usually c:\windows\temp\, unless you override this on the Properties screen.

When the host system is UNIX and the file name includes forward slashes, '/', (see the section below on *Extras* and *Using Host Options At The PC*), PWLPD will carry this information forward as part of the file name, replacing the slash with an underscore. As an example, if you are to print /etc/hosts through the lpr command from a Linux or UNIX system, the file will go to your currently defined directory as
        <directory>_etc_hosts

If the file you are printing already exists within your current working directory, the file name is pre-pended with a '$', unless you have the Overwrite option selected in the Properties.

Client-end Configuration

Most all UNIX and LINUX systems come with the ability to support lpr and lpd. The lpr command is what would be used to send print data to a remote computer running PWLPD. You will need to define the print queue for the lpr host and the remote queue for it to send to (these may be different). See your specific documentation for the version of your operating system for more information.

A typical command to send a print job from a Linux host would be
        lpr -Plpauto test.doc
This assumes that on the Linux host you have already set up lpr and have defined an associated Linux printer of lpauto, and have defined what queue name to use when sending – in this case it was set up before hand to send to AUTO.

Examples & Tutorial

An example of how you might utilize this:

Let's say you have a group of files on a remote host system, each needing a special method of printing. Many jobs are to print simply out to the printer, but the reports vary in size, etc. However, you also have a handful of special reports that are to be printed out through a variety of applications.

In this example, set up a queue called *"AUTO"* to do most of the print jobs that arrive at this PC. This queue is set for "Use Print Wizard" and to print to the PC's default printer under the Properties. This way 80 column reports, 125 column reports and 135 column reports are all scaled automatically through Print Wizard and printed on the local printer.

"lp" is set to always use the default Windows extension. The assumption with this queue is that the file extension is present on each filename.

"WordDocs" queue is set to print using the Windows file extension and Microsoft Word. If the documents all have the .doc extension, there is no problem. If they do not, you can still force the documents coming in to Word by including the .doc extension and overriding the default file extension. Word will then print these automatically.

"ExcelDocs" is actually set to print similar to "WordDocs" but to go through Microsoft Excel.

"PrintWiz" is set to "Use Print Wizard" in its properties, but it needs to print special forms (which Print Wizard can handle) on a different printer, i.e. color labels.

The properties for *"CustomFilter"* are set to print using a custom application, in my case, these jobs are to be faxed and hence need to go through Print Wizard's MAPISEND program.

Extras

Drag-and-Drop Printing

PWLPD has an added feature, not related to the LPR/LPD protocol, but is useful under Windows. With PWLPD running in the background and Windows Explorer in the foreground, you can select a file you wish to print and with your mouse drag that file name or icon and drop it on the PWLPD program or tray icon, and the file will print.

In order for this to work, you must either have a queue defined as "DEFAULT" or you must have an existing queue set as the "default" queue for PWLPD. Files dropped on PWLPD will print using the parameters defined for the default queue.

Using Host Options At The PC

You have three options when setting up a queue: pass it to Print Wizard, use Windows File Association or pass the file name to a third party program or script. PWLPD allows a queue to control what to do with the resulting job print file.

PWLPD can also glean certain information from certain control header records coming in from the lpr program and pass this information on as well. This is especially useful when passing the information on to a third party script. PWLPD will parse this data and substitute it on the command-line where a script expects it to be.

Rasmussen Software, Inc., 10240 SW Nimbus Ave., Suite L9, Portland, Oregon 97223
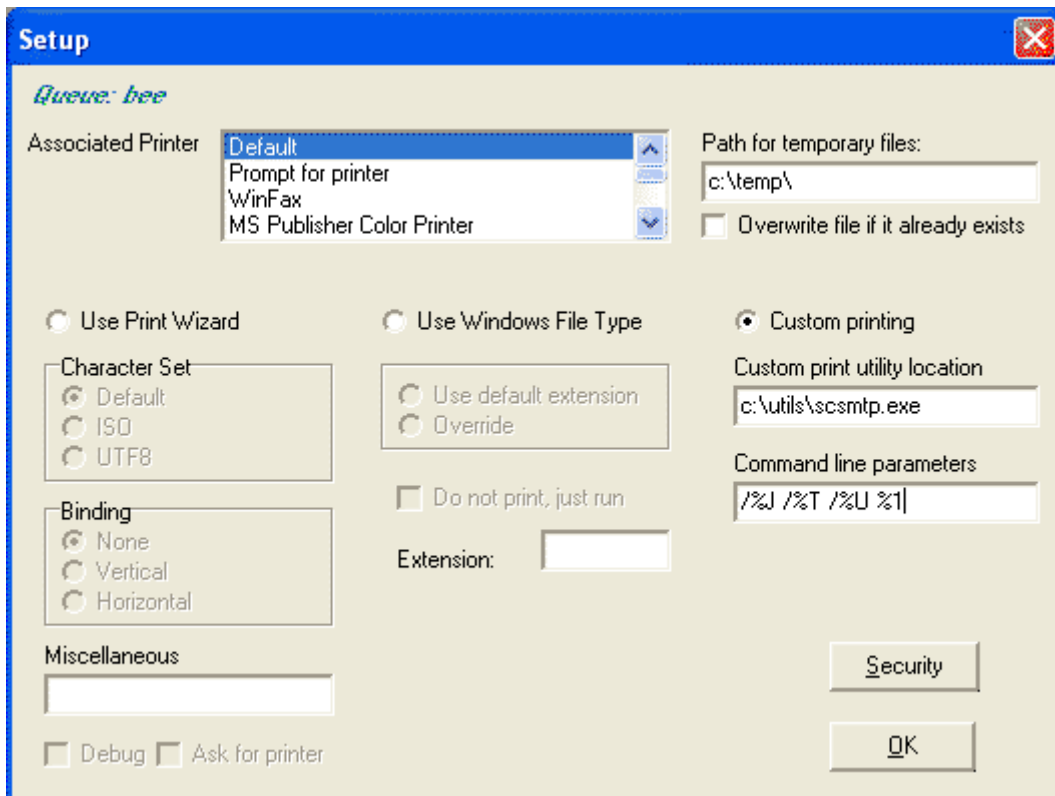
The example above shows a command-line containing information to be filled in by the print job.

In order to understand what data you may select from for the command-line, you need to know a little about the lpr capabilities of the sender. The table below lays out the option you select in the lpr command at the sender's end (this example is for Linux and may vary by host implementation), the control records we may receive and the PWLPD option you may include in the parameters.

LPR switch (as is for Linux lpr)	Control header	PWLPD switch	Default value
	N - filename	%1	<filename>
-J <job name>	J - jobname	%J	<filename>
-m <mailto address>	M - mail address	%M	
-C <class name>	C - class	%C	<hostname>
	H - host	%H	<host.domain>
-T <title>	T - title	%T	
-U <user>	P - user	%U	<Unix login>

Any of these strings coming from the host with embedded spaces, will be placed in quotes in order to appropriately pass them on to the application.

Note that while the email address from the '-m' option does get passed through to PWLPD and can be used, an email message with the result of the lpr command is also sent to that email.