



Version 4.0, User's Guide

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Introduction

KeyesPDF can be used to convert spooled files into images. The resulting images can be used for any desired purpose, such as printing, e-mailing, archiving, or posting on a website.

Spooled files can be standard *SCS printer files, *AFPDS spooled files, or *USERASCII spooled files with HP-PCL code. The spooled files can be converted into PDF documents, TIFF images, or ASCII text files and placed in your IFS, onto a Network drive, or into a Physical File. The resulting files can then be e-mailed, archived, transferred, or copied to another destination, as desired. The system can also send PDF documents directly to a PDF Printer on your network.

For example: You can call our API to convert spooled files into PDF documents and have them placed directly into your IFS (Integrated File System). This would make it available to everyone with access to the IFS directory.

KeyesPDF includes an automatic output queue processing program. It will monitor an output queue called KUOUTQ. When any spooled file appears in this output queue, in a "RDY" status, it will be automatically converted to an image and placed in any desired destination.

KeyesPDF includes automatic indexing features. This will allow a single spooled file to be burst into smaller pieces, each with their own filename.

KeyesPDF can password encrypt the generated PDF documents, if you supply user and/or owner passwords up to 32 characters long.

KeyesPDF Menu

The KeyesPDF can be run using commands, or from a menu. After the installation has completed (described on the following pages), you may use the menu.

Displaying the Menu

1. Be sure that the KeyesPDF library is on your library list.
Enter: ADDLIBLE KULIB
2. Display the KeyesPDF Menu.
Enter: GO KUMENU

Installation Instructions

Sign on as a Security Officer

The following installation procedure will require that you have *ALLOBJ authority, when you restore the library as an update.

Copying KeyesPDF Programs to a Library

You may place the **KeyesPDF** programs into any library that you wish. However, we suggest that you install the programs into a permanent program library called KULIB.

Restoring Instructions:

1. If you have a CD or tape load it into the appropriate drive.
2. Restore the programs from the CD, tape, or the Save File from the Web.

New Installation:

```
Enter: RSTLIB SAVLIB(KU04LIB) DEV(device)
      MBROPT(*ALL) RSTLIB(KULIB)
```

Updating an Existing System:

```
Enter: DLTLIB LIB(KUUPD)
```

Ignore any "Library not found" message.

```
Enter: RSTLIB SAVLIB(KU04LIB) DEV(device)
      MBROPT(*ALL) RSTLIB(KUUPD)
```

device is the name of the CD drive (usually OPT01) or enter *SAVF if you are restoring from a Save File. The name of the Save File should be KU04SVF in QGPL.

Updating an Existing System

If this is a New Installation, skip this step.

1. Be sure that the KeyesPDF library is on your library list.

```
Enter: ADDLIB KULIB
```

2. Prompt the KeyesPDF Update program.

```
Enter: KUUPD/KUUPDATE then press F4 (Prompt)
```

3. Fill in the appropriate library names and press Enter:

```
KeyesPDF Program library . . . kulib
```

```
KeyesPDF Update library . . . kuupd
```

4. At the end of the update process, the "PDF Conversion Setup" screen may appear. This will allow you to set default parameter values for the system, as desired.

Review/update the parameter values and press Enter.

Installing KeyesPDF Tables

This step will install the appropriate translation tables into your KeyesPDF library. It selects the tables based on your system's Code Page.

1. Change your current library to the KeyesPDF library.

Enter: CHGCURLIB *kulib*

2. Run the KeyesPDF Table program.

Enter: KUTABLES

Enter your KeyesPDF License number

The KeyesPDF programs will not function until they are activated with a license number. The license number is based on your iSeries or AS/400 serial number and the Logical Partition that you will be using. The Logical Partition can be seen on the KULICENSE screen.

You must contact Computer Keyes to get a valid license number. You may call or e-mail your request. Be sure to specify your name, company, and other contact information along with the serial number of your iSeries (AS/400) and logical partition, if you e-mail the request.

Note: You may use DSPSYSVAL QSRLNBR to display the serial number of your computer. You can see the Logical Partition on the screen below.

Recording the KeyesPDF License Number:

1. Switch your current library to your KeyesPDF library, usually called KULIB.

Enter: CHGCURLIB *kulib*

2. Start up the program that will record your KU License.

Enter: KULICENSE

3. Key your KU License number in the field provided, then press Enter.

KeyesPDF License Number:

Permanent: _____ S# - _____

Temporary: _____

PDF Conversion Setup

The PDF Conversion Setup (item 11 on KUMENU) is used to define a data area (KUDATA). The information is used in the conversion programs to direct how and where the spooled files should be converted. You can change the values in the data area at any time, and it will take effect immediately.

Default IFS Path

This parameter specifies the default path that your converted documents will be sent to. All directories in the path must already exist. New directories are not created. You may code a value of *NONE, if you do not want to save the PDF's.

Default PDF Printer

This parameter specifies the default PDF Printer that your documents will be sent to. You may leave the default value of *NONE, if you do not want to print the PDF's.

Default Image type

This specifies the default type of image the spooled files will be converted to.

The possible values are:

PDF

Portable Document Format (PDF) files will be created.

TIF

TIFF image files will be created. This type cannot be used when converting *SCS printer files.

ASC

ASCII text files will be created. This type can only be used when converting *SCS printer files.

Text or Image based PDF

This parameter sets the default type of PDF that will be produced. This parameter is only used when converting *USERASCII spooled files to PDF's. Text based PDF's are searchable and indexable, and will usually print a cleaner crisper image. However an Image based PDF will prevent anyone from altering the data and is usually faster to print.

The possible values are:

T

Text based PDF file.

I

Image based PDF file.

Encode text streams

This parameter will set whether or not Text streams with PDF documents will be encoded. Encoded text streams cannot be read or changed by a text editor. This is intended to make the PDF document difficult (if not impossible) to alter without leaving a trace.

The possible values are:

Y

Encode PDF text streams.

N

Do not encode PDF text streams.

Default Paper size

This parameter specifies the default size of paper that PDF images should be created for. This parameter is only used for *AFPDS and *SCS spooled files. *USERASCII spooled files set the page size in the PCL.

The possible values are:

S

Standard paper 8.5 x 11 inches in size.

L

Legal paper 8.5 x 14 inches.

A

A4 size paper 8.3 x 11.67 inches.

User Password

You may supply a user password, if you wish to encrypt PDF's. This password will allow a user to view, print, & annotate the PDF documents. The user will not be able to change PDF's. To remove a password, enter ' '.

The possible values are:

***SAME**

This will leave the password the same as has already been entered.

***NONE**

You may use *NONE to remove the password. Or, you may enter ' ' to blank out the password.

'Password String'

Enter the password within single quotes. The password string may be up to 32 characters long and IS case sensitive.

Owner Password

You may supply an owner password, if you wish to encrypt PDF's. This password will allow the owner to do anything with the PDF documents. To remove a password, enter ' '.

The possible values are:

*SAME

This will leave the password the same as has already been entered.

*NONE

You may use *NONE to remove the password. Or, you may enter ' ' to blank out the password.

'Password String'

Enter the password within single quotes. The password string may be up to 32 characters long and IS case sensitive.

Convert a Spool File into an Image (KUCVTSPL)

This program is an API that can be used to convert spooled files. It places the resulting image file into a Data Base file, into a Stream File on your IFS, or onto a Network drive. If you are sending the image to a Data Base file, it will be created for you in the library specified. If the file already exists, it must have a record length of 256 bytes.

If you are sending the image to the IFS or a Network drive, all directories in the path must already exist. New directories are not created. If the stream file does not exist, it will be created. If it does exist, it will be replaced.

Notes:

When converting a *SCS printer file to a PDF image, the Page Size values in the spooled file attributes are used to determine an appropriate sized font that will fit all the possible characters on the PDF page and an appropriate page orientation will be set.

When converting an *AFPDS printer file to a PDF image, the Rotation value in the spooled file attributes will be used to set the page orientation for the PDF.

Spooled file (SPLFILE)

Specifies the name of the spooled file that you wish to convert. This comes from the name of the printer output file that is defined in the program that created it.

To file name (TOFILE)

Specifies a physical file to which the spooled file will be converted. If the file does not exist, it will be created. If it does exist, it must have a record length of 256 bytes.

To copy the image to a stream file in the IFS or a Network drive, specify *STMF in this parameter.

You can specify *NONE in this parameter, if you do not want to save the image.

To library (TOLIB)

Specifies the library where the file will be located. This parameter is ignored for Steam Files.

The possible values are:

*LIBL

All libraries in the job's library list are searched for the named file.

*CURLIB

The current library for the job is used to locate the file.

library-name

Specify the library where the file will be located.

Stream file Path (TOPATH)

Specify the Path where the stream file will be located. The Path must already exist. This parameter is ignored for Physical Files. For a Network drive, specify "/QNTC/server-name/directory".

The possible values are:

***DFT**

Use the default path set in the PDF conversion setup parameter.

path

Specify the path where the stream file should be sent.

Stream file Name (TOSTMF)

Specify the Name of the stream file, up to 60 characters long, that receives the converted image. If you do not specify a filename extension, the program will add one to the Name. You may include additional directories in the path, as part of the name, by following the directory with a forward slash (/).

This parameter is ignored for Physical Files.

To PDF Printer (TOPRINT)

Specify the name of a PDF printer, if you want to print this image directly to this printer.

***DFT**

The default value of ***DFT** will set this parameter to the value that you have set in the PDF Setup parameter (Default PDF Printer).

***NONE**

You can specify ***NONE**, if you do not want to print the image.

printer-name

Specify the name of a printer that is PDF capable.

Job name (JOBNAME)

Specifies the name of the job that created the spooled file to be converted.

The possible values are:

The job that issued this command is the job that created the spooled file.

job-name

Specify the name of the job that created the spooled file.

User (USER)

Specify the user name that identifies the user profile under which the job was run.

Job number (JOBNR)

Specify the system-assigned job number.

Spooled file number (SPLNBR)

Specifies the number of the spooled file, from the job whose data records are to be converted.

The possible values are:

*ONLY

Only one spooled file in the job has the specified file name; therefore, the number of the spooled file is not necessary.

*LAST

The spooled file with the highest number and the specified file name is used.

spooled-file-number

Specify the number of the spooled file whose data records are to be converted.

To member (TOMBR)

Specifies the name of the file member that receives the converted image. This parameter is ignored for Stream Files.

To image type (TOTYPE)

Specifies the type of image that the spooled file will be converted to.

The possible values are:

DEF

Use the default image type set in the PDF conversion setup parameter.

PDF

A Portable Document Format (.PDF) file will be created.

TIF

A TIFF image file will be created. This type cannot be used when converting *SCS printer files.

ASC

An ASCII Text file will be created. This type can only be used when converting *SCS printer files.

Text or Image based PDF (TEXTIMG)

Allows you to select the type of PDF that you will produce. This option is only useful for converting *USERASCII spooled files to PDF's. Text based PDF's are searchable and indexable, and will usually print a cleaner crisper image. However an Image based PDF is usually faster to print.

The possible values are:

*

Use the default value in the PDF conversion setup parameter.

T

Text based PDF file.

I

Image based PDF file.

Encode (Hide) text streams (ENCODE)

Allows you to select whether or not Text streams within the PDF will be encoded. Encoded text streams cannot be read or changed by a text editor. This is intended to make the PDF difficult to alter without leaving a trace.

The possible values are:

*

Use the default value in the PDF conversion setup parameter.

Y

Encode the PDF text streams.

N

Do not encode the PDF text streams.

From page number (FROMPAGE)

Specifies the starting page number for the spooled file to be converted.

To page number (TOPAGE)

Specifies the last page number of the spooled file to be converted.

The possible values are:

***END**

The last page in the spooled file is to be converted.

page-number

Specify the last page number to be converted.

Paper size (PAPERSZ)

Specifies the size of paper that PDF images should be created for.

The possible values are:

*

Use the default value in the PDF conversion setup parameter.

S

Standard paper 8.5 x 11 inches in size.

L

Legal paper 8.5 x 14 inches.

A

A4 size paper 8.5 x 11.67 inches.

User Password (USERPWD)

You may supply a user password, if you wish to encrypt the PDF. This password will allow a user to view, print, & annotate the PDF document. The user will not be able to change the PDF.

The possible values are:

***DFT**

This will set to the PDF Setup Parameter (Default User Password)

***NONE**

The document will NOT be encrypted, unless an Owner Password is given.

'Password String'

Enter the password within single quotes. The password string may be up to 32 characters long and IS case sensitive.

Owner Password (USERPWD)

You may supply an owner password, if you wish to encrypt the PDF. This password will allow the owner to do anything with the PDF document.

The possible values are:

***DFT**

This will set to the PDF Setup Parameter (Default Owner Password)

***NONE**

The document will NOT be encrypted, unless a User Password is given.

'Password String'

Enter the password within single quotes. The password string may be up to 32 characters long and IS case sensitive.

Sample Code

The following code creates a spooled file. It then converts that spooled file into a PDF image and places it in the IFS folder called WEBFILES.

```
PGM

OVRPRTF    FILE(QPRINT) HOLD(*YES)
CALL       PGM(your-pgm)
DLTOVR     FILE(QPRINT)

KUCVTSPL   SPLFILE(QPRINT) TOFILE(*STMF) +
           TOPATH('/WEBFILES') +
           TOSTMF('PDFFILE.PDF') TOTYPE(PDF)

/* Monitor for Escape Message, indicating an error */
MONMSG    MSGID(CPF9898) EXEC(GOTO ERRORS)

SNDPGMMSGMSG('Printer file QPRINT was converted +
             to a PDF image and placed in +
             WEBFILES') MSGTYPE(*COMP)

ERRORS:    /* Error processing */

ENDPGM
```

Convert Gathered Spool Files into an Image (KUCVTSPLS)

This API is used to convert spooled files, that were gathered by KUGETSPLS, into either one large PDF document, or one large ASCII text file. You can place the resulting document into a Data Base file, into a Stream file on your IFS, or it can send the document directly to a PDF printer.

If you are sending the document to a Data Base file, it will be created for you in the library specified. If the file already exists, it must have a record length of 256 bytes.

If you are sending the document to the IFS, all directories in the path must already exist. New directories are not created. If the stream file does not exist, it will be created, otherwise it will be replaced.

Notes:

When converting multiple printer files to a PDF document, the Page Size values in the spooled file attributes will be used to determine an appropriate sized font that will fit all the possible characters on the PDF page and an appropriate page orientation will be set. The values from the spooled file with the largest Page Size will be used for all the spooled files gathered.

There is a limit to the number of pages that can be converted into a single PDF document. The conversion program will stop when it reaches the limit. The current limit for *SCS printer files is 29997 pages.

Gather Multiple Spool Files into a File (KUGETSPLS)

This API is used to gather multiple spooled files into a Physical file, one at a time, so that all of them can be converted into one large PDF document, or one large ASCII text file.

If you name a Physical file that does not exist, it will be created for you in the library specified. If the file already exists, it must have a record length of 360 bytes. This file is then intended to be sent to KUCVTSPLS to convert the gathered spooled files into one large document.

Notes:

The Front and Back Overlay attributes from the first spooled file that has these defined, will be set into the Physical file member's description field. These values will be used by the conversion program (KUCVTSPLS), when converting to a PDF document, if you have KeyesOverlay.

There is a limit to the number of pages that can be converted into a single PDF document. The conversion program will stop when it reaches the limit. The current limit for *SCS printer files is 29997 pages.

Output Queue Processing

The output queue called KUOUTQ can be monitored for spooled files that you wish to convert. As each spooled file becomes **Ready** in this output queue, it will be automatically processed into a TIFF or PDF document.

After processing a spooled file, it will be removed from the output queue unless you specify *YES on the *Save spooled file* attribute using an OVRPRTF command.

Starting KeyesPDF Out Queue Processing (STRKUOUTQ)

This program is used to start a program that will automatically convert spooled files into either TIFF or PDF images. It will monitor an output queue called KUOUTQ, converting any spooled file that is in a "RDY" status.

The TIFF or PDF images will be placed in a location of your choice.

Notes:

The first time you run this program, it will create a subsystem called KUSBS and a job queue, a message queue and an output queue all called KUOUTQ. These objects are used to run the monitoring program CHKKUOUTQ that will run in the KUSBS subsystem.

Each spooled file will be converted and possibly burst into parts, based on how you have told the system how each should be processed. The default values used for all spooled file conversions are coded in the PDF Conversion Setup parameters. The *Work with PDF Spooled Files* screen, described on the following pages, can be used to direct how each different spooled file should be processed.

File Naming

Unique member names will be automatically generated for the output file as it processes each spooled file. The names will be made up of a date and time stamp. However, you can have the output files given a name of your choice, in several different ways:

1. You can code an escape sequence as part of the data inside your spooled file, that contains the filename that you desire. This method is available for use with *SCS and *USERASCII printer files, only. You code the escape sequence as follows, anywhere on a page:

~Desc filename.ext

The Filename with extension can be any value up to 60 characters long. You can include different description commands on each page, if you want to have the spooled file burst into multiple image files. Pages with no description command are considered a continuation of the previous page. If you give a description command with a blank filename value, that page will not be converted.

2. You can code a location string, using the format 'L=xx,C=xxx' in the *User Data* field using an OVRPRTF statement. Where L=xx is used to specify the line number and C=xxx is used to specify the column number of the location in the spooled file where an Index can be found. This method is

available for *SCS printer files, only. The string that is found starting at the specified location, on each page, will be used to Index or Name each of the documents created. The first blank character ends the Index value.

For example: The location could point to a document number, a customer number, or any other unique identifying information that can be found on a page.

Pages that have no value at the specified location will be considered a continuation of the previous page. A filename extension will be added to the Index value.

3. You can code values in the *Work with PDF Spooled Files* screen to direct how the documents should be named.
4. You can code an escape sequence in the *User Defined Data* field using an OVRPRTF statement, that contains the filename desired. You code the escape sequence as follows:

 -Desc filename.ext

The filename can be up to 60 characters long.

Encryption

You can provide user and/or owner passwords for spooled files in several different ways.

1. You can code an escape sequence as part of the data inside your spooled file, that contains the passwords that you desire. This method is available for use with *SCS and *USERASCII printer files, only. You code the escape sequence as follows, anywhere on a page:

 -PUser user-password -and/or- -POwner owner-password

The passwords can be any value up to 32 characters long. You can include different password commands for each section of the spooled file, if you will be bursting the spooled file into multiple documents. Pages with no password commands are considered a continuation of the previous page. If you give password commands with blank password values, that document will not be encrypted.

2. You can code values in the *Work with PDF Spooled Files* screen to direct how the documents should be encrypted.
3. You can code an escape sequence in the *User Defined Data* field using an OVRPRTF statement, that contains the password desired. You code the escape sequence as follows:

 -PUser password string -and/or- -POwner owner-password

The passwords can be any value up to 32 characters long. The passwords ARE case sensitive.

End KeyesPDF Out Queue Processing (ENDKUOUTQ)

This program is used to end the program that is monitoring the KUOUTQ output queue. The program (CHKKUOUTQ) runs in the KUSBS subsystem converting all spooled files that go into a "RDY" status in the KUOUTQ output queue. You can end the program using this command.

Work with PDF Spooled Files

Conversion parameters can be specified for each of your spooled files, using the *Work with PDF Spooled Files* program (shown below). This program can be started from the KeyesPDF menu (Item 14) or using the KUSPOOL command.

WRKUSF	Work with PDF Spooled Files	Date
user-id		Time
		Position to: _____
Options: 2=Change 3=Copy 4=Delete		
Option	Spooled File	
	_____	Enter new Spooled File here to add
-	FORMS	
-	INVOICES	
-	ORDERS	
F3=Exit F12=Cancel F17=Top F18=Bottom		Bottom

You may add a new spooled file description by entering the spooled file name on the top line.

Option **2** (Change) may be used to change existing spooled file descriptions.

Option **3** (Copy) may be used to copy a description to another name.

Option **4** (Delete) may be used to remove entries that are no longer needed.

Spooled File Setup Screens

When adding a new spooled file or selecting option 2 (Change) the following screen is used to define the conversion parameters desired.

WRKUSF	Setup Screen	Date						
user-id	Spooled File: INVOICES	Time						
Type choices, press Enter.								
IFS Path.	/home/pdffiles	or *None						
File name.	~1 for ~2 ~UD.PDF							
To PDF Printer . .	PRT01	Printer name or (blank)=None						
Image type. . . .	PDF	PDF, TIF, or ASC						
Text/Image	I	(T/I) PCL conversions only						
Encode text	Y	(Y/N) PDF documents only						
Paper size	S	S=Std, L=Legal, A=A4						
Exit Program . . .	EXITPGM							
Scan Field Locations:								
	Line	Column	Size		Line	Column	Size	
#1	7	68	5		#2	10	68	6
#3	—	—	—		#4	—	—	—
#5	—	—	—		#6	—	—	—
#7	—	—	—		#8	—	—	—
#9	—	—	—		#10	—	—	—
F3=Exit	F12=Cancel					More...		
You can use ~n to place Scan Field Values into the Path or File name.								
You can use ~UD to place the User Data field into the Path or File name.								

IFS Path

Specify the path in the form (/home/pdffiles) where you want this type of spooled file to be sent in your IFS. The path can be up to 50 characters long.

You may code ~n to add Scan Field values to the path. You may code ~UD to add the User Data field to the path. If you leave this field blank, the converted documents will be sent to the default path specified in the KeyesPDF Setup parameters.

You may code *NONE in this field, if you do not want to save the PDF's to the IFS. This would be used if you wanted to simply print the PDF's.

File name

Specify the name that you want to call the converted document in your IFS. The name can be up to 60 characters long and can include parts of the path, if desired. For example, (invoices/#12345.pdf) would add the documents to the *invoices* directory, within the above Path.

You may code ~n to add Scan Field values to the filename. You may code ~UD to add the User Data field to the filename. If you leave this field blank, the converted documents will be given a generic name made up from the current date and time.

To PDF Printer

You may specify the name of a printer, if you want to print your PDF's. The printer must have PDF direct printing capability. To use this feature, you must select PDF as the Image type.

You may leave this field blank to not print the PDF's.

Image type

You can specify (PDF) to convert any type of spooled file into a PDF document.

*AFPDS and *USERASCII spooled files can be converted to (TIF) images.

*SCS spooled files can be converted to (ASC).

Text/Image based PDF

For USERASCII conversions only, you can specify the type of PDF that you want to produce. Text based PDFs are searchable and indexable, and will usually print better looking text. Image based PDFs cannot be altered and are usually faster to print.

Encode text

You may select whether or not text streams are encoded within the PDF documents. Encoded text streams cannot be read or changed by an editor. This will make text based PDF's difficult, if not impossible, to alter without leaving a trace.

Paper size

This specifies the size of paper that the PDF documents will be created for.

- S = Standard paper 8.5 x 11 inches in size.
- L = Legal paper is 8.5 x 14 inches in size.
- A = A4 size paper is 8.3 x 11.7 inches.

Exit Program

An exit program can be used to alter the path or filenames, etc. All the parameters including the Scan Field Values are sent to the exit program for each page of the spooled file, as it is being processed. The exit program can add to or change any of the parameters. The Scan Field Values can be used by the exit program for chaining or substitution into other fields, such as the *Path* or *Filename*.

A sample exit program called EXITPRGM can be found in the source file called QRPGSRC in KULIB. You may copy this source code to any other name, in any library so that you can add your own custom code, to make your exit programs.

Scan Field Locations

Key the line number, column number, and length for up to 10 different fields to be extracted from each *SCS spooled file page. The values found at these locations are passed to the exit program and can be used for chaining to your master files. They can also be used for substitution into the Path or Filename fields.

To specify a substitution value, you may code $\neg n$ (where n is the Scan Field number) within the other fields. For example, the filename field could be coded as simply $\neg 1$, if you define the location of a document name in Scan Field #1.

Roll Keys

You may use either Roll Key to access the *Setup Continued* screen, shown below:

WRKUSF user-id	Setup Continued Spooled File: INVOICES	Date Time
Type choices, press Enter.		
User Password . . .:	_____	(blank)=Default or *NONE
Owner Password.:	_____	(blank)=Default or *NONE
F3=Exit	F12=Cancel	More...
You can use $\neg n$ to place Scan Field Values into the Passwords. You can use $\neg UD$ to place the User Data field into the Passwords.		

User & Owner Passwords

You can provide passwords if you want the PDF documents to be encrypted. A User password will allow the document to be opened, printed, and annotated. The user will not be allowed to change the document.

To specify a substitution value, may code $\neg n$ (where n is the Scan Field number) within the password fields. You may also code $\neg UD$ to insert the User Data field into either of the passwords.

If you leave the password fields blank, they will default to any value that you have coded elsewhere. You can enter *NONE to leave the documents unencrypted.

*SAME means do not change the passwords from what was already entered previously.

Sending an iSeries Spooled File

We have supplied an API to assist you in sending a spooled file to another iSeries. Spooled files can be extracted "as-is" from an output queue and placed in a Physical File. This will allow you to transfer the spooled file to another computer, via FTP or e-mail. The complete spooled file can then be restored into an output queue on the other iSeries.

If you want to send someone else a spooled file, here is how to do it:

1. Use the command KGETSPLF to get the spooled file into the physical file. You can find the needed spooled file parameters using the WRKOUTQ or WRKSPLF commands.
2. Download or transfer the file to your PC for e-mailing. Be sure not to translate the file in any way. It must be sent as a Binary file, as-is.

Restoring an iSeries Spooled File

We have supplied another API to assist you in restoring a saved spooled file. After extracting a spooled file to a Physical File, the file can be restored as a spooled file into an output queue of your choice.

1. Copy, upload, or transfer the file to the iSeries into a Physical File created with a record length of 4083 bytes. Be sure to upload the file with no translation.
2. Use the command KPUTSPLF to put the spooled file into the desired output queue.

How to Create EBCDIC PCL Printer Data

KeyesPDF conversion programs can convert PCL printer files into PDF documents or TIFF images. PCL printer files can include:

- Scalable Fonts from 4 to 99 point
- Raster graphics
- GL/2 vector graphics
- Shading & cross-hatch patterns
- Pie charts
- Macros

We have supplied tools that will allow you to create PCL printer data directly from your application programs in standard *SCS printer files. PCL and GL/2 vector graphics data contain escape sequences that all start with an ASCII Esc character followed by standard ASCII characters (in most cases).

We have provided a program that automatically transforms standard EBCDIC spool files into ASCII PCL. It will translate the EBCDIC negate character (¬) into an ASCII Esc character, strip out blanks at the ends of each line, and add Carriage Return/Line Feeds for each print line to the data. Using this technique you should be able to print any type of PCL graphics, lines, boxes, shading patterns, etc. using regular *SCS printer files. For example, the following line in a printer file would print a line across the page:

```
¬*p212y0X¬*c2b3326a0P
```

You must specify the phrase "EBCDIC PCL" in either the Form Type or the User Data field of a spooled file, for KeyesPDF to be able to recognize that you have created EBCDIC PCL.

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