Preparing and Printing PDF Files

THE DOCUMENT COMPANY
XEROX

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1. Before you begin

This book is intended for you, the person preparing, submitting, or printing PDF files on Xerox printers supported by the Xerox Document Services Platform (DocuSP) controller software.

This book introduces you to Portable Document Format (PDF) files and explains how to prepare and print them.

- Chapter 1, *Before you begin*:
    - provides introductory material.

- Chapter 2, *Procedures:*
    - provides detailed explanations
    - is used in conjunction with Adobe's *How to Create Adobe® PDF Files for Print and Press*

About PDF files

Portable Document Format (PDF) was originally designed as a file format for viewing files rather than printing them; therefore, some PDF files are not suitable for printing.

To ensure that you are preparing a PDF file that can be printed on a supported Xerox printer:

- this chapter provides general information about hardware and software for PDF creation and gives examples of two production print paths.

- the next chapter provides further details along the example production print paths, as detailed in the section "PDF production print path examples" in this chapter, and suggests various troubleshooting procedures.

Hardware and software

Various types of hardware and software are used along the production print path. Examples of production print paths are described later in this section.

Client hardware

Typical client hardware platforms are:

- Macintosh

- Windows

- UNIX Workstation

Client software

Direct PDF printing is now supported by version 2.2 or higher of Xerox Document Submission (XDS) software and version 1.2 or higher of Xerox DigiPath *QuickPrint* application. Command line applications such as lpr, print, nprint, and others may also be used to submit PDF files to print.

PDF creation software

There are many applications that can create PDF files. It is suggested that you create the PDF file using the recommended workflow process described in Adobe's *How to Create Adobe® PDF Files for Print and Press* (available from Adobe's web site http://www.adobe.com/products/acrobat/pdfs/acr4finhowto.pdf). This document lists many Adobe applications and provides recommended settings and procedures for creating PostScript files that are optimized for PDF conversion.

In addition, this document also provides guidelines for creating print-optimized PDF files. The preferred method is to utilize Adobe's Distiller, version 3.0.2 or higher to create the PDF files.

Document submission software

PDF files can be submitted by using the Xerox Document Submission software version 2.2 or higher, the Xerox DigiPath version 1.2 or higher *QuickPrint* tool, lpr, print, nprint, or another choice.

You might use, for example, any of the following:

- for Macintosh (OS7.x or higher)

  - Xerox Production Print Services (XPPS) version 2.2 or higher, which includes the Xerox Document Submission (XDS) software, Adobe drivers and PPD files, and Xerox driver plugins

- for Windows 95/98/ME/NT4.0/2000

  - Xerox Production Print Services (XPPS) version 2.2 or higher, which includes the Xerox Document Submission (XDS) software, Adobe drivers and PPD files, and Xerox drivers

- for Sun Solaris

  - Xerox Document Submission (XDS) software version 1.4x

  - Xerox Production Print Services (XPPS) version 3.1 Xerox Document Submission Plus (XDS Plus) software

  - DocuSP version 3.1 Web Interface

Controller software

On the Xerox DocuSP controller, you need the appropriate DocuSP Print Services software for your printer:

- for a DocuTech 61xx printer, the Xerox Document Services Platform (DocuSP) software version 2.x or higher

- for a DocuTech/DocuPrint 65/75/90 printer, the Xerox Document Services Platform (DocuSP) software version 2.x or higher

- for all other Xerox printers supported by the DocuSP software, version 2.0 or higher

This version of controller software includes the Adobe PostScript Level 3 decomposer (version 3010.106 or higher). This decomposer is capable of accepting and processing PDF version 1.2 or higher Page Description Languages native format.

Documentation

Your primary information sources for preparing and printing PDF files are:

- *Preparing and Printing PDF Files*
- Adobe's *How to Create Adobe® PDF Files for Print and Press*

For information about document submission using XPPS software, refer to:

- *Xerox Production Print Services guide to job submission for Windows*
- *Xerox Production Print Services guide to job submission for Macintosh*

- *Xerox Production Print Services Guide to Job Submission using XDS Plus*

- *Xerox Document Services Platform Series Guide to the DocuSP Web Client*

For information about using the DocuSP controller to manage and print jobs, refer to:

- The DocuSP documentation on the CD-ROM or the DocuSP Help

For in-depth information about PDF files, refer to:

- *PDF Technical Reference Manual*, Adobe Systems ISBN 0-201-62628-4

PDF production print path examples

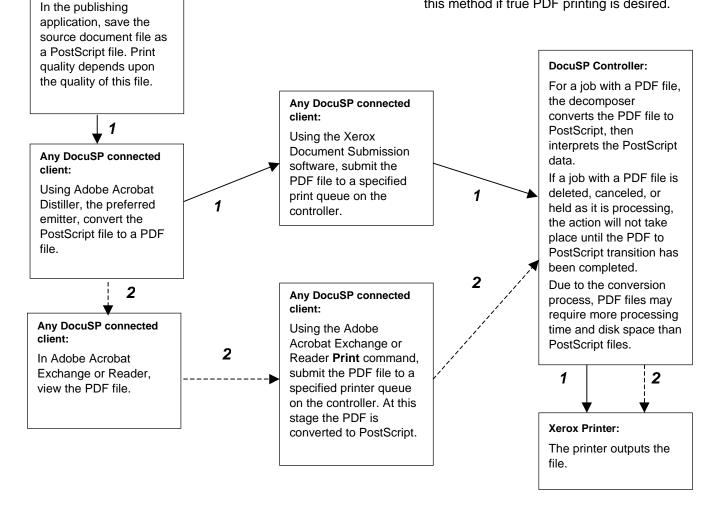Examples of two production print paths are illustrated below.

Direct Path (**1**) – The standard mechanism for submitting a PDF file is, in general, the same as for submitting any Page Description Language (PDL) file or "print file" ‑ Xerox Document Submission software (XDS submission tool), lpr, print, nprint, etc. This is the preferred method for submitting PDF files to print.

For a Sun workstation, only the *Direct Path* (**1**) is available.

Indirect Path (**2**) – PDF viewer Print command (transparent printing enabled by drivers).

Since this method converts the file to PostScript format and sends the PostScript file to the printer, it is not recommended to use this method if true PDF printing is desired.

Any DocuSP connected client:

In the publishing application, save the source document file as a PostScript file. Print quality depends upon the quality of this file.

1

Any DocuSP connected client:

Using Adobe Acrobat Distiller, the preferred emitter, convert the PostScript file to a PDF file.

1

Any DocuSP connected client:

Using the Xerox Document Submission software, submit the PDF file to a specified print queue on the controller.

1

DocuSP Controller:

For a job with a PDF file, the decomposer converts the PDF file to PostScript, then interprets the PostScript data.

If a job with a PDF file is deleted, canceled, or held as it is processing, the action will not take place until the PDF to PostScript transition has been completed.

Due to the conversion process, PDF files may require more processing time and disk space than PostScript files.

2

Any DocuSP connected client:

In Adobe Acrobat Exchange or Reader, view the PDF file.

2

Any DocuSP connected client:

Using the Adobe Acrobat Exchange or Reader **Print** command, submit the PDF file to a specified printer queue on the controller. At this stage the PDF is converted to PostScript.

2

1   **2**

Xerox Printer:

The printer outputs the file.

2. Procedures

This section provides tips and suggestions along the production print paths and guidelines for troubleshooting. It is also recommended that Adobe's *How to Create Adobe® PDF Files for Print and Press* be used as an additional resource*.*

General guidelines

Be aware of the following guidelines.

- The preferred method to create the PDF files is to utilize the Adobe Acrobat Distiller, version 3.0.2 or higher.

- The display of a PDF file in a PDF viewer does not guarantee that the printed output will match the displayed format, or even that the PDF file can be printed.

- If you are dissatisfied with the prints, generate the PDF file in a different emitter/process, then print the new version.

- If you are dissatisfied with the prints, and there are problems with shifted images and rotation, resubmit the PDF file and attempt some modifications using the DocuSP Print Services Job Manager or Queue Manager.
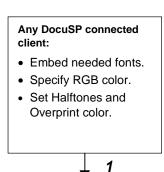
Tips along the production print path

For the two examples of production print paths, at different points along the paths, some actions can be taken to prepare PDF files that print successfully.

Direct Path (*1*) – XDS, lpr, print, nprint, etc
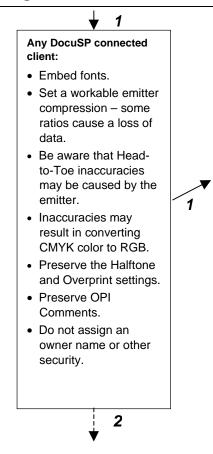
Indirect Path (*2*) – PDF viewer Print command

Converting the source file to PostScript

Any DocuSP connected client:

- Embed needed fonts.
- Specify RGB color.
- Set Halftones and Overprint color.

1

When converting the source document file to a PostScript file, fonts can be embedded and required options can be selected.

Ensure that all necessary fonts are embedded in the PostScript file. Select the PostScript option "Optimizing for Portability using Xerox PPD" and also select "All Non-Resident Fonts be included in the PostScript file" or "Download All Fonts."

Creating the PDF file

1

Any DocuSP connected client:

- Embed fonts.
- Set a workable emitter compression – some ratios cause a loss of data.
- Be aware that Head-to-Toe inaccuracies may be caused by the emitter.
- Inaccuracies may result in converting CMYK color to RGB.
- Preserve the Halftone and Overprint settings.
- Preserve OPI Comments.
- Do not assign an owner name or other security.

1

2

Adobe Acrobat Distiller 3.0.2 or higher is the preferred emitter for generating a PDF file from a PostScript file. Be sure you understand the Distiller's options as you select them. These options will have to be compatible with the options already present in the PostScript file.

Font options: Be aware that some emitters, by default, do NOT automatically embed fonts; instead, you are expected to choose to embed any fonts. To embed fonts using Acrobat Distiller, select [Embed All Fonts] and *deselect* [Subset Fonts Below].
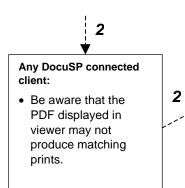
Compression options: If a previously printed PDF had shown poor image quality particularly for photos, generate the PDF again, but this time select a compression other than the default compression or even select [No Compression].

If the PDF needs compression because of excessive file size, select the manual compression setting of ZIP 4bit/8bit.

Downsampling options: If a previously printed PDF had shown fuzzy graphic images, generate the PDF again, but this time deselect [Downsampling].

Security options: Selection of the [Do not allow printing] flag, or specifications of passwords or owners names can cause a failure during PDF processing at the controller. Regenerate the PDF but deselect this flag and password and owner name.

Viewing the PDF file

2

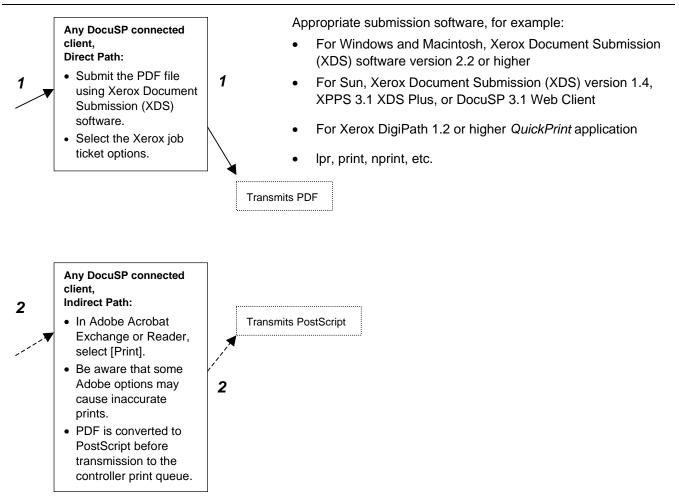| **Any DocuSP connected client:**

• Be aware that the PDF displayed in viewer may not produce matching prints. |
|---|

2

Pages displayed as landscape in Adobe Acrobat Exchange or Reader may actually be drawn in portrait mode accompanied with instructions to Acrobat to display this page rotated 90 degrees. If this occurs the PostScript or PDF file may contain other orientation information affecting the output. See Adobe's Customer First Support web site

http://www.adobe.com/support/main.html

If you are not satisfied with the prints, on your next attempt at printing this file make some adjustments when the job is in the Print Services Job Manager. You may need to produce several trial prints before you know which rotation adjustments to make.
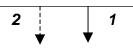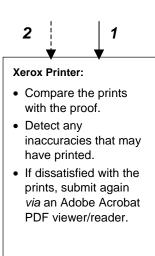
Submitting the PDF file

1

Any DocuSP connected client, **Direct Path:** • Submit the PDF file using Xerox Document Submission (XDS) software. • Select the Xerox job ticket options.

1

Transmits PDF

Appropriate submission software, for example:

• For Windows and Macintosh, Xerox Document Submission (XDS) software version 2.2 or higher

• For Sun, Xerox Document Submission (XDS) version 1.4, XPPS 3.1 XDS Plus, or DocuSP 3.1 Web Client

• For Xerox DigiPath 1.2 or higher *QuickPrint* application

• lpr, print, nprint, etc.

2

Any DocuSP connected client, **Indirect Path:** • In Adobe Acrobat Exchange or Reader, select [Print]. • Be aware that some Adobe options may cause inaccurate prints. • PDF is converted to PostScript before transmission to the controller print queue.

Transmits PostScript

2

Controller processing of the PDF file

Controller:

- Accepts PS or PDF.
- Inaccuracies in the PDF file may be processed.
- Inaccuracies may cause a displayed error message.
- As needed, use the DocuSP Print Services Job Manager to modify Image Shift and Rotation.
- A PDF file needs more processing time than a PostScript file.
- Be aware that a PDF to PostScript transition must take place before some job actions (Delete, Cancel, etc.) can occur.
- A PDF job with a password or an owner name will fault.

1

2   *1*

On the *Direct Path* (*1*), the controller accepts and processes the PDF.

On the *Indirect Path* (*2*), the controller accepts and process a PostScript (PS) file.

When there is a problem converting PDF to PostScript, the Print Services Job Manager displays the job's final status as, "Completed with Errors." If error pages are enabled, the error page describes the error as: "Problem converting PDF to PS." If this problem occurs, follow the procedure in Troubleshooting.

If a PDF file was submitted:

- in the *Direct Path (1),* for example in XDS, landscape pages are oriented correctly so that duplex and tumble requests are correctly processed
- in the *Indirect Path (2),* for example *via* Adobe Acrobat Reader or Exchange, there may be a problem with the orientation of landscape pages.

For some jobs to print correctly, you may need to use the Queue Manager to set the stock size with an Override or the Exception Pages options to specify various stock sizes. However, for jobs that print on stock that is smaller than the image size, stock size with an Override or Exception Pages specifications will cause the image to be cropped and printed in the lower left corner of the stock – if the image must be scaled down and centered, print from Adobe Acrobat Reader or Exchange after selecting the appropriate print setup parameters.

Printing

2   *1*

Xerox Printer:

- Compare the prints with the proof.
- Detect any inaccuracies that may have printed.
- If dissatisfied with the prints, submit again *via* an Adobe Acrobat PDF viewer/reader.

The processed data is transmitted to the printer.

Image Shift and Crop:
It is a best practice to have the image size the same as the printed page size. If the image size is smaller than the selected page size, the image will be centered on the page. If the image size is larger than the selected page size, the image will be cropped.

Tumble duplex:
Unexpected Tumble Duplex printing may occur when the PDF file images the landscape page in a portrait orientation. The top edge of the landscape job can be either to the right or left side of the portrait page.

Rotation:
Unexpected rotation may occur.

Page Limitations:
If the images extended to the edge limits of the page, cropping may occur.

Consult the Adobe book

For further details on creating and printing PDF files, access the Adobe web site and print the book titled *How to Create Adobe® PDF Files for Print and Press*: The URL for the book is:

http://www.adobe.com/products/acrobat/pdfs/acr4finhowto.pdf

PDF printing summary

1. Create "composite" PDF, not pre-separated PDF.

2. Be aware of the maximum resolution and the line screen values of the printer.

3. All DocuSP-based printers only print black and white with grayscales.

4. The DocuSP software accepts PostScript Level 1, 2, and 3 files, and PDF files.

5. The DocuSP software has incorporated a "True Type Rasterizer" for Type 42 fonts.

6. Disable font substitution to output the most accurate font reproduction.

7. Follow the procedure to use Adobe Distiller as the virtual printer (Distiller PPD) and XDS 2.2 or higher to submit the jobs to print.

8. Use either the (1) Custom Xerox driver or (2) Adobe driver and Xerox PPD appropriate to the designated printer.

9. Although the printer is black and white, convert to CMYK to provide the best legacy PDF files. (Choose grayscale if black and white PDF files are not a problem).

10. It is not necessary to configure for spot colors.

11. It is acceptable to downsample to 300. Generally the downsample is 2x the printer line screen, so a down sample to 170ppi (for 85 line screen) would be the minimum setting.

Troubleshooting

Troubleshooting procedures and support will assist you in solving problems.

Procedures

Attempt one or more of the following troubleshooting procedures.

- Validate that the PDF file is good.

  - Open the PDF file in Acrobat Reader or Exchange.

  - Print to file or directly to DocuSP using the Adobe PS driver and the PPD appropriate to the designated printer.

- Check to ensure that the file has been optimized; if it has not been optimized, do it now.

  - Open the file in Adobe Acrobat Exchange.

  - Select "File/Document info."

  - Select "Use the Save As command for online delivery."

- Ensure that all necessary fonts are included in the original PostScript file before distillation.

  - Select the PostScript option "Optimizing for Portability using Xerox PPD."

  - Select "All Non Resident Fonts be included in the PostScript file."

- Understand how the different options in the source application Print dialog affect the print quality, then make selections and print the file again.

- If you suspect that the files are extremely large and possibly exceeding the Spool space or if you have seen displayed messages about exceeding the Spool space, ask your system administrator to check that the inQ is not exceeding its limit during the PDF to PostScript conversion.

Questions

The following questions should be used as a guide to troubleshooting PDF problems. The answers to these questions will help isolate the problem and provide critical information for its resolution.

- Did you try creating the PDF from the original PostScript through the latest version of Adobe's PDF Distiller?

- Does the original PostScript file print correctly? And, does it print correctly on other PostScript printers?

- Can you open all pages within Adobe's Acrobat? Within Acrobat, can you print correctly *via* PostScript?

- What application and/or PDF software created the PDF file?

- Does the PDF file print on other PDF printers?

- Have you tried printing the PDF file using the most current release of the DocuSP software?

- Have you tried distilling the PostScript file again?

- Have all the document fonts been downloaded and included throughout the process? Keep in mind that the fonts have to be within the PostScript and the resulting PDF.

- Did you use PDF Writer to create the PDF file? If so, please recreate the PDF file using Adobe's PDF Distiller.

Support

For problems printing PDF files on Xerox supported printers, call the Xerox Welcome Center:

- In the USA, (800) 821-2797

- In Canada, (800) 939-3769

- In Europe, local center number

When providing the center with files for troubleshooting or other analyses, be prepared to supply the following:

1. The source document file and the name and version number of the application.

2. The PostScript file that was generated from the source file and a description of the driver settings that were used.

   Note: Without the original PostScript file, solutions for your problems will be almost impossible to resolve.

3. The PDF file that was generated from the PostScript file, and the name and version number of the PDF emitter application.