halFILE Printer Utility

Addendum to halFILE for Windows™
Document Storage & Retrieval

Version 2.2
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hal

Systems Corporation

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Overview

The halFILE Printer program, HALPRN32.EXE, can be used to:

1)   Import documents from any Microsoft Windows applications into the halFILE system as single-page TIFF images (native halFILE format) by using a standard Printer monitor.
2)   Create a multi-page TIFF image from any Microsoft Windows application document, by using a standard Printer monitor, which can be saved in a location of the user's choice.

This document describes how the program works, hot to set it up, and how to use advanced configuration options.

NOTE: For the purposes of this document, Terminal Services and Citrix Metaframe are considered to be the same, and the same concerns address both operating environments. Hereafter in this document, when referring to Terminal Services, the Citrix Metaframe environment is also included.

Requirements

This program requires halFILE for Windows (v2.1 or later), and the following executable files:

1)   HALPRN32.EXE
2)   SPLITTIF.EXE
3)   HFPIMP32.EXE

The HALPRN32.EXE file will be placed by the halFILE for Windows Setup program (v2.1 or later) in a folder called HALFILE, at the root level of the local hard drive of each workstation. The other 2 files should be installed with the halFILE for Windows Setup program (v2.1 or later), and should be located in the same folder as the main halFILE Programs.

Web Installation

For registered customers, the above components can also be installed from update.halfile.com. Select the "setting up halFILE features" link which displays a page with the following installation routines:

Install the Send to halFILE Feature on this computer – Installs the send to halFILE feature to streamline the importing of Office documents into halFILE.

Install the Print to halFILE Feature on this computer – Installs the print to halFILE feature to capture printed output as a TIFF image and import the document into halFILE.

Install the Remote Print to halFILE Feature on this computer – Installs the remote print to halFILE feature on non-halFILE stations. This feature works like Print to halFILE but is capable of sending the TIFF image via FTP from a remote site to the halFILE server.
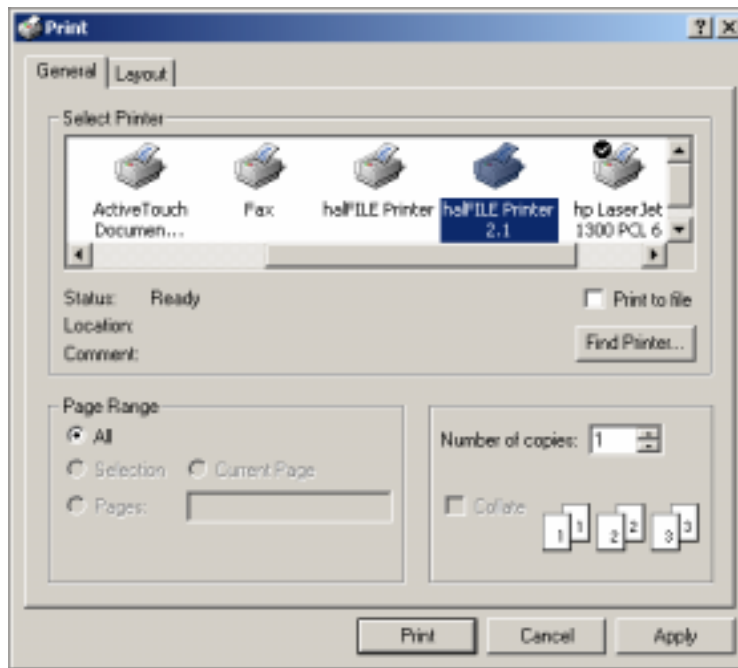
Running the program

Running the HALPRN32.EXE program without using the print monitor in the Microsoft Windows Printers folder is not supported. Running the HALPRN32.EXE program with the command-line switch CONFIG, runs the program in Setup mode, where advanced settings can be configured (see page 6).

Operation

The halFILE Printer is accessed like a standard Microsoft Windows printer, and has an icon in the Printers folder that is selected when printing from other programs. When printing to the Printer, properties are available as in other print devices.
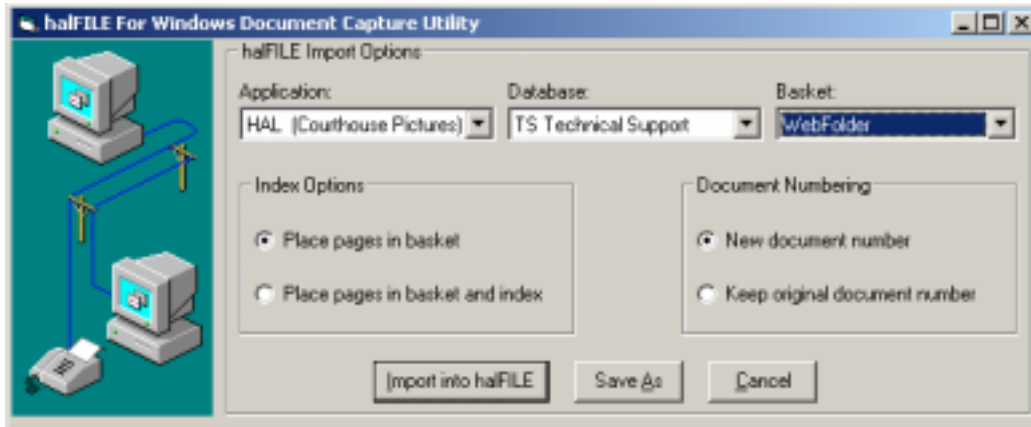
To use the halFILE Printer:

1) Create a document in another application (example is using Windows Notepad).
2) Once your document is ready to be placed into halFILE, be sure to SAVE it.
3) Once your document is ready to be placed into halFILE, click the FILE menu, then select Print. (It is recommended to use the FILE-PRINT menu, instead of shortcut Print buttons on toolbars, because some of those shortcuts do not allow the selection of Printers and will only print to the default.)
4) The Windows Printer dialog will appear. The standard Printer installed by halFILE for Windows will be called halFILE Printer (and may contain a version number 2.1, 2.2, etc.). halFILE Printers on a Terminal Services system may have other designations, determined by the system administrator.

5) Select the correct printer; enter the pages to print (if not printing ALL pages). Additional options may be set on the printer dialog, if allowed, but support for other application options is not guaranteed.
6) Click the PRINT button.
7) A small window will appear, indicating the program is generating an image file from the document, and showing the location of the temporary image file it is creating (usually the system TEMP folder)

8)   Once the image file is created, another window will appear, titled "halFILE for Windows Document Capture Utility". This is another halFILE for Windows Utility, used for importing image files into the halFILE system.

9)   If you are importing the document into halFILE, select the Application, Database, and Basket to place the document image into. Then hit the button labeled Import into halFILE.

10)   If you are NOT importing the document into halFILE, and only want to save it as a multi-page TIFF, click the button labeled SAVE AS. This will give you a standard windows dialog for saving a file. Navigate to the desired destination folder, and click SAVE.

11)   Once you have chosen one of these options, the windows will disappear. If you imported into halFILE, the document pages should appear in the basket you selected, as standard halFILE images. If you selected SAVE AS, you may use the output file you created, as you need it.
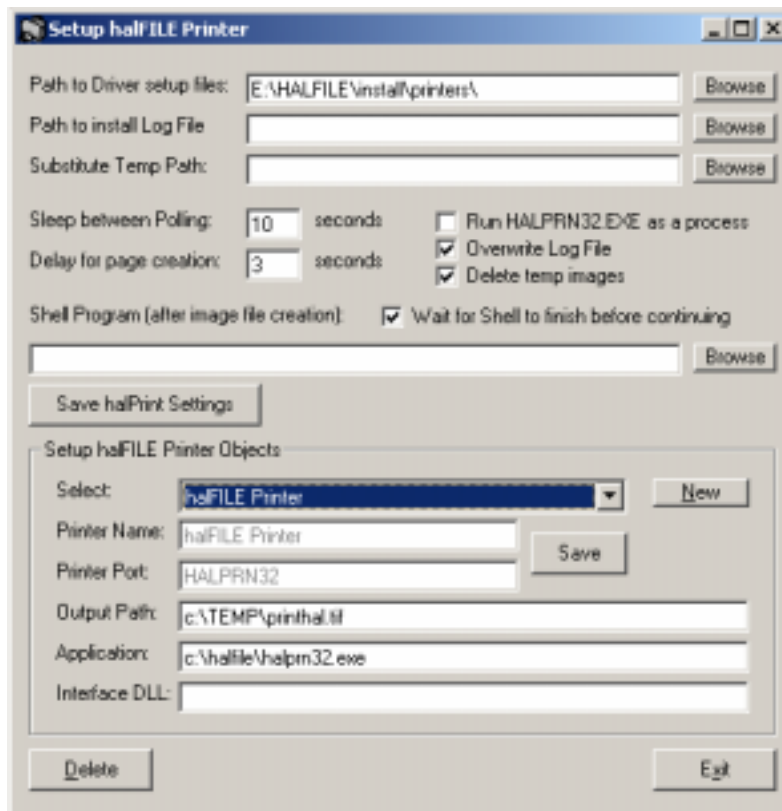
Advanced printer options

Removing an existing halFILE Printer

To delete a halFILE Printer, open the Windows Printers folder (START-SETTINGS-Printers). Select the halFILE Printer you want to remove, then hit the delete key on your keyboard. When it asks you if you are sure you want to do this, click YES (if you are sure; otherwise, click NO).

Adding a new halFILE Printer

This should only be done if the original halFILE Printer was removed, or if there is a specific reason given by Technical Support to do so. This process assumes a standard setup from halFILE for Windows (v2.1 or later). You must have administrator rights to the local machine if you are on Windows 2000 or XP.

1)   Click Start, and then RUN.
2)   In the OPEN box, type in C:\HALFILE\HALPRN32.EXE CONFIG. A screen will appear like this:

3)   In the first box, type in (or browse to) the full path to the halfile\install\printers\ folder on the network. A drive letter or UNC path is acceptable, as long as it is consistent with the network halFILE installation. (If you need to check this information, use your right mouse button and click the halFILE for Windows 2.1 icon on your desktop, and select Properties from the pop-up menu. The START IN box should indicate the network folder for halFILE.)
4)   Check the boxes for Overwrite Log File, Delete Temp Images, and Wait for Shell to finish.
5)   If there is anything in the Shell Program text box, delete it.
6)   Click SAVE HALPRINT SETTINGS.

7) Click the NEW button in the bottom half of the screen.
8) Fill in the output path to the SYSTEM Temp folder (not the user TEMP folder. To find this information, select the START MENU, and click RUN. In the Open box, type in the word COMMAND (not CMD). A DOS screen will open. Type in the word SET. A list of environment variables will scroll across the window. Locate a line in the list that says TEMP=. The path following the = is the system TEMP folder). This path will probably be C:\WINDOWS\TEMP\PRINTHAL.TIF or C:\WINNT\TEMP\PRINTHAL.TIF) - be sure to leave the PRINTHAL.TIF on the end.
9) Fill in the Application to the local drive, where HALPRN32.EXE is located (i.e., C:\HALFILE\HALPRN32.EXE)
10) Click the INSTALL button.
11) A black DOS box will appear to perform the installation. If it doesn't close by itself when it finishes, close it.
12) Click EXIT.
13) WIN2000/XP ONLY:
    a. Go into the Printers folder, and edit the properties of the new halFILE Printer. Select the Ports tab, click on the HALPRN32 port, and click Configure Port. Make sure the path is correct for the HALPRN32.EXE program on the local machine. If not, change it.
    b. Close Printer properties.
    c. Restart the print spooler (to do this, select the START MENU, and click RUN. In the Open box, type in the CMD. A DOS screen will open. Type in the following: NET STOP SPOOLER. Once the message comes back indicating the service is stopped, type in the following: NET START SPOOLER. Once the service is restarted type in EXIT and hit ENTER. Those familiar with using the Services applet in the Administrative Tools, or the MMC Services Snap-in may restart the Print Spooler using those interfaces)
14) Restart the workstation.

Once these steps are complete, you should have a new halFILE Printer in your Printer folder, to use for printing to the halFILE Application.

Additional Settings

path to install log file – here you can put a path to a log file for debugging the FAXINSTALL procedure.

substitute temp path – this value can be used to substitute the TEMP path for the output routines

sleep between polling – an integer value; the number of seconds to wait between checking the TEMP path for new output (PRINTHAL.TIF). This is usually only modified for Terminal Services setup.

delay for page creation – an integer value; the number of seconds to wait for additional pages to appear, before ending the process and executing the Shell program. This is usually only modified for Terminal Services setup.

run HALPRN32 as a process – select this option to run the halFILE Printer as a system tray process, constantly monitoring your TEMP path for output. This is used primarily for Terminal Services setup.

overwrite log file – a flag to toggle the deleting of the log files before performing another print job.

delete temp images – a flag to toggle the deleting of the TEMP folder image files at the end of a print job.

wait for shell to finish before continuing – a flag to toggle waiting for the shell program to complete before completing the printer driver tasks. Used only if an alternative SHELL program (other than HFPIMP32.EXE) has been used.

shell program – the program to run after the program has received the Print Job Complete status from the print driver.

output path – the location to place temporary images before importing into halFILE.

Application – the application to run to perform the print job (should usually be HALPRN32.EXE)

interface dll – an optional hook DLL used with Terminal Services setup.

Using the halFILE Printer in a Terminal Services/Citrix Metaframe environment

This configuration is not fully supported by hal Systems Corporation. Regular administration of the Terminal Services environment is the responsibility of the owner of the system. This process has been used successfully at several sites, but hal Systems makes no guarantees as to performance, data integrity, or image consistency. As running halFILE for Windows in a Terminal Services environment is an addition to standard halFILE licensing, we provide setup assistance for running in this configuration. It is recommended that this process be performed with the consultation of Technical Support.

If running Terminal Services on a Windows Server 2003 or Small Business Server 2003 platform, please see the Special Note for Windows Server 2003 on page 9.

The special problem of running the halFILE Printer in a Terminal Services environment is that each user account who will use the halFILE Printer through a Terminal Session must have its own Printer Monitor and Printer Port, so the operating system can distinguish between print jobs. In order to accomplish this, do the following:

1) If you are running Windows Server 2003 – read the special note on page 9
2) Stop any SQL Services that maybe running (MSSQLServer, SQLSERVERAGENT)
3) Run the regular setup for halFILE, at the Server console (with the chosen installation path for the network setup – mapped drive or UNC).
4) Restart the server.
5) Once restarted, open up the printers folder to view the halFILE Printer. Opening up a notepad window, and testing the printer is probably a good idea, as well. See the OPERATION section of this document.
6) Close the printers folder.
7) Download the following: http://www.countyrecords.com/download/halprint.dll and place it in the C:\WINDOWS\SYSTEM32 folder (or whatever the Windows Directory is on the server)
8) Select START-RUN, and type in C:\HALFILE\HALPRN32.EXE CONFIG
9) Check the box labeled run HALPRN32.EXE as a process
10) Click Save halPrint Settings
11) Close the configuration screen, then go back in (Select START-RUN, and type in C:\HALFILE\HALPRN32.EXE CONFIG)
12) For each user who will use the halFILE Printer, create a NEW halFILE Printer. Click the NEW button.
    a. The Printer Name will be halFILE Printer [username] (i.e., halFILE Printer [JSMITH]
    b. The Port Name will be HAL_USERNAME (i.e., HAL_JSMITH)
    c. The Output Path will be a temp folder location UNIQUE for EVERY User, local to the server, that every user can access. Most sites are configured with a TEMP folder on the C: drive, with an individual folder for each user inside. User MUST have FULL CONTROL permissions to the folder.
    d. Application should be blank
    e. Interface DLL should be HALPRINT.DLL
13) Once the options are set, hit the INSTALL button.
14) Repeat this process for each user account to use halFILE Printer.

Once the printers are setup, administrator may wish to restrict access to the printers per user.

Special Note for Windows Server 2003

If running Windows Server 2003 or Small Business Server 2003 platform, there is a Security setting that must be configured BEFORE installing the halFILE Printer. The driver used for generating our image files through the printing subsystem is a Kernel Mode driver. By default, these drivers are DISABLED in Windows Server 2003. You must ENABLE these drivers through group security if you are going to use these drivers on a Windows Server 2003 or Small Business Server 2003 environment.

To enable the use of Kernel Mode drivers on Windows Server 2003:

1) Select the Start Menu, settings, control panel.
2) Click Local Security Policy
3) Expand the Local Security Tree
4) Expand the Local Policies branch
5) Click the Security Options folder
6) Look in the list in the right pane for the entry labeled "Devices: prevent users from installing printer drivers", and double-click it
7) In the dialog box, click the ENABLE button, then click OK
8) Close the Local Security Policy snap-in

If you are using Active Directory, you may need to repeat this process in the Active Directory Management snap-in, by right-clicking the Server icon, and selecting Group Policies.

Troubleshooting

Log Options – the halFILE Printer uses a log file where it writes process information, as well as additional information useful in debugging problems. The default log will be located in the TEMP directory, on the station from which the print to program was executed, and is called HALPRN32.LOG.

If you have problems with setting up or running the Print to halFILE program, please contact halFILE Technical Support.