

Creating a free PDFWriter using Ghostscript

This web page provides step by step instructions on how to create a simple but functional PDF Writer on Windows 98/2000/XP using the freely available Ghostscript and RedMon utilities. A PDF Writers is a virtual printer that allows you to "print" (i.e. create) PDF files from your applications. There are quite a few steps and these instructions are **not** for novice computer users. The steps below were captured on a Windows XP system and they may vary under Windows 98 or 2000.

This process through which the conversion from document to PDF file happens is as follows:

Document → Virtual Postscript Printer → RedMon → Ghostscript → GS *pdfwrite* device → PDF file

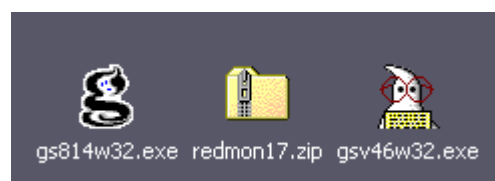
The steps required to get this to work are:

1. [Download Required Packages.](#)
2. [Install Ghostscript.](#)
3. [Install GSview \(optional\).](#)
4. [Install RedMon.](#)
5. [Create the Ghostscript Options File.](#)
6. [Create the Virtual PDF Printer.](#)
7. [Configure the Virtual PDF Printer.](#)
8. [Configure the RPT1: Port.](#)
9. [Print a Test Page.](#)

I'd appreciate any feedback and comments on this page and these instructions. Send feedback to henrik@stat.tamu.edu.

• *Download Required Packages.*

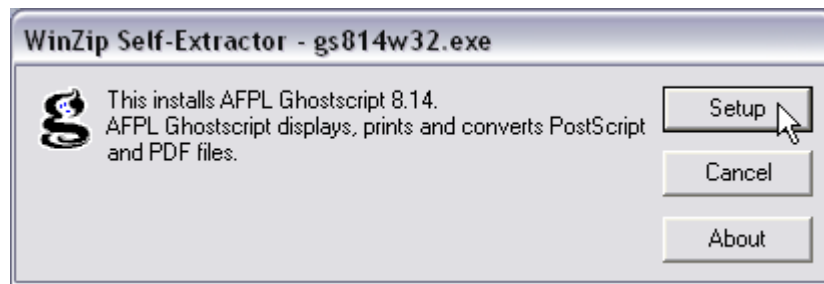
The first step is to download the Ghostscript and RedMon software package. A companion package called GSview is **not** needed, but it may be a good idea to install both since GSview is a graphical interface to Ghostscript. At the time of this writing the Ghostscript package was at version 8.14 and the GSview package was at version 4.6. [Click here](#) and download the files called **gs814w32.exe** (needed) **redmon17.zip** (needed) and **gsv46w32.exe** (optional). *Note: the file names will be different for newer versions of the programs.*



• *Install Ghostscript.*

*Synopsis: We install Ghostscript to the folder **C:\gs**. We note the version number.*

Double click on **gs814w32.exe**:



and click on **Setup**:

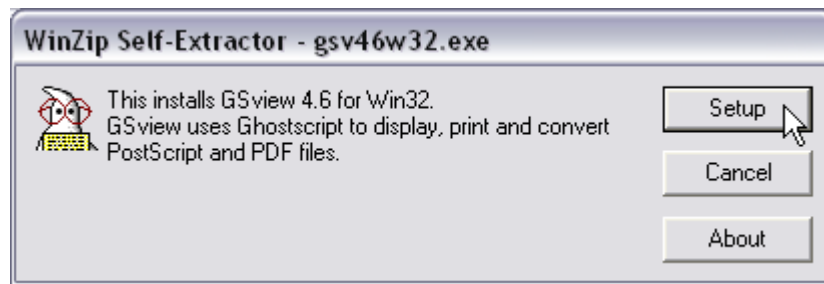


Note the version number the Ghostscript we are installing in this case it is 8.14 (you may need this later). Select the where you want to install the program under the **Install to Directory**. If you are not sure what to place here, leave the default **C:\gs**. All directions below presume Ghostscript was installed in **C:\gs**. You need to adjust all instructions for the actual installation path you choose. Make sure **Install Fonts** is checked. Click on **Install** to proceed. If no error messages appear, Ghostscript is now installed. The setup file **gs814w32.exe** can now be deleted (though you may want to wait until you know the entire setup is working).

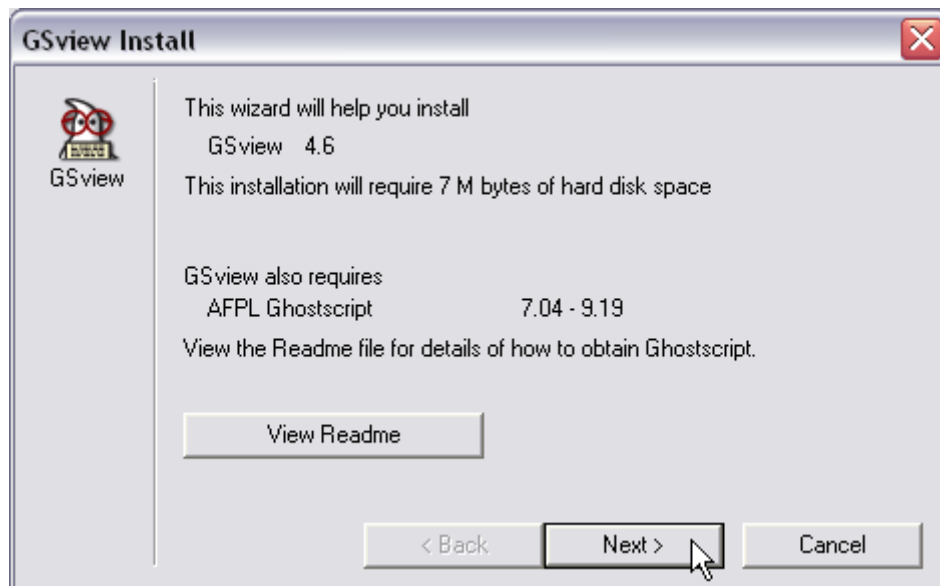
- **Install GSview.**

Synopsis: We install the optional package GSview using the default setup options.

We now install GSview, a GUI front end for Ghostscript. GSview useful for previewing Postscript (and EPS and PDF) files using Ghostscript. Double click on **gsv46w32.exe**:



and click on **Setup**:



Proceed by clicking repeatedly on **Next** leaving the default options as they are until you reach the last screen:



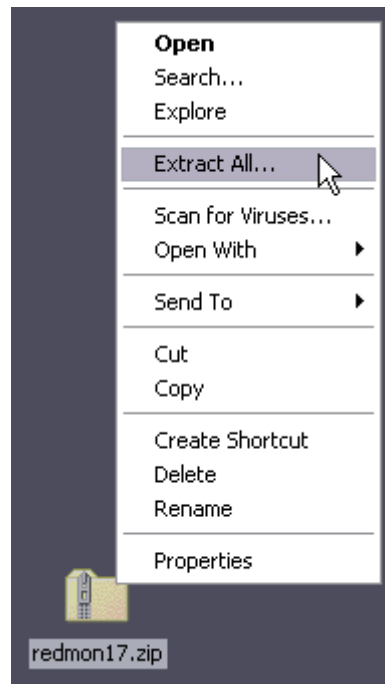
Click on **Finish** and then on **Exit**. GSview will now be installed. You can find it under the Start Menu folder Ghostgum. You can now delete the file **gsv46w32.exe**.

- **Install RedMon.**

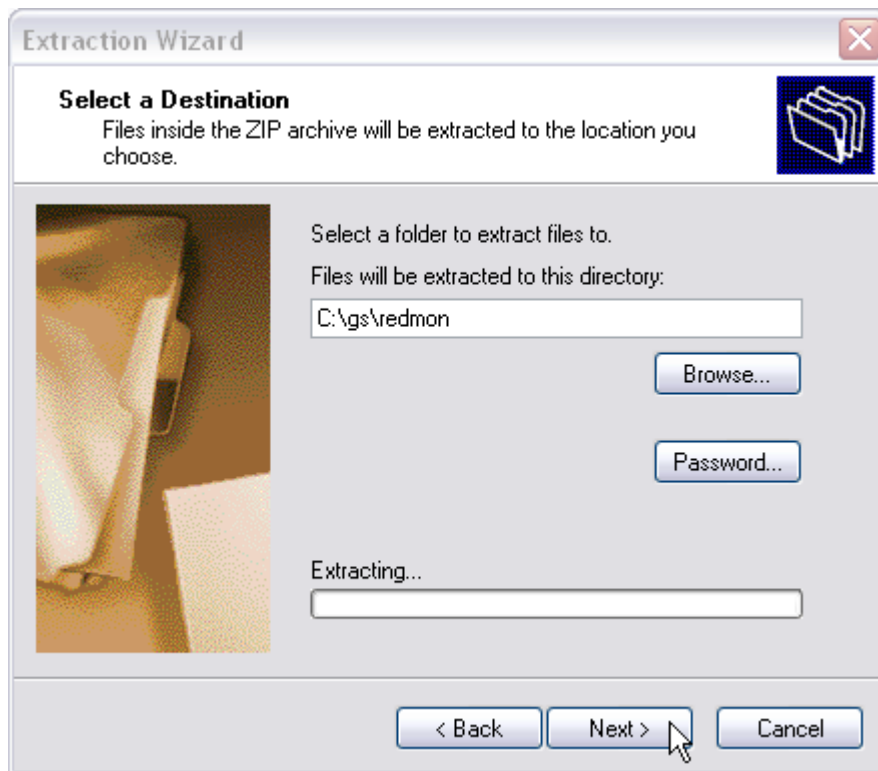
*Synopsis: We extract RedMon into the **C:\gs\redmon** folder and install it.*

RedMon is the utility that will enable you to convert Ghostscript into a virtual printer that creates the PDF files. We need to extract the **redmon17.zip** archive into the **C:\gs\redmon** folder and install RedMon. *The following instruction will work on Windows XP, but not earlier versions of Windows since those do not have build-in ZIP archive extraction. If you need a utility to extract ZIP files I recommend [IZArc](#) (freeware). Extract the ZIP archive to **C:\gs\redmon** and [go here](#) to continue.*

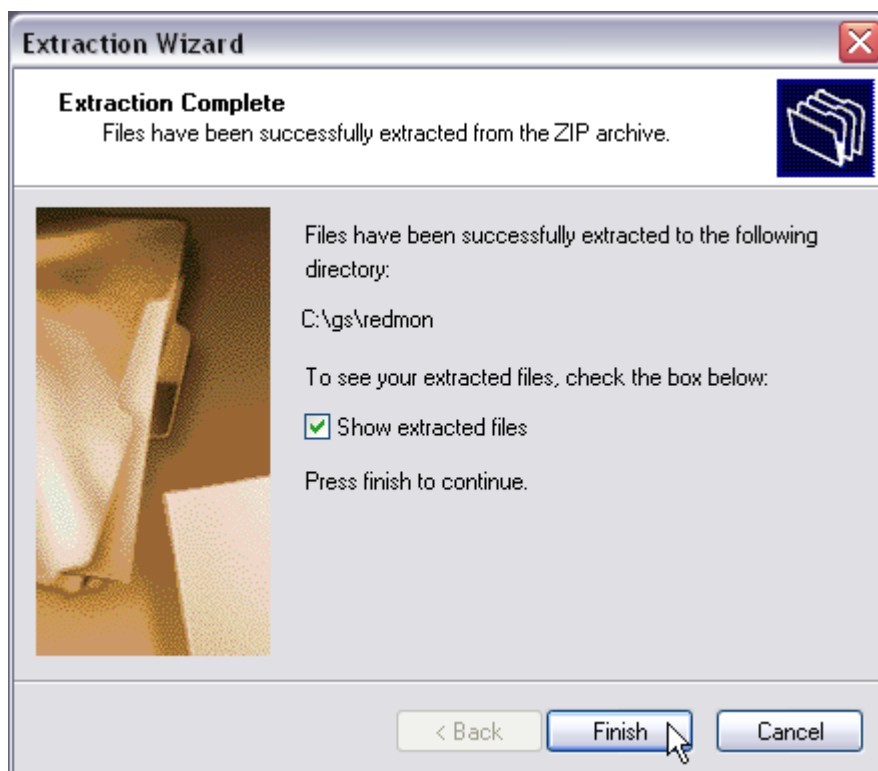
Right-click on the **redmon17.zip** file and select **Extract All...**:



Click on **Next** and this window will appear:

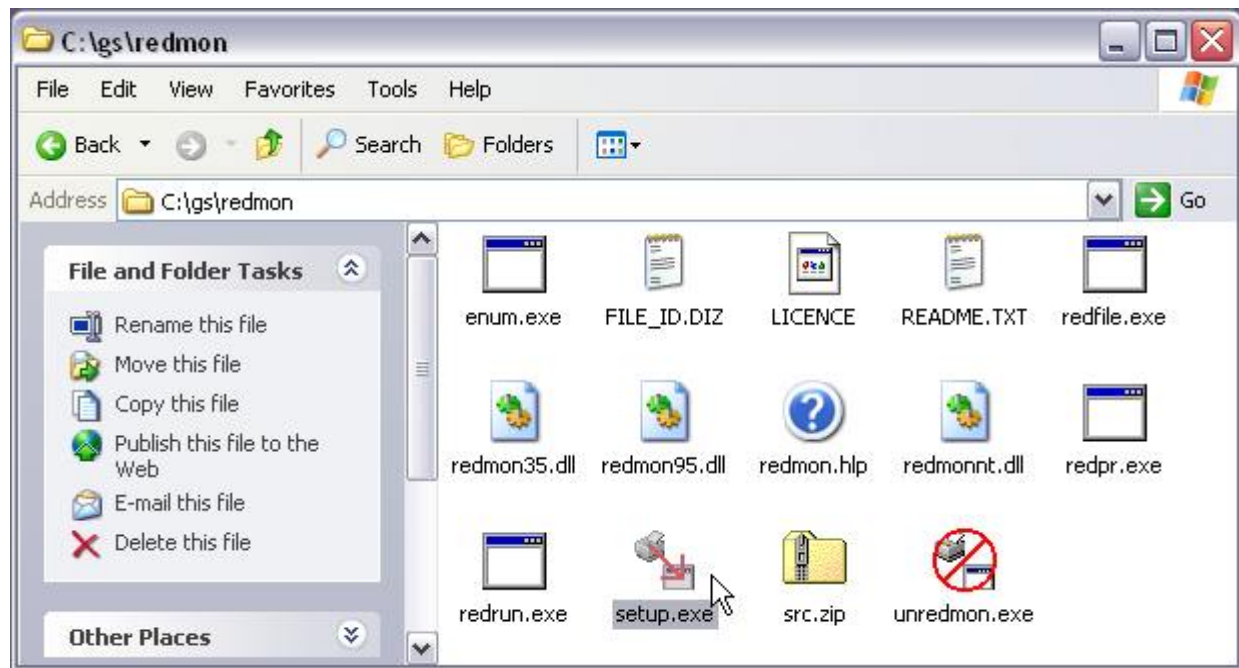


Enter **C:\gs\redmon** under **Files will be extracted to this directory:**. Click on **Next** to proceed.

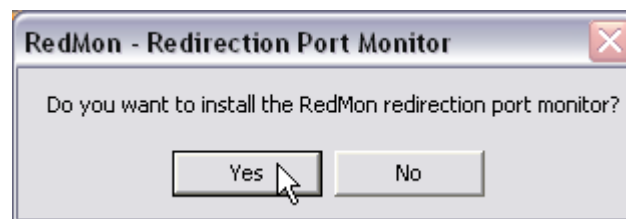


Make sure the **Show extracted files** is checked and click on **Finish**.

The following folder should appear. *Note: The folder may look different depending on how Windows XP is configured to display folders.*



Double-click on **setup.exe**:



and click on **Yes**:

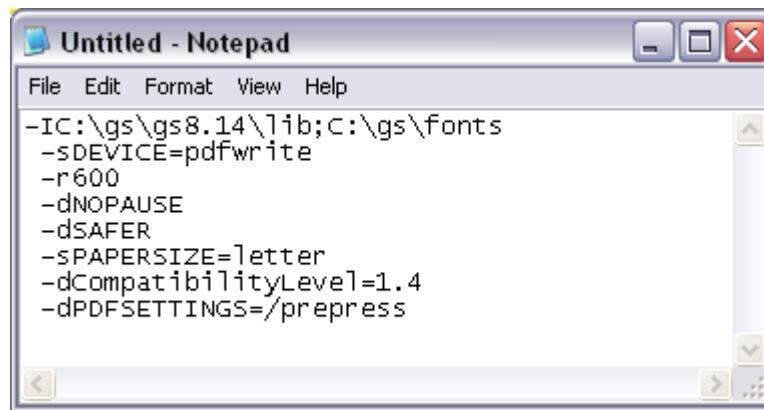


and then on **OK** to finish. If all goes well RedMon will be installed on your computer. You can now delete the file **redmon17.zip**. **Do not delete the C:\gs\redmon folder!**

- **Create Ghostscript Options File.**

*Synopsis: We create the Ghostscript Options file **pdfwrite.txt** that specifies the type of PDF file we want to create.*

Now we need to create an options file **pdfwrite.txt** which will tell Ghostscript what kinds of PDF file we want to create. Start the Notepad program usually found in **Start > Programs > Accessories** menu folder and enter the following:



Alternatively download the above **pdfwrite.txt** file from [here](#). Note that the path (the first line) must be correct for the version of Ghostscript you installed. Change the 8.14 to whatever version number you noted when you installed Ghostscript. European users should change the paper size from **letter** to **a4**. The PDF compatibility level 1.4 will create PDF files that can be displayed with Acrobat Reader 5 or later. Use compatibility level 1.2 to create file Acrobat Reader 3 or later can display. This file is read every time a PDF file is created and it can be changed at any time to suit your needs.

Note: If your path names contains spaces you will need to put quotes around the paths specification **C:\gs\gs8.14\lib;C:\gs\fonts**. Thanks to Jonathan Sefton for pointing this out.

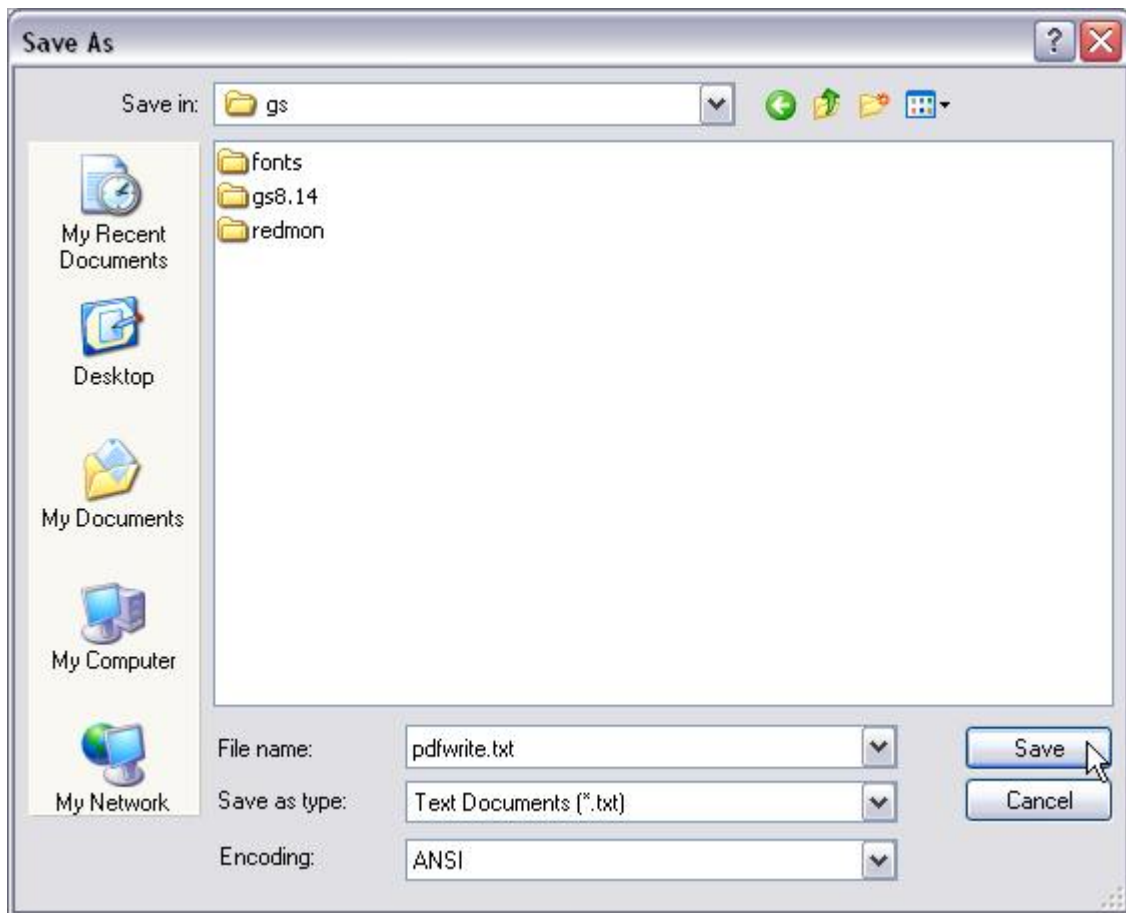
The **PDFSETTINGS=/prepress** option creates high quality PDF files at the expense of space (this is often visible in images). Other options are **/printer**, **/ebook** and **/screen** which will create smaller PDF files at the expense (mainly) of image quality. For more information on what options are available see here: <http://www.cs.wisc.edu/~ghost/doc/cvs/Ps2pdf.htm>.

Note: A good option to add may be to add auto-page-orientation. Add:

```
-dAutoRotatePages=/PageByPage (or /All)
```

to enable it. This will auto-rotate the pages to landscape when necessary. See the [Ps2pdf](#) link above for more information. Thanks to John Harald Apeland for suggesting this.

Save the options file **File > Save** as **pdfwrite.txt** into the **C:\gs** folder:



[For Windows 98 click here to continue.](#)

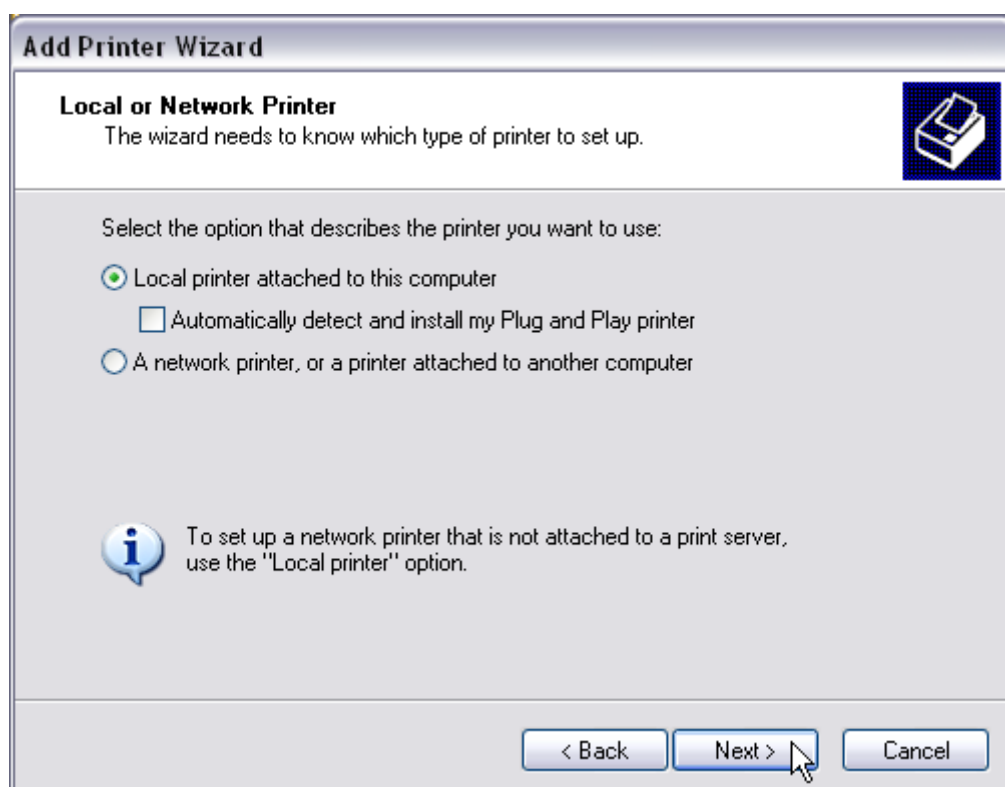
- **Create the Virtual PDF Printer (Win 2000/XP).**

Synopsis: We create a redirected port RPT1: and associate a color PostScript printer to this new port.

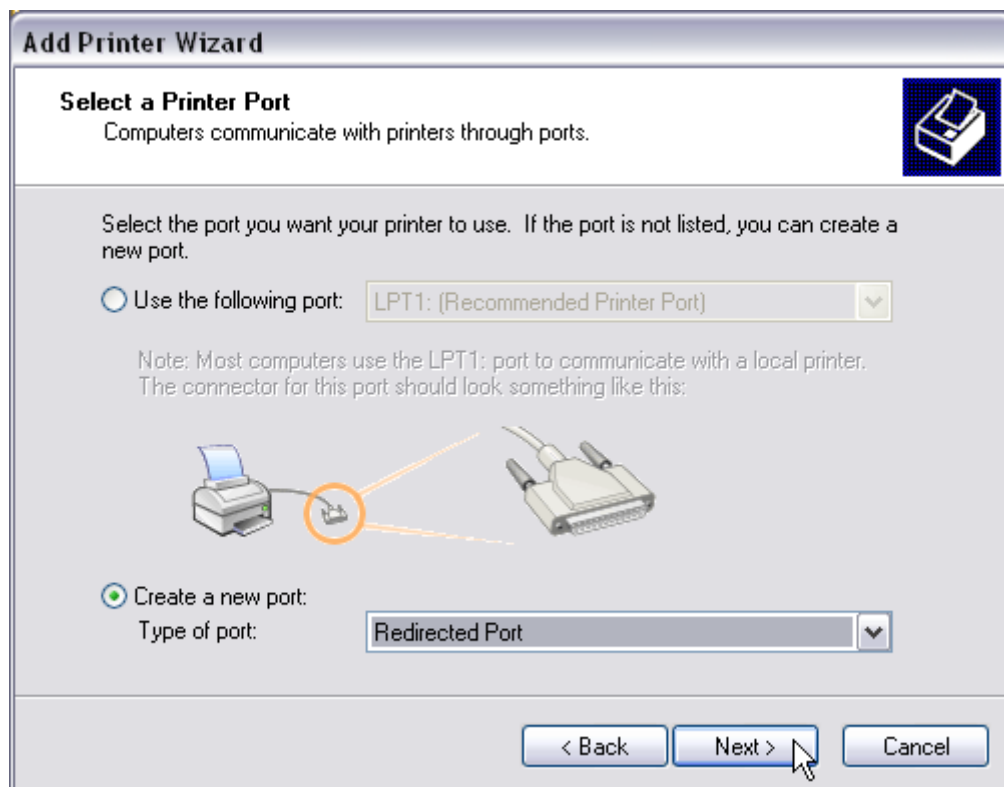
We now create the virtual PDF printer. We need to run the **Add a printer** Wizard found in the Windows **Printers** control panel:



Click on **Next**:



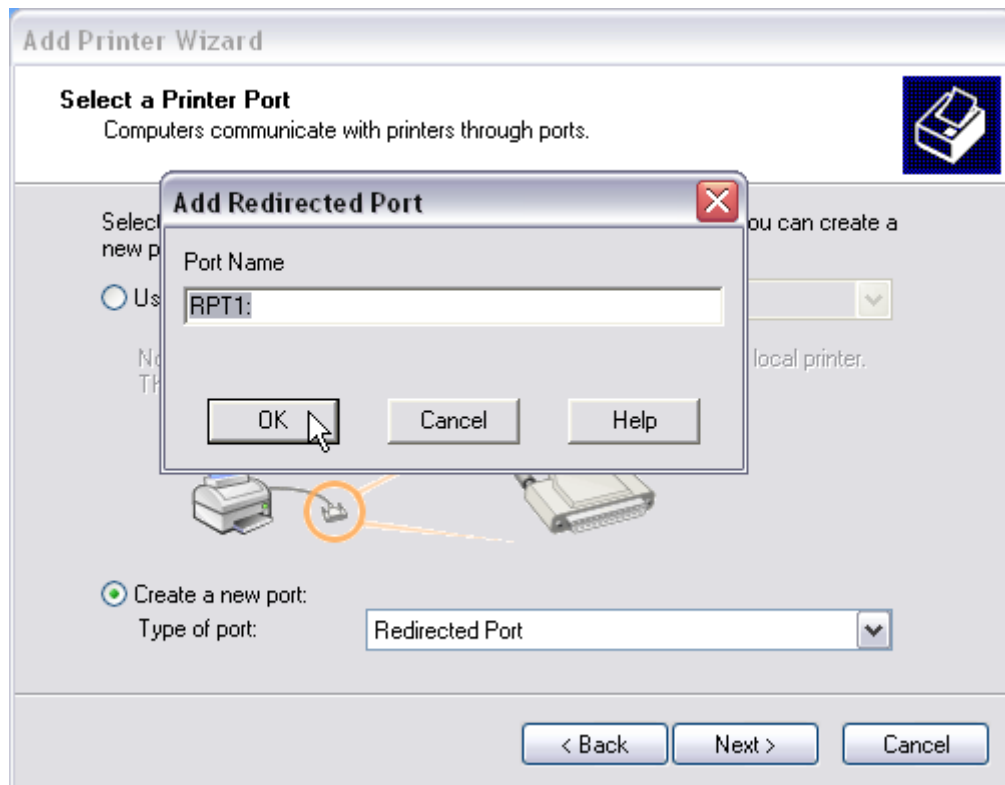
and make sure the **Local printer attached to this computer** option is checked and all other items are unchecked. Click on **Next**:



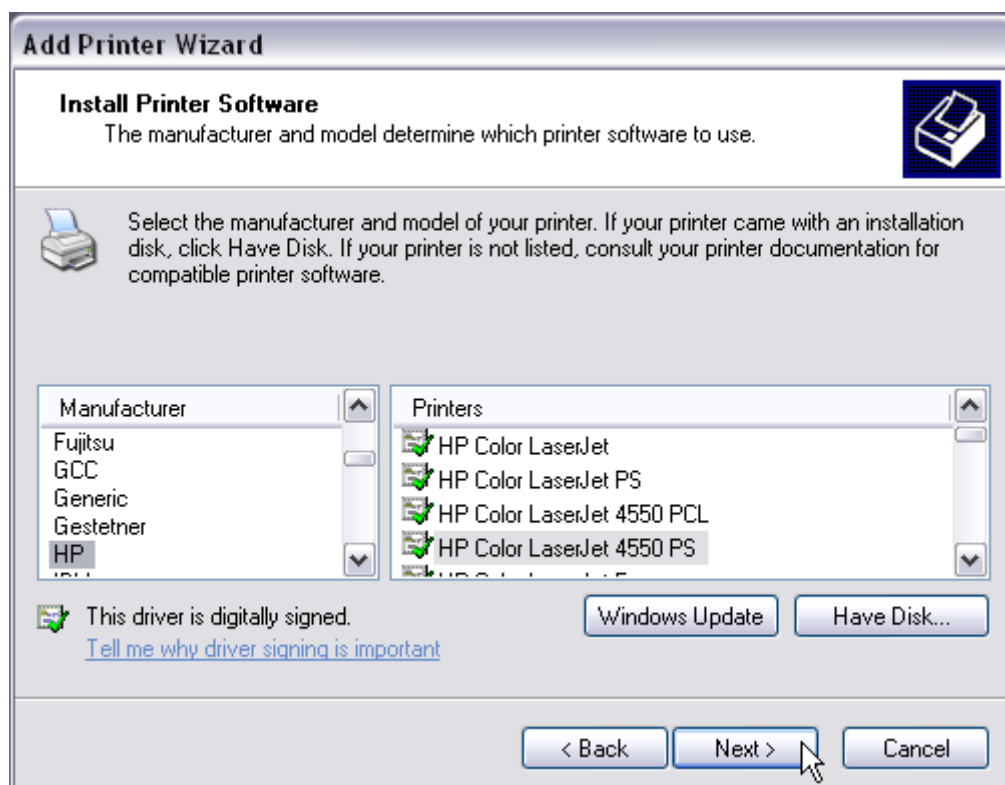
and select **Create a new port** and choose **Redirected Port** as the **Type of Port**.

- Do not choose the **FILE:** or any other port here!
- If you are using Windows XP/2000 and you do not have a **Redirected Port** as an option then the installation of RedMon (above) failed. *Note: Windows 95/98 will not list a redirected port here.* You cannot continue until RedMon is properly installed.
- The Windows 2000 screen looks [significantly different](#) then the XP screen shown above. The functionality remains the same.

Click on **Next** and

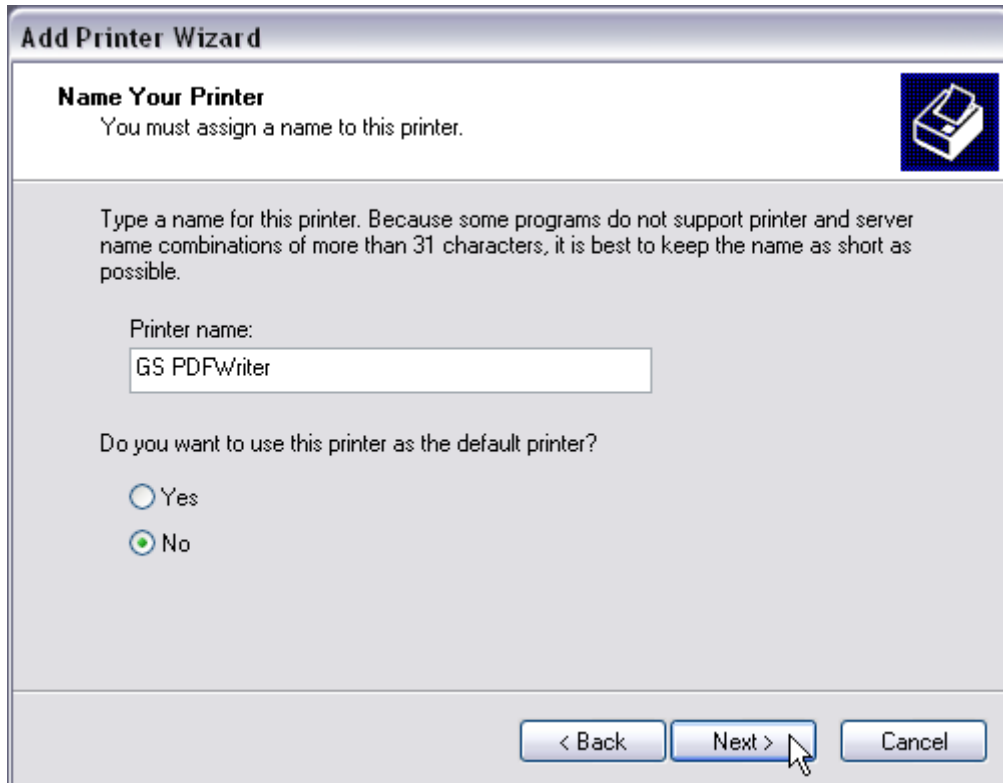


accept the default Port Name of **RPT1:** by clicking **OK**. Select the default printer to associate with this port.



Select the HP printer **HP Color Laserjet 4550 PS**. *Even if you do not own this printer select this choice.* Certain other (but not all) printer selection will work here. Important is that printer be a color PostScript printer. Some printers seem to give better font quality output then others. I have had good success with this one. *Under Windows 2000 select the **HP C LaserJet 4500-PS** printer.* Click on **Next** until you must name your

printer:



Add Printer Wizard

Name Your Printer
You must assign a name to this printer.

Type a name for this printer. Because some programs do not support printer and server name combinations of more than 31 characters, it is best to keep the name as short as possible.


Printer name:

Do you want to use this printer as the default printer?

☐ Yes
☒ No

< Back Next > Cancel

Name the printer **GS PDFWriter** and you probably do not want it to be your default printer. Click on **Next** and **Next** again on the Printer Sharing page until you reach the Print Test Page dialog box:



Add Printer Wizard

Print Test Page
To confirm that the printer is installed properly, you can print a test page.

Do you want to print a test page?

☐ Yes
☒ No

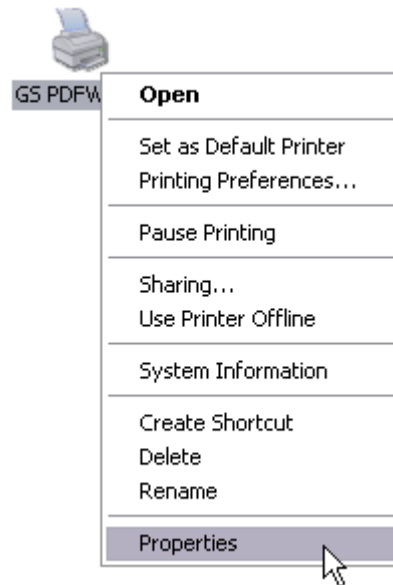
< Back Next > Cancel

Make sure you **do not** print a test page. Click on **Next** and then **Finish** to actually install the printer.

- *Configure the Virtual PDF Printer.*

Synopsis: Configure the newly created virtual PDF printer.

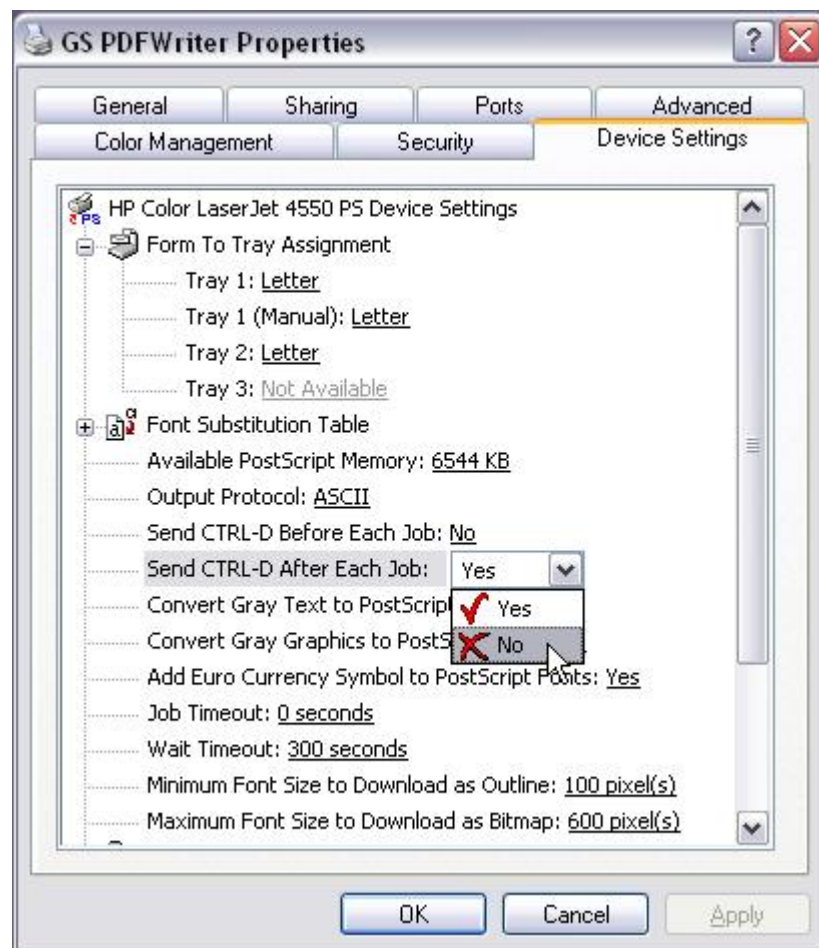
Find the newly created **GS PDFWriter** printer in the **Printer and Faxes** control panel. Right-click on it and select **Properties**:



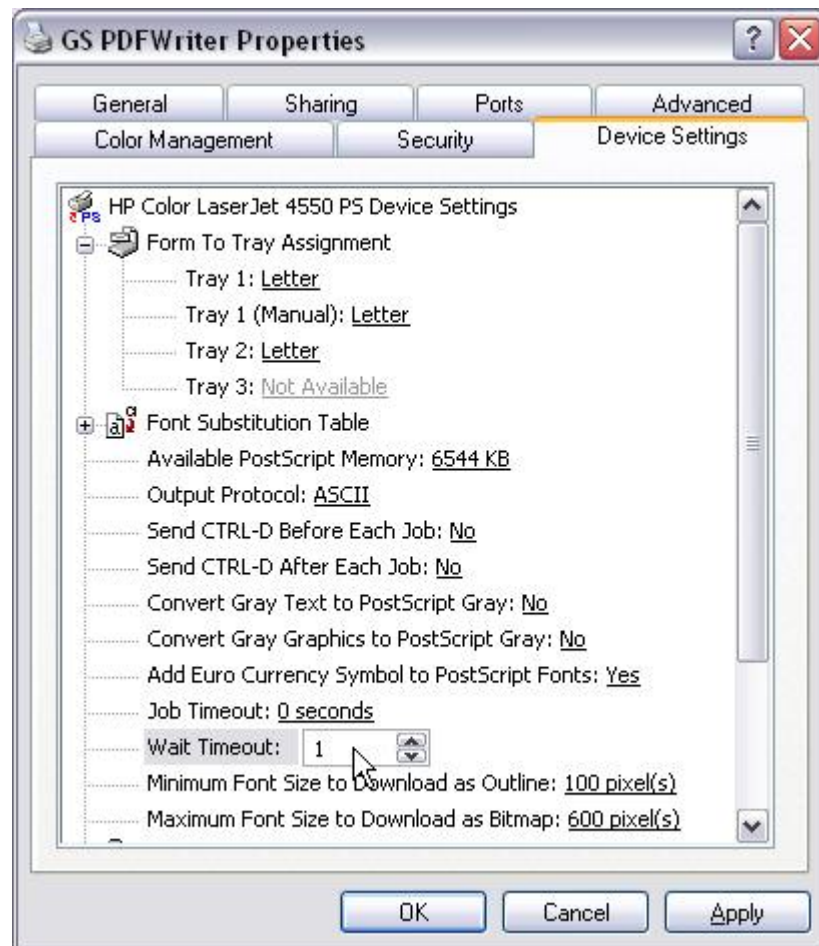
Select the **Advanced** tab:



and select **Print directly to the printer** (this prevents spooling the PDF output to the disk twice). Now select the **Device Settings** tab:



and set **Send CTRL-D After Each Job** to **No**. Also change the **Wait Timeout** to **1 seconds**:



These two **Device Settings** modifications avoid the

```
ERROR: undefined
```

```
OFFENDING COMMAND: _
```

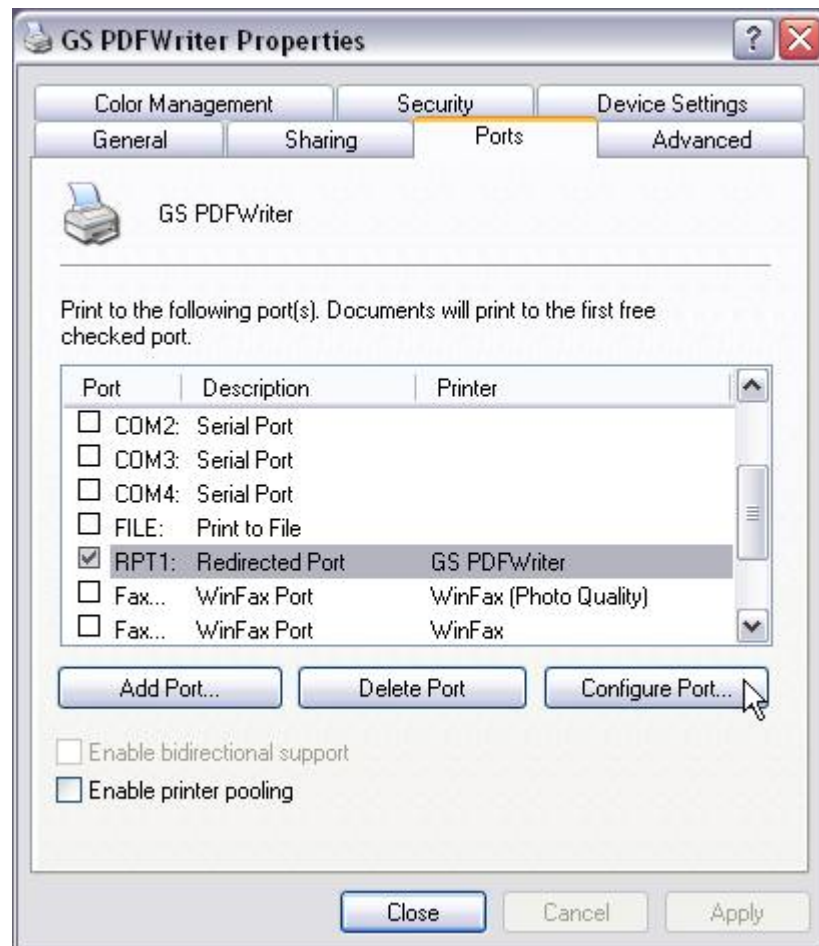
```
STACK:
```

error message that some user report on the last page of the PDF output. Thanks to David Taft and Brent Powers for suggesting this solution.

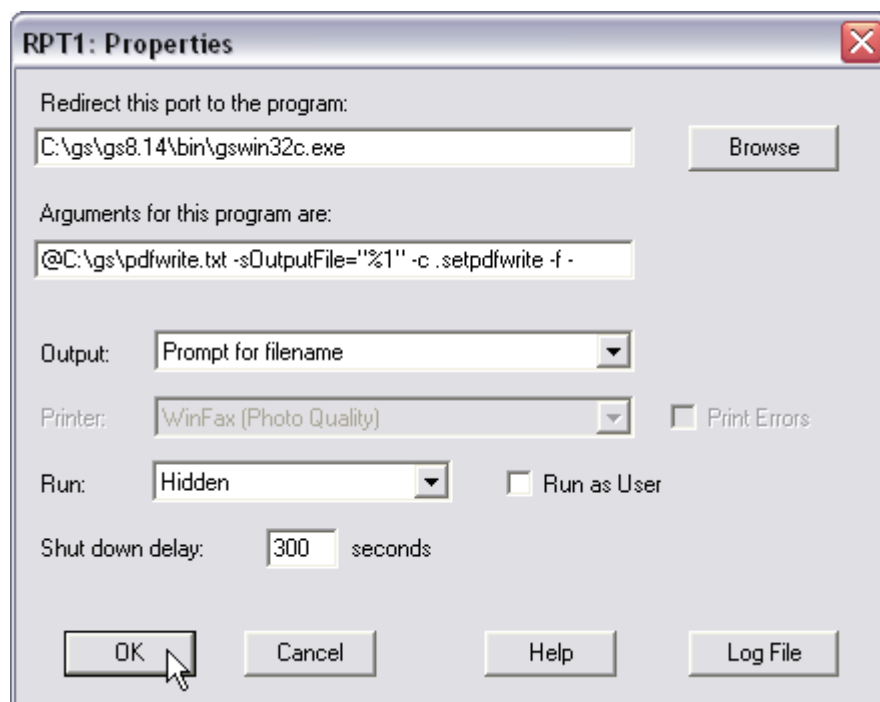
- **Configure the RPT1: Port (Win 2000/XP).**

Synopsis: Configure the newly created RPT1: port to use Ghostscript to create PDF files.

Select the **Ports** tab of the **GS PDFWriter** printer control panel:



and click on **Configure Port...**:



and fill out the dialog box as shown above. Make sure the program path **C:\gs\gs8.14\bin\gswin32c.exe** points to the **gswin32c.exe** executable. Change version 8.14 in the path to match the version that was actually installed. Make sure the **Arguments for this program are:** as indicated above (listed here again for reference and easy cut-and-

paste):

```
@C:\gs\pdfwrite.txt -sOutputFile="%1" -c .setpdfwrite -f -
```

Note the dash at the end of the line and the period at the beginning of ".setpdfwrite". The path name after the "@" points to the options file **pdfwrite.txt** we created above. The **Output:** needs to be **Prompt for filename**, the **Printer:** is irrelevant and the **Run:** box should say **Hidden**. Click on **OK** when done.

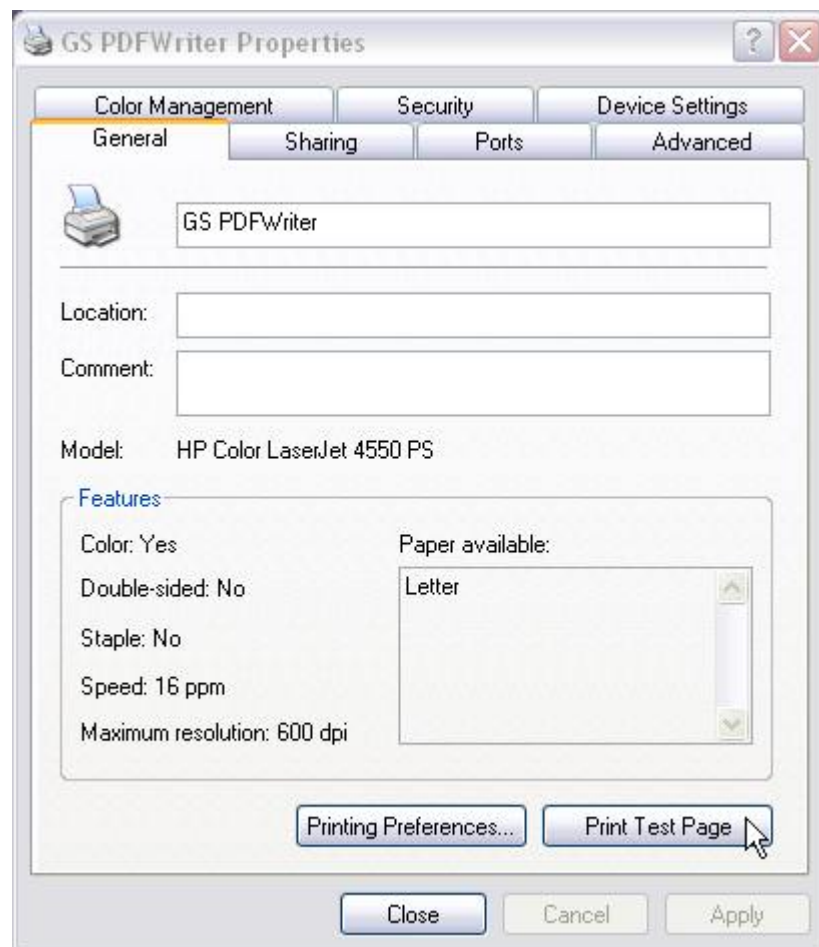
Note: It may be necessary to check the **Run as User** box if the user's credentials are necessary to access required resources. For example, writing the PDF file to a network drive may require the users permissions. Thanks to Bryan Wilson for pointing this out.

Note: If your path names contains spaces you will need to put quotes around the path **C:\gs\pdfwrite.txt**. Thanks Jonathan Sefton for pointing this out.

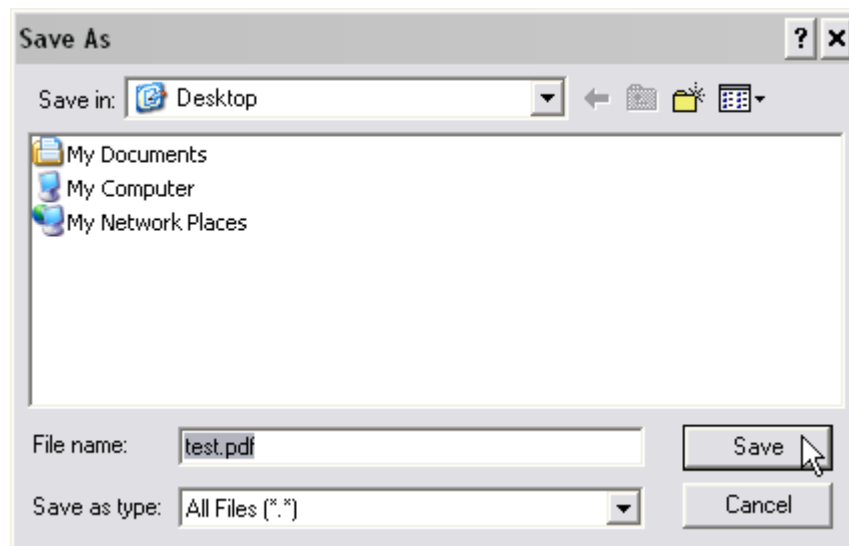
Note: You can modify the port argument to "-sOutputFile="%1.pdf". This will, by default, add the .pdf extension to the output filename. Thanks to Justin S. Cohen for pointing this out.

- **Print a Test Page!**

Select the **General** tab from the **GS PDFWriter Properties** page:



and select **Print Test Page**



and, hopefully, a dialog box prompting you for the file name of the PDF file should open. Enter a file name *with the .pdf file extension (the program does not automatically add it)*, select a location and print (i.e. create) the PDF file. View the newly create PDF file (in this case **test.pdf**) with a PDF viewer.

Note: If the color on the PDF output file is wrong (i.e. the black is not black), remove all the **Color Profiles** in the **Color Management** tab of the **GS PDFWriter** printer.

If everything work correctly your PDFWriter is now functional. You can create a PDF file by selecting the **GS PDFWriter** printer from any applications that can print a file. Please let me know if you succesully used these instructions to create a Ghostscript based PDFWriter. Email me at henrik@stat.tamu.edu.

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