z/OS
3.3.0

Infoprint XT for z/OS

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 411.

Contents

Figures

Tables

About this publication

This publication describes how to use IBM Infoprint XT Version 3 Release 3 for z/OS (hereafter referred to as Infoprint XT).

Infoprint XT, which uses the IBM Xerox transform (XT) technology, runs on z/OS Version 2.2 or later. Before using this publication, you should ensure that the Infoprint XT installation is complete as described in the *Program Directory for IBM Infoprint XT for z/OS*.

Who should read this publication

The information in this publication applies to these audiences:

- The system programmer who is responsible for performing the product configuration and running the installation verification procedure (IVP).
- The system programmer who is responsible for copying the original Xerox resources into partitioned data sets (PDSs) on z/OS. The system programmer also configures and customizes the Infoprint XT environment, as required. For example, the system programmer completes tasks for using Infoprint Server in conjunction with Infoprint XT.
- The job submitter who submits Xerox jobs on z/OS for processing by Infoprint XT.

Planning for administrator tasks and user tasks

How you use the information in this publication depends on the major task or tasks that you want to perform. You can use this list in conjunction with "A roadmap for using Infoprint XT" on page 2. You also need to complete some preliminary planning before you begin your configuration tasks:

Analyzing the resource usage in your current printing environment
Before you begin to set up your Infoprint XT environment, you should analyze your current printing environment. For example, do all of your Xerox printers have exactly the same sets of resources, or do your printer configurations support different sets of jobs? You can read "Determining whether you require resource groups" on page 111, to help you decide whether to use resource groups.

Transferring Xerox resources from a Xerox printer and loading them on z/OS
This is typically a one-time task that you perform when you install and set up your Infoprint XT environment. You only copy resource files additional times if you are retaining a Xerox printer and updating its resources after you install Infoprint XT. You should ensure that you have all of the resources from each of your Xerox printers on tapes. See "Transferring Xerox printer resources to a tape" on page 81 for more information.

Note: These activities to do not pertain to jobs that use FILE dynamic job descriptor entries (DJDEs) to load resources.

How do you currently manage your Xerox jobs?
Some installations might only require a single Xerox START command for all jobs. For example, the starting environment for the printer might only use a combination of the **dfault** job descriptor library (JDL) and the **dflt** job descriptor entry (JDE). The individual jobs then call out other internal JDLs, JDEs, or DJDEs for their specific requirements. Regardless of how you submit jobs, you should understand your current environment, so that you can replicate it with Infoprint XT. See "Reviewing your existing JCL" on page 72. While this information is in a section that is specific to Infoprint Server, it provides guidance for examining your current environment.

How do you want to submit jobs for processing by Infoprint XT?
The extent to which you can make changes to your existing job control language (JCL) jobs influences how you can submit jobs for processing by Infoprint XT. If you are using Infoprint Server, you have further decisions with regards to whether you use the Print Interface subsystem, or the IP PrintWay component of Infoprint Server:

- If you do not use Infoprint Server, you need to make modifications to your existing JCL. These changes can be extensive, depending on how many jobs you need to modify. To view the types of changes that you would need to make, see Figure 20 on page 173. This table contains the AIOZ2AFP sample JCL that Infoprint XT provides. This JCL sample includes all of the JCL statements that you use to submit jobs for batch processing.
- You can reduce the number of JCL changes by using the Print Interface subsystem component of Infoprint Server. With the Print Interface subsystem, you can modify the OUTPUT parameter in your existing JCL for the program that generates the Xerox job. The output from the program automatically becomes the input to Infoprint XT. See "Printing jobs by using the Print Interface subsystem" on page 180.
- If you currently use combinations of CLASS, DEST, and FORMS values to route your Xerox jobs, and to select their starting environments, you can use the IP PrintWay component of Infoprint Server. No changes to your existing JCL might be necessary in a combined IP PrintWay and Infoprint XT installation. See "Processing jobs by IP PrintWay with Infoprint XT" on page 71.

Conventions used in this publication

This publication uses conventions for:

- Highlighting
- Command syntax and example syntax, including special characters in commands

Highlighting

These are the types of highlighting:

Bold
> Identifies commands, attributes, files, directories, and other items whose names the Infoprint XT installation predefines. For example, the **pdxtx2afp** command and the `/var/Printsrv/xfd/` directory.

Italic

> Identifies variable data for which you supply values that apply to your installation. For example, if the text identifies a printer name as PRT*nnn*, you should enter the real name of your printer, such as PRT680. This publication shows variable data in both normal text, *nnn*, and in bold text, ***nnn***.

Bold *Italic*
> Syntax that combines bold and italic highlighting identifies a specific keyword or parameter name that you enter exactly as shown, and a variable value that you supply. For example, **xjdl=***jdl_name*. In this syntax, *jdl_name* is a value that you choose.

Understanding the syntax notation in this publication

These rules apply to the various coding examples that this publication includes:

- When you perform procedures in the UNIX System Services environment, text that you enter is case-sensitive.
- Do not type any vertical bars, underscores, braces, or brackets that the command examples in this publication contain:
  - A vertical bar or bars between two or more entries means that you can only select one of the values. `[xspacing=`<u>`none`</u>` | word | char]` is an example of this notation.
  - An underscore identifies the default value for an option, if you do not explicitly specify a value. <u>none</u> was the default value in the previous example.
  - Braces around a value mean that you must select one of the mutually exclusive values. For example, `{ THIS | THAT }`.
  - Brackets around an item in an example specify that the item is optional. You do not have to include it.

Abbreviations

AFP
Advanced Function Presentation

FCB
Forms Control Buffer

IPDS
Intelligent Printer Data Stream

ISPF
Interactive System Productivity Facility

JCL
Job Control Language

LCDS
Line Conditioned Data Stream

MO:DCA–P
Mixed Object Document Contact Architecture–Presentation

NPRO
Non-process runout

PSF
Print Services Facility

RACF®
Resource Access Control Facility

STDERR
Standard error

STDIN
Standard input

STDOUT
Standard output

Related information

This publication refers to other publications that contain more information about AFP, the z/OS operating systems, Print Services Facility (PSF), Infoprint Server, and related products. The "Bibliography" on page 431 lists the related publications.

Web sites

For additional information about z/OS, see the z/OS home page (www.ibm.com/systems/z/os/zos).

For information about Infoprint XT on other platforms, see Ricoh Production Print Software (rpp.ricoh-usa.com/products/software).

Publications

IBM provides both hardcopy and viewable versions of publications. For a list of publications that you might find useful with the Infoprint XT installation, see "Bibliography" on page 431.

Infoprint XT manual (man) pages

Your Infoprint XT installation includes online help in the form of man pages. To view the Infoprint XT manual (man) pages, use the z/OS UNIX **man** command:

1. Access the z/OS UNIX environment through either OMVS or the ISPF shell. See "Accessing the UNIX System Services z/OS UNIX shell" on page 184 or "Accessing the UNIX System Services ISPF shell" on page 183 if you need further information.

2. Issue the **man** command and specify the name of an Infoprint XT man page. For example:

```
man pdxt
```

For a complete list of all the man pages available with Infoprint XT, access the **pdxt** man page.

Summary of changes

Infoprint XT for z/OS, GI11-9492-02

This publication contains additions and changes to information previously presented in the second edition of *IBM Infoprint XT for z/OS*, GI11-9492-01. The technical additions and changes are marked with a revision bar (|) in the left margin.

New information

- "MO:DCA-P" and "NPRO" are added to "Abbreviations" on page xv.
- A note is added to "Non-printable Xerox resources that Infoprint XT uses" on page 7.
- Overlay invocation has been added to "Xerox job restrictions" on page 11.
- Information about negotiating support for unsupported DJDEs is added to "Supported and unsupported Xerox DJDE and PDL commands" on page 15.
- The topic "Enabling Infoprint XT in the SYS1.PARMLIB member" on page 19 is added.
- The topic "Activating trace functions for the form converter (PDXT_XR2RAPI_TRACE)" on page 37 is added.
- A rule for the use of regular expressions is added to "Parameter mapping file syntax rules" on page 39.
- A reference to the **pdxt_resources** man page is added to Chapter 6, "Copying and loading Xerox resources," on page 81.
- The topic "Sampling Xerox FRMs by using AIOZR2AR" on page 94 is added.
- A step is added to the procedure in "Loading Xerox double-byte character set (DBCS) and EBCDIC fonts" on page 107.
- An example is added to the description of the $xxx\_metr.lst$ file in "Error information for resources that fail to load" on page 109.
- The **-a** parameter is added to the syntax of the **pdxtcluster -f remove** command in "Using the pdxtcluster command to create and modify cluster database resources" on page 125.
- Descriptions of the values for the **-f** option of the **pdxtcluster** command are reordered in "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133.
- The **-h** and **-m** parameters are added to the **pdxtpdl** command. See "Using the pdxtpdl command to compile Xerox JSL resources" on page 155.
- The **-a** parameter is added to the **pdxtx2afp** command. See "Using the pdxtx2afp command to process jobs" on page 167.
- The topic "Determining the Infoprint XT code level" on page 193 is added.
- The **xcaobs**, **xckdupmsg**, and **xpginterval** transform conversion parameters are added. See Appendix A, "Conversion parameters for converting Xerox jobs," on page 205.
- These messages are new:
  - "5016-124" on page 226
  - "5016-235" on page 230
  - "5016-236" on page 230
  - "5016-289" on page 232
  - "5016-500" on page 237
  - "5016-515" on page 238
  - "5016-516" on page 239
  - "5016-517" on page 239

- Appendix I, "InfoPrint XT Custom Color Collections," on page 401 is added.

Changed information

- Copyright statements for sample JCL are updated throughout the book.
- Instructions for the format of parameters and values in "Controlling the default arguments when you load resources (PDXTPDL_ARGS)" on page 36 are clarified.
- Messages in "Verifying the parameter specification of the mapping file" on page 41 are updated.
- Information about the **-d** and **-e** transform directives is updated in "Transform directives and syntax" on page 42.
- "Capturing service information for the AIOZ2AFP utility" on page 196 is updated.
- References to the Infoprint XT color collections web page at http://www.infoprint.com/internet/dcfdata.nsf/WebR10/1C3K3522 are replaced with references to Appendix I, "InfoPrint XT Custom Color Collections," on page 401.
- These messages are changed:
- Book numbers in "Advanced Function Presentation" on page 431 are updated.

Deleted information

- References to z/OS Version 2.1 and earlier versions have been deleted because these versions are no longer supported.

Infoprint XT for z/OS, GI11-9492-01

This publication contains additions and changes to information previously presented in the first edition of *IBM Infoprint XT for z/OS*, GI11-9492-00. The technical additions and changes apply to PTF UA72483 and are marked with a revision bar (|) in the left margin.

New information

- OTEXT messages on page "OTEXT messages" on page 13 has been added to Xerox job restrictions.
- New options have been added to the **pdxtloadres** command: `-L` *listfile*, `-N` *pattern*, `-S` *copies*, and `-f` *sample*. See "Using the pdxtloadres command to load Xerox resources" on page 111
- A new conversion parameter has been added. See xwarnrc transform conversion parameter on page "#unique_42/unique_42_Connect_42_xwarnrc" on page 218. Also see the note added to "Data stream converter message format and severity" on page 311.
- These messages are new:
  - "5016-016" on page 223
  - "5016-650" on page 242
  - "5016-651" on page 242
  - "5016-652" on page 242
  - "5016-653" on page 243
  - "5016-654" on page 243
  - "5016-655" on page 243
  - "5016-656" on page 243
  - "5016-657" on page 243
  - "5016-658" on page 244
  - "5016-659" on page 244
  - "5019-132 W" on page 320

Changed information

- In Table 4 on page 15, the **ABNORMAL** command has been added to the Unsupported column; the **OTEXT** command has been updated; and the **RFEED** command has been moved from the Unsupported column to the Supported column.
- "Infoprint XT resource directories for the load process" on page 105 has been updated with resource sample directories for FRM sampling.
- "Information files generated by Infoprint XT during resource tasks" on page 107 has been updated with new examples of pdxtloadres.log entries for FRM sampling.
- A list of file types that **pdxtblkres** command does not verify has been added to the **-f** option in "Using the pdxtblkres command to block resources" on page 153.
- The **-H** option has been added to the syntax in "Using the pdxtpdl command to compile Xerox JSL resources" on page 155.
- Numerous messages have changed in Appendix B, "Infoprint XT messages: 5016-nnn," on page 221, Appendix C, "Resource utility messages: 5017-nnn X (xxx)," on page 263, and Appendix E, "Data stream converter messages: 5019-nnn X (xxx)," on page 311.

Deleted information

- LGO has been deleted from the text in "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133.
- Message 5019-070 I has been deleted.

Chapter 1. Introducing Infoprint XT for z/OS

This chapter briefly describes the components of Infoprint XT for z/OS, how it processes jobs, and its non-supported or restricted functions.

Infoprint XT is the Xerox transform technology that you can use to print Xerox jobs on high-speed, Intelligent Printer Data Stream (IPDS) printers.

lists the functions provided by Infoprint XT, the components that you need to customize, and the sections that describe the customization tasks.

Infoprint XT overview

Infoprint XT is a data stream transform that uses IBM Xerox transform (XT) technology to convert Xerox data to Advanced Function Presentation (AFP) format, which is a presentation architecture for creating, storing, retrieving, viewing, and printing data. AFP was developed by IBM and is now maintained by the AFP Consortium at `www.afpcinc.org`.

Infoprint XT converts Xerox Metacode and Line Conditioned Data Stream (LCDS) jobs and the resources that they require, such as fonts, forms, and images, to their AFP equivalents in the Mixed Object Document Content Architecture (MO:DCA) data stream. You can print the converted AFP data on high-speed, Intelligent Printer Data Stream (IPDS) printers or use it with IBM's Content Manager OnDemand archival and retrieval system. Infoprint XT stores the AFP resources in libraries identified to Print Services Facility (PSF) so the resources can be automatically accessed for printing on all of the printers that use them.

For viewing, sending email, or printing on non-IPDS printers, IBM Print Transforms from AFP for Infoprint Server for z/OS (**afpxpcl**, **afpxps**, or **afpxpdf**) can be used in conjunction with Infoprint XT to convert the AFP output to PCL, PDF, or PostScript.

You can install Infoprint XT on z/OS Version 2 Release 2 or later (Program Number 5650-ZOS) operating systems.

The *Program Directory for IBM Infoprint XT for z/OS* , GI11-9495, provides detailed information about the operating system requirements, and other installation requisites.

Benefits of using AFP and Infoprint XT

The AFP architecture provides the ability to represent documents in a data format that is independent of the methods used to capture or create them. Documents might contain combinations of text, images, graphics, and bar code objects in device-independent formats.

You can send the same document to a variety of destinations, including printers, without altering its format for the type of destination. Many methods exist by which you can generate Xerox LCDS and Metacode data streams and send them to Xerox printers. Now, you can send Xerox jobs directly to Infoprint XT without altering the applications that generate the jobs.

Infoprint XT converts the jobs, which you can then print on a wide variety of IPDS printers. For example, you can print the jobs on InfoPrint 4100 printers, which are nonimpact, all-points-addressable, laser electrophotographic printers. You can also print the jobs on InfoPrint 5000 printers, which are full-color printers using advanced ink-jet technology. These continuous-forms printers are ideal for the high volume, production printing environment. If your printing needs require cut-sheet printers, with several bins for a variety of paper stocks, you can print the jobs on supported IPDS cut-sheet printers, such as the InfoPrint Pro C900AFP printer.

For in-depth information about the presentation architectures, see AFP Consortium at `www.afpcinc.org`. For detailed information about InfoPrint printers, see Ricoh Production Print Solutions at `http://rpp.ricoh-usa.com`.

A roadmap for using Infoprint XT

Table 1 on page 2 contains a list of tasks to complete in order to use the functions of Infoprint XT that can apply to your installation.

Table 1. Summary of Infoprint XT tasks			
Infoprint XT task	**Components**	**Required or optional?**	**See**
1. Creating the AIOUSER group on your system and ensuring the appropriate users have access to Infoprint XT.	Resource Access Control Facility (RACF) or an equivalent product that follows System Authorization Facility (SAF) protocol.	Required	"Establishing security for Infoprint XT" on page 19
2. Ensuring your system has sufficient storage for both Xerox print resources and job processing.	Separately mounted `/var/pdxt` directory (preferred) or the `/var` directory. • Resource storage guidelines • Job processing storage guidelines	Required	• "Verifying that you have sufficient storage available for resources" on page 20 • "Verifying that you have sufficient storage for job processing" on page 22
3. Ensuring your system has sufficient memory for both Xerox print resources and job processing.	• Infoprint XT **x2afpd** transform daemon • Infoprint XT AIOZR2AR utility program • Infoprint XT AIOZ2AFP utility program	Required	• "Memory considerations for the x2afpd daemon" on page 62 • "Memory considerations for AIOZR2AR" on page 87 • "Memory considerations for AIOZ2AFP" on page 171
4. Creating the `/var/pdxt` directory where Infoprint XT writes its variable data	z/OS	Required	"Creating the /var/pdxt directory" on page 22
5. Setting necessary environment variables (such as PATH and NLSPATH) to control Infoprint XT processing.	• If submitting jobs to Infoprint Server, `aopxfd.conf` file • Otherwise: – `pdxt.cfg` file – `.profile` file – `/etc/profile` file	Required	• "Setting required environment variables" on page 23 • "Transform entry format" on page 63
6. Running the IVP so you can load resources, convert, and print a test Xerox data stream.	• AIOZIVP1 • AIOZIVP2 • AIOZIVP3	Optional, but recommended	"Running the installation verification procedure" on page 26
7. Setting optional environment variables to control Infoprint XT processing.	Various methods	Optional	"Setting optional environment variables" on page 35

Infoprint XT task	Components	Required or optional?	See
Table 1. Summary of Infoprint XT tasks (continued)			
8. Creating a custom transform parameter mapping file to streamline the process of setting transform parameters.	`/var/pdxt/pdxtx2afp.map` file	Optional	"Creating a custom parameter mapping file" on page 38
9. Using transform directives to control the data stream conversion process.	Various methods.	Optional	"Using transform directives" on page 42
10. Using Infoprint XT application exits to control parts of the transform process	• **aioxlxae** transform accounting application exit • **aioxlxbe** transform begin application exit • **aioxlxie** transform input application exit • **aioxlxoe** transform output application exit • **aioxlxte** transform end application exit	Optional	• "Setting up a transform accounting application exit" on page 46 • "Setting up a transform begin application exit" on page 48 • "Setting up a transform input application exit" on page 49 • "Setting up a transform output application exit" on page 51 • "Setting up a transform end application exit" on page 53
11. Defining your printers to PSF and providing that program with access to your AFP resources.	PSF	Required if submitting jobs to PSF	"Providing PSF with access to the AFP resources " on page 59
12. Configuring your Infoprint Server environment, by using the appropriate product documentation.	Infoprint Server	Required if submitting Infoprint XT jobs to Infoprint Server	"Overview of customizing and administering Infoprint Server" on page 61

Table 1. Summary of Infoprint XT tasks (continued)			
Infoprint XT task	**Components**	**Required or optional?**	**See**
13. Configuring Infoprint Server to use the managed LCDS and metacode transform by: • Ensuring adequate security authorization for all Infoprint Server functions. • Updating environment variables. • Defining Infoprint Server daemons in the `aopd.conf` file. • Customizing the Infoprint Server transform interface • Creating printer definitions to associate the Infoprint XT transform filter with data stream types.	Infoprint Server	Required if submitting jobs to Infoprint Server	• Chapter 5, "Customizing Infoprint Server," on page 61 • "Updating environment variables" on page 61 • "Controlling Infoprint Server daemons" on page 62 • "Customizing the Transform Interface" on page 62 • "Creating printer definitions that specify the Infoprint XT transform filter" on page 68
14. Customizing IP PrintWay to use existing JCL to submit the jobs to Infoprint XT by: • Reviewing how your JCL directs jobs to the correct printer. • Setting up environments to meet your particular printer routing needs by using the CLASS, DEST, and FORMS parameters. • Creating an IP PrintWay printer definition. • Reviewing the job selection rules in the printer inventory. Creating or modifying jobs selection rules for the CLASS, DEST, and FORMS parameters that you use for your jobs.	Infoprint Server and IP PrintWay	Required if submitting jobs to Infoprint Server through IP PrintWay	• "Reviewing your existing JCL" on page 72 • "Setting up an environment that uses the CLASS parameter" on page 73 • "Setting up an environment that uses a fixed CLASS and varying FORMS" on page 74 or "Setting up an environment that uses DEST and FORMS parameters" on page 76 • "Creating an IP PrintWay printer definition" on page 78

Table 1. Summary of Infoprint XT tasks (continued)			
Infoprint XT task	**Components**	**Required or optional?**	**See**
15. Copying and loading Xerox resources from your Xerox printers to z/OS.	• Infoprint XT AIOZRTAP utility program • Infoprint XT AIOZR2AR utility program • Infoprint XT AIOZRESL utility program • Infoprint XT **pdxtloadres** program	Required	• "AIOZRTAP parameters" on page 83 • "Loading Xerox resources by using AIOZR2AR - initial load" on page 87 • "Loading resources and populating PDSs and PDSEs by using AIOZRESL" on page 102 • "Using the pdxtloadres command to load Xerox resources" on page 111
16. Populating AFP libraries in order to print Infoprint XT output.	• Infoprint XT AIOZRPDS utility program • Infoprint XT AIOZRESL utility program	Optional	• "Using the AIOZRPDS AFP resource population utility" on page 98 • "Loading resources and populating PDSs and PDSEs by using AIOZRESL" on page 102
17. Processing Xerox cluster databases for use with Infoprint XT.	• Infoprint XT **pdxtcluster** program • Infoprint XT AIOZCLS utility program	Optional	• "Using the pdxtcluster command to create and modify cluster database resources" on page 125 • "Using the AIOZCLS utility to control bin selection" on page 131
18. Managing the Infoprint XT ink correlation table.	• Infoprint XT **pdxtcolor** program • Infoprint XT AIOZCLR utility program	Optional	• "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133 • "Using the AIOZCLR utility to manage the ink correlation table" on page 150
19. Deblocking and reblocking Xerox resources.	• Infoprint XT **pdxtdblkres** program • Infoprint XT **pdxtblkres** program	Optional	• "Using the pdxtdblkres command to deblock resources" on page 152 • "Using the pdxtblkres command to block resources" on page 153

Table 1. Summary of Infoprint XT tasks (continued)			
Infoprint XT task	**Components**	**Required or optional?**	**See**
20. Creating reformatted environment control resources when compiling Xerox JSL files.	• Infoprint XT **pdxtpdl** program • Infoprint XT AIOZPDL utility program	Optional	• "Using the pdxtpdl command to compile Xerox JSL resources" on page 155 • "Using the AIOZPDL utility to compile Xerox JSL resources" on page 160
21. Converting Xerox data streams with batch programs.	Various methods, including: • Infoprint XT AIOZ2AFP utility program • Infoprint XT **pdxtx2afp** command	Optional	Chapter 7, "Submitting Xerox jobs for processing," on page 167
22. Using Infoprint Server to process jobs.	• Printer Inventory • Print Interface • IP PrintWay • Transform Interface	Required if submitting jobs to Infoprint Server	• "Printing jobs by using IP PrintWay" on page 179 • "Printing jobs by using the Print Interface subsystem" on page 180

Xerox resources and the Infoprint XT load process

Xerox jobs use a combination of printable and non-printable resources. In the Xerox environment, these resources are on the Xerox printer hardware. Before you convert a Xerox job to AFP, you must do these to convert the printable resources to AFP:

1. Copy the resources with one of these methods:

   • Copy all of the resources from your Xerox printers to tape. Then use a tape unload utility that Infoprint XT provides to copy them from the tape to a PDS on z/OS.

   • Use the Xerox printer's TCP/IP network attachment to copy all the resources from the printer to a z/OS UNIX System Services directory on your z/OS system.

2. Convert the resources into their AFP counterparts with the Infoprint XT load process. An Infoprint XT resource utility performs the actual conversions.

For more information about loading resources and the messages that Infoprint XT can issue during the load process, see:

• Chapter 6, "Copying and loading Xerox resources," on page 81

• Appendix C, "Resource utility messages: 5017-nnn X (xxx)," on page 263

• Appendix D, "Resource converter messages: 5018-nnn," on page 303

Printable Xerox resources

Xerox jobs use specific printable Xerox resources, such as fonts, forms, images, and logos. Table 2 on page 7 lists the major types of printable Xerox resources and their equivalent AFP resources.

| Table 2. Printable Xerox resources and their AFP functional equivalents ||
Xerox Resources	AFP Resources
Xerox FNT (fonts)	AFP code pages, character sets, and coded fonts
Xerox FRM (forms)	AFP overlays
Xerox IMG (images)	AFP page segments (SI prefix)
Xerox LGO (logos)	AFP page segments (SL prefix)

Non-printable Xerox resources that Infoprint XT uses

Xerox jobs use other types of resources, such as job descriptor libraries (JDLs) and page descriptor entries (PDEs). These resources control the data stream characteristics and the printing environment. When Infoprint XT loads these Xerox resources, the load process does not produce any corresponding AFP resources. Instead, the Infoprint XT resource utility stores output formatting information from the resources in metrics files. When you process a job that uses these resources, Infoprint XT uses the formatting information to create a unique AFP form definition for the job. The form definition specifies information such as whether the job requires duplexed printing, and which printer bins to use.

This list describes the non-printable Xerox resources that Infoprint XT processes and uses:

Cluster Library (LIB)
    Defines clusters, or groups of printer trays.

Copy Modification Entry (CME)
    Defines changes to the printing characteristics of a job on a copy-by-copy basis.

Ink Descriptor Entry (IDR)
    Specifies default ink catalogs, palettes and colors.

Job Descriptor Library (JDL)
    Contains a collection of compiled job descriptor entries (JDEs), which define the unique characteristics of one or more Xerox jobs.

Page Descriptor Entry (PDE)
    Contains a set of statements that define formatting information for each page of a job. This includes information such as the page orientation, the starting print line, and the fonts that the page uses.

Routing Text (TST)
    Contains information that is specific to separator sheets, which precede individual Xerox reports.

Stocksets (STK)
    Defines the types of paper that the job requires and associates them with the clusters of printer trays, as defined by `clustr.lib`.

Non-printable Xerox resources that Infoprint XT does not use

Infoprint XT copies information for these non-printable Xerox resources when you load them through Infoprint XT:

- CMD
- DAT
- FSL
- ISL
- JSL
- MSC
- PCH
- TMP

Infoprint XT does not use these resources; it copies them for reference purposes only. For more information, see "Types of Xerox resources that you can load" on page 106.

Notes:

- Infoprint XT does not load Ink Catalog (ICT) resources, but stores related information in the ink correlation table.
- The **pdxtpdl** command can compile Xerox JSL resources to store output formatting information in metrics files for use during job processing.

Copying Xerox resources from printers to tapes

You can copy the resources from your Xerox printer onto two types of tapes. The Infoprint XT tape unload utility can then read the tapes and copy the resources to a PDS. The two types of tape formats that Infoprint XT supports are:

- 1600/6250 bits-per-inch (bpi), 9-track, open reel tapes; also known as 6250 bpi 1/2" tapes
- IBM 3480 or 3490 data format 18-track cartridge tapes

While there are other methods of copying resources from Xerox printers, such as using the Xerox printer's TCP/IP network attachment to copy all the resources from the printer to a z/OS UNIX System Services directory on your z/OS system, Infoprint XT does not provide a copy utility to support them. You cannot copy resources from other media types into a PDS on z/OS through Infoprint XT. See "Transferring Xerox printer resources to a tape" on page 81, and "Copying Xerox resources from a tape by using AIOZRTAP" on page 82 for further information.

Making generated AFP resources available to other programs

You can further process the AFP jobs that Infoprint XT creates with other products. For example, you could direct the output to PSF. PSF is an IBM licensed printer-driver program that manages and controls the data that it transmits to AFP printers. The printers can be channel-attached, SNA-attached, or TCP/IP-attached. When PSF transmits the job to the printer, it needs access to the AFP resources that the job requires.

After copying and loading your Xerox resources on z/OS, you can make them available to PSF by choosing one of these methods:

1. Instructing Infoprint XT to include resources inline in the AFP data stream by using the **xinlr** transform conversion parameter to include inline resources:

   ```
   xinlr=all
   ```

   For more details, see xinlr transform conversion parameter on page "xinlr = all:cs:cp:cf:pseg:ovly:inlr" on page 210.
2. Using an Infoprint XT utility to copy the generated AFP resources into PDSs that other programs can access. For a description of this procedure, see "Using the AIOZRPDS AFP resource population utility" on page 98.

Xerox data stream conversion and Dynamic Job Descriptor Entries

Xerox jobs can contain Dynamic Job Descriptor Entries (DJDEs), which invoke printable and non-printable resources. DJDEs can appear in LCDS jobs or in metacode jobs. They can modify the printing environment that the current JDL and JDE pair specifies. The Infoprint XT data stream converter reads and interprets these internal Xerox entries and commands, as it converts the job into AFP. You can pass options to the data stream converter when you submit the job for conversion to control the types of processing that occur.

The data stream converter interprets a specific set of DJDE commands. For more information, see "Supported and unsupported Xerox DJDE and PDL commands" on page 15.

Xerox START commands and Infoprint XT conversion parameters

When you print a job on a Xerox printer, you enter a specific START command to run the job. The START command specifies the starting JDL and JDE pair to use for the job; the JDL and JDE specify the characteristics of the job. For example, they can specify an initial set of fonts and whether duplexing is in effect. They can also specify carriage control assignments and the delimiters that identify Dynamic Job Descriptor Entry (DJDE) commands. You might have a single START command that applies to all jobs, or several START commands that apply to specific jobs. When you submit a job to Infoprint XT, you pass this same information to the data stream converter by using Infoprint XT conversion parameters. For more information, see these:

- Appendix A, "Conversion parameters for converting Xerox jobs," on page 205, which describes the Infoprint XT parameters that you pass to the data stream converter.
- Appendix E, "Data stream converter messages: 5019-nnn X (xxx)," on page 311, which describes the messages that the data stream converter issues.

Infoprint XT and UNIX System Services on z/OS

Infoprint XT utilizes the UNIX System Services environment of z/OS, and uses the z/OS UNIX shell. System administrators perform some tasks by using the z/OS UNIX shell, as do people who submit jobs through the Infoprint Server interfaces. This document describes how to access the z/OS UNIX shell through the OMVS 3270 terminal interface. For some procedures, you can also use the ISPF shell. System administrators who perform Infoprint XT administrative tasks should have familiarity with UNIX System Services and the z/OS UNIX shell. This document only includes abbreviated procedures, and provides a reference section for some tasks. See Chapter 9, "UNIX System Services procedures," on page 183.

Methods of sending jobs to Infoprint XT

There are four primary methods of submitting jobs to Infoprint XT:

- Through standard, job control language batch processing. Infoprint XT provides a sample JCL job, AIOZ2AFP, that you can modify to submit jobs. You can use the sample JCL as a guide if you want to make modifications to your existing JCL. You can also use the sample if you want to write new JCL for your installation. See "Using the AIOZ2AFP utility to process jobs" on page 171.
- Through Infoprint Server, and its IP PrintWay component. IP PrintWay provides the advantage of requiring no JCL changes, in many cases, or requiring only minor modifications to your existing JCL. You create new Infoprint Server objects to control the processing when you use your existing JCL. See Chapter 5, "Customizing Infoprint Server," on page 61 and "Customization and Administration tasks for IP PrintWay" on page 71.
- Through Infoprint Server and its Print Interface subsystem component. With the Print Interface subsystem, you always need to make minor modifications to your existing JCL. You also need to create new Infoprint Server objects to control the processing, and to support your modified JCL.
- Through UNIX System Services. Infoprint XT provides a command-line interface that you can use to process Xerox jobs with the **pdxtx2afp** command (see "Using the pdxtx2afp command to process jobs" on page 167). Chapter 9, "UNIX System Services procedures," on page 183 provides information about the command-line interface.

Highlight color processing

Infoprint XT provides a rich set of features that support Xerox LPS highlight color. These features are designed to help you migrate your Xerox applications to full color AFP and precision marketing solutions.

Infoprint XT uses an ink correlation table to convert Xerox highlight color ink specifications to device-independent CIELAB values in the AFP output and resources that it creates. The shipped Infoprint XT ink correlation table consists of these files:

tab.akt
    Binary ink correlation table

tab.skt
   Ink correlation table source code

Infoprint XT installs the shipped ink correlation table files in `/usr/lpp/pdxt/V3R3M0/resources`. Internally, Infoprint XT represents CIELAB color values with three components: L, a, and b. Infoprint XT uses 8-bit encoding for each component for color fidelity. The range for the L component is 0.00 to 100.00, which is mapped to the binary value range 0 to (2**8 - 1). The range for the a and b components is -128.00 to +127.00, which is mapped to the binary range -(2**7 - 1) to +(2**7 - 1). All CIELAB values that Infoprint XT uses assume the CIE Standard Illuminant D50 and the CIE 1931 2° Standard Observer.

Infoprint XT represents MONO and GRAY inks as grayscale in the ink correlation table. Internally, Infoprint XT represents grayscale as a one-byte, unsigned binary number that specifies a percentage of coverage. The percentage of coverage can be any value from 0% to 100% (X'00' - X'64').

Infoprint XT converts color specifications in Xerox resources and data streams into one of the naming conventions in the ink correlation table in order to locate the correct CIELAB values for the AFP resources and data streams that it generates.

The **pdxtcolor** command helps you maintain and customize the ink correlation table. This command also creates AFP color sample jobs, which let you print or view the colors represented in the ink correlation table. You can also run the AIOZCLR utility program, which invokes the **pdxtcolor** command.

For more information about AFP color management, see AFP Consortium at `www.afpcinc.org`.

Ink correlation table organization

Xerox highlight color LPS printers are shipped with a variety of ink catalogs. These catalogs define color + black + white bit patterns called inks. The inks are organized into groups called palettes. Infoprint XT consolidates the various Xerox ink catalogs, palettes and ink names into the shipped ink correlation table by using the entry groups in Table 3 on page 10:

Table 3. Ink correlation table organization

Catalog	Palette	Solid Color Ink Names	Alphanumeric Ink Names	Long Ink Names
SOLID	SIMPLE	BLUE	B100	STRONG BLUE
SOLID	SIMPLE	GREEN	G100	VIVID GREEN
SOLID	SIMPLE	RED	R100	VIVID RED
SOLID	SIMPLE	BROWN, CARDINAL, CYAN, GRAY[1], MAGENTA, ROYAL, RUBY, VIOLET, YELLOW[2]		
DFAULT	BLUE		B*nn*K*nn*	BLUISH GRAY...
DFAULT	GREEN		G*nn*K*nn*	GRAYISH GREEN...
DFAULT	MONO		K*nn*	LIGHT GRAY...
DFAULT	RED		R*nn*K*nn*	STRONG PINK...
XEROX1	BLUE		H*nn*K*nn*	BLUISH GRAY...
XEROX1	BROWN		H*nn*K*nn*	
XEROX1	CARDINAL		H*nn*K*nn*	
XEROX1	CYAN		H*nn*K*nn*	
XEROX1	GRAY[1]		H*nn*K*nn*	
XEROX1	GREEN		H*nn*K*nn*	GRAYISH GREEN...

Table 3. Ink correlation table organization (continued)				
Catalog	Palette	Solid Color Ink Names	Alphanumeric Ink Names	Long Ink Names
XEROX1	MAGENTA		H*nn*K*nn*	
XEROX1	MONO		K*nn*	LIGHT GRAY...
XEROX1	RED		H*nn*K*nn*	STRONG PINK...
XEROX1	ROYAL		H*nn*K*nn*	
XEROX1	RUBY		H*nn*K*nn*	
XEROX1	VIOLET		H*nn*K*nn*	
XEROX1	YELLOW[2]		H*nn*K*nn*	

Notes:

1. In order to ensure a full palette of unique H*nn*K*nn* shades, Infoprint XT implements GRAY by using CIELAB L* values in the ink correlation table.

2. Xerox offers YELLOW toner with the DocuTech 128 / 155 / 180 HighLight Color printer models. YELLOW was not offered with the earlier 4850 / 4890 or DocuPrint 92C printers.

Xerox job restrictions

These restrictions apply to Xerox jobs that you process with Infoprint XT:

Accounting statistics
Xerox printers can provide information about job processing, which includes information that is specific to the reports in the job. You can use this information for purposes such as billing or supplies management. Infoprint XT also collects accounting information at the report level. However, Infoprint XT does not provide a method of matching the Xerox accounting information to the number of pages that actually print on the printer hardware. The Infoprint XT accounting information is specific to the pages that it converts.

C DJDE support
When you specify the **xcmt2nop=yes** parameter, Infoprint XT copies the text of each C DJDE to an AFP NOP. Each C DJDE text string that is processed by **xcmt2nop=yes** must be all ASCII or all EBCDIC alphanumeric or blank characters, and must not contain any special characters.

FILE DJDE support
In the Xerox environment, Xerox printers can only process one job at a time. Infoprint XT can process two or more jobs concurrently. Do not submit two jobs at the same time that specify different versions of the same resource. Also, do not process any job that specifies more than one version of the same resource in the reports in the job. Unpredictable results can occur in both cases.

Grayscale substitution for Xerox shading
Infoprint XT can interpret and convert Xerox shading patterns and characters to grayscale. This improves the overall visual results and increases the readability for any text that is superimposed on the shading. These restrictions apply to grayscale substitution when you use the **xshading** conversion parameter or the **-c** option of the **pdxtloadres** command:

- Grayscale interpretation of Xerox standard shading is only useful with printers, archival solutions, and viewing solutions that support Logical Page and Object Area Coloring.

- In FRM conversion, this enhancement is only effective for shading that is accomplished by the SHADING LIGHT | MEDIUM | HEAVY parameter of the BOX FSL command. It has no effect on conversion of highlight color shading that is accomplished by the FILL parameter of the BOX FSL command.

- In data stream conversion, this enhancement is only effective for shading that is accomplished by the use of the shading characters in FORMS$, FORMSX, or ISISPX fonts. The shading enhancement has no affect on shading that is produced by text fonts or custom graphics fonts.
- When converting data streams that use the FILE DJDE to specify one or more inline FRMs, this enhancement controls how Infoprint XT interprets shading in all the inline FRMs in the job, regardless of whether the input data stream is Xerox LCDS or Metacode.
- The dot patterns in certain Xerox standard shading code points do not fill the entire area that the code point represents, which leaves white space on one or more sides. The grayscale that Infoprint XT generates for these and other Xerox shading code points fills the entire area and leaves no white space. In certain shading configurations, this can cause solid grayscale areas to look larger than their dot pattern counterparts.

Highlight color form processing
Infoprint XT supports highlight color shading in Xerox FRMs.

Highlight color image processing
Infoprint XT can process Xerox highlight color images that use Restricted Raster Encoding and produce highlight color AFP page segments that correspond to the images. These restrictions apply to the highlight color image processing that Infoprint XT does. Infoprint XT only supports:

- Interleaving by pixel for the color sample and the black sample that the Xerox image contains. Infoprint XT does not support interleaving by scan line or interleaving by compressed-pixel vector array.
- Highlight color images that use the portrait scan orientation.
- A maximum of two samples per pixel; one color sample and one black sample.
- A maximum sample value of one.

For detailed information about Xerox highlight color images and Restricted Raster Encoding, see the Xerox Interpress documentation:

- *Xerox Interpress Raster Encoding Standard:* XNS Standard 178506, January, 1985
- *Xerox Interpress Electronic Printing Standard:* XNSS 048601, January, 1986

Highlight color logo processing
Infoprint XT can process Xerox highlight color logos and produce black-and-white AFP page segments that correspond to the logos.

Highlight color job processing
You can submit Xerox jobs that contain color-related metacodes or PDL commands, such as ICATALOG, IDR, ILIST, and INKINDEX.

Highlight color processing
The color output and resources that Infoprint XT generates are designed to be device-independent. Infoprint XT does not perform color management, generate CMOCA color management resources (CMRs), or use ICC profiles. To achieve the exact visual result that you require from particular printers and other output devices, it is your responsibility to select and use appropriate ICC profiles, rendering intents and CMRs outside of Infoprint XT.

You must specify the **-H color** option of the **pdxtloadres** command for Infoprint XT to process Xerox resources that contain color instructions. The default, **-H nocolor**, specifies that Infoprint XT ignores color instructions in Xerox resources.

You must specify the **xhonorcolor=yes** parameter of the **pdxtx2afp** command for Infoprint XT to process jobs and FILE DJDE resources that contain color instructions. The default, **xhonorcolor=no**, specifies that Infoprint XT ignores color instructions in data streams and FILE DJDE resources.

You must specify the **-H color** option of the **pdxtpdl** command for Infoprint XT to process Xerox JSL resources that contain color instructions. The default, **-H nocolor**, specifies that Infoprint XT ignores color instructions in Xerox JSL resources.

The target output device for resources that you convert with the **pdxtloadres -H color** option, or data streams that you convert with the **pdxtx2afp xhonorcolor=yes** parameter, must support the PT3 PTOCA subset. For more information about the PT3 PTOCA subset, see the *Presentation Text Object Content Architecture Reference*.

OTEXT messages

Infoprint XT can process jobs that contain OTEXT messages, but it does not display OTEXT messages or suspend printing.

Overlay invocation

If you specify any of these data stream conversion parameters:

- **xcsmmname=yes**
- **xhonorshift=yes**
- **xhonorinvert=yes**
- **xalign**

Infoprint XT generates Page Position (PGP) Format 2 structured fields in the AFP output and invokes overlays from Include Page Overlay (IPO) structured fields in affected pages, rather than invoking overlays from medium maps in the inline FORMDEF.

Reformatted resources

Reformatted resources (metrics files) that you create by using the Infoprint XT V3R3 **pdxtloadres** or **pdxtpdl** commands might not be backward compatible with Infoprint XT V1R1 for data stream conversion purposes.

SHIFT and XSHIFT JDL and DJDE commands

Infoprint XT supports the Xerox SHIFT and XSHIFT JDL and DJDE commands with these exceptions:

1. You must specify the **xhonorshift=yes** conversion parameter for Infoprint XT to process jobs that contain SHIFT and XSHIFT commands. The default is that Infoprint XT ignores SHIFT and XSHIFT commands.

2. Xerox LPS printers save DJDE SHIFT values between jobs, but they do not save JDL/JDE SHIFT values. Therefore, if the first SHIFT DJDE in a job specifies a value for only one side, the value for the other side is the last DJDE value specified for that side, even if a previous, unrelated job specified that value.

   Infoprint XT initializes each job with SHIFT values of zero for both front and back sides. If the first SHIFT DJDE in a job specifies a value for only one side, the value for the side that was not specified is zero. Output does not shift on the unspecified side until Infoprint XT finds a SHIFT value for that side in a JDL/JDE or in a DJDE in the job.

   This restriction does not apply to XSHIFT.

3. When a Xerox LPS finds SHIFT DJDEs in the data stream, it sometimes misplaces graphic images for the page on which the new SHIFT values take effect. For example, in portrait mode, the images might move lower on the page instead of shifting to the right or to the left. This might even affect images that are specified by the FRM being printed on the page.

   Infoprint XT correctly shifts all page segments as specified by the SHIFT command when you set up Infoprint XT to accept SHIFT commands. Infoprint XT does not try to emulate the incorrect image placement occasionally introduced by the Xerox LPS.

   This restriction does not apply to XSHIFT.

Spacing characters in Xerox fonts

With the default **xspacing=none** conversion parameter and value, Infoprint XT converts spacing characters in Xerox fonts to Presentation Text Object Content Architecture text characters in the AFP that it generates. It does the same for overlays that it generates from Xerox FRMs. You can instruct Infoprint XT to create Relative Move Inline (RMI) structured fields in the AFP output instead of the PTOCA text characters. You use the **-b** option of the **pdxtloadres** command or the **xspcrmi** conversion parameter to generate RMI structured fields.

Controlling how Infoprint XT interprets spacing characters is intended for limited use with a small subset of Xerox fonts in any given resource set. Use this function only if you have manually correlated Xerox fonts to AFP fonts and code page conflicts occur with Xerox spacing characters and AFP code points. This function does not correct any other type of code page conflicts that occur after manually correlating Xerox resources to AFP resources.

Stapling support

When you submit jobs that request stapling, these restrictions apply to Infoprint XT processing:

- You must have Print Services Facility for z/OS, Version 4 Release 3 or later. This is a requirement in order to use the built-in stapling support that Infoprint XT provides.

- You must specify the **xhonorstaple=yes** conversion parameter for Infoprint XT to process jobs that contain stapling instructions. The default is that Infoprint XT ignores stapling commands.

- Differences exist in the stitching hardware of InfoPrint cut-sheet printers and Xerox LPS cut-sheet printers. Because of this, Infoprint XT does not support the Xerox stapling commands FACEUP and NTO1, either when used independently or when used only with each other. Infoprint XT only recognizes FACEUP and NTO1 when a job uses them with the STAPLE command. Together, STAPLE=YES, FACEUP=YES, and NTO1=YES or NTO1=n indicate that stapling should occur. n is a positive number.

- When a Xerox LPS printer processes the STAPLE command, it always drives the staples into the upper-left corner of the sheets, as viewed in portrait orientation. This is true even if the report is actually in landscape orientation. If you specify the **xstapleorient=yes** conversion parameter for the job, Infoprint XT detects reports whose first pages are landscape. It then staples them in the lower-left corner of the sheets, as viewed in portrait orientation. This is equivalent to the upper-left corner when you view the sheet in landscape orientation.

- Infoprint XT assumes that the default printing order that was established on the Xerox printer at SYSGEN is 1TON. If you specify NTO1 at printer SYSGEN, you must include the **xstaplesysgen=nto1** conversion parameter. Otherwise, Infoprint XT ignores stapling commands in JDLs and JDEs that jobs invoke internally if the starting JDL and JDE pair does not specify that stapling should occur.

- The Xerox NTO1 command forces the LPS printer to delay output processing until the input processing for the entire report is complete. For this reason, input processing might not recognize the end of the report until it identifies the beginning of the next report. This might not occur until input processing identifies a BANNER page at the beginning of the next job. This can cause the printer to retain attributes from one job and apply them to subsequent jobs. Infoprint XT does not apply attributes of one job to the next job. Instead, it processes each job by using only the attributes that are specific to the job.

- Infoprint XT cannot detect if the destination IPDS printer supports stapling. When you specify stapling with the **xhonorstaple=yes** conversion parameter and value and then convert a Xerox job that has JDEs that specify STAPLE=YES, Infoprint XT includes stapling information in the AFP that it generates. This is always the case, even if the destination printer does not support stapling.

- Each of the InfoPrint printer models that support stapling imposes its own limits on the number of sheets, the paper weights, and the paper sizes that it can staple. Infoprint XT cannot automatically detect those limits. It does not reference any information about them when it generates an AFP job that includes stapling information. You must set the maximum number of sheets to staple with the xstaplemax conversion parameter, as needed.

Note: For more information about the **xhonorstaple**, **xstapleorient**, **xstaplesysgen**, and **xstaplemax** parameters, see Appendix A, "Conversion parameters for converting Xerox jobs," on page 205.

Other restrictions

These Infoprint XT restrictions apply to considerations other than Xerox job conversion:

240-pel resolution support
Infoprint XT only supports 300-pel resolution. If you have older printer models that support 240-pel resolution, do not direct jobs from Infoprint XT to them.

Compilers for FSLs
Infoprint XT does not provide compilers for Forms Source Libraries (FSLs).

Multi-step jobs that specify multiple data sets
You cannot process jobs with Infoprint XT that consist of more than one data set. Infoprint XT does not have the ability to merge the data sets together for processing as a single job.

Offline jobs, copying them to z/OS
Infoprint XT provides no utility program to unload jobs from tape, and to store them in data sets on z/OS.

Double-byte character set (DBCS) support

Infoprint XT supports the conversion of Xerox DBCS LCDS and Metacode jobs. It also stores information from the Xerox DBCS fonts that the jobs require for use at data-stream conversion time. However, Infoprint XT does not directly convert the Xerox DBCS fonts to the AFP DBCS outline fonts that it requires for DBCS data-stream processing. It also does not automatically create the grid-mapping files that it requires to print DBCS output. These fonts and files are available from IBM as a separately priced option. For more information about AFP DBCS outline fonts and grid-mapping files for use in Xerox DBCS data-stream conversion, contact your marketing representative.

Note: You can use AFP DBCS outline fonts from other sources. Those fonts must fully conform to the MO:DCA FOCA standards; see the *Font Object Content Architecture Reference*, S544-3285.

Supported and unsupported Xerox DJDE and PDL commands

Infoprint XT does not support a subset of less-commonly used Xerox DJDE and PDL commands. lists both the supported and unsupported commands.

Table 4. Supported and unsupported PDL and DJDE commands	
Supported	**Unsupported** [1]
ALTER	ABNORMAL
ASSIGN	BARCODE, BSEQ, BSIDE, BSKIP, RBAR
BATCH [2]	BDELETE, BSELECT, RSELECT
BEGIN	BTEXT
BFORM	DESTINATION
BLANKTYPE	EXPAGE
BOF	EXPORT
C	IMISMATCH
CANCEL	IRESULT
COLLATE	ISUBSTITUTE
COPIES	ITEXT
DATA	LOGO [3]
DEPT	MAP
DUPLEX	SAVE
END	SEFFNT, SEFMAP

Table 4. Supported and unsupported PDL and DJDE commands (continued)

Supported	Unsupported [1]
FACEUP [4]	SF1FUNCTION
FCB	SF2FUNCTION
FEED	SNUMBER
FILE	SPLIT
FONTINDEX	SRECOVER
FONTS	STIMING
FORMAT	TMODE
FORMS	TRANS
GRAPHIC	XMP
ICATALOG	
IDFAULT	
IDR	
ILIST	
IMAGE	
INK [5]	
INKINDEX	
INVERT	
JDE	
JDL	
LPI	
MARGIN	
MODIFY	
NTO1 [4]	
NUMBER	
OTEXT [7]	
OVERPRINT	
PALETTE	
PMODE	
RFEED	
RFORM	
RTEXT	
SHIFT [6]	
SIDE	
STAPLE	

Table 4. Supported and unsupported PDL and DJDE commands (continued)	
Supported	**Unsupported** [1]
STOCKS	
TOF	
XSHIFT [6]	

Notes:

1. Infoprint XT ignores these commands when it finds them in a job. Infoprint XT processes the job and issues informational messages stating that it ignored the commands. IBM can negotiate support for unsupported DJDE commands according to the customer's needs.

2. Infoprint XT supports one BATCH mode image between each BATCH START / BATCH END pair.

3. If you compile an FSL to an FRM that contains LOGO references in its internal font list or logo list, Infoprint XT supports those references. However, Infoprint XT does not support a LOGO DJDE in the data stream.

4. Infoprint XT only supports this command when you use it with the STAPLE command.

5. This is a CME parameter.

6. Restrictions apply to this command. See SHIFT and XSHIFT JDL and DJDE commands on page "SHIFT and XSHIFT JDL and DJDE commands" on page 13 for more information.

7. Infoprint XT can process jobs that contain OTEXT messages, but does not display these messages or suspend printing.

Chapter 2. Configuring Infoprint XT

This chapter describes how to configure your Infoprint XT processing environment. It can help you determine which Infoprint XT components you must customize to use the different functions that Infoprint XT provides. Before completing the tasks in this chapter, ensure that you have reviewed "A roadmap for using Infoprint XT" on page 2.

Enabling Infoprint XT in the SYS1.PARMLIB member

After you install Infoprint XT, you must enable it.

1. In SYS1.PARMLIB, add the PRODUCT entry shown in Figure 1 on page 19 to member IFAPRD*xx*.

```
PRODUCT OWNER('IBM CORP')
        NAME('XT for z/OS')
        FEATURENAME('XT for z/OS')
        ID(5655-O15)
        VERSION(*) RELEASE(*) MOD(*)
        STATE(ENABLED)
```

Figure 1. PRODUCT entry for Infoprint XT in your IFAPRDxx member of SYS1.PARMLIB

2. Do either of these actions to confirm the new PRODUCT entry:

   - Enter this command at the MVS™ console:

   ```
   SET PROD=(xx)
   ```

   xx is the last two characters in the name of the IFAPRD*xx* member.

   - IPL the system.

Establishing security for Infoprint XT

This section describes the tasks that you must complete to configure the security function within Infoprint XT. The security function lets you determine which users can perform Infoprint XT job submission tasks and system administrator tasks. You can use either RACF or an equivalent product that follows SAF protocol. Regardless of the security product you are using at your installation, you must perform these tasks:

1. Create an AIOUSER group for Infoprint XT job submitters and administrators. The AIOUSER group profile must have an OMVS segment and an OMVS group identifier (GID).
2. Define the users of Infoprint XT to UNIX System Services. Each user ID that runs Infoprint XT commands must have an OMVS segment and a home directory.
3. Add the user IDs for all users of Infoprint XT to the AIOUSER group. If Infoprint Server is used, put the user IDs associated with Infoprint Server daemons and PrintWay Basic started task in the AIOUSER group.
4. Set the owner for Infoprint XT directories and files. Add the owner to the AIOUSER group.

Set the owner for Infoprint XT directories and files

After you create the AIOUSER group, and set up user IDs for access to z/OS UNIX, you *must* set the group owner for Infoprint XT installation files and subdirectories to AIOUSER. You complete this task in the UNIX System Services environment:

Note: In order to complete this task, you must do these to mount the file system that contains `/usr/lpp/pdxt` in read/write mode:

1. Access a UNIX System Services command line with either the ISPF shell or the z/OS UNIX shell.

2. Update the Infoprint XT installation directory, and its files and subdirectories. To recursively change the group to AIOUSER, enter:

```
chgrp -R AIOUSER /usr/lpp/pdxt
```

Analyzing your system storage requirements

Although you can use an existing file system, IBM recommends that you create /var/pdxt as a separately mounted z/OS UNIX file system, which is exclusively for use by Infoprint XT. Creating a unique file system has the advantage of preventing programs from interfering with one another when there is insufficient space. For example, if Infoprint XT filled up a separately-mounted /var/pdxt file system, it would not impact any other programs that use the /var directory on your system.

Whether you use your existing file system and increase the size of the /var directory, or create a z/OS UNIX file system, you must analyze your storage requirements.

Verifying that you have sufficient storage available for resources

In most installations, the number of Xerox resources that you load do not change. You load all of the resources that were resident on your Xerox printers. After the initial resource load, you might only make occasional updates, or you might make no additions to the initial resource base. You can generally determine the amount of storage that your system requires for the resources by examining the numbers and types of resources that were resident on your Xerox printers. Some types of resources, such as printable resources, require more space than non-printable resources. There are also types of non-printable resources that require more space than other type of non-printable resources. You can use formulas to determine space requirements. You use your storage calculations when you create the /var/pdxt directory; see "Creating the /var/pdxt directory" on page 22.

Note: If you use the PDXTWORKDIR environment variable to permanently specify a working directory other than /var/pdxt, you need to calculate the same space requirements for that directory. See "Controlling the working directory that Infoprint XT uses for variable data (PDXTWORKDIR)" on page 25.

Table 5 on page 20 shows how you can determine the storage for the different types of Xerox resources. Detailed information about how to use the calculations follows the table.

Table 5. Resource storage requirements and formulas	
Xerox resource types	**Multiplication factor**
FNT	10%
IMG	10%
LGO	10%
FRM	10%
CLS	0.1%
CMD	100%
CME	100%
DAT	0.1%
FSL	100%
ICT	0.1%
IDR	0.1%
ISL	0.1%
JDL	2000%

Table 5. Resource storage requirements and formulas (continued)	
Xerox resource types	**Multiplication factor**
JSL	100%
LIB	10%
MSC	0.1%
PCH	0.1%
PDE	100%
STK	100%
TMP	100%
TST	100%

Note: IBM derived these multiplication factors through random samplings. They might not be representative of your specific resource mix. IBM recommends that you use these as the base guidelines when you calculate your storage requirements.

To calculate space:

1. Add up the sizes of all of the Xerox resources, by type, that you are loading with Infoprint XT. For example, add the sizes of all font files. You can run a report on the Xerox printer that assists with this task. At the printer console:

   a. Log on at level three. Enter:

      ```
      LOG 3,pwd
      ```

      Where *pwd* is the level three password.

   b. Run the report. Enter:

      ```
      LIS/EX
      ```

      The printer prints a report that includes statistics for the different resource types. For example, the end of the section for fonts looks similar to Figure 2 on page 21.

      ```
          ⋮
      File name       Unit        FSIZE    RSize    FFBY           EOF    Disk addr

      Z05FJP.FNT            ** LICENSED   **
      Z05FMP.FNT            ** LICENSED   **
      2785CP.FNT       0           9      512      0              9      110245
      PBI25L.FNT       0         160      512      0            160      110644
      PBI25P.FNT       0         149      512      0            149      111104
      FX0109.FNT       0          20      512      512           20      110437
      YR13NP.FNT       0          62      512      512           62      111331
            Total of    166332 Sectors in    4564 Files
      ```

      Figure 2. Sample report generated by the Xerox LIS/EX command

   The FSIZE value specifies the number of 512–byte blocks in each file. Sectors are 512-byte blocks, and the sector total at the end of each file type group is the total number of 512-byte blocks for each file. In this example, 166332 sectors (or 512-byte blocks) are equivalent to 85,161,984 bytes.

2. Increase the total size of each resource type by the multiplication factor specified for that resource type in Table 5 on page 20. For example, if the total size of all of your Xerox font files is 85,161,984 bytes, increase that number by 10 percent. The amount of storage that Infoprint XT requires for your fonts is 93,678,182 bytes.

3. Add the increased value for each type of resource to determine the total amount of storage that Infoprint XT requires for the resource-load process.

Verifying that you have sufficient storage for job processing

To determine the amount of storage that you require for job processing, you need to take into consideration how you are submitting jobs for processing. The basic formula for job storage requirements is to multiply the largest job that you are processing at any given time, by the maximum number of jobs that you can process concurrently. Then, double that value. If you are processing jobs through job control language, and you do not use Infoprint Server, the number of JES job initiators that are active and available to accept jobs controls the total number of concurrent jobs. If you use IP PrintWay, or the Print Interface subsystem component of Infoprint Server, the number of **x2afpd** transform daemons that can be active at one time controls the number of concurrent jobs. See "Transform entry examples" on page 67.

Verifying that you have sufficient memory available

The amount of memory that you require to load resources and process jobs is different between installations. The requirements depend on the complexity of your resources and jobs. Therefore, this document includes memory considerations within the resource-load procedure, and the job-processing procedures. See:

- "Memory considerations for AIOZR2AR" on page 87 for more information about resources.
- "Memory considerations for AIOZ2AFP" on page 171 for more information about jobs in the batch processing environment.
- "Memory considerations for the x2afpd daemon" on page 62 for more information about jobs in the Infoprint Server environment.

Creating the /var/pdxt directory

The /var/pdxt file system is where Infoprint XT writes its variable data. If you choose to create a separately-mounted /var/pdxt z/OS file system, you must ensure that you allocate enough space in the file system. The file system must support the total number of Xerox resources that you are loading, and it must support the jobs that you are processing concurrently. See "Verifying that you have sufficient storage available for resources" on page 20 and "Verifying that you have sufficient storage for job processing" on page 22.

Note: If you do not create a separately-mounted /var/pdxt file system, you must still create /var/pdxt. You use the command:

```
mkdir /var/pdxt
```

When you create the /var/pdxt file system, add the number of bytes that you calculated for resource storage to the total number of bytes for concurrent job processing. To create the file system, you actually allocate a z/OS data set. Your operating system documentation provides detailed instructions. The following example shows the allocation JCL. The values and names that you use are specific to your installation, and can differ from the example:

```
//PDXTALOC EXEC PGM=IEFBR14
//PDXTHFS  DD   DSN=OMVS.DEVL.PDXT,
//         DISP=(NEW,CATLG),
//         DSNTYPE=HFS,
//         SPACE=(CYL, (2600,100,20) ),
//         UNIT=SYSALLDA,
//         VOL=SER=USR037
```

After you create the directory, you mount it as /var/pdxt. You can specify the mount point through the BPXPRM*xx* member in SYS1.PARMLIB. You could make an entry that is similar to this to mount /var/pdxt:

```
/**********************************************************************/
/*  BPXPRMxx parmlib member for the Infoprint XT transform.          */
/*  Mounts the UNIX file system                                      */
/**********************************************************************/
```

```
MOUNT FILESYSTEM('OMVS.DEVL.PDXT')
      MOUNTPOINT('/var/pdxt')
      TYPE(HFS)  MODE(RDWR)
```

If you created your own separately-mounted /var/pdxt file system, you also need to set the group and the permissions for it:

1. Access a UNIX System Services command line with either the ISPF shell or the z/OS UNIX shell.
2. Change the group to AIOUSER for the Infoprint XT variable data directory structure:

```
chgrp AIOUSER /var/pdxt
```

3. Change the permissions to 775:

```
chmod 775 /var/pdxt
```

Setting required environment variables

You can set environment variables to control certain aspects of Infoprint XT resource processing and job processing. There are four locations in which you can set environment variables. Where you specify them affects which Infoprint XT functions can use the settings. Environment variables set in either of the pdxt.cfg files only affect the utility programs that Infoprint XT provides. For example, the AIOZR2AR program for loading resources and the AIOZ2AFP program for converting jobs, can access settings from a pdxt.cfg file.

Note: None of the following methods apply when you use the Infoprint XT managed LCDS and metacode transform in the Infoprint Server environment. While you can specify the same environment variables that this section describes, Infoprint Server has its own method of specifying the variables. See "Transform entry format" on page 63 for further information.

$HOME/pdxt.cfg
You can create the pdxt.cfg script file in the z/OS UNIX home directory of a user ID. For example, /u/*userID*/pdxt.cfg. You need to specify read and execute permissions for the file; there are no special requirements for the owner or group for the file. The first line of the file must indicate that it is a script, and you must export each environment variable:

```
#!/bin/sh
export PDXTX2AFP_ARGS="-g payroll"
```

Any environment variables that you specify in the $HOME/pdxt.cfg file only apply to the specific user ID. They do not apply to other user IDs on the system. You should specify only Infoprint XT environment variables in this file. Do not set system variables, such as PATH, in this file.

/etc/pdxt.cfg
You can create the pdxt.cfg script file in the /etc system directory. The group for this file must be AIOUSER, and the group requires read and execute permissions. Any Infoprint XT environment variables that you specify in the /etc/pdxt.cfg file apply to all users on the system.

$HOME/.profile
You can specify both operating system environment variables and Infoprint XT environment variables in this file. The format for each entry is **export** *variablename=value*. For example:

```
export PDXTX2AFP_ARGS="-g payroll"
```

Any environment variables specified in the $HOME/.profile file only apply to the specific user ID.

/etc/profile
You can specify operating system variables and Infoprint XT variables in the /etc/profile file, which is an operating system file. Environment variables set in the /etc/profile file are also available to all system users. You must have superuser authority to update the /etc/profile file:

```
export PDXTX2AFP_ARGS="-g payroll"
```

There are multiple methods that you can use to edit these files. , and describe two methods.

Notes:

1. The z/OS UNIX environment is case-sensitive. Ensure that you enter environment variables and values exactly as the documentation shows them.

2. If you specify the same environment variable in more than one place, the order of precedence is:

   a. `$HOME/pdxt.cfg`

   b. `/etc/pdxt.cfg`

   c. `$HOME/.profile`

   d. `/etc/profile`

   For example, if you set the **PDXTWORKDIR** environment variable in both `/etc/profile` and `/etc/pdxt.cfg`, Infoprint XT uses the value from the `/etc/pdxt.cfg` file.

Determining the current settings of environment variables

If you do not know what the current settings of specific environment variables are, you have two methods you can use to check settings. You can also use these methods if you want to verify that changes you have made are in effect. You must start either an ISPF shell session, or an OMVS session before you issue the commands:

- To determine the setting of a specific environment variable, use the **echo** command. For example, to verify the setting of the Infoprint XT PATH environment variable, enter:

```
echo $PATH
```

- To verify the settings of all environment variables, use the **printenv** command:

```
printenv
```

The operating system returns information similar to this:

```
MAIL=/usr/mail/SJONES
_BPX_TERMPATH=OMVS
PATH=/usr/lpp/Printsrv/bin:/bin:/usr/lpp/pdxt/V3R3M0/local:/usr/lpp/pdxt/V3R3M0/bin
SHELL=/bin/sh
COLUMNS=80
_=/bin/printenv
LOGNAME=SJONES
STEPLIB=none
LANG=C
LIBPATH=/usr/lpp/Printsrv/lib:/lib:/usr/lib
TERM=dumb
HOME=/
LINES=39
TMP_VI=/
JAVA_HOME=/usr/lpp/java/IBM/J1.3
TZ=MST7MDT
MANPATH=/usr/lpp/Printsrv/%L:/usr/man/%L:/usr/lpp/pdxt/V3R3M0/nls/man/%L
NLSPATH=/usr/lpp/Printsrv/%N/%L:/usr/lib/nls/msg/%N/%L:/usr/lpp/pdxt/
V3R3M0/nls/msg/%L/%N
```

Controlling the z/OS UNIX execution path (PATH)

You must update the PATH environment variable for your location so that it includes Infoprint XT directories. Typically, you specify the PATH environment variable in the `/etc/profile` file. This makes the path information available to users on the system who have access to z/OS UNIX. The Infoprint XT directories that you must add are:

- `/usr/lpp/pdxt/V3R3M0/local`. This is the directory in which you put the customized, Infoprint XT executable files for your installation. For example, this is the directory in which you would put any

compiled application exits that you write, and that you want Infoprint XT to use. Do not store other files, such as source files for customized executables, in this directory. Infoprint XT provides for a separate directory, `/usr/lpp/pdxt/V3R3M0/localsrc`, in which you can store your customized source files.

- `/usr/lpp/pdxt/V3R3M0/bin`. This is the path to the binary executable files that Infoprint XT provides.

For more information about defining PATH values and the order in which z/OS UNIX System Services uses the values that you specify, see *z/OS UNIX System Services Planning* for your version of z/OS UNIX System Services.

The web page for z/OS UNIX System Services planning publications is:

```
http://publibz.boulder.ibm.com/cgi-bin/bookmgr_OS390/DOCNUM/GA22-7800/CCONTENTS?
```

Controlling the z/OS UNIX path for man pages (MANPATH)

If you want to view the manual (man) pages that Infoprint XT provides, you must update the MANPATH environment variable. Typically, you specify MANPATH in the `/etc/profile` profile. The directory that you add to the environment variable is `/usr/lpp/pdxt/V3R3M0/nls/man/%L`.

For more information about the Infoprint XT man pages, see "Infoprint XT manual (man) pages" on page xv.

Controlling the z/OS UNIX path for message catalogs (NLSPATH)

Infoprint XT provides online message catalogs that it uses internally, and that you can use to view explanations and recommended actions for the messages that it can issue. You use the **pdxtmsg** command; see "Using the pdxtmsg command" on page 221. You must update the NLSPATH environment variable to access the Infoprint XT messages. The values that you need to add are `/usr/lpp/pdxt/V3R3M0/nls/msg/%L/%N:/usr/lpp/pdxt/V3R3M0/nls/msg/C/%N`.

Controlling the working directory that Infoprint XT uses for variable data (PDXTWORKDIR)

The PDXTWORKDIR environment variable controls the working directory that Infoprint XT uses for variable data. Infoprint XT creates the directory during installation. The PDXTWORKDIR default value, `/var/pdxt`, specifies that Infoprint XT uses subdirectories in the `/var/pdxt` directory to store the files that it creates or copies for Xerox resources and jobs. For example, Infoprint XT uses subdirectories of `/var/pdxt/resources` to store information for Xerox resources that you have loaded. It also uses subdirectories of `/var/pdxt/jobs` to store information during data stream conversion.

To have Infoprint XT create subdirectories and store files in a different location on the z/OS system, you can specify a value with the PDXTWORKDIR environment variable that becomes the replacement for the `/var/pdxt` directory.

This shows the format that you use to set the variable:

```
PDXTWORKDIR=/path/directory
```

Notes:

1. You can only use one working directory at any given time. For example, you cannot use the default `/var/pdxt` directory for some jobs and `/var/mypdxt` for other jobs.

2. If the directory you specify does not exist, Infoprint XT creates it.

3. In order to access resources correctly, you must ensure that you load resources and populate PDSs *after* you set this environment variable. If you do not, errors will occur. For example, if you load resources without this environment variable set, Infoprint XT stores files in subdirectories of `/var/pdxt`. If you then set the PDXTWORKDIR environment variable to use a different directory, Infoprint XT attempts to locate the resources in subdirectories of the new directory. It does not search for them in `/var/pdxt`. You would need to reload the resources and repopulate PDSs in order for Infoprint XT

and other products to locate the resources. See "Loading Xerox resources by using AIOZR2AR - initial load" on page 87, and "Loading resources and populating PDSs and PDSEs by using AIOZRESL" on page 102 for more information.

4. If you want to use a different working directory permanently, ensure that the file system that contains the directory meets your storage requirements. See "Verifying that you have sufficient storage available for resources" on page 20, and "Creating the /var/pdxt directory" on page 22.

Running the installation verification procedure

After you complete the initial installation of Infoprint XT, complete all required configuration tasks, and set up your printing environment, you can run the installation verification procedure (IVP). This procedure shows you how to load resources, and to convert and print a test Xerox data stream. Ensure that you have completed the customization procedures that precede the IVP information in "A roadmap for using Infoprint XT" on page 2 before you continue.

If you use PSF as your printer driver when you print the IVP test job, you must ensure that PSF has access to the AFP resources that the test job requires. The IVP2 instructions indicate the point at which you need to complete this step. For further information, see "Providing PSF with access to the AFP resources " on page 59.

Infoprint XT provides sample Xerox resources and data that you can use to verify the installation. It also provides JCL to invoke the steps required to load the resources and convert the data to AFP:

AIOZIVP1
    This JCL invokes the AIOZR2AR utility program, which loads the Xerox resources that the IVP requires. The installation process copied these resources to z/OS.

AIOZIVP2
    This JCL invokes the AIOZRPDS utility program to copy the AFP resources, which Infoprint XT generated when you ran the AIOZIVP1 JCL, into separate PDSs. You need to complete this task if you are printing the output from the IVP with an external driver, such as PSF or Infoprint Server.

AIOZIVP3
    This JCL invokes the AIOZ2AFP utility program, which converts the combined LCDS and metacode job, and verifies the product configuration. The installation process copied the test job to your system.

Loading the test resources with the AIOZIVP1 sample JCL

You use the AIOZIVP1 sample JCL to load the seven test resources, which include six fonts and a JDL that the test job requires. Figure 3 on page 27 shows the sample JCL that Infoprint XT provides.

```
//AIOZIVP1 JOB <JOB STATEMENT PARAMETERS>
//***********************************************************************
//* Copyright 2003,2019 IBM Corporation                          *
//* Copyright 2007,2019 RICOH Company, Ltd                       *
//*                                                              *
//* Permission to use, copy, modify, and distribute this         *
//* software for any purpose with or without fee is hereby       *
//* granted, provided that the above copyright notices appear     *
//* in all copies.                                               *
//*                                                              *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY     *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE    *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR       *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH   *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER        *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER   *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR          *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE     *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.        *
//*                                                              *
//*  THIS IS THE FIRST STEP OF THE IVP.  USE THIS JOB TO LOAD THE *
//*  RESOURCES USED BY THE IVP.  THE RESOURCES WERE INSTALLED WITH *
//*  INFOPRINT XT.                                               *
//*                                                              *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE      *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE          *
//*  FOLLOWING MODIFICATIONS:                                    *
//*                                                              *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                              *
//*  2) CHANGE hlq ON THE XRSPDS DD TO MATCH THE HLQ SPECIFIED    *
//*     IN THE DATA SET ALLOCATION JOB THAT WAS RUN DURING        *
//*     INFOPRINT XT INSTALLATION.                               *
//*                                                              *
//*  3) ENSURE YOU RUN THIS JOB FROM A USERID THAT IS IN THE      *
//*     AIOUSER GROUP.                                           *
//*                                                              *
//***********************************************************************
//*
//AIOZIVP1 EXEC  PGM=AIOZR2AR
//*
//SYSIN    DD *
 -g pdxttest
*
/*
//SELECT   DD *
   *.*
/*
//XRSPDS   DD DSN=hlq.SAIOXRES,DISP=SHR
//SYSPRINT DD SYSOUT=*
//*
//***********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//***********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZIVP1.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 3. Sample JCL for loading the IVP resources

AIOZIVP1 JOB <JOB STATEMENT PARAMETERS>
> This JOB statement marks the beginning of the job. It sets up the notification for the job through the positional and keyword parameters of the statement. Replace AIOZIVP1 with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZIVP1 EXEC
> This EXEC statement calls the Infoprint XT AIOZR2AR utility program, which actually performs the resource-load process and generates the AFP resources.

SYSIN DD

This data definition (DD) statement specifies the name of the resource group into which Infoprint XT loads the test resources. Do not alter this statement; the correct group is **pdxttest**.

SELECT DD

This DD statement specifies a Xerox resource pattern-matching string that instructs Infoprint XT to load all of the test resources. Do not alter this statement; the correct selection criteria is ***.***.

XRXPDS DD

This DD statement specifies the name of the PDS that contains the test resources. Change the **hlq** portion of the data set name to specify the appropriate high-level qualifier that was selected when XT was installed.

SYSPRINT DD

This DD statement defines a sequential data set in which the AIOZR2AR utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD

This DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the AIOZR2AR utility ran successfully

If the first step of the IVP runs successfully, you receive a return code of zero from the JCL job submission step. You can also view the information in the data set that you specified with the SYSPRINT DD statement. Figure 4 on page 28 shows the information from the Infoprint XT load process, which indicates that the AIOZR2AR utility ran successfully:

```
AIOSEL220I  Processing selection criteria...

AIOUSM227I  The resource utility will process Xerox resources that match
            the following SELECT criteria:

                *.*

5016-600 Resource load process started for type "fnt".
5016-610 Resource conversion process started.
...Number of resources to convert: 6.
5016-613 Resource conversion process is complete.
...Number of successes: 6.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 6.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "fnt".
5016-600 Resource load process started for type "img".
5016-614 Resource correlation process started.
5016-615 Resource correlation process is complete.
5016-601 Resource load process is complete for type "img".
5016-600 Resource load process started for type "lgo".
5016-614 Resource correlation process started.
5016-615 Resource correlation process is complete.
5016-601 Resource load process is complete for type "lgo".
5016-600 Resource load process started for type "jdl".
5016-610 Resource conversion process started.
...Number of resources to convert: 1.
5016-613 Resource conversion process is complete.
...Number of successes: 1.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 1.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "jdl".
```

Figure 4. Example of the AIOZR2AR utility running successfully

Copying the AFP versions of the test resources with the AIOZIVP2 sample JCL

You use the AIOZIVP2 sample JCL to copy the AFP versions of the six test fonts into a PDS that external programs, such as printer drivers, can access. After you copy the AFP resources, you must include the PDS in the search path of other programs that use the resources.

Allocating data sets for the AIOZIVP2 sample JCL

Before running the AIOZIVP2 sample JCL, be sure to allocate these PDSs, because Infoprint XT does not allocate them for you:

- FONTLIB DD
- OVLYLIB DD
- PSEGLIB DD

You can either allocate these PDSs externally through the ISPF Data Set Utility, or you can include a data control block (DCB) parameter in the JCL. In either case the FONTLIB DD PDS characteristics must include:

RECFM=VBM
   The record format must be variable block, with machine carriage controls.

LRECL=12284
   This is the minimum logical record length.

BLKSIZE=12288
   This is the minimum block size. You should specify the maximum block size that is efficient for your system.

This is an example of how you could allocate the data set on the FONTLIB DD statement:

```
//FONTLIB   DD   DSN=hlq.FONTLIB
//              UNIT=SYSDA,VOL=SER=volser,
//              SPACE=(TRK,(5,2,2),RLSE),
//              DCB=(BLKSIZE=27998,RECFM=VBM,LRECL=12284),
//              DISP=(NEW,CATLG,CATLG)
```

You would replace *hlq* with the appropriate high-level qualifier for your installation. The values that you specify for the TRK and BLKSIZE parameters depend upon whether you use this data set, at a later time, to contain all of your AFP font resources.

Note: If you use this data set in the future, there are considerations about whether you are processing jobs that contain FILE DJDE commands. See "Using the AIOZRPDS AFP resource population utility" on page 98.

Both the OVLYLIB DD PDS and the PSEGLIB DD PDS must have these characteristics:

RECFM=VBM
   The record format must be variable block, with machine carriage controls.

LRECL=8205
   This is the minimum logical record length.

BLKSIZE=8209
   This is the minimum block size. You should specify the maximum block size that is efficient for your system.

If you use these data sets in the future, there are also considerations about whether you can process jobs that contain FILE DJDE commands.

Figure 5 on page 30 shows the sample JCL that Infoprint XT provides.

```
//AIOZIVP2 JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2003,2019 IBM Corporation                              *
//* Copyright 2007,2019 RICOH Company, Ltd                           *
//*                                                                  *
//* Permission to use, copy, modify, and distribute this            *
//* software for any purpose with or without fee is hereby          *
//* granted, provided that the above copyright notices appear       *
//* in all copies.                                                  *
//*                                                                  *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY       *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE      *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR         *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH     *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER          *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER     *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR            *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE       *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.          *
//*                                                                  *
//*  THIS IS THE SECOND STEP OF THE IVP.  USE THIS JOB TO LOAD THE  *
//*  AFP RESOURCE LIBRARIES WITH THE RESOURCES GENERATED DURING THE *
//*  FIRST STEP OF THE IVP.                                         *
//*                                                                  *
//*  THIS STEP NEED NOT BE RUN IF THE OUTPUT OF THE IVP WILL NOT BE *
//*  PRINTED.                                                       *
//*                                                                  *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE        *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE           *
//*  FOLLOWING MODIFICATIONS:                                      *
//*                                                                  *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS.  *
//*                                                                  *
//*  2) CHANGE hlq ON THE FONTLIB, OVLYLIB AND PSEGLIB DDS.        *
//*     THESE AFP RESOURCE DATA SETS MUST ALSO BE SPECIFIED IN THE *
//*     PSF WRITER PROCEDURE THAT WILL BE USED TO PRINT THE IVP.   *
//*                                                                  *
//*  3) ENSURE YOU RUN THIS JOB FROM A USERID THAT IS IN THE       *
//*     AIOUSER GROUP.                                             *
//*                                                                  *
//**********************************************************************
//*
//AIOZIVP2 EXEC  PGM=AIOZRPDS
//*
//SYSIN    DD *
 -g pdxttest
*
/*
//**********************************************************************
//* IDENTIFY THE AFP RESOURCE PARTITIONED DATA SETS.
//**********************************************************************
//FONTLIB  DD DSN=hlq.FONTLIB,DISP=SHR
//OVLYLIB  DD DSN=hlq.OVLYLIB,DISP=SHR
//PSEGLIB  DD DSN=hlq.PSEGLIB,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//**********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//**********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZIVP2.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 5. Sample JCL for copying AFP versions of the IVP resources

AIOZIVP2 JOB <JOB STATEMENT PARAMETERS>
> This JOB statement marks the beginning of the job. Replace AIOZIVP2 with the appropriate job name.
> Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters
> that your installation requires.

AIOZIVP2 EXEC
> This EXEC statement specifies the AIOZRPDS utility program, which actually performs the AFP
> resource-copy process.

SYSIN DD
>   This DD statement specifies the group in which you loaded the test resources by using the AIOZIVP1 sample JCL. Do not alter this statement; the correct group is **pdxttest**.

FONTLIB DD
>   This DD statement specifies the PDS into which Infoprint XT copies the AFP font resources. You must allocate this PDS by using the procedure described in "Allocating data sets for the AIOZIVP2 sample JCL" on page 29. Infoprint XT does not allocate this PDS automatically.

OVLYLIB DD
>   This DD statement specifies the PDS into which Infoprint XT copies AFP overlay resources. While the test job does not use any overlays, you must specify a PDS by using the procedure "Allocating data sets for the AIOZIVP2 sample JCL" on page 29.

PSEGLIB DD
>   This DD statement specifies the PDS into which Infoprint XT copies AFP page segments. While the test job does not use any page segments, you must specify a PDS by using the procedure "Allocating data sets for the AIOZIVP2 sample JCL" on page 29.

SYSPRINT DD
>   This DD statement defines a sequential data set in which the AIOZRPDS utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD
>   This DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the AIOZRPDS utility ran successfully

If the second step of the IVP runs successfully, you receive a return code of zero from the JCL job submission step. You can also view the information in the data set that you specified with the SYSPRINT DD statement. Figure 6 on page 31 shows the information from the Infoprint XT copy process, which indicates that AIOZRPDS utility ran successfully:

```
2003-04-01 10:59:49 MST pdxtloadpds -g pdxttest -F hlq.FONTLIB
                                 -O hlq.OVLYLIB -P hlq.PSEGLIB
5016-680 Update resource: hlq.FONTLIB(C0L01BOB)
5016-680 Update resource: hlq.FONTLIB(C0L0112C)
5016-680 Update resource: hlq.FONTLIB(C0PR111D)
5016-680 Update resource: hlq.FONTLIB(C0PR111E)
5016-680 Update resource: hlq.FONTLIB(C0P06BOB)
5016-680 Update resource: hlq.FONTLIB(C0P0612C)
5016-680 Update resource: hlq.FONTLIB(T1L01BOB)
5016-680 Update resource: hlq.FONTLIB(T1L0112C)
5016-680 Update resource: hlq.FONTLIB(T1PR111D)
5016-680 Update resource: hlq.FONTLIB(T1PR111E)
5016-680 Update resource: hlq.FONTLIB(T1P06BOB)
5016-680 Update resource: hlq.FONTLIB(T1P0612C)
5016-680 Update resource: hlq.FONTLIB(X0L01BOB)
5016-680 Update resource: hlq.FONTLIB(X0L0112C)
5016-680 Update resource: hlq.FONTLIB(X0PR111D)
5016-680 Update resource: hlq.FONTLIB(X0PR111E)
5016-680 Update resource: hlq.FONTLIB(X0P06BOB)
5016-680 Update resource: hlq.FONTLIB(X0P0612C)
2003-04-01 10:59:53 MST pdxtloadpds (0)
```

Figure 6. Example of the AIOZRPDS utility running successfully

Converting the test job with the AIOZIVP3 sample JCL

You use the AIOZIVP3 sample JCL to convert the test job. The test job contains four pages. Figure 7 on page 32 shows the sample JCL that Infoprint XT provides.

```
//AIOZIVP3 JOB <JOB STATEMENT PARAMETERS>
//***********************************************************************
//* Copyright 2003,2019 IBM Corporation                        *
//* Copyright 2007,2019 RICOH Company, Ltd                     *
//*                                                            *
//* Permission to use, copy, modify, and distribute this       *
//* software for any purpose with or without fee is hereby      *
//* granted, provided that the above copyright notices appear   *
//* in all copies.                                             *
//*                                                            *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY  *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE  *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR     *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER      *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR        *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE   *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.      *
//*                                                            *
//*  THIS IS THE THIRD AND FINAL STEP OF THE IVP.  USE THIS JOB TO *
//*  CONVERT AN LCDS/METACODE FILE TO AFP.  THE FILE WAS INSTALLED *
//*  WITH INFOPRINT XT.                                        *
//*                                                            *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE    *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE        *
//*  FOLLOWING MODIFICATIONS:                                  *
//*                                                            *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                            *
//*  2) CHANGE hlq ON THE XRXIN DD TO MATCH THE HLQ SPECIFIED   *
//*     IN THE DATA SET ALLOCATION JOB THAT WAS RUN DURING      *
//*     INFOPRINT XT INSTALLATION.                             *
//*                                                            *
//*  3) CHANGE THE AFPOUT DD AND OUT1 OUTPUT STATEMENTS TO DIRECT THE *
//*     JOB TO A PSF WRITER.  THE IVP PRINTS ON LETTER OR A4 PAPER. *
//*                                                            *
//*  4) ENSURE YOU RUN THIS JOB FROM A USERID THAT IS IN THE    *
//*     AIOUSER GROUP.                                         *
//*                                                            *
//***********************************************************************
//*
//AIOZIVP3 EXEC  PGM=AIOZ2AFP
//*
//***********************************************************************
//* SPECIFY PROCESSING OPTIONS.
//***********************************************************************
//SYSIN    DD *
 -x'xjde=strton xjdl=pdxton xclb=none xafprc=4' -g pdxttest
/*
//OUT1      OUTPUT FORMS=STD,DEST=LOCAL
//XRXIN     DD DSN=hlq.SAIOIVPD(AIOZIVPD),DISP=SHR
//AFPOUT    DD SYSOUT=*,OUTPUT=(*.OUT1),DCB=(LRECL=12284,RECFM=VBM)
//SYSPRINT DD SYSOUT=*
//*
//***********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//***********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZIVP3.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 7. Sample JCL for converting the IVP test job

AIOZIVP3 JOB <JOB STATEMENT PARAMETERS>
>   This JOB statement marks the beginning of the job. It sets up notification for the job through the
>   positional and keyword parameters of the statement. Replace AIOZIVP3 with the appropriate job
>   name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any
>   parameters that your installation requires.

AIOZIVP3 EXEC

This EXEC statement specifies the AIOZ2AFP utility program, which actually performs the job-conversion process. While this utility program has parameters that you can specify, you do not specify them on the EXEC statement when you convert the test job.

SYSIN DD

This DD statement specifies the conversion parameters for the job. This is equivalent to the START command that you would enter on a Xerox printer to run a job. It also uses the **-g** option to specify that the resources for the job are in the **pdxttest** resource group. This is the group in which you loaded the resources when you ran the sample AIOZIVP1 JCL. Do not alter this statement.

OUT1 OUTPUT

This OUTPUT statement, in conjunction with the AFPOUT DD statement, routes the job to the appropriate printer. Modify this for the requirements of your installation.

XRXIN DD

This DD statement specifies the data-set member that contains Infoprint XT test job. Change the *hlq* portion of the data set name to specify the appropriate high-level qualifier for your installation.

AFPOUT DD

Modify this DD statement so that, in conjunction with the OUT1 DD statement, you route the test job to the appropriate printer. The AFPOUT DD statement includes DCB information that z/OS uses to allocate the data set that contains the AFP output for the job.

SYSPRINT DD

This DD statement defines a sequential data set in which the AIOZ2AFP utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD

This DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the test job converted and printed correctly

Infoprint XT prints four test pages. The first and second test pages are converted Xerox LCDS data, and they print in portrait orientation and landscape orientation. The third and fourth test pages are converted Xerox Metacode data, which also print in portrait orientation and landscape orientation. Figure 8 on page 33 shows an example of the first test page.

```
Infoprint XT                                                                    PR111E


A B C D E F G H I J K L M N O P Q R S T U V W X Y Z   P0612C
a b c d e f g h i j k l m n o p q r s t u v w x y z   P0612C
0 1 2 3 4 5 6 7 8 9 ! @ # $ % ? & * ( ) - _ = + ; :   P0612C
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z   P06B0B
a b c d e f g h i j k l m n o p q r s t u v w x y z   P06B0B
0 1 2 3 4 5 6 7 8 9 ! @ # $ % ? & * ( ) - _ = + ; :   P06B0B


Infoprint XT                                                                    PR111E
```

Figure 8. Infoprint XT Test Page

Chapter 3. Customizing Infoprint XT

This chapter describes how to customize Infoprint XT processing environment. All procedures in this chapter are optional; you do not have to do them to use Infoprint XT.

Setting optional environment variables

You can set optional environment variables to control certain aspects of Infoprint XT resource processing and job processing.

Controlling the default arguments when you compile JSLs (PDXTLOADRES_ARGS)

You can change the default values that Infoprint XT uses for the parameters of the AIOZR2AR utility program. You use this program to load Xerox resources; see "Loading Xerox resources by using AIOZR2AR - initial load" on page 87. For example, you might want the default value for the **-m** option to be **A4**, instead of **letter**. "AIOZR2AR parameters" on page 88 describes the parameters that you can specify with the environment variable.

When you make a PDXTLOADRES_ARGS entry, enclose options and values in single quotation marks, for example:

```
PDXTLOADRES_ARGS='-m A4'
PDXTLOADRES_ARGS='-m A4 -s word'
PDXTLOADRES_ARGS='-r'
```

The last example shows an option without a value. This example causes Infoprint XT to automatically add the **-r** option whenever you enter the **pdxtloadres** command.

Controlling the default arguments when you compile JSLs (PDXTX2AFP_ARGS)

You can change the default values that Infoprint XT uses when you convert Xerox jobs, through any of the job-conversion methods. For example:

- You can use the AIOZX2AFP utility program to convert jobs. See "Using the AIOZ2AFP utility to process jobs" on page 171.
- You can use the IP PrintWay component of Infoprint Server. See "Customization and Administration tasks for IP PrintWay" on page 71.
- You can also use the Print Interface component of Infoprint Server. See "Printing jobs by using the Print Interface subsystem" on page 180.
- You can update the Transform Manager transform configuration file to define the Infoprint XT **x2afpd** daemon. See "Customizing the Transform Interface" on page 62.

You might want the default value for the **-x** option to specify a certain Job Descriptor Language (JDL) and Job Descriptor Entry (JDE) pair. "AIOZ2AFP parameters" on page 171 specifies the parameters that you can specify. You can use any one of these formats when you make a PDXTX2AFP_ARGS entry:

- To specify a single parameter and value, use single quotation marks:

```
PDXTX2AFP_ARGS='-g payroll'
```

- To specify the **-x** option and values, use a combination of single and double quotation marks:

```
PDXTX2AFP_ARGS='-x "xjdl=tonl xjde=dflt xclb=pay"'
```

- To specify one parameter and value, and the **-x** option and values, also use a combination of single and double quotation marks:

```
PDXTX2AFP_ARGS='-g payroll -x "xjdl=tonl xjde=dflt xclb=pay"'
```

Controlling the default arguments when you create and modify cluster database resources (PDXTCLUSTER_ARGS)

You can change the default values that Infoprint XT uses for the options of the **pdxtcluster** command. You use this command to create and modify cluster database resources; see . You can use the PDXTCLUSTER_ARGS environment variable to specify new default values for the options. For example, you might want the default value for the **-g** option to be **payroll** instead of **common**:

```
PDXTCLUSTER_ARGS='-g payroll'
```

Controlling the default arguments when you load resources (PDXTPDL_ARGS)

You can change the default values that Infoprint XT uses for the options of the **pdxtpdl** command. You can use the PDXTPDL_ARGS environment variable to specify new default values for the options. For example, you might want the default value for the **-g** option to be **resgrp** instead of **common**.

Use these formats for the value of the PDXTPDL_ARGS variable:

- If the option that you want to specify does not have an associated value, use this format:

```
PDXTPDL_ARGS=-r
```

This causes Infoprint XT to automatically add the **-r** option any time you specify the **pdxtpdl** command.

- Enclose one or more options with associated values in single quotation marks when you specify a PDXTPDL_ARGS entry. For example:

```
PDXTPDL_ARGS='-g resgrp -r'
```

```
PDXTPDL_ARGS='-n /xyz/*.jsl'
```

Controlling resource-load messages for FILE DJDE jobs (PDXT_AIOLXDFE_TRACE)

You can instruct Infoprint XT to include messages about the resource-load process for jobs that use FILE DJDE commands. Infoprint XT can write the messages to the x2afp.lst file. The PDXT_AIOLXDFE_TRACE environment variable controls the disposition of the resource-load messages. Set this variable to 1 to include the messages:

```
PDXT_AIOLXDFE_TRACE=1
```

Remove the environment variable to suppress the messages.

Activating trace functions for the font converter (PDXT_XR2FAPI_TRACE)

If you place a service call, the IBM service representative might ask you to run a trace of the Infoprint XT font converter to aid in diagnosing a problem. The PDXT_XR2FAPI_TRACE environment variable controls tracing in the font converter. Set this variable to 1 to activate:

```
PDXT_XR2FAPI_TRACE=1
```

Remove the environment variable to turn tracing off.

Note: You must include the **-e listings** command option and value with the **pdxtloadres** command after you activate tracing.

Activating trace functions for the image and logo converter (PDXT_XR2IAPI_TRACE)

If you place a service call, the IBM service representative might ask you to run a trace of the Infoprint XT image and logo converter to aid in diagnosing a problem. The PDXT_XR2IAPI_TRACE environment variable controls tracing in the image and logo converter. Set this variable to 1 to activate tracing:

```
PDXT_XR2FAPI_TRACE=1
```

Remove the environment variable to turn tracing off.

Note: After you activate tracing, you must include the **-e listings** command option and value with the **pdxtloadres** command.

Activating trace functions for the form converter (PDXT_XR2RAPI_TRACE)

If you place a service call, the IBM service representative might ask you to run a trace of the Infoprint XT form converter to aid in diagnosing a problem. The PDXT_XR2RAPI_TRACE environment variable controls tracing in the form converter. Set this variable to 1 to activate tracing:

```
PDXT_XR2FAPI_TRACE=1
```

Remove the environment variable to turn tracing off.

Note: After you activate tracing, you must include the **-e listings** command option and value with the **pdxtloadres** command.

Controlling the default arguments when you process the ink correlation table (PDXTCOLOR_ARGS)

You can change the default values that Infoprint XT uses for the options of the **pdxtcolor** command. You use this command to manage the ink correlation table (see "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133). You can use the PDXTCOLOR_ARGS environment variable to specify new default values for the options. For example, you might want the default value for the **-m** option to be **A4** instead of **letter**.

Use these formats for the value of the PDXTCOLOR_ARGS variable:

- To specify a single option and value:

```
PDXTCOLOR_ARGS='-g payroll'
```

- To specify multiple options and associated values, enclose the options and values in single quotation marks:

```
PDXTCOLOR_ARGS='-m A4 -p no -s all'
```

- To specify an option whose value contains embedded blanks, use a combination of single and double quotation marks:

```
PDXTCOLOR_ARGS='-k "midnight blue":lab:15:-50:-65'
```

- To specify one or more options with associated values and an option whose value contains embedded blanks, also use a combination of single and double quotation marks:

```
PDXTCOLOR_ARGS='-m A4 -e "dfault.green.very light green":k:lab:90:-30:10'
```

Controlling the content of error messages (PDXT_INTMSGIDS)

Use the PDXT_INTMSGIDS environment variable to control the level of detail that Infoprint XT provides in the messages that it issues for basic operations. You can use this environment variable for diagnostic purposes, and at the direction of an IBM service representative. When you set this variable, Infoprint XT writes the name of the module that issued the message before the message number. It also writes a line number from the module, which indicates the line at which the condition that caused the message occurred. The expanded output is similar to this:

```
pdxtloadres: (aioxclxr 01516) 5016-241 An error occurred while searching SMITH(FILE) (error 41).
    EDC5041I An error was detected at the system level when opening a file.
```

This message shows that an error resulted from an invocation of the **pdxtloadres** command, and the error occurred at line 1516 of the **aioxclxr** module.

Set the PDXT_INTMSGIDS variable to 1 to include module and line number information:

```
PDXT_INTMSGIDS=1
```

Remove the environment variable to suppress the module and line number information.

Controlling access to the pdxtx2afp transform directives (PDXTX2AFP_DIRECTIVES)

If you want to use the **pdxtx2afp** transform directives that Infoprint XT provides, you can update the PDXTX2AFP_DIRECTIVES environment variable. For more information, see "Activating transform directives" on page 44.

Controlling the job name to each class of transform daemon (_BPX_JOBNAME)

You can specify the _BPX_JOBNAME environment variable in each transform entry to assign a different job name to each class of transform daemon. By default, the job name of each transform daemon is AOPXFD. When you assign a different job name to each class of transform daemon, the operator can manage the transform daemons more effectively. You can specify a job name of 1 to 8 alphanumeric characters. Incorrect job names are ignored. For more information about the _BPX_JOBNAME variable, see *z/OS UNIX System Services Planning*.

For more information about transform entries, see "Customizing the Transform Interface" on page 62.

Controlling performance in the z/OS shell (_BPX_SHAREAS)

You must set the _BPX_SHAREAS environment variable to YES in order to ensure that Infoprint XT works correctly with the z/OS shell. For more information about the _BPX_SHAREAS variable, see *z/OS UNIX System Services Planning*.

Creating a custom parameter mapping file

When you convert a Xerox job, you must specify certain parameters that equate to the Xerox START command for the job. The parameters include the starting Job Descriptor Library and Job Descriptor Entry (JDE) pair. You might also specify other parameters that further define the job, such as how to process stapling commands. Infoprint XT can use a parameter mapping file, which you create, to streamline the process of setting conversion parameters. You can automatically set certain parameters by instructing Infoprint XT to use the pass-through values of the **pdxtx2afp** command to trigger which parameters to apply. The mapping file assigns parameters by using these job characteristics:

- Job class
- Destination for the job
- Form for the job

- Job ID
- Job name

See -p option for pdxtx2afp on page "-p passthru_values" on page 168 for more information. Also see the /usr/lpp/pdxt/V3R3M0/testjob/pdxtx2afp.map file, which is a mapping file that you can use with the test job that Infoprint XT supplies.

Note: Any parameters that you specify with the **pdxtx2afp** command override the same parameters in the mapping file.

Parameter mapping file syntax rules

You can control how Infoprint XT processes jobs that have specific characteristics by using a custom parameter mapping file. Create a file with the name pdxtx2afp.map and then add entries that support the requirements of the installation. After you complete the entries, store the file in the /var/pdxt directory. Make sure that the group for the file is AIOUSER and that the file has 640 permissions. Table 6 on page 39 shows the format of an entry in a mapping file.

The /usr/lpp/pdxt/V3R3M0/testjob/pdxtx2afp.map file is an example of a transform parameter mapping file. Do not modify the sample file in the testjob subdirectory. Table 6 on page 39 shows the format of each entry in the file.

Note: If the installation uses the PDXTWORKDIR environment variable, store the parameter mapping file in the directory that the environment variable specifies, instead of the /var/pdxt directory.

Table 6. Format of the transform parameter mapping file

Mapping file lines	Explanation
# text	Comments
keyword=value	A pattern match of any **-opa** values passed through the **-p** command option.
parameter parameter	Additional conversion parameters, as required.

Use one of these as the keyword: **class**, **dest**, **forms**, **jobid**, or **jobname**. You can also use a special keyword and value pair, ***=***, to apply parameters to every job. ***=*** specifies that any keyword and value pair is a match; Infoprint XT applies the associated parameters to every job that it processes.

You can assign the **-g**, **-r**, **-t**, and **-x** options. These options correspond to a subset of the processing parameters that you can specify with the AIOZ2AFP utility program, or that you specify through Infoprint Server filter options. See "AIOZ2AFP parameters" on page 171, and "Options for the DLL transform filter" on page 69 for more information.

These rules apply to the parameter mapping file:

- You must use lowercase keyword names in the mapping file: **class**, **dest**, **forms**, **jobid**, or **jobname**.
- The values for the keywords are case-sensitive. For example, **prt1** and **PRT1** are two distinct values.
- You can use regular expressions for values only if the value to be matched is a single character.
- You can use asterisks and question marks as wildcard characters for keyword values. You can also use brackets to specify ranges of characters:
  - To specify all jobs whose names begin with ORB:

    ```
    jobname=ORB*
    ```

  - To specify all jobs with a destination of PRT, followed by any three characters:

    ```
    dest=PRT???
    ```

- To specify all jobs with a class value of any single character from A through M:

```
class=[A-M]
```

- You cannot use wildcard characters or regular expressions to define the keyword to match. For example, **job*** is not valid for matching both the **jobid** and **jobname** keywords.
- Infoprint XT ignores blank lines and comment lines. Lines that begin with a number sign, #, are comments.
- All *keyword=value* pairs must start in column one. The expression must include the equal sign, =, and the expression cannot contain spaces.
- Parameter lines cannot start in column one; use at least one space before the parameter.
- When a keyword match occurs, Infoprint XT applies all the parameter lines that follow, up to the next keyword line or the end of the file.
- You cannot include comments on keyword lines or parameter lines.
- Two or more keywords on a single line represent an *and* condition. Jobs must match all keywords to use the associated parameters.
- Two or more keywords on separate lines represent an *or* condition. Jobs can match any one of the keywords to use the associated parameters.
- Infoprint XT checks each keyword group in the file. If a job matches more than one keyword group, the job can use parameters from each group it matches.

  For the **-g**, **-r**, and **-t** options, if the job matches several keywords groups that specify the same parameter, Infoprint XT uses the value from the last group.

  For the **-x** option, Infoprint XT merges the conversion parameters from all matched keyword groups into the final **pdxtx2afp** command. For example, if one matched keyword group specifies **-x xcopies=5** and another specifies **-x xclb=pay1**, Infoprint XT includes both **xcopies** and **xclb** in the final command. If more than one matched keyword group specifies the same parameter, for example **-x xjdl=strton** and **-x xjdl=dpljdl**, Infoprint XT uses the last value.

is an example of a completed parameter mapping file.

```
#------------------------------------------------------#
#  Set the default for all jobs that do not match any #
#  other criteria                                      #
#------------------------------------------------------#
*=*
  -x'xjde=base xjdl=base1'

#------------------------------------------------------#
#  Set parameters for FORMS=STD and CLASS=K jobs       #
#------------------------------------------------------#
forms=STD class=K
  -x'xjde=std xjdl=dpljdl'

#------------------------------------------------------#
#  Set parameters for FORMS=RED or CLASS=J jobs        #
#------------------------------------------------------#
forms=RED
class=J
  -x'xjde=pay1 xjdl=bills'

#------------------------------------------------------#
#  Set parameters for DEST=PRT17                       #
#------------------------------------------------------#
dest=PRT17
  -x'xjde=strt xjdl=prt17'

#------------------------------------------------------#
#  Set parameters for payroll jobs                     #
#------------------------------------------------------#
jobname=PAYROLL
  -x'xjde=strt xjdl=prt17'

#------------------------------------------------------#
# Class D jobs, class E jobs, or any jobs whose        #
# names starts with INV use resources from             #
# /var/pdxt/resources/inventory.                       #
#------------------------------------------------------#
class=D
class=E
jobname=INV*
   -g inventory

#------------------------------------------------------#
# Jobs whose names start with PAY* use AFP             #
# resources in the /pay/secure/monthly directory       #
#------------------------------------------------------#
jobname=PAY*
   -r /pay/secure/monthly
```

Figure 9. Completed parameter mapping file

Infoprint XT merges transform parameters from the transform parameter mapping file with parameters specified with the submitted job. If both the mapping file and the parameters specified with the job specify the same transform parameter, Infoprint XT uses the value from the parameters specified with the job.

Verifying the parameter specification of the mapping file

You can use these basic methods to convert a Xerox job with Infoprint XT:

- Use the AIOZ2AFP utility program and invoke the program through JCL.
- Convert jobs in UNIX System Services using the **pdxtx2afp** command.
- Use the transform filter and transform daemon in the Infoprint Server environment, which lets you convert jobs with either IP PrintWay or the Print Interface subsystem.

Each of the methods has a default location in which Infoprint XT writes its messages from the conversion process. The format of the information that Infoprint XT provides is the same for the parameters that it assigns from the transform parameter mapping file, regardless of the job-submission method. If Infoprint

XT sets parameters from the parameter mapping file, it writes entries similar to these in the transform arguments section:

```
5016-501 2010-04-04  21:51:40  (pid 83951854) - transform started

5016-515 Infoprint XT received these job attributes to match with keywords
         in parameter mapping file pdxtx2afp.map:
5016-516 class=a dest=mysys forms=frml jobid=(none) jobname=billspay
5016-517 Infoprint XT matched these job attribute keywords in parameter
         mapping file pdxtx2afp.map:
5016-518 class=a dest=mysys forms=frml jobname=billspay
5016-503 Transform arguments (/var/pdxt/pdxtx2afp.map)
5016-504 -x "xjde=pay1 xjdl=bills"
```

For in-depth descriptions of the information that Infoprint XT provides for job conversion, see:

- "Using the pdxtx2afp command to process jobs" on page 167
- "Printing jobs by using IP PrintWay" on page 179
- "Verifying whether the job converted correctly" on page 182 for submitting jobs through the Print Interface subsystem

Using transform directives

Infoprint XT provides a set of internal directives that you can activate to control certain aspects of the overall data stream conversion process. For example, you can instruct Infoprint XT to capture traces of the job data stream as it flows through the conversion process. You primarily use the transform directives for diagnostic purposes or when you require special modifications to the transform process.

There are several methods that you can use to specify the directives. You can specify the directives with any of these:

- Parameters when you submit a job. For example, in JCL, when you invoke the AIOZ2AFP utility program.
- An environment variable. For example, in a pdxt.cfg file or the .profile file for a specific user ID.
- A control file.

You primarily use the transform directives for diagnostic purposes or when you require special modifications to the transform process.

Transform directives and syntax

You can set these transform directives:

-d jobdir | resdir

Specifies the type of information that you want to capture for a specific job. **jobdir** specifies that transform processing should capture all files in the working directory for the job. **resdir** specifies that transform processing should capture all files in the resource directories for the job. This includes the informational files, and the AFP resources. The location of the output that this transform captures depends upon how you specify this directive. For example if you use the AIOZ2AFP utility program, it goes to the Infoprint XT DEBUG DD statement. For an example of a DEBUG DD statement, see Figure 20 on page 173. For details about capturing service information, see the "Capturing service information" on page 195.

Notes:

- Use this directive only at the direction of a technical support representative.
- You can specify **-d** more than once to capture both the working directory and the resource directories.
- Infoprint XT uses this directive only if file descriptor nine is defined when the **pdxtx2afp** command is issued and if the **pax** command is available. Infoprint XT writes the output to the file that file descriptor nine specifies, for example:

```
9 > myoutfile
```

- To capture Infoprint XT diagnostic job information, add the **-a jobcapturearchive** parameter to the **pdxtx2afp** command. See "Using the pdxtx2afp command to process jobs" on page 167. The **pdxtcapture** command is no longer operational.

-e '*exitname argument...*'

Specifies an argument or arguments that Infoprint XT passes to a transform application exit. *exitname* specifies the name of the transform application exit. Enclose the application exit name and the argument string in single quotation marks. See "Working with the base Infoprint XT application exits" on page 45 for more information.

Valid names are:

- **aioxlxae** for the transform accounting application exit. See "Setting up a transform accounting application exit" on page 46.
- **aioxlxbe** for the transform begin application exit. See "Setting up a transform begin application exit" on page 48.
- **aioxlxie** for the transform input application exit. See "Setting up a transform input application exit" on page 49.
- **aioxlxoe** for the transform output application exit. See "Setting up a transform output application exit" on page 51.
- **aioxlxte** for the transform end application exit. See "Setting up a transform end application exit" on page 53.

The application exit program controls the arguments that you can specify and the format of those arguments . Enclose the program name and the argument string in double quotation marks or escaped quotation marks, depending on the context.

You can specify the **-e** directive more than one time, with different options. If you specify multiple **-e** directives for the same transform application exit, Infoprint XT sends all of the arguments to the application exit.

For examples of passing arguments to application exit programs, see "Activating transform directives" on page 44.

-j0 | -j1

Specifies whether Infoprint XT enables online processing of carriage controls in the job. **-j1** enables online processing. **-j0** disables online processing. The default is that Infoprint XT does carriage-control processing for online jobs.

-k0 | -k1

Specifies whether Infoprint XT retains the working directory for the job after the data stream conversion process completes. The working directory for the job is /var/pdxt/jobs/*jobname*-*jobid*-*n*, where *n* is a unique sequence number. A value of **-k0** causes Infoprint XT to delete the working directory after conversion completes; this is the default. A value of **-k1** causes Infoprint XT to retain the working directory. If you specify the **-k** directive by more than one method, Infoprint XT uses the last value. See "Activating transform directives" on page 44 for the order in which Infoprint XT checks for transform directives.

Note: The delete function of the **-k** directive only applies to working directories that Infoprint XT creates. If you specify the working directory with the **-w** directive, Infoprint XT does not delete it.

-t *TraceType ...*

Specifies how Infoprint XT traces a job as it flows through the conversion process. Infoprint XT writes all output from the **-t** directive to the working directory for the job. Valid values are:

x2afp.in
> Saves a copy of the original Xerox job.

x2afp.out
> Saves a copy of the AFP job generated by data stream conversion.

x2afp
> Saves both the original Xerox job and the generated AFP job.

aioxlxie.in
Saves the Xerox input data sent to the **aioxlxie** application exit.

aioxlxie.out
Saves the Xerox output generated by the **aioxlxie** application exit.

aioxlxie
Saves both the input to, and the output from, the **aioxlxie** application exit.

aioxlxoe.in
Saves the AFP input data sent to the **aioxlxoe** application exit.

aioxlxoe.out
Saves the AFP output data generated by the **aioxlxoe** application exit.

aioxlxoe
Saves both the input to, and the output from, the **aioxlxoe** application exit.

Note: Multiple occurrences of the **-t** directive are cumulative. For example, you can specify **-t aioxlxie.in** with the PDXTX2AFP_DIRECTIVES environment variable, and specify **-t aioxlxie.out** with the **-t** command option attribute. In this case, Infoprint XT saves both the input to, and the output from, the **aioxlxie** application exit. You can also specify more than one value on a single occurrence of the **-t** directive.

-x '*transformparameters*'
Specifies conversion parameters. Any parameters that you specify with this directive override the same parameters if you specify them with other methods. For example, **-x** transform parameters override the same parameters if you specify them with the SYSIN DD or EXEC JCL statements, or with the **-x** option of the **pdxtx2afp** command.

Note: Do not use this directive to specify parameters, such as **xjdl** and **xjde**, for your production environment. However, you can use this directive to temporarily override the production environment during testing.

For more information about conversion parameters, see Appendix A, "Conversion parameters for converting Xerox jobs," on page 205.

Trace transform directives

For service purposes, an IBM service representative might ask you to activate a trace by using this format:

```
 -x xztrace=all1:all2
```

Use this only at the direction of an IBM service representative who provides further information about how to locate the trace output and send it for diagnosis. For more information, see xztrace transform conversion parameter on page "xztrace = all1:all2" on page 219.

Activating transform directives

Several methods exist for activating Infoprint XT transform directives. Infoprint XT checks for an environment variable first and for a directives file second. If you enter the **pdxtx2afp** command directly, Infoprint XT then checks for the **-t** command option.

PDXTX2AFP_DIRECTIVES environment variable
You can set the PDXTX2AFP_DIRECTIVES environment variable through the various methods. For example, you can add it to the /etc/profile file or to the /var/pdxt/pdxt.cfg file. Where you add the environment variable can affect which Infoprint XT functions can access it. If you specify the environment variable in the /var/pdxt/pdxt.cfg file, the transform directives are only available to the AIOZ2AFP utility program. However, the transform directives that you specify are available to any user ID that runs the utility programs. If you use Infoprint Server, you must specify the environment variable when you define the Infoprint XT **x2afpd** transform daemon. For Infoprint Server, these

environment variables are specified in **x2afp** transform entries in `/etc/Printsrv/aopxfd.conf`.
These examples show the format that you use to specify directives through the environment variable:

```
PDXTX2AFP_DIRECTIVES='-x xztrace=all1:all2'

PDXTX2AFP_DIRECTIVES='-t x2afp.out -k1'
```

/var/pdxt/pdxtx2afp.directives file
This is a plain, z/OS UNIX text file that contains the transform directives. You can include comments and blank lines in the file. Delimit comments with a pound sign, #. You must include a destination name, followed by a colon, for each directive in the file. You can also use `*:` as a destination, which indicates that the directive applies to all job destinations. When you submit the job by using JCL, Infoprint XT uses the value of the DEST parameter for the destination.

These examples show the types of entries that you can make in the transform directives file:

1.
```
#-----------------------------------------------#
# For all destinations, pass an argument to the #
# transform input application exit.             #
#-----------------------------------------------#
*: -e 'aioxlxoe OFFSET_ALTBIN'
```

2.
```
#-----------------------------------------------#
# Capture and keep the AFP output for all jobs   #
# with a destination of PRT01.                   #
#-----------------------------------------------#
PRT01: -t x2afp.out -k1
```

After you create the `pdxtx2afp.directives` file in the directory, make sure that the group for the file is AIOUSER and that it has 640 permissions. For example:

```
-rw-r-----  1 XTUSER AIOUSER  94 Apr 01 16:47 pdxtx2afp.directives
```

You can use the z/OS UNIX **chgrp** and **chmod** commands, as necessary, to set the group and the permissions.

-t parameter of the AIOZ2AFP utility program
You can include transform directives when you submit JCL to batch process a Xerox job. See "AIOZ2AFP parameters" on page 171.

-t filter option in a combined Infoprint XT and Infoprint Server installation
You can include transform directives when you define the **x2afpd** daemon in the `aopxfd.conf` transform daemon configuration file. You can also specify it in a transform parameter mapping file, the **%filter-options** attribute of a printer definition, or the **filter-options** job attribute in JCL. See:

- "Transform entry format" on page 63
- "Options for the DLL transform filter" on page 69
- "Modifying the application JCL and including conversion parameters" on page 180

Programming Interface Information

Working with the base Infoprint XT application exits

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

Infoprint XT provides application exits that you can use to control the various stages of the job submission process and the transform process. This section presents the application exits in the order in which Infoprint XT calls them.

Setting up a transform accounting application exit

Infoprint XT provides a transform accounting application exit, **aioxlxae**, which you can use to capture transform-specific information from the data stream conversion process. Use this information for purposes such as billing. The application exit does not capture information about the printing process.

Infoprint XT passes these options to the application exit:

-e *arguments*
> Specifies any application exit arguments specified with the **-e** transform directive. For more information, see "Transform directives and syntax" on page 42.

-j *jobname-jobID-n*
> Specifies the job identifier to the application exit. Infoprint XT automatically derives the *jobname* and *jobID* values, and assigns a unique sequence number, *n*. If Infoprint XT is unable to derive the job name and job ID, it passes **UNKNOWN-UNKNOWN-***n* as the job identifier.

-p *passthru_values*
> Specifies the same values that the **-p** option for the job specifies, if it is present. See "Using the pdxtx2afp command to process jobs" on page 167.

-q *dest*
> Specifies the destination for the job.

-s *submit_method*
> Specifies the job-submission method, where *submit_method* is:
>
> **infoprint**
> > Infoprint Server initiated the transform.
>
> **pdxtx2afp**
> > The **pdxtx2afp** command initiated the transform.

-x *transform_options*
> Specifies all the conversion parameters that Infoprint XT uses when it converts the Xerox job to AFP. The set of conversion parameters can contain more than one occurrence of a specific parameter. In this case, Infoprint XT uses the value for the last occurrence of the parameter.

-w *directory*
> Specifies the name of the Infoprint XT working directory. Typically, this is `/var/pdxt`.

-t *type*
> Specifies the type of accounting information. This corresponds to the point in the transform process at which Infoprint XT gathered the information. Valid types are:
>
> **AIOX2ABC**
> > Infoprint XT generates a single AIOX2ABC observation when it starts the data stream conversion process.
>
> **AIOX2AOC**
> > When data stream conversion finishes for a report in the job, Infoprint XT generates a single AIOX2AOC observation for the report.
>
> **AIOX2AEC**
> > Infoprint XT generates a single AIOX2AEC observation when data stream conversion finishes for the job.
>
> **Note:** For specific information about the types of accounting information, see "Components of transform accounting observations" on page 47.

-l *level*
> Specifies the level of detailed accounting information. This corresponds to the data format. If Infoprint XT changes the format of the detailed accounting information, it increments the level. This makes it possible for **aioxlxae** to differentiate between records built with the original format and records built with a new format. The initial level is 0.

-i *information*

Specifies the detailed accounting information for the three observation types, as described in "Components of transform accounting observations" on page 47.

Note: The accounting application exit must ignore any command options passed to it that it does not recognize. Infoprint XT can then add command options without impacting a customized accounting application exit.

Streams for the transform accounting application exit

Infoprint XT communicates with the application exit by using these streams:

fd0 (STDIN)
Infoprint XT does not pass any data to the standard input of the application exit.

fd1 (STDOUT)
Infoprint XT redirects the standard output from the application exit to /dev/null.

fd2 (STDERR)
Infoprint XT redirects the standard error from the application exit to /dev/null.

Components of transform accounting observations

The Infoprint XT accounting observations consist of three distinct components:

Type
Indicates where in the transform process the observation took place.

Level
A number that indicates the version or the format of the observation information.

Information
Contains details specific to the observation type.

These accounting observations pertain to the conversion of the Xerox data stream, and not to the actual number of pages that print on the printer.

For the AIOX2ABC observation at level 0, the detailed information is always empty.

Table 7 on page 47 shows the information that Infoprint XT reports for the AIOX2AOC observation at level 0. Infoprint XT reports this observation when the data stream conversion process finishes processing a report in a job. Infoprint XT creates one observation for each report.

Table 7. AIOX2AOC accounting observation for level 0		
Offset	**Length**	**Description**
0	10	Report number
10	6	Job number (HJOBNO)
16	16	Report name (HPRTNA)
32	6	Starting JDE
38	6	Starting JDL
44	10	Maximum copy count
54	31	Department name
85	10	Graphic images read
95	1	Collate (Y | N)
96	1	Duplex (Y | N)
97	1	Copy sensitive (Y | N)

Table 7. AIOX2AOC accounting observation for level 0 (continued)		
Offset	**Length**	**Description**
98	10	Pages (impressions) converted
108	10	Graphic pages (impressions) converted
118	10	Simplex pages (impressions) converted
128	10	Duplex pages (impressions) converted
138	10	Lines converted

Table 8 on page 48 shows the information that Infoprint XT reports for the AIOX2AEC observation at level 0. Infoprint XT reports this observation when the data stream conversion process finishes processing a job. Infoprint XT creates one observation for each job.

Table 8. AIOX2AEC accounting observation for level 0		
Offset	**Length**	**Description**
0	10	Return code from the data stream conversion process.

Customizing the sample transform accounting application exit

Infoprint XT provides a sample of the transform accounting application exit in the `/usr/lpp/pdxt/V3R3M0/samples` directory. The directory contains **aioxlxae**, which is the compiled sample application exit, and `aioxlxae.c`, which is the source. The sample accounting application exit writes the accounting information to the `/var/pdxt/aioxlxae.log` file. For information about how to use or modify the sample application exit, read the prolog of the `aioxlxae.c` source file.

Setting up a transform begin application exit

Infoprint XT provides a transform begin application exit, **aioxlxbe**. Infoprint XT calls this application exit before it begins to read the Xerox input data stream. Use the transform begin application exit to:

- Do initialization work before the transform process.
- Log the transform start time.
- Prevent the transform from running under certain conditions.

This application exit is useful for restricting jobs from running at the same time.

Infoprint XT passes these options to the application exit:

-e *arguments*
Specifies any application exit arguments that the **-e** transform directive specified. For more information, see "Transform directives and syntax" on page 42.

-j *jobname-jobID-n*
The **-j** command option passes the job identifier to the application exit. Infoprint XT automatically derives the *jobname* and *jobID* values, and assigns a unique sequence number, *n*. If Infoprint XT is unable to derive the job name and job ID, it passes **UNKNOWN-UNKNOWN-***n* as the job identifier.

-p *passthru_values*
Specifies the same values that the **-p** option for the job specifies, if it is present. See "Using the pdxtx2afp command to process jobs" on page 167.

-q *dest*
Specifies the destination for the job.

-x *transform_options*
Specifies all the conversion parameters that Infoprint XT uses when it converts the Xerox job to AFP. The set of conversion parameters can contain more than one occurrence of a specific parameter. In this case, Infoprint XT uses the value for the last occurrence of the parameter.

-w *directory*
> Specifies the name of the Infoprint XT working directory. Typically, this is `/var/pdxt`.

Note: The application exit must ignore any command options passed to it that it does not recognize. Infoprint XT can then add command options without impacting the operation of a customized application exit.

Streams for the transform begin application exit

Infoprint XT communicates with the application exit by using these streams:

fd0 (STDIN)
> Infoprint XT does not pass any data to the standard input of the application exit.

fd1 (STDOUT)
> Infoprint XT redirects the standard output from the application exit to `/dev/null`.

fd2 (STDERR)
> Infoprint XT captures anything that is written to standard error. Infoprint XT writes the information from standard error to the `aioxlxbe.lst` file in the working directory for the job.

Customizing the sample transform begin application exit

Infoprint XT provides a sample of the transform begin application exit in the `/usr/lpp/pdxt/V3R3M0/samples` directory. The directory contains **aioxlxbe**, which is the compiled sample application exit, and `aioxlxbe.c`, which is the source. The sample application exit writes the transform start time to the operator console for jobs that are converted under Infoprint Server. In addition, it prevents the transform from running during user-specified times. This transform ends if it receives a non-zero return code. For information about how to use or modify the sample application exit, read the prolog of the `aioxlxbe.c` source file.

Setting up a transform input application exit

Infoprint XT provides a transform input application exit, **aioxlxie** for modifying the input data stream of the Xerox job before the data stream conversion process. The **aioxlxie** transform input application exit lets you convert several different input data formats into the format that Infoprint XT expects for online Xerox jobs. The data stream conversion process converts the job to AFP.

The **aioxlxie** application exit works with the **pdxtx2afp** command to process UNIX System Services hierarchical file system (HFS) or z/OS File System (zFS) input files. However, the shipped version of **aioxlxie** is not designed to work with the AIOZ2AFP utility program or the **x2afp.dll** transform filter in Infoprint Server to process input files that are received from MVS data sets.

Infoprint XT passes these options to the application exit:

-e *arguments*
> Specifies any application exit arguments specified with the **-e** transform directive. For more information, see "Transform directives and syntax" on page 42.

> The syntax for the **aioxlxie** is:

```
aioxlxie -e [ NONE ] [ RECFM = V | VB | VI ]
            [ BARR = SPOOL | TBV | S370 | METABAR2 | COMPUSET | METABAR3 |
                VM | VBM ]
            [ CRLF = [ a | e ] [ c ] [ t ] [ :i = a | e | s ]]
```

> The default value is:

> **NONE**
>> **aioxlxie** reads from standard input and writes to standard output with no changes to the data stream.

> The remaining parameters describe variable length formats of the input data stream:

RECFM=V
Unblocked, variable-length records; records are delimited by record descriptor words.

RECFM=VB
Blocked, variable length records; blocks are delimited by block descriptor words; records are delimited by record descriptor words.

RECFM=VI
Unblocked, variable length records; records are delimited by 4-byte length fields. The first two bytes of each length field indicate the length, in little-endian format, of the logical record. The length values do not include the 4 bytes of the length field.

BARR=SPOOL
Barr Systems **SPOOL** format.

BARR=TBV
Barr Systems **S370** | **METABAR2** | **COMPUSET** or **METABAR3** format; **aioxlxie** automatically determines which format is used and invokes the appropriate exit function.

BARR=S370
Barr Systems **S370** format.

BARR=METABAR2
Same as **BARR=S370**.

BARR=COMPUSET
Same as **BARR=S370**.

BARR=METABAR3
Barr Systems **METABAR3** format.

BARR=VM
Same as **RECFM=V**.

BARR=VBM
Same as **RECFM=VB**.

CRLF=[a | e][c][t][:i=a | e | s]
Input records are delimited by ASCII carriage returns (X'0D') and line feeds (X'0A'):

a
Generated ANSI carriage control characters are ASCII.

e
Generated ANSI carriage control characters are EBCDIC; if you specify **CRLF=c**, this is the default.

c
aioxlxie generates ANSI carriage control characters.

t
aioxlxie translates the output from ASCII to EBCDIC.

:i
Input data type. If specified, this must be the last CRLF flag. Valid values are:

a
ASCII input data; this is the default.

e
EBCDIC input data.

s
iSeries SCS (SNA Character String) input data.

METABAR and **METASPUR** formats are the same as **CRLF**.

-j *jobname-jobID-n*
The **-j** command option passes the job identifier to the application exit. Infoprint XT automatically derives the *jobname* and *jobID* values, and assigns a unique sequence number, *n*. If Infoprint XT is unable to derive the job name and job ID, it passes **UNKNOWN-UNKNOWN-***n* as the job identifier.

-p *passthru_values*
>Specifies the same values that the **-p** option for the job specifies, if it is present. See "Using the pdxtx2afp command to process jobs" on page 167.

-s *submit_method*
>Specifies the job-submission method, where *submit_method* is:

>**infoprint**
>>Infoprint Server initiated the transform.

>**pdxtx2afp**
>>The **pdxtx2afp** command initiated the transform.

>**AIOZ2AFP**
>>AIOZ2AFP utility program initiated the transform.

-q *dest*
>Specifies the destination for the job.

-x *transform_options*
>Specifies all the conversion parameters that Infoprint XT uses when it converts the Xerox job to AFP. The set of conversion parameters can contain more than one occurrence of a specific parameter. In this case, Infoprint XT uses the value for the last occurrence of the parameter.

Note: The application exit must ignore any command options passed to it that it does not recognize. Infoprint XT can then add command options without impacting a customized application exit.

Streams for the transform input application exit

Infoprint XT passes data to the transform input application exit by using streams, and the application exit passes data back to Infoprint XT. The streams are:

fd0 (STDIN)
>Infoprint XT uses standard input to pass the original Xerox job to the transform input application exit.

fd1 (STDOUT)
>The transform input application exit must use standard output to pass the Xerox job back to Infoprint XT. The Xerox job can be in its original format, or it might contain modifications that the application exit made. The function of the transform input application exit determines the format.

fd2 (STDERR)
>Infoprint XT captures anything that is written to standard error. Infoprint XT writes the information from standard error to the `aioxlxie.lst` file in the working directory for the job. If the conversion process fails to produce AFP output, Infoprint XT includes the standard error information on the error sheet for the job.

Note: The transform input application exit must always use unbuffered input/output (I/O).

Customizing the sample transform input application exit

Infoprint XT provides a sample of the transform input application exit in the `/usr/lpp/pdxt/V3R3M0/samples` directory. The directory contains **aioxlxie**, which is the compiled sample application exit, and `aioxlxie.c`, which is the source. The sample input application exit translates MVS variable-length records into the variable-record format that Infoprint XT expects.

Setting up a transform output application exit

Infoprint XT provides a transform output application exit, **aioxlxoe**, which can modify the AFP output produced by the data stream conversion process. Infoprint XT passes these options to the application exit:

-e *arguments*
>Specifies any application exit arguments specified with the **-e** transform directive. For more information, see "Transform directives and syntax" on page 42.

-j *jobname-jobID-n*

The **-j** command option passes the job identifier to the application exit. Infoprint XT automatically derives the *jobname* and *jobID* values, and assigns a unique sequence number, *n*. If Infoprint XT is unable to derive the job name and job ID, it passes **UNKNOWN-UNKNOWN-***n* as the job identifier.

-p *passthru_values*

Specifies the same values that the **-p** option for the job specifies, if it is present. See "Using the pdxtx2afp command to process jobs" on page 167.

-q *dest*

Specifies the destination for the job.

-s *submit_method*

Specifies the job-submission method, where *submit_method* is:

infoprint
Infoprint Server initiated the transform.

pdxtx2afp
The **pdxtx2afp** command initiated the transform.

AIOZ2AFP
AIOZ2AFP utility program initiated the transform.

-x transform_options

Specifies all the conversion parameters that Infoprint XT used when it converted the Xerox job to AFP. The set of conversion parameters can contain more than one occurrence of a specific parameter. In this case, Infoprint XT uses the value for the last occurrence of the parameter.

Note: The application exit must ignore any command options passed to it that it does not recognize. Infoprint XT can then add command options without impacting the operation of a customized application exit.

Streams for the transform output application exit

Infoprint XT passes data to the transform output application exit by using streams, and the application exit passes data back to Infoprint XT. The streams are:

fd0 (STDIN)
Infoprint XT uses standard input to pass the converted, AFP version of the Xerox job to the transform output application exit.

fd1 (STDOUT)
The transform output application exit must use standard output to pass the AFP job back to Infoprint XT. The AFP job can be in its original format, or it might contain modifications that the application exit made. The function of the application exit determines the format.

fd2 (STDERR)
Infoprint XT captures anything that is written to standard error. Infoprint XT writes the information from standard error to the `aioxlxoe.lst` file in the working directory for the job. If the conversion process failed to produce AFP output, Infoprint XT includes the standard error information on the error sheet for the job.

Note: The transform output application exit must always use unbuffered I/O.

Customizing the sample transform output application exit

Infoprint XT provides a sample of the transform output application exit in the `/usr/lpp/pdxt/V3R3M0/samples` directory. This directory contains **aioxlxoe**, which is the compiled sample application exit, and `aioxlxoe.c`, which is the source. The sample transform output application exit causes any pages that the job pulls from the alternate bin of the printer to produce an offset stack change. For information about how to use or modify the application exit, read the prolog of the `aioxlxoe.c` source file.

Setting up a transform end application exit

Infoprint XT provides a transform end application exit, **aioxlxte**. Infoprint XT calls this exit after it writes the AFP data stream from the conversion process. Use the transform end application exit to:

- Do work after the transform process.
- Log the transform completion time.
- Process messages from the transform.

Infoprint XT passes these options to the application exit:

-# *pages*
Specifies the number of page impressions that the transform process produced.

-c *return_code*
Specifies the return code from the transform process.

-e *arguments*
Specifies any application exit arguments specified with the **-e** transform directive. See "Transform directives and syntax" on page 42.

-j *jobname-jobID-n*
The **-j** command option passes the job identifier to the application exit. Infoprint XT automatically derives the *jobname* and *jobID* values, and assigns a unique sequence number, *n*. If Infoprint XT is unable to derive the job name and job ID, it passes **UNKNOWN-UNKNOWN-***n* as the job identifier.

-p *passthru_values*
Specifies the same values that the **-p** option for the job specifies, if it is present. See "Using the pdxtx2afp command to process jobs" on page 167.

-q *dest*
Specifies the destination for the job.

-s *submit_method*
Specifies the job-submission method, where *submit_method* is:

infoprint
Infoprint Server initiated the transform.

pdxtx2afp
The **pdxtx2afp** command initiated the transform.

AIOZ2AFP
AIOZ2AFP utility program initiated the transform.

-x *transform_options*
Specifies all the conversion parameters that Infoprint XT used when it converted the Xerox job to AFP. The set of conversion parameters can contain more than one occurrence of a specific parameter. In this case, Infoprint XT uses the value for the last occurrence of the parameter.

-w *working_directory*
Specifies the name of the Infoprint XT working directory. Typically, this is /var/pdxt.

Streams for the transform end application exit

Infoprint XT passes data to the transform end application exit by using streams, and the application exit passes data back to Infoprint XT. The streams are:

fd0 (STDIN)
Infoprint XT does not pass any data to standard input for the application exit.

fd1 (STDOUT)
Infoprint XT redirects the standard output from the application exit to /dev/null.

fd2 (STDERR)
Infoprint XT captures anything that is written to standard error. Infoprint XT writes the information from standard error to the aioxlxte.lst file in the working directory for the job.

Customizing the sample transform end application exit

Infoprint XT provides a sample of the transform end application exit in the `/usr/lpp/pdxt/V3R3M0/samples` directory. The directory contains **aioxlxte**, which is the compiled sample application exit, and `aioxlxte.c`, which is the source. In addition, it mails the transform messages to a user-specified email address. For information about how to use or modify the application exit, read the prolog of the `aioxlxte.c` source file.

End Programming Interface Information
Programming Interface Information

Working with Infoprint XT AFP structured fields

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

Infoprint XT converts Xerox LCDS and Metacode to AFP. The AFP that Infoprint XT generates results in printed output that matches the original Xerox job. However, the content and form of the AFP can vary with different levels of Infoprint XT code. The exception to this rule is a series of Mixed Object Document Content Architecture (MO:DCA) No Operation (NOP) structured fields that contain information about the job. You can use these data structures in your own application programs.

Infoprint XT NOP structured field format

MO:DCA structured fields begin with a Structured Field Introducer that identifies the length and the function or type of the structured field. The Structured Field Data follows the Structured Field Introducer and contains the parameters that are specific to the type of structured field. Table 9 on page 54 shows the format of the NOP Structured Field Identifier and Structured Field Data that Infoprint XT inserts in the AFP data stream.

Table 9. Infoprint XT NOP structured field format

Offset	Length	Value	Description
0	1	X'5A'	Carriage control. Infoprint XT always uses X'5A' for the carriage control.
1	2	8-32767	Total length of the structured field. This does not include the carriage control byte.
3	3	X'D3EEEE'	MO:DCA No Operation structured field identifier.
6	1	X'00'	Flags. Infoprint XT always uses X'00'.
7	2	X'0000'	Reserved bytes. Infoprint XT always uses X'0000'.
9	8	AIOX2AFP	This parameter specifies that Infoprint XT generated the NOP structured field. Infoprint XT generates the parameter value in EBCDIC: X'C1C9D6E7F2C1C6D7'.
17	2	X'*nnnn*'	The level of the Infoprint XT Structured Field Data. The current level is X'0000'.
19-*n*	*n*	variable	This is the actual data for the structured field. Its format depends on the level. See "Infoprint XT AIOX2AFP NOP level X'0000' format" on page 54.

Infoprint XT AIOX2AFP NOP level X'0000' format

Table 10 on page 55 shows the format of the Infoprint XT AIOX2AFP level X'0000' NOP, which consists of four parts.

Table 10. Infoprint XT NOP level X'0000' format		
Offset	**Length**	**Description**
19	8	An EBCDIC keyword that describes the Infoprint XT information. See "Infoprint XT AIOX2AFP NOP keywords" on page 55.
27	1	The flag byte.
28	2	The length of any associated data.
30-*n*	*n*	The data itself, if any.

Infoprint XT AIOX2AFP NOP keywords

Infoprint XT uses these keywords in the NOP structured fields that it generates:

CTLHEADR (X'C3E3D3C8C5C1C4D9')

Infoprint XT generates one CTLHEADR record at the beginning of each job and uses it to identify whether the AFP data stream can contain XRXOTEXT records. The values for its flag byte at offset 27 are:

Bit 0:

Specifies whether the data stream can contain XRXOTEXT records. 1 indicates that the data stream can contain XRXOTEXT records. 0 indicates that the data stream does not contain XRXOTEXT records.

Bit 1:

Specifies whether the data stream can contain XRXCDJDE records. 1 indicates that the data stream can contain XRXCDJDE records. 0 indicates that the data stream does not contain XRXCDJDE records.

Bit 2:

Reserved for future use.

Bit 3:

Reserved for future use.

Bit 4:

Reserved for future use.

Bit 5:

Reserved for future use.

Bit 6:

Reserved for future use.

Bit 7:

Reserved for future use.

The CTLHEADR record has no associated data.

A CTLHEADR record that indicates the possible presence of NOPs generated from OTEXT DJDEs might contain:

```
----+----1----+----2----+----3
!..LÓÓ...AIOX2AFP..CTLHEADR...
501DEE000CCDEFCCD00CEDCCCCD800
A0D3EE0001967216700333385149000
```

The CTLHEADR record has no associated data.

A CTLHEADR record that indicates the possible presence of NOPs generated from C DJDEs might contain:

```
----+----1----+----2----+----3
!..LÓÓ...AIOX2AFP..CTLHEADR...
```

```
501DEE000CCDEFCCD00CEDCCCCD400
A0D3EE000196721670033385149000
```

XRXOTEXT (X'E7D9E7D6E3C5E7E3')

Infoprint XT generates one XRXOTEXT record for each OTEXT DJDE command that the job contains. The values for its flag byte at offset 27 are:

Bit 0:

Specifies whether the OTEXT DJDE command suspends printing until an operator acknowledges the message. 1 indicates that the OTEXT DJDE command suspends printing.

Bit 1:

Reserved for future use.

Bit 2:

Reserved for future use.

Bit 3:

Reserved for future use.

Bit 4:

Reserved for future use.

Bit 5:

Reserved for future use.

Bit 6:

Reserved for future use.

Bit 7:

Reserved for future use.

AFPRLEVL (X'C1C6D7D9D3C5E5D3')

Infoprint XT generates one AFPRLEVL record at the beginning of each AFP font and each AFP page segment that it creates from Xerox font, image, and logo resources. Infoprint XT does not use the flag byte at offset 27. The data length at offset 28 is always X'0002'. The data at offset 30 is currently X'0000', which indicates the base level for AFP resources created by Infoprint XT.

XRXHCINK (X'E7D9E7C8C3C9D5D2')

Infoprint XT also converts Xerox images that contain highlight color controls to AFP page segments. Infoprint XT generates an XRXHCINK record immediately following the AFP Begin Image Object (BIM) structured field for each image object in the page segment. It uses the data section of this record to identify the fully-qualified Xerox ink name (ink catalog name, palette name and color name) for the Xerox sample that corresponds to the image object. Infoprint XT does not use the flag byte at offset 27.

XRXCDJDE (X'E7D9E7C3C4D1C4C5')

When you specify **xcmt2nop=yes**, Infoprint XT generates one XRXCDJDE record for each C DJDE that the job contains. The values for its flag byte at offset 27 are:

Bit 0:

Reserved for future use.

Bit 1:

Reserved for future use.

Bit 2:

Reserved for future use.

Bit 3:

Reserved for future use.

Bit 4:

Reserved for future use.

Bit 5:

Reserved for future use.

Bit 6:

Reserved for future use.

Bit 7:
> Reserved for future use.

The data for the XRXCDJDE record is the comment text in EBCDIC. Each C DJDE text string that is processed by **xcmt2nop=yes** must be all ASCII or all EBCDIC alphanumeric or blank characters, and must not contain any special characters.

An XRXCDJDE record for comment text might contain:

```
----+----1----+----2----+----3----+----4----+----5----+
!..LÓÓ...AIOX2AFP..XRXCDJDE...Data copied from a C DJDE
503DEE000CCDEFCCD00EDECCDCC001C8A8489988848999484C4CDCC
A063EE00019672167007973414500941310367954069640103O4145
```

End Programming Interface Information

Programming Interface Information

Working with content-sensitive medium map names

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

Infoprint XT creates an AFP form definition for each Xerox job that it processes. It embeds the form definition in the AFP data stream that it generates from the Xerox data stream. By using the **xcsmmname** conversion parameter, you can instruct Infoprint XT to use a specific naming convention for each medium map in the form definition. The format of the name defines the characteristics of the medium map. Table 11 on page 57 describes the name format.

Table 11. Format of content-sensitive medium map names

Byte	Bit	Description
1	Not applicable	Infoprint XT always uses X'C6'.
2 – 5	Not applicable	Infoprint XT always uses X'F0F0F0F0'.
6		This byte consists of bit flags that represent medium map options.
	0	Reserved for future use.
	1	1 means that the medium map specifies duplex printing. 0 specifies simplex printing.
	2	1 means that the medium map specifies an offset stack change. 0 specifies no offset stack change.
	3	Specifies the format that the E1 keyword of the Medium Modification Control (MMC) structured field uses. 1 means that the medium map specifies format one[1] for the keyword. 0 specifies that the keyword uses format two[2].
7 – 8	Not applicable	These bytes specify the bin number in hexadecimal format.

Notes:

1. Bins are numbered 1 through four; bin 65 is the envelope bin, and bin 100 is the manual bin.
2. Bins are numbered 1 through 255.

See xcsmmname transform conversion parameter on page "xcsmmname = yes | no" on page 208 for more information.

End Programming Interface Information

Color customization

You can use the **pdxtcolor** command to customize the ink correlation table. See "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133.

Chapter 4. PSF configuration tasks

If you are using Print Services Facility for z/OS to manage the printers that print the AFP jobs that Infoprint XT generates, you need to complete PSF customization tasks.

Defining your printers to PSF

If you are using PSF to print output from Infoprint XT, you must complete the procedures for any printer that you want to control through PSF. The *PSF for z/OS: Customization* publication includes detailed information about connecting TCP/IP-attached printers and other types of printers.

Providing PSF with access to the AFP resources

You need to update the PSF writer procedures for the printers that you use so that they have access to the AFP resources that Infoprint XT generates for Xerox jobs. You copy the AFP resources into PDSs with the Infoprint XT AIOZRPDS utility program, and then define those PDSs to PSF. "Using the AIOZRPDS AFP resource population utility" on page 98 describes how you copy the AFP resources. The writer-procedure data sets that you use to define your PDSs are specific to your installation. See the PSF publications for information about concatenating defined libraries to system libraries. *PSF for z/OS: Customization* contains information about the PRINTDEV and resource data sets. The publication for information about data sets is *z/OS DFSMS Using Data Sets*.

Note: If you have jobs that contain FILE DJDE commands, and you do not instruct Infoprint XT to put the resources inline in the resulting AFP, IBM recommends that you store your resources in a partitioned data set extended (PDSE). z/OS has specific rules for how you concatenate defined libraries with system libraries, when you have both PDSs and PDSEs. There are also guidelines for concatenation that apply to the sizes of the PDSs and PDSEs. Consult your operating system documentation for specific information.

After you update a writer procedure for a specific printer, you must stop and start the writer to use the AFP resources. For more information about performing this task in your environment, see information about starting PSF FSAs in the *PSF for z/OS: Customization* publication.

Chapter 5. Customizing Infoprint Server

If you have IBM Infoprint Server for z/OS, you can customize it so that you can process jobs with Infoprint XT. Infoprint XT provides a dynamic link library (DLL) transform filter program, named **x2afp.dll**, and the **x2afpd** transform daemon, which work together to perform Xerox job conversion. The combination of the Infoprint XT transform filter program and transform daemon make up the *managed LCDS and metacode transform*.

Overview of customizing and administering Infoprint Server

The Transform Manager component of Infoprint Server manages the LCDS and metacode transform that Infoprint XT provides. Before you complete configuration tasks for the Infoprint XT transform, you must set up Infoprint Server. The Infoprint Server documentation provides detailed information about setup tasks:

- For customizing the `/etc/Printsrv/aopxfd.conf` transform configuration file and the Infoprint Server configuration file `/etc/Printsrv/aopd.conf`, see *z/OS Infoprint Server Customization*.
- For tasks associated with the Printer Inventory, see *z/OS Infoprint Server Operation and Administration*.
- For tasks associated with setting up security for the Infoprint Server, see *z/OS Infoprint Server Customization*.

Also ensure that you have completed the initial configuration for Infoprint XT. See Chapter 3, "Customizing Infoprint XT," on page 35. After you complete these items, return to the procedures in this section to complete the configuration for the managed LCDS and metacode transform. You must complete these tasks:

- Define the **x2afpd** transform daemon to Transform Manager. See "Customizing the Transform Interface" on page 62.
- Create a printer definition for the **x2afp.dll** transform filter. See "Creating printer definitions that specify the Infoprint XT transform filter" on page 68.
- If you are using the IP PrintWay component of Infoprint Server, you complete additional customization procedures. See "Customization and Administration tasks for IP PrintWay" on page 71.

Updating environment variables

Before you complete the configuration tasks in this chapter, you *must* update the LIBPATH and NLSPATH environment variables for Infoprint Server in the **aopstart** command. Infoprint Server combines the information in the **aopstart** command with the values you specify in **x2afp** transform entries in aopxfd.conf. If you update these variables in the **aopstart** command, you do not need to specify them in aopxfd.conf.

The **aopstart** command is a Restructured Extended Executor (REXX) EXEC that sets the environment variables that Infoprint Server uses. To change the LIBPATH and NLSPATH environment variables, you must modify the EXEC. By default, the **aopstart** EXEC resides in the `/usr/lpp/Printsrv/bin` directory. For the procedure to update this exec, see *z/OS Infoprint Server Customization*.

The LIBPATH environment variable in **aopstart** must include the path to the Infoprint XT DLL module **x2afp.dll**. For example:

```
n=n+1; env.n='LIBPATH='install_path'/lib:'                    ||,
               '/usr/lpp/pdxt/V3R3M0/lib'
```

The NLSPATH environment variable in **aopstart** must include the paths to the Infoprint XT message catalogs. For example:

```
n=n+1; env.n='NLSPATH='install_path'/%L/%N:'                  ||,
               install_path'/En_US/%N:'                        ||,
```

```
                    '/usr/lib/nls/msg/%L/%N:'                    ||,
                    '/usr/lpp/pdxt/V3R3M0/nls/msg/%L/%N:'        ||,
                    '/usr/lpp/pdxt/V3R3M0/nls/msg/C/%N'
```

To activate the settings, you must stop and restart Infoprint Server. You can use the **aopstop** and **aopstart** commands, or you can use the AOPSTOP and AOPSTART procedures.

Memory considerations for the x2afpd daemon

In the Infoprint Server environment, the total amount of memory available to the various daemon processes, including the **x2afpd** daemon, is set when the **aopstart** command starts the daemons. To calculate how much memory is required for the transform, you need to analyze your Xerox jobs. Double the size of the largest Xerox job that you convert with Infoprint XT, and add 4 MB. Then ensure that there is sufficient memory specified in these parameters:

- If you use the AOPSTART JCL procedure to start Infoprint Server, increase the region size on the EXEC statement in the procedure.
- If you use the **aopstart** command to start Infoprint Server, increase the maximum address space in the MAXASSIZE parameter in the BPXPRMxx member of SYS1.PARMLIB or in the ASSIZEMAX RACF parameter for the user ID that starts Infoprint Server (ASSIZEMAX overrides MAXASSIZE).
- If you enter the **aopstart** command from the TSO/E OMVS command line, the SIZE parameter on the TSO/E LOGON panel determines the maximum region size of the address space.

You need to use the **aopstop -d xfd** command, or the AOPSTOP procedure to stop the daemons, and then restart them to pick up the new value.

Controlling Infoprint Server daemons

The Infoprint Server configuration file, aopd.conf, which resides in the /etc/Printsrv directory, lets you customize the Printer Inventory Manager and other components of Infoprint Server. This includes the daemon processes that start when you issue the **aopstart** command. To use the **x2afpd** daemon, the **start-daemons** attribute must include **xfd**, which is the Infoprint Server **aopxfd** daemon. The daemons that you might need for processing and printing are shown in this example of the **start-daemons** attribute:

```
start-daemons  = { lpd xfd subd outd }
```

For more information about Infoprint Server daemons and the attributes in aopd.conf see *z/OS Infoprint Server Customization*.

After you have customized the aopd.conf file, then you can start and stop Infoprint Server daemons by using the AOPSTART and AOPSTOP JCL procedures or the z/OS UNIX **aopstart** and **aopstop** commands. For more information about starting and stopping the Infoprint Server daemons, see .

Customizing the Transform Interface

You update the Transform Manager transform configuration file to define the Infoprint XT **x2afpd** daemon. The transform configuration file is aopxfd.conf. A sample file is provided with z/OS Infoprint Server. An active configuration file must reside in /etc/Printsrv, which is part of the z/OS UNIX directory structure. You can have one or more Infoprint XT definitions in the configuration file. The transform name of the first attribute of the entry must be **x2afp**. If you require multiple definitions, add the *transformclass* attribute. Each transform class is a separate entry in the configuration file, and transform classes let you specify different sets of options for transforming the data. For example, you could define separate transform classes that specify different Infoprint XT transform directives, or that specify different conversion parameters. For detailed information about aopxfd.conf and the use of transform classes, see *z/OS Infoprint Server Customization*.

Note: If you do not have an active transform configuration file, you might need to copy it from the Infoprint Server `/usr/lpp/Printsrv/samples` directory to the `/etc/Printsrv` directory. Do not modify the original sample file that Infoprint Server provides in the `samples` directory; only make modifications to your copy. For further information, see *z/OS Infoprint Server Customization*.

Transform entry format

You must use a specific format for the **x2afp** entry in the `aopxfd.conf` file. Bracketed items are optional; you must include the required semi-colon at the end of the entry:

```
# comments
transform x2afp[_transformclass ]
    start-command = /path/command
    environment  = {
      EnvironmentVariable ->       value
      [EnvironmentVariable ->       value ]...
      }
    [ maximum-active = number ]
    [ maximum-idle-time = seconds ]
    [ minimum-active = number ]
;
```

You can edit or create entries with these attributes:

 # *comments*
You can specify one or more lines of comments that describe the transform entry. You can also add comments in the middle of a line. Begin each comment with a pound sign, #.

transform x2afp[_*transformclass*]
This specifies the Infoprint XT transform name and, optionally, the transform class. You must include this required attribute, and it must be the first attribute in the transform definition.

The value for *transformclass* can contain from one to 63 characters. You can use letters, numbers, and special characters in the value. "Transform entry examples" on page 67 show examples of specifying a *transformclass*.

start-command = */path/command*
For detailed information about how to specify the required **start-command** attribute, see "x2afpd daemon command syntax" on page 64.

environment = { *EnvironmentVariable -> 'value'***}**
This attribute specifies both operating system environment variables, and Infoprint XT environment variables that define the transform environment. Infoprint Server does not invoke Infoprint XT with the environment settings that the z/OS `/etc/profile` file specifies, or that other system locations specify. Therefore, you must include the operating system environment variables with the **environment** attribute, or unpredictable errors can occur.

You must specify these operating system environment variables enclosed in braces:

PATH
Specify all necessary paths so that your environment variable resembles this: `/usr/lpp/pdxt/V3R3M0/local:/usr/lpp/pdxt/V3R3M/bin:/usr/lpp/Printsrv/bin:/bin`.

TZ
This environment variable specifies the standard time zone for your locale, which is the number of hours offset from Coordinated Universal Time (UTC). The value might also include the daylight savings time zone.

Notes:

1. Enclose the paths in quotation marks.

2. For more details about transform entries, see "Steps for creating the transform configuration file" in *z/OS Infoprint Server Customization*.

3. If you update the NLSPATH specification in the **aopstart** command to include the Infoprint XT message catalog paths, you do not need to also specify NLSPATH in **x2afp** transform entries.

The Infoprint XT environment variables that you can specify include:

PDXTWORKDIR
See "Controlling the working directory that Infoprint XT uses for variable data (PDXTWORKDIR)" on page 25.

PDXTX2AFP_ARGS
See "Controlling the default arguments when you compile JSLs (PDXTX2AFP_ARGS)" on page 35.

PDXT_INTMSGIDS
See "Controlling the content of error messages (PDXT_INTMSGIDS)" on page 38.

PDXTX2AFP_DIRECTIVES
See "Controlling access to the pdxtx2afp transform directives (PDXTX2AFP_DIRECTIVES)" on page 38.

_BPX_JOBNAME
See "Controlling the job name to each class of transform daemon (_BPX_JOBNAME)" on page 38.

maximum-active = *number*
The maximum number of transform daemons that the Transform Manager activates concurrently. Specify a number greater than 0 and greater than or equal to the number specified in the **minimum-active** attribute. For more information, see "Format of a transform entry" in *z/OS Infoprint Server Customization*.

Default: No maximum number. Transform daemons are started when needed.

maximum-idle-time = *seconds*
The number of seconds before the Transform Manager shuts down an idle transform daemon and system resources are freed. Specify a number greater than 0. For more information, see "Format of a transform entry" in *z/OS Infoprint Server Customization*.

Default: Transform Manager does not shut down idle transform daemons.

minimum-active = *number*
The minimum number of transform daemons that the Transform Manager activates concurrently. Specify a number less than or equal to the number specified in the maximum-active attribute. For more information, see "Format of a transform entry" in *z/OS Infoprint Server Customization*.

Default: minimum-active = 0

x2afpd daemon command syntax

You specify the Infoprint XT **x2afpd** daemon command on the required **start-command** attribute of the transform entry. Include the complete path to the command. The values of the options follow standard shell rules:

start-command = "*daemon* [*option*]... "
The name of the transform daemon and options. Enclose the value in single or double quotation marks if you specify an option. This attribute is required.

daemon
The name of the transform daemon, for example, **x2afpd**. If the transform daemon is not in a directory identified in the PATH environment variable in the **aopstart** EXEC, specify the full directory path name of the daemon.

option
One or more options supported by the transform daemon.

Therefore, depending on the strings specified in the individual parts, you might need to use quotation marks around the four-part values for both the **-D** and the **-L** options. You can also include options that let you capture problem determination and listing information, as described in this information:

```
/usr/lpp/pdxt/V3R3M0/bin/x2afpd
  [-D error:Pattern:Directory:Minutes | all:Pattern:Directory:Minutes | none ]
  [-L error:Pattern:Directory:Minutes | all:Pattern:Directory:Minutes | none ]
```

-D <u>**error**</u>**:***Pattern***:***Directory***:***Minutes* **| all:***Pattern***:***Directory***:***Minutes* **| none**
This option specifies how Infoprint XT processes problem determination output from the transform
when you specify the **-d** transform directive; the transform only generates output that **x2afpd** can
process when you specify the **-d** transform directive. See "Transform directives and syntax" on page
42. The value for the **-D** option has four parts, each separated by a colon. If you do not use one or
more of the values, you must still include the colon for the position that you omit:

<u>**error**</u> **| all | none**
The first part of the value specifies whether **x2afpd** keeps the output, where:

error
Specifies that **x2afpd** keeps the output if the transform completes with a non-zero return
code.

all
Specifies that **x2afpd** always keeps the output from the transform.

none
Specifies that **x2afpd** never keeps the output from the transform.

:*Pattern*
The second part of the value specifies one or more pattern-matching strings that limit the criteria
set when you specify either **error** or **all** as the first part of the **-D** value. See "Specifying pattern
strings with x2afpd" on page 66.

:*Directory*
The third part of the value specifies the directory where **x2afpd** stores the output. The default
is /var/pdxt/x2afpd. The output file has a specific naming convention; see "x2afpd naming
conventions for output files" on page 66.

:*Minutes*
The fourth part of the value specifies how long **x2afpd** stores the output. A value of 0 instructs
Infoprint XT to never delete the output. The default is 60 minutes.

-L <u>**error**</u>**:***Pattern***:***Directory***:***Minutes* **| all:***Pattern***:***Directory***:***Minutes* **| none**
This option specifies how Infoprint XT handles listing output from the transform. The value for the **-L**
option has four parts, each separated by a colon. If you do not use one or more of the values, you
must still include the colon for the position that you omit:

<u>**error**</u> **| all | none**
The first part of the value specifies whether **x2afpd** keeps the listing output, where:

error
Specifies that **x2afpd** keeps the output if the daemon completes with a non-zero return code.

all
Specifies that **x2afpd** always keeps the output from the daemon.

none
Specifies that **x2afpd** never keeps the output from the daemon.

:*Pattern*
The second part of the value specifies one or more pattern-matching strings that limit the criteria
set when you specify either **error** or **all** as the first part of the **-L** value. See "Specifying pattern
strings with x2afpd" on page 66.

:*Directory*
The third part of the value specifies the directory where **x2afpd** stores the output. The default
is /var/pdxt/x2afpd. The output file has a specific naming convention; see "x2afpd naming
conventions for output files" on page 66.

:*Minutes*
The fourth part of the value specifies how long **x2afpd** stores the output. A value of 0 instructs
Infoprint XT to never delete the output. The default is 60 minutes.

Specifying pattern strings with x2afpd

The pattern string consists of a *keyword=value* pair. Valid keywords are:

- `class`
- `destination`
- `forms`
- `jobid`
- `jobname`
- `time`

Separate the keyword and value with an equals sign, =. Do not include spaces between the keyword and value, or in the value itself. The content of the value depends on the keyword, and on information that is specific to your particular installation.

Notes:

1. For all of the keywords except `time`, *value* is a simple string that can contain the wildcard characters ? and *. The question mark matches any single character, and the asterisk matches any number of characters. The value can also contain brackets, [and], to enclose the string. The pattern matches any one of the characters between the brackets. If you use a dash, -, to separate a pair of characters, the pattern matches either of the characters in the pair. It also matches any character that falls between the two characters in the current locale. For specific examples, see "Examples – x2afpd daemon command" on page 66.

2. For the `time` keyword, the value is a range in the form *start-end*. The *start* and *end* times are either in the form *hhmm*, or a date and time in the form *yyyymmddhhmm*. The time range is in the local time zone, and uses the 24-hour clock. If you do not specify a date, **x2afpd** captures output within the given time range every day.

You can specify more than one pattern, but you can only use each of the keywords one time. Separate the patterns with spaces. For example:

```
:jobname=ABC* destination=PRT01
```

Examples – x2afpd daemon command

These examples show how you can use the **-D** and **-L** options.

- To retain problem determination output for all jobs that fail conversion, that have a job name that starts with either A, B, or C, and that have a destination of PRT01:

  ```
  /usr/lpp/pdxt/V3R3M0/bin/x2afpd -D 'error:jobname=[A-C]* destination=PRT01::'
  ```

  This example uses the default values for the directory and for how long Infoprint XT retains the output.

- To retain problem determination output for all jobs that fail conversion, that have a job name that starts with either ABC or DEF, and that have a destination of PRT01:

  ```
  /usr/lpp/pdxt/V3R3M0/bin/x2afpd -D 'error:jobname=[AD][BE][CF]*
  destination=PRT01::'
  ```

  This also finds job names of AEF, ABF, DBC, and DEC.

- To retain listing output forever for all jobs that arrive between 11:00 p.m. and 11:45 p.m.:

  ```
  /usr/lpp/pdxt/V3R3M0/bin/x2afpd -L 'all:time=2300-2345::0'
  ```

x2afpd naming conventions for output files

When **x2afpd** keeps problem determination or listing output, it uses this file naming convention:

```
jobname-jobid-n.ext-timestamp
```

Where:

jobname
>   Indicates the z/OS job name.

jobid
>   Indicates the z/OS job identifier.

n
>   Indicates a sequence number that **x2afpd** uses to keep the file name unique when the job name and job identifier are not unique.

ext
>   Indicates the file extension. For problem determination output, the extension is dbg. For listing output, the extension is lst.

timestamp
>   Indicates the file expiration time, which is expressed in terms of the number of seconds since 00:00:00 UTC, 1 January, 1970. This component of the file name exists only when a retention period was in effect when **x2afpd** created the file.
>
>   **Note:** The file expiration time denotes when a file is eligible for removal. Infoprint XT removes it the next time the **x2afpd** cleanup process runs. The cleanup process itself is not timer driven, so some files might exist for some period of time after the retention period expires.

Transform entry examples

The examples in this section show how you can make entries for Infoprint XT in the aopxfd.conf transform daemon configuration file. The user ID that you use to make updates to the aopxfd.conf file must have superuser authority to update the transform configuration file:

- The following example includes default conversion parameters, and a transform directive. Infoprint XT applies the **xjdl** and **xjde** parameters to any job that does not explicitly specify these parameters. It also applies a transform directive for the post-transform application exit to jobs that do not specify **-e** :

```
transform x2afp
    start-command = "/usr/lpp/pdxt/V3R3M0/bin/x2afpd"
    maximum-idle-time = 300 # 5 minutes
    minimum-active = 1
    maximum-active = 2
    environment = {
      PDXTX2AFP_ARGS -> "-x'xjdl=dpljdl xjde=online'"
      PDXTX2AFP_DIRECTIVES -> "-e'aioxlxoe OFFSET_ALTBIN'"
      PATH -> "/usr/lpp/pdxt/V3R3M0/local:/usr/lpp/pdxt/V3R3M0/bin:/usr/lpp/Printsrv/bin:/
bin"
      TZ -> MST7MDT
    }
;
```

- This example uses a *transformclass* attribute of **payroll**:

```
transform x2afp_payroll
    start-command = "/usr/lpp/pdxt/V3R3M0/bin/x2afpd"
    maximum-idle-time = 120 #2 minutes
    minimum-active = 1
    maximum-active = 2
    environment = {
      PDXTX2AFP_ARGS -> "-x'xjdl=checks xjde=hourly'"
      PDXTX2AFP_DIRECTIVES -> "-e'aioxlxoe OFFSET_ALTBIN'"
      PATH -> "/usr/lpp/pdxt/V3R3M0/local:/usr/lpp/pdxt/V3R3M0/bin:/usr/lpp/Printsrv/bin:/
bin"
      TZ -> MST7MDT
    }
;
```

- This example uses the **-D x2afpd** option:

```
transform x2afp_debug
    start-command = "/usr/lpp/pdxt/V3R3M0/bin/x2afpd -D 'error:time=2000-0600::720'"
    min-active = 0
    max-active = 2
    maximum-idle-time = 300
    environment = {
        PDXTX2AFP_DIRECTIVES -> "-d jobdir"
        PATH -> "/usr/lpp/pdxt/V3R3M0/local:/usr/lpp/pdxt/V3R3M0/bin:/usr/lpp/Printsrv/bin:/
bin"
        TZ -> "MST7MDT"
    }
;
```

Activating your changes to the aopxfd.conf file

If you update the `aopxfd.conf` configuration file while the Transform Manager is running, you must stop and restart the Transform Manager to pick up the changes that you have made. The user ID that stops and starts Infoprint Server must be a member of both the AIOUSER group and the AOPOPER group. To issue the **aopstop** and **aopstart** commands:

1. Use the **aopstop -d xfd** command to stop the Transform Manager.
2. Use the **aopstart** command to start the Transform Manager.

For example, enter these MVS commands to run the AOPSTOP and AOPSTART JCL procedures:

```
START AOPSTOP,OPTIONS='-d xfd'
START AOPSTART
```

If you require more information about the **aopstop** and **aopstart** commands, see *z/OS Infoprint Server Customization*.

You can also view man page information for the **aopstop** command and the **aopstart** command by using either the ISPF shell or OMVS. Use these commands:

```
man aopstop
```

```
man aopstart
```

Creating printer definitions that specify the Infoprint XT transform filter

In the printer definitions for AFP printers, you can specify the **x2afp.dll** transform filter and associate it with the xerox data stream formats. (A filter is a program that modifies the input data before it is sent to the printer.) When you associate the transform filter with the xerox data stream formats, Infoprint Server automatically calls the **x2afp** transform when it processes a document with the xerox data streams.

The types of printer definitions that can be used with XT:

- If the jobs are submitted by using the AIOZ2AFP batch job (or some modification of that job) and PSF on the host is used, then a PSF printer definition alone could be used.
- If submitting another type of batch job that does not contain the Xerox parameters that the AIOZ2AFP batch job has, there are some different options.
  - To print to PSF on the host you can use a combination of two Infoprint Server definitions. One printer definition with an IP PrintWay type can specify the transform filter and send the transformed data through a PSF type printer definition to print to PSF.

– If your job is submitted on the host and you have a PSF attached printer on a remote server, then you can also use an IP PrintWay definition (by using the remote PSF option) to send the data to the remote server.

You can also send the data in other formats to email or other types of printers by using a combination of the Infoprint XT data stream converter and one of these transforms: **afpxpdf**, **afpxps**, or **afpxpcl**. This can be done by using two IP PrintWay printer definitions. For detailed information, see *Planning the Printer Inventory* in *z/OS Infoprint Server Operation and Administration*.

You must make associations between the filter and the line data and other data stream types in an Infoprint Server printer definition. Specifically for Infoprint XT, select the **Line data** and **Other** formats.

Then, when you submit Xerox jobs, Infoprint Server automatically calls the associated Infoprint XT filter program.

Options for the DLL transform filter

The **x2afp** DLL transform filter has these options:

```
x2afp.dll [ %filter-options ] [ -c transformclass ]
```

You can use any of the parameters described in "Parameter mapping file syntax rules" on page 39, specify options from the **filter-options** job attribute, and use the additional **-c** option:

%filter-options
Causes options that are specified in the **filter-options** job attribute to be passed to the transform. You can type the **%filter-options** option in any position relative to the other filter options. If you specify filter options after **%filter-options**, those options override the same options specified in the **filter-options** job attribute.

When you create the printer definition for the Infoprint XT DLL transform filter, you can specify filter options for Infoprint XT to use. You can specify the options and values before or after the **%filter-options** processing option. IBM recommends that you consider specifying **%filter-options** before the actual options and values in the printer definition. This causes Infoprint Server to accept filter options that the user specifies at job submission with the **filter-options** job attribute. If you specify **%filter-options** after the options and values, the options in the printer definition take precedence and override the same options that the **filter-options** job attribute specifies. IBM recommends that you only specify those options that you want to retain complete administrative control of after **%filter-options**. For additional information, see "Filter option usage guidelines: printer definitions and jobs" on page 69.

-c *transformclass*
Specifies the name of a transform class that is defined in the transform configuration file, `aopxfd.conf`. The name is case-sensitive. The job submitter can also specify this option in the **filter-options** job attribute.See "Customizing the Transform Interface" on page 62 for more information about this file.

Filter option usage guidelines: printer definitions and jobs

There are guidelines for how you enter filter options, and how Infoprint Server interprets the Infoprint XT options. In addition to specifying filter options in the printer definition for the Infoprint XT DLL transform filter, you can also use the **filter-options** attribute when you submit the job:

• In the **filter-options** attribute that you can specify for a job, you can enter a text string that contains the options. If the string contains blanks, or other characters that z/OS might interpret, enclose the string in single quotation marks or double quotation marks, as required. For example:

```
'filter-options="-x ''xjdl=pdxton xjde=strton xlcb=none''"'
```

See "Determining the method of Infoprint Server job submission" on page 179 for information about using the Infoprint Server Print Interface subsystem in conjunction with Infoprint XT.

- The filter options that you specify with the **filter-options** job attribute only take effect if you specify the **%filter-options** processing option for the DLL transform filter in the printer definition. See "Creating a PSF for z/OS printer definition with routing information" on page 70, and "Creating an IP PrintWay printer definition" on page 78.
- This list describes the order of precedence, in decreasing priority, that Infoprint Server uses to determine which filter option values to apply:

    1. Filter options that you specify as a transform directive. See "Using transform directives" on page 42.
    2. Filter options that you specify after the **%filter-options** processing option. For example:

       ```
       %filter-options -x 'xjdl=dpljdl xjde=strton'
       ```

    3. Those filter options that the user specifies at job submission, provided that you include **%filter-options** processing option in the printer definition.
    4. Filter options that you define in the printer definition before the **%filter-options** processing option. For example:

       ```
       -x 'xjdl=dpljdl xjde=strton' %filter-options
       ```

    5. Filter options that you specify in a transform parameter mapping file.
    6. Transform default values. For example, the default starting JDL for the transform is **dfault**. The default starting JDE is **dflt**, and the default resource group is **common**.

Creating a PSF for z/OS printer definition with routing information

If you are printing the AFP that Infoprint XT generates on an IPDS printer, Infoprint XT requires a PSF for z/OS printer definition. This applies whether you print from the Print Interface subsystem component of Infoprint Server, or choose to use IP PrintWay to print your Infoprint XT jobs. You can include routing information in the printer definition or, if you use the Print Interface subsystem, you might choose to only apply Infoprint XT conversion parameters through the definition. See "Creating a printer definition that only applies Infoprint XT conversion parameters" on page 70.

For creating the PSF for z/OS printer definition and its **Allocation** section, see *z/OS Infoprint Server Operation and Administration*. In the **Processing** section update these areas of the **Custom values** information:

1. Position the cursor in the **Custom values** field, and press Enter. You see the Processing panel.
2. In the data format and filter section, ensure that both the **Line data** and **Other** data formats are selected. A slash next to the entry indicates that it is selected.
3. In the **Filter:** fields for the **Line data** and **Other** data formats:

   ```
   x2afp.dll %filter-options
   ```

   Note: The use of **%filter-options** is not required. You could specify only options, such as **-x**, or specify nothing other than **x2afp.dll**. Modify the information in the **Filter:** fields to meet the requirements of your installation.

4. To determine whether you want to specify additional options, see *z/OS Infoprint Server Operation and Administration* for information about the other fields. Infoprint XT requires no other information.
5. Use the appropriate function keys to save the processing information to close this panel, and return to the PSF for z/OS Printer Definition panel.

Creating a printer definition that only applies Infoprint XT conversion parameters

You might want to create a printer definition that only applies conversion parameters. If you have multiple starting environments (combinations of JDLs and JDEs)for your Xerox jobs, and if you have multiple

printers, this can streamline your customization process. Complete the following procedure for each of the starting environments. Each job that you process with the Print Interface subsystem specifies the appropriate printer definition to select the correct JDL and JDE pair:

1. From the ISPF Primary Option Menu panel, access the z/OS System Programmer Primary Option Menu.
2. Select Infoprint Server from the list of options. You see the Infoprint Server: Printer Inventory Manager panel.
3. Select the **Add** option from the Printer Definitions list. You see the Choose a Definition Type and Protocol panel.
4. Select **PSF for z/OS** for the definition type and protocol of the printer definition. You see the PSF for z/OS Printer Definition panel.
5. Enter a name of your choosing in the **Printer definition name** field. If you had a specific name that you used to identify the starting environment when you were printing to Xerox printers, you might want to use the same name. For example if this printer definition is for FORMS=LETTER, you might want to name this printer LETTER. You can also enter a description and location information, in the two fields that follow the name field. You might want to make note that this printer definition does not correspond to any printer hardware; it only applies conversion parameters.
6. Update the **Custom values** information for the **Processing** section:

   a. Position the cursor in the **Custom values** field, and press Enter. The Processing panel displays.
   b. In the data format and filter section, ensure that both the **Line data** and **Other** data formats are selected. A slash next to the entry indicates that it is selected. Enter this information in the **Filter:** fields for the **Line data** and **Other** data formats:

   ```
   x2afp.dll -x 'XToption XToption' %filter-options
   ```

   Where *XToption* is an Infoprint XT transform conversion parameter and its value. You can specify as many *XToption* and value pairs as your installation requires. If you have more parameters than can fit on a single line, position the cursor under the **(extend)** text on the panel, and press Enter. A new panel displays, in which you can continue to enter your parameters. For detailed information about the parameters that you can specify, see Appendix A, "Conversion parameters for converting Xerox jobs," on page 205.
   c. To determine whether you want to specify additional options, see *z/OS Infoprint Server Operation and Administration* for information about the other fields. Infoprint XT requires no other information.
   d. Use the appropriate function keys to save the processing information, and return to the PSF for z/OS Printer Definition panel.
7. Do not fill in any other printer definition fields, such as allocation information. You only require the processing information that you completed in the previous steps.

Customization and Administration tasks for IP PrintWay

If you currently use FORMS, CLASS, or DEST parameters to route jobs and to select their starting environment, you might be able to use your existing JCL jobs without making any modifications. You can then use IP PrintWay to process the jobs, and to invoke the Infoprint XT managed transform with the correct starting parameters. The information in this section pertains to evaluating your current Xerox environment, and creating the corresponding IP PrintWay and Infoprint XT environment.

Note: By adding the FSSDATA parameter to your existing JCL, you can explicitly select a printer definition.

Processing jobs by IP PrintWay with Infoprint XT

When you configure IP PrintWay to use Infoprint XT to process and print Xerox jobs, the overall process involves a number of components from the z/OS operating system, and from other products. Job-processing steps place the job on the z/OS Job Entry Subsystem (JES) spool multiple times. This list describes the components and the job-processing steps:

1. Submitting the job

   In the first step, you submit the Xerox job with JCL that uses a FORMS, CLASS, or DEST value, or combined values. These values might indicate the printer that should print the job. The value or values can also indicate which initial JDL and JDE pair that the job requires. For example, CLASS=A jobs all require the DPLJDL JDL, and the STRTON JDE. This step places the native Xerox data stream onto the z/OS JES spool for the first time.

2. Obtaining the job from the spool through a JES IP PrintWay local printer

   In the second step, an IP PrintWay printer obtains the job from the spool. The Printer can either be a PrintWay Basic printer (which uses the FSA interface), or a PrintWay Extended printer (which uses the SAPI interface with JES). Typically, the configuration of the IP PrintWay printer mirrors the configuration that you used for one or more of your Xerox printers.

3. Transferring the job to an IP PrintWay LPR printer

   IP PrintWay then uses the Infoprint Server Printer Inventory to identify an IP PrintWay LPR printer definition that has specific values in its allocation information. That is, it locates an IP PrintWay LPR printer definition that matches the value or values for the FORMS, CLASS, and DEST parameters that the job specifies. In this step, IP PrintWay transfers the Xerox job to the Print Interface LPD and PSF printer definitions. You set up both the Print Interface LPD and the PSF printer definitions in the IP PrintWay LPR printer definition.

4. Converting the job with the Infoprint XT managed transform

   In the fourth step, the Print Interface LPD receives the data set. The configuration of the PSF for z/OS printer definition causes Infoprint XT to convert the Xerox job into AFP.

5. Applying new printer-selection values to the AFP job

   The PSF for z/OS printer definition contains printer-selection values in its allocation information. It can have a value for CLASS, FORMS, or DEST parameters, or a combination of values. It applies these values to the job, and places the job back on the JES spool.

6. Assigning the job to a printer device

   You use a printer driver program, such as PSF, to manage the workflow of jobs to your InfoPrint printers. The printer driver manages the jobs, and communicates with the printer hardware. You define each printer to the printer driver, and include work selection criteria. By using the same printer-selection values that the PSF for z/OS printer definition applied to the job in the previous step, the printer driver removes the AFP job from the spool for the last time. It then sends the job to your Infoprint printers.

Reviewing your existing JCL

Before you start any IP PrintWay configuration tasks, you should examine the method that you use to direct your jobs to the correct printer. You should also examine the method that you use to identify the correct START command on your Xerox printer. This helps you determine how to configure your system. Your existing JCL might use routing methods that are similar to any of the methods that these examples describe. Each method has a separate customization example, that you can use as a guide to set up your new printing environment through IP PrintWay and Infoprint XT:

Method one: CLASS=*X*
 You might use just the CLASS parameter to route your Xerox jobs to specific Xerox printers. You defined your Xerox printers to z/OS as JES local printers, with one JES printer for each Xerox printer. The starting environment, which is the combination of JDL and JDE that you use on the Xerox START command, is fixed. The individual jobs might modify the starting environment through the use of dynamic job descriptor entries (DJDEs), depending on their requirements.

 For the procedure to create this environment, see .

Method two: FORMS=*FORM*,CLASS=*X*

You might use a combination of the FORMS and CLASS parameters in your JCL. You use the CLASS value to determine the printer, and the FORMS value to determine the starting environment. In the work selection criteria for your Xerox printer, you specify that the CLASS value must match exactly, but that the FORMS value can vary. In this environment, the printer processes all queued jobs that specify a particular form. When it finishes processing all jobs of that type, and a job that specifies a different FORMS value is the next job to print, a message alerts the operator of the change in forms. At that time, the operator enters the new START command at the printer console. This method works well, but does have a limit on the number of values that you can use for the CLASS parameter. This is a limitation imposed by the operating system.

For the procedure to create this environment, see "Setting up an environment that uses a fixed CLASS and varying FORMS" on page 74. You can also modify this environment to support more than one CLASS value. See "Setting up an environment that uses multiple CLASS values and varying FORMS" on page 76.

Method three: FORMS=*FORM*,DEST=PRT*nnn*

Another common routing method is to use a combination of the FORMS parameter and the DEST parameter. The DEST value determines which printer to use, and the FORMS value determines the starting environment. This is more flexible, because the limit on the number of destinations (printers) is much larger than the limit on the number of classes that you can specify.

For the procedure to create this environment, see "Setting up an environment that uses DEST and FORMS parameters" on page 76.

Note: This document intentionally abbreviates the procedures because of the tasks that apply to the operating system, or other products. You might want to see these publications for additional reference materials when you perform the configuration tasks:

- For detailed information about creating JES local printers, see the appropriate *z/OS JES2 Initialization and Tuning Reference* for your version of the operating system.
- For detailed information about IP PrintWay, see:
  - *z/OS Infoprint Server Customization*
  - *z/OS Infoprint Server User's Guide*
- For information about connecting TCP/IP-attached printers, and completing the PSF startup procedure for PSF printers, see *PSF for z/OS: Customization*.

Setting up an environment that uses the CLASS parameter

In your Xerox environment, you have two printers that use a starting environment that specifies the DPLJDL JDL, and the STRTON JDE. The names of the Xerox printers are PRT1 and PRT2, and they are defined as JES local printers. Their work selection criteria are identical: **WS=(Q)**. Their class definitions are also the same: **CLASS=P**. Complete these steps to replicate this environment in a combined Infoprint XT and IP PrintWay installation:

1. If you are using IP PrintWay Basic mode, create a new JES local printer that can be your JES IP PrintWay local printer. This is an FSS printer, with the appropriate name for the IP PrintWay subsystem specified through the FSS parameter of the PRT(*nnnnn*) statement. See *z/OS Infoprint Server Customization* for further information about creating the IP PrintWay FSS and FSA. Configure **CLASS=P**, and **WS=(Q)**, so that the parameter values match the settings that you specified for your Xerox printers.

   If you are using IP PrintWay Extended, then you do not need to configure **CLASS=P** or **WS** in JES for the printer. Instead, create a job selection rule in the Printer Inventory so that IP PrintWay selects jobs that specify **CLASS=P**. See *z/OS Infoprint Server Customization* for procedures to create job selection rules for IP PrintWay.

2. Create a printer definition in the Printer Inventory that can be your PSF for z/OS printer. Record the name you give the printer definition. You use it when you define the IP PrintWay LPR printer in the next step. Use the procedure described in "Creating a PSF for z/OS printer definition with routing

information" on page 70. You need to specify a new value for the CLASS parameter in the allocation section. For example, you might want to use a value of **N**. This printer definition applies the CLASS value to the job, prior to placing the job back on the spool. This is the method through which you associate the job with the JES PSF local printers, which you create in a later step.

3. Create a printer definition in the Infoprint Server Printer Inventory, that can be your IP PrintWay LPR printer. Use the procedure described in "Creating an IP PrintWay printer definition" on page 78. In this example, you would specify:

   a. A value of **P** for the CLASS parameter when you complete the **Allocation** section.

   b. In the **Protocol** section, the name that you specify in the **Print queue name** field is the name of your PSF for z/OS printer, specified in the previous step. By using the transform that Infoprint XT manages, this printer definition actually invokes the conversion process that creates the AFP version of the Xerox job.

4. Create a transform parameter mapping file with these entries. Because you submit all of the jobs with a CLASS of **P**, you can omit CLASS information, which improves performance:

```
#-----------------------------------------------------#
#  Set the default for all jobs                       #
#-----------------------------------------------------#
*=*
   -x'xjdl=dpljdl xjde=strton'
```

See "Creating a custom parameter mapping file" on page 38 for detailed information about mapping files.

5. Create a new JES local printer for each of your Infoprint printers. Configure **CLASS=N**, and **WS=(Q)**, so that these printers process the AFP jobs placed on the spool by the PSF for z/OS printer.

6. Ensure that you have updated the PSF startup procedure. See *PSF for z/OS: Customization*. This is a separate procedure, and these definitions are not JES local printers, or printer definitions in the Infoprint Server Printer Inventory.

Setting up an environment that uses a fixed CLASS and varying FORMS

In this example of a Xerox environment, you use a CLASS value of **K** to identify all of your print jobs. You have several applications that generate the jobs, and the applications require different starting environments. Printer operators use the FORMS value for the job to determine the corresponding JDL and JDE that the job requires:

- FORMS=STD: DFAULT JDL and DFLT JDE
- FORMS=LTR: DPLJDL JDL and STRTON JDE
- FORMS=CAT: CATLG JDL and WINTER JDE
- FORMS=BILL: PAYONL JDL and ONLN JDE

You have four Xerox printers that can accept jobs from any of the applications. Their work selection criteria are identical: **WS=(Q / F)**. All of the printers use **QUEUE=K**. The printer names are:

- PRT10
- PRT20
- PRT30
- PRT40

Complete these steps to replicate this environment in a combined IP PrintWay and Infoprint XT environment:

1. If you are using IP PrintWay Basic mode, create a new JES local printer, that can be your JES IP PrintWay local printer. This is an FSS printer, with the appropriate name for the IP PrintWay subsystem specified through the FSS parameter of the PRT(*nnnnn*) statement. See *z/OS Infoprint Server Customization* for further information about creating the IP PrintWay FSS and FSA. Configure **QUEUE=K**, and **WS=(Q /F)**, so that the parameter values match the settings that you specified for your Xerox printers.

If you are using IP PrintWay Extended, then you do not need to configure **CLASS=K** or **WS** in JES for the printer. Instead, create a job selection rule in the Printer Inventory so that IP PrintWay selects jobs that specify **CLASS=K**. See *z/OS Infoprint Server Customization* for procedures to create job selection rules for IP PrintWay.

2. Create a printer definition in the Printer Inventory, that can be your PSF for z/OS printer. See "Creating a PSF for z/OS printer definition with routing information" on page 70. Record the name you give the printer definition. You use it when you define the IP PrintWay LPR printer in a later step.

   - You need to specify a new value for the CLASS parameter in the allocation section. Use a value that is not in use by any other printer. The printer definition applies the value that you specify to each job that it processes. This routes jobs to one of the printers that you define in a later step.

   - You cannot retain the FORMS value that the job specifies. Either specify a FORMS value with the printer definition, which applies to all jobs, or omit the FORMS value. Omitting the FORMS value applies the system default FORMS value to the job.

   - Filter options for the **Line data** and **Other** data formats that only allows specification of filter options through other methods. Specify this information in the processing section:

     ```
     x2afp.dll %filter-options
     ```

     This printer definition invokes the Infoprint XT managed transform, and lets you specify transform parameters in a transform parameter mapping file. You use the mapping file to support the JDL and JDE pairs for the FORMS values that the jobs specify.

3. Create a printer definition in the Infoprint Server Printer Inventory that can be your IP PrintWay LPR printer. See "Creating an IP PrintWay printer definition" on page 78 for the complete procedure. In this example, you would specify:

   - A value of **K** for the CLASS parameter when you complete the allocation section.

   - In the protocol section, the name that you specify in the **Print queue name** field is the name of your PSF for z/OS printer definition, which you specified in a previous step.

4. Create a transform parameter mapping file with these entries. Because you submit all of the jobs with a CLASS of **K**, you can omit CLASS information, which improves performance:

   ```
   #------------------------------------------------------#
   #  Set parameters for FORMS=STD                        #
   #------------------------------------------------------#
   forms=STD
     -x'xjdl=dfault xjde=dflt'

   #------------------------------------------------------#
   #  Set parameters for FORMS=LTR                        #
   #------------------------------------------------------#
   forms=LTR
     -x'xjdl=dpljdl xjde=strton'

   #------------------------------------------------------#
   #  Set parameters for FORMS=CAT                        #
   #------------------------------------------------------#
   forms=CAT
     -x'xjdl=catlg xjde=winter'

   #------------------------------------------------------#
   #  Set parameters for FORMS=BILL                       #
   #------------------------------------------------------#
   forms=BILL
     -x'xjdl=payonl xjde=onln'
   ```

   See "Creating a custom parameter mapping file" on page 38 for detailed information about mapping files.

5. Create a new JES local printer for each of your InfoPrint printers. Configure the QUEUE value to match the new CLASS, so that these printers process the AFP jobs placed on the spool by the PSF for z/OS printer that you created in a previous step.

6. Ensure that you have updated the PSF startup procedure. See *PSF for z/OS: Customization*. This is a separate procedure, and these definitions are not JES local printers, or printer definitions in the Infoprint Server Printer Inventory.

Setting up an environment that uses multiple CLASS values and varying FORMS

You can make minor modifications to the previous procedure if you have more than one CLASS value for your Xerox jobs. For example, you have jobs that use the same FORMS values that were previously described, but they use a CLASS value of **J**. In this example, your installation also uses other CLASS values for non-Xerox jobs. You can change these items, so that your combined IP PrintWay and Infoprint XT environment supports both CLASS K and CLASS J:

1. When you create the JES IP PrintWay local printer, modify the classes that it accepts: **QUEUE=KJ**.

   For IP PrintWay extended, instead of creating a JES local printer, you should create one or more job selection rules in the printer inventory that specify CLASS K and CLASS J.

2. Create a second PSF for z/OS printer definition in the Printer Inventory. Specify a CLASS value in the allocation information that is not in use. This must be different from the value that you specified in the first PSF for z/OS printer definition.

   Use the same processing setting that you did for the first PSF for z/OS printer.

3. Create a second IP PrintWay LPR printer in the Infoprint Server Printer Inventory. Use a value of **J** for the CLASS parameter when you complete the allocation section for the second printer definition.

4. Update the transform parameter file, and modify the entries to include the CLASS information:

```
#--------------------------------------------------------#
#  Set parameters for FORMS=STD and CLASS=J and K jobs #
#--------------------------------------------------------#
forms=STD class=[JK]
  -x'xjdl=dfault xjde=dflt'

#--------------------------------------------------------#
#  Set parameters for FORMS=LTR and CLASS=J and K jobs #
#--------------------------------------------------------#
forms=LTR class=[JK]
  -x'xjdl=dpljdl xjde=strton'

#--------------------------------------------------------#
#  Set parameters for FORMS=CAT and CLASS=J and K jobs #
#--------------------------------------------------------#
forms=CAT class=[JK]
  -x'xjdl=catlg xjde=winter'

#--------------------------------------------------------#
#  Set parameters for FORMS=BILL and CLASS=J and K jobs #
#--------------------------------------------------------#
forms=BILL class=[JK]
  -x'xjdl=payonl xjde=onln'
```

5. Add the CLASS value to the CLASS values that the JES local printers support.

Setting up an environment that uses DEST and FORMS parameters

In your Xerox environment, you have many printers, and multiple starting environments. The DEST parameter in the JCL selects the printer on which to print the job, and the FORMS value specifies the starting environment. The starting environment on each Xerox printer might be fixed; that is, a given printer always uses the same starting JDL and JDE pair. Or, you might have a group of printers in which operators change starting environments from a set of JDL and JDE pairs. This example uses the latter case. The work selection criteria for a group of eight printers are identical: **WS=(R / F)**. The printer names are:

- PRT101
- PRT102
- PRT103

- PRT104
- PRT201
- PRT202
- PRT203
- PRT204

The forms definition for each of the eight printers specifies four forms, which printer operators can use to identify the corresponding JDL and JDE that the job requires:

- FORMS=STD: DFAULT JDL and DFLT JDE
- FORMS=LTR: DPLJDL JDL and STRTON JDE
- FORMS=CAT: CATLG JDL and WINTER JDE
- FORMS=BILL: PAYONL JDL and ONLN JDE

Complete these steps to replicate this environment in a combined IP PrintWay and Infoprint XT environment:

1. Create one new JES local printer, which can be the JES IP PrintWay local printer that corresponds to Xerox printers PRT101 through PRT104. This is an FSS printer, with the appropriate name for the IP PrintWay subsystem specified through the FSS parameter of the PRT(*nnnnn*) statement. See your IP PrintWay documentation for further information about creating the IP PrintWay FSS and FSA. Configure **WS=(R / F)** and **ROUTECDE=(PRT101,PRT102,PRT103,PRT104)**, so that the parameter values match the settings that you specified for your Xerox printers.

   If you are using PrintWay Basic, configure **CLASS=K**, and **WS=(Q)** in JES so that the parameter values match the settings that you specified for your Xerox printers. If you are using IP PrintWay Extended, then you do not need to configure **CLASS=K** in JES for the printer. Instead, create a job selection rule in the Printer Inventory so that IP PrintWay selects jobs that specify **CLASS=K**. See *z/OS Infoprint Server Customization* for procedures to create job selection rules for IP PrintWay.

   Set up a second JES IP PrintWay local printer that corresponds to Xerox printers PRT201 through PRT204. The work selection criteria and the forms information are the same as the first printer that you created.

2. Create a printer definition in the Printer Inventory, that can be your PSF for z/OS printer for PRT101. Record the name you give the printer definition. You use it when you define the IP PrintWay LPR printer in the next step. See "Creating a PSF for z/OS printer definition with routing information" on page 70. You need to specify a new value for the DEST parameter in the allocation section. For example, you might want to use a value of IBM101. This is the method through which you associate the jobs with the PSF printer, which you create in a later step.

   - Filter options for the **Line data** and **Other** data formats that only allows specification of filter options through other methods. Specify this information in the **Processing** section:

     ```
     x2afp.dll %filter-options
     ```

     This printer definition invokes the Infoprint XT managed transform, and lets you specify transform parameters in a transform parameter mapping file. You use the mapping file to support the JDL and JDE pairs for the FORMS values.

   Create seven more PSF for z/OS printer definitions for printers PRT102 through PRT104, and printers PRT201 through PRT204.

3. Create one printer definition in the Infoprint XT Printer Inventory that can be the IP PrintWay LPR printer for the first JES IP PrintWay local printer that you created in the first step. See "Creating an IP PrintWay printer definition" on page 78. This printer definition is specific to the route code of PRT101. In this example, you would specify:

   - A value of **PRT101** for the DEST parameter when you complete the allocation section.
   - In the protocol section, the name that you specify in the **Print queue name** field is the name of your PSF for z/OS printer, specified in the previous step.

- Create seven more IP PrintWay LPR printer definitions for printers PRT102 through PRT104, and printers PRT201 through PRT204.

4. Create a transform parameter mapping file with these entries for the four FORMS values:

```
#-------------------------------------------------------#
#  Set parameters for FORMS=STD                         #
#-------------------------------------------------------#
forms=STD
  -x'xjdl=dfault xjde=dflt'

#-------------------------------------------------------#
#  Set parameters for FORMS=LTR                         #
#-------------------------------------------------------#
forms=LTR
  -x'xjdl=dpljdl xjde=strton'

#-------------------------------------------------------#
#  Set parameters for FORMS=CAT                         #
#-------------------------------------------------------#
forms=CAT
  -x'xjdl=catlg xjde=winter'

#-------------------------------------------------------#
#  Set parameters for FORMS=BILL                        #
#-------------------------------------------------------#
forms=BILL
  -x'xjdl=payonl xjde=onln'
```

See "Creating a custom parameter mapping file" on page 38 for detailed information about mapping files.

5. Create a new JES local printer for each of your InfoPrint printers. You must set up the work selection criteria and the forms definitions for each printer. For example, if you are configuring the InfoPrint printer that replaces PRT101, use **WS=(R /F)** and **ROUTECDE=IBM101**.

6. Define your InfoPrint printers to the PSF printer driver. This is a separate procedure, and these definitions are not JES local printers, or printer definitions in the Printer Inventory.

Creating an IP PrintWay printer definition

When you use the IP PrintWay component of Infoprint Server to print the jobs that Infoprint XT generates, you create a second printer definition, in addition to the PSF for z/OS printer definition. For creating the IP PrintWay printer definition and its **Allocation** section, see *z/OS Infoprint Server Operation and Administration*.

Then follow these steps to complete an IP PrintWay printer definition:

1. Update the **Custom values** information for the **Processing** section:

    a. Position the cursor in the **Custom values** column, and press Enter. You see the Processing panel.

    b. In the **Printer code page** field, delete any value that is present, so that the field has no value.

    c. To determine whether you want to specify additional options, see the Infoprint Server documentation for information about the other fields. Infoprint XT requires no other information.

    d. Use the appropriate function key to save the processing information, close the panel and the **Component List** panel, and return to the IP PrintWay Printer definition panel.

2. Update the **Custom values** information for the **IP PrintWay options** section:

    a. Position the cursor in the **Custom value** field, and press Enter. You see the IP PrintWay Options panel.

    b. In the **Formatting** field, enter 1. This prevents IP PrintWay from attempting EBCDIC or ASCII translations, which can adversely affect the input data stream.

    c. Use the appropriate function key to save the option information, close the panel, and return to the IP PrintWay Printer definition panel.

3. Update the **Custom values** information for the **Protocol** section:

a. Position the cursor in the **Custom values** field, and press `Enter`. You see the LPR Protocol panel. You must make several entries on this panel.

b. In the **Printer IP address** field, enter the IP address of the z/OS system on which the PSF for z/OS printer definition resides. This is the printer definition that you created with the procedure described in "Creating a PSF for z/OS printer definition with routing information" on page 70.

c. In the **Print queue name** field, enter the name of the PSF for z/OS printer definition.

d. By default the **Printer banner page** option is active, as indicated by the slash before the option. You must turn this option off, when you use this printer definition with Infoprint XT.

e. In the **LPR Processing Options: Mode** field, enter 4 for **Remote PSF**.

Note: You must enter the IP address and queue name information. If you do not, z/OS issues an error message when you try to return from the LPR Protocol panel.

4. Select the **Use DEST, CLASS, and FORMS for IP PrintWay printer selection** option.

Note: If you do not select this option, you must use the FSSDATA method of printing through IP PrintWay. See *z/OS Infoprint Server User's Guide*.

Starting Infoprint Server for jobs that contain FILE DJDE commands

To successfully convert jobs that contain Xerox FILE DJDE commands, the associated user ID or the task that starts Infoprint Server with the **aopstart** command must have write authority to the font, overlay, and page segment PDSs or PDSEs. These are the PDSs or PDSEs into which you populate the AFP resources with the Infoprint XTInfoprint XT AIOZRPDS utility program. Infoprint XT keeps an internal record of the data set names from the last time that the AIOZRPDS utility ran. See "Using the AIOZRPDS AFP resource population utility" on page 98 for further information.

If the user ID or task that starts Infoprint XT does not have write access, all FILE DJDE jobs that you convert in the Infoprint Server environment that use the **P** (permanent) storage parameter end with conversion errors. Any AFP that Infoprint XT generates for the jobs is spooled for printing. However, if the conversion parameters for the job do not specify the **xinlr** parameter, which causes Infoprint XT to imbed the AFP resources inline, the job either fails to print or prints incorrectly. This is because Infoprint XT could not load the resources that the DJDE commands specified. Also, any subsequent jobs that require those resources fail to print correctly. To provide the appropriate write authority, consider making the PDSs or PDSEs writable by the AIOUSER group.

Typically, you start Infoprint Server from a common procedure that starts a number of other procedures. If you do not want all started procedures to have write access to the data sets that contain the AFP resources, you might want to create a separate procedure to start Infoprint Server. Once started in this manner, all FILE DJDE jobs that have permanent storage parameters can copy AFP resources. Infoprint XT does not control the write process based on the authority of the user ID that submits the job. If this is not satisfactory for your installation, you can use the AIOZ2AFP utility program, instead of Infoprint Server, to process FILE DJDE jobs. Through the utility, Infoprint XT controls the ability to load resources by the authority of the user ID submitting the job. See "Using the AIOZ2AFP utility to process jobs" on page 171 for information about the utility program.

Chapter 6. Copying and loading Xerox resources

This chapter describes how to transfer Xerox resource files from your Xerox printers, and copy them into PDSs on z/OS. Other tasks include how to load the Xerox resources, and how to populate Advanced Function Presentation PDSs. Load procedures and population procedures in this chapter describe how to perform the tasks by using job control language statements.

For an overview of working with Xerox resources, see the **pdxt_resources** man page that Xerox provides. Enter this command:

```
man pdxt_resources
```

Transferring Xerox printer resources to a tape

You need to copy all of the resources from each of your Xerox printers onto tapes. You then use an Infoprint XT utility to copy the resources from the tapes into PDSs on z/OS. Depending on your Xerox printer model, you can copy the resources onto a 3480 or a 3490 cartridge tape, or onto a 1/2" open reel tape. To copy the resources from the printer:

1. At the printer console, initialize the tape volume:

   ```
   TAPE VOLINIT, 6250
   ```

2. Copy the resources to the tape:

   - To write all of the resources that reside on the printer to the tape, enter:

     ```
     COPY TAPE WRITE LABEL ALL
     ```

   - To write all resources of a specific type to the tape, enter:

     ```
     COPY TAPE WRITE LABEL *.xxx
     ```

     Where *xxx* is the extension of the resource type. For example, the extension for Xerox font files is FNT.

   - To write a specific resource to the tape, specify the exact resource name. For example:

     ```
     COPY TAPE WRITE LABEL DFAULT.JDL
     ```

   - To write resources by using a blocking factor, you can use this command:

     ```
     COPY TAPE WRITE /BF:n LABEL ALL
     ```

     Where *n* is an integer from one through 16. Using a blocking factor can increase the efficiency of storage on the tape.

3. After copying the files, rewind the tape:

   ```
   TAPE REWIND
   ```

4. Print a listing of the resources on the tape:

   ```
   TAPE LIST,PRINT
   ```

5. Unload the tape from the tape drive on the printer:

   ```
   TAPE UNLOAD
   ```

Note: To ensure that the Xerox tape is complete, issue these commands to obtain an extended listing of files on the Xerox printer:

```
LOG 3,level_3_password

LIS/EX
```

The **LIS/EX** command lists all resources on the printer, grouped by resource type, and includes totals for each type.

Copying Xerox resources from a tape by using AIOZRTAP

Infoprint XT provides a utility program, AIOZRTAP, that you use to copy resources from your Xerox printer tapes onto z/OS. There are no restrictions on the user ID that can use the utility. The only requirement is that you must have write access to the PDS into which the utility copies the resources.

Renaming Xerox resource names to PDS member names

When you copy your Xerox resources from tape to a PDS on z/OS, the AIOZRTAP utility renames the resources. The new resource names follow host naming conventions. shows the Xerox resource file names, and their corresponding names when you copy them to z/OS.

Table 12. Host naming conventions for Xerox resource source files			
Xerox Resource Extension	**Xerox Resource Example**	**PDS Member Prefix**	**PDS Member Example**
CMD	CHECK.CMD	D$	D$CHECK
CME	CMESPC.CME	C$	C$CMESPC
DAT	RA74B.DAT	A$	A$R74B
FNT	L0112B.FNT	F$	F$L0112B
FRM	ACCT5.FRM	M$	M$ACCT5
FSL	ACCT5.FSL	G$	G$ACCT5
ICT	XEROX1.ICT	U$	U$XEROX1
IDR	PROMO.IDR	V$	V$PROMO
IMG	BB0009.IMG	I$	I$BB0009
ISL	XEROX1.ISL	W$	W$XEROX1
JDL	DFAULT.JDL	J$	J$DFAULT
JSL	DFAULT.JSL	K$	K$DFAULT
LIB	CLUSTR.LIB	B$	B$CLUSTR
LGO	PESEAL.LGO	L$	L$PESEAL
MSC	PRINT4.MSC	S$	S$PRINT4
PCH	SYMBOL.PCH	H$	H$SYMBOL
PDE	DMRPOR.PDE	P$	P$DMRPOR
STK	DRAWER.STK	Y$	Y$DRAWER
TMP	DATA.TMP	E$	E$DATA
TST	CRDR.TST	T$	T$CRDR

AIOZRTAP parameters

The AIOZRTAP utility program provides two parameters that you can use to control whether it reports the number of Xerox resources on the tape that it skipped. The parameters are LSKIP and NOLSKIP. By default, AIOZRTAP uses the LSKIP parameter, and reports all Xerox resources that it skipped on the tape. If you specify the NOLSKIP parameter, the utility program does not produce the list of skipped resources. It only reports the number of resources that it skipped. If you use the NOLSKIP parameter, you can reduce the time that Infoprint XT requires to process the tape resources. AIOZRTAP writes the report messages in the data set specified by the SYSPRINT data definition (DD) statement.

You can specify the NOLSKIP parameter in the JCL that you use to submit the job. You can include the parameter on either the EXEC statement, or the SYSIN DD statement. These are examples of the statements:

```
//AIOZRTAP  EXEC  PGM-AIOZRTAP,
//  PARM=NOLSKIP


//SYSIN   DD  *
 NOSKIP
 /*
```

Job control language statements

Infoprint XT provides sample JCL that you can modify to copy your Xerox resources from tape. Infoprint XT supplies the JCL in the SAIOSAMP data set. "Sample JCL for copying Xerox resources from tape" on page 83 shows the sample JCL that Infoprint XT provides.

Sample JCL for copying Xerox resources from tape

```
//AIOZRTAP JOB <JOB STATEMENT PARAMETERS>
//*********************************************************************
//* Copyright 2003,2019 IBM Corporation                              *
//* Copyright 2007,2019 RICOH Company, Ltd                           *
//*                                                                   *
//* Permission to use, copy, modify, and distribute this             *
//* software for any purpose with or without fee is hereby           *
//* granted, provided that the above copyright notices appear        *
//* in all copies.                                                    *
//*                                                                   *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY         *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE        *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR           *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH       *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER            *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER       *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR              *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE         *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.            *
//*                                                                   *
//*  USE THIS JOB TO COPY RESOURCES FROM A XEROX LPS LABELED TAPE     *
//*  TO A PDS.                                                        *
//*                                                                   *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE          *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE              *
//*  FOLLOWING MODIFICATIONS:                                         *
//*                                                                   *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS.    *
//*                                                                   *
//*  2) CHANGE 'hlq' ON THE XRSTAPE DD TO AN APPROPRIATE HIGH         *
//*     LEVEL QUALIFIER FOR YOUR SYSTEM.                              *
//*                                                                   *
//*  3) CHANGE 'unit' ON THE XRSTAPE DD TO AN APPROPRIATE TAPE        *
//*     DRIVE UNIT NAME FOR YOUR SYSTEM.                              *
//*                                                                   *
//*  4) CHANGE 'volser' ON THE XRSTAPE DD TO AN APPROPRIATE VOLUME    *
//*     NAME FOR YOUR SYSTEM.                                         *
//*                                                                   *
//*  5) SET THE SELECT PARAMETERS TO REPRESENT THE GROUP OF FILES     *
//*     YOU WANT TO COPY FROM TAPE.                                   *
//*                                                                   *
//*  6) SET THE SYSIN PARAMETERS TO THE DESIRED REPORT LISTING        *
```

```
//*     COMMAND.                                                   *
//*                                                                *
//*  7) ENSURE YOU RUN THIS JOB FROM A USER ID THAT HAS THE        *
//*     OMVS AUTHORIZATION TO RUN THE SELECTED COMMAND AND ACCESS  *
//*     REFERENCED DIRECTORIES.                                    *
//*                                                                *
//***********************************************************************
//*
//***********************************************************************
//*
//AIOZRTAP EXEC  PGM=AIOZRTAP
//*
//XRSTAPE  DD   DSN=hlq.XRSTAPE,
//             UNIT=unit,LABEL=(1,NL),
//             VOL=SER=volser,
//             DCB=(BLKSIZE=8192,RECFM=U),
//             DISP=SHR
//XRSPDS   DD   DSN=hlq.XRSPDS,DISP=SHR
//***********************************************************************
//* SPECIFY THE RESOURCES TO COPY FROM TAPE.  FOR EXAMPLE,         *
//*                                                                *
//*   *.*       COPY ALL RESOURCES                                 *
//*   *.FRM     COPY ALL FRM FILES                                 *
//*   P06*.FNT  COPY ALL FNT FILES WHOSE NAMES BEGIN WITH P06      *
//*                                                                *
//***********************************************************************
//SELECT   DD   *
 *.*
/*
//***********************************************************************
//* SPECIFY THE REPORT LISTING PARAMETER:                          *
//*                                                                *
//*   LSKIP     LIST FILES THAT THE RESOURCE UTILITY SKIPPED       *
//*   NOLSKIP   DO NOT LIST FILES THAT THE RESOURCE UTILITY SKIPPED *
//*                                                                *
//***********************************************************************
//SYSIN    DD   *
 LSKIP
/*
//SYSPRINT DD   SYSOUT=*
//*
//***********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//***********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZRTAP.DBG,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

These describe the various JCL statements in the sample JCL:

AIOZRTAP JOB

This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZRTAP with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZRTAP EXEC

Optionally, you can specify AIOZRTAP NOLSKIP parameter on the EXEC statement. See "AIOZRTAP parameters" on page 83 for an example of how to specify the parameter on the EXEC statement. Also, see the SYSIN DD notes on page "SYSIN DD" on page 86 for the conditions under which Infoprint XT reads the parameters from this statement.

XRSTAPE DD

This required DD statement specifies the name of the tape that contains the Xerox resources. This statement must contain these parameters:

LABEL=(1,NL)

Specifies a data-set-sequence number of one, and specifies that the tape data set has no label.

DCB=(BLKSIZE=8192, RECFM=U)

Specifies a block size of 8192 in order to accommodate the maximum Xerox tape blocking factor of 16, and specifies that the records are of undefined length.

Make theses modifications to the other parameters of the XRSTAPE DD statement:

- Change **hlq** in the **hlq.XRSTAPE** parameter to any valid high-level qualifier for your installation to which you have access.
- Change the **unit** portion of **UNIT=unit,** to the unit name of the tape drive on the z/OS system. For example, UNIT=4F0.

Change the **volser** portion of **VOL=SER=volser** to a tape volume serial number that is appropriate for your system. Because the tape that you created on your Xerox printer is a non-labeled tape, the volume serial number can be an arbitrary value. For example, 123456.

XRSPDS DD

This required DD statement specifies the name of the PDS in which Infoprint XT creates a member for each Xerox resource that you copy. You can either allocate the PDS externally, through the ISPF Data Set Utility, or you can include specific parameters in the JCL. In either case, the PDS characteristics must include **RECFM=FB**, **LRECL=128**, and **BLKSIZE=**nnnnn. The numeric value, nnnnn, is the largest efficient size, and is a multiple of 128. This is an example of how you could allocate the data set on the XRSPDS DD statement:

```
//XRSPDS   DD   DSN=PM.VOL1,
//            UNIT=SYSDA,VOL=SER=USR012,
//            SPACE=(TRK,(2000,45,1260),RLSE),
//            DCB=(BLKSIZE=27904,RECFM=FB,LRECL=128),
//            DISP=(NEW,CATLG,CATLG)
```

Notes:

1. If the data set that you specify already contains copies of Xerox resources, and the SELECT criteria specifies one or more resources with the same names, Infoprint XT overwrites the existing resources. Infoprint XT does not issue a warning message about the overwrite action.
2. You should not discard this PDS. If you wish to modify your Xerox resources in the future, or reload them with different parameters, Infoprint XT might require this PDS.

SELECT DD

This required DD statement specifies the Xerox resources that you want to copy from the tape. You can either specify a sequential data set that contains the resource names, or you can specify the names directly in the DD statement. You can use wildcard characters to specify resources:

- Use an asterisk, *, in a column other than column one to represent a series of characters. An asterisk in column one indicates that the text that follows is a comment.
- Use a question mark, ?, to represent a single character.

You can specify one or more resource names or resource patterns on a single line. Separate each name or pattern with one or more spaces. You can also use multiple lines to specify resources. These are examples of how you can specify resources:

```
//SELECT     DD *
           TEST*.FNT   ?PROD.FNT
           POLICY.FRM
           STAR.LGO
           OFFLN.JDL
           *.IMG
/*
```

From this example, the AIOZRTAP utility would load:

- All fonts with names that begin with TEST, followed by any number of alphanumeric characters.
- Any font with a five-character name, where the first character is any character, followed by PROD.
- The form named POLICY.
- The logo named STAR.
- The JDL named OFFLN.
- All images.

SYSIN DD

This DD statement specifies the AIOZRTAP parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement.

Notes:

1. The SYSIN DD statement is optional. If it is present, Infoprint XT attempts to use any parameters that it specifies.

2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT issues informational messages that it encountered an empty SYSIN statement. It then attempts to read any AIOZRTAP parameters that the EXEC statement specifies.

3. If Infoprint XT does not find any AIOZRTAP parameters, as specified in the previous two items, it uses the AIOZRTAP default parameters.

SYSPRINT DD

This required DD statement defines a sequential data set in which the AIOZRTAP utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

Note: After you submit the JCL to copy the Xerox resources to a PDS, either you or a system operator must mount the tape in the tape drive identified on the XRSTAPE DD statement.

Verifying that the copy process was successful

You can review the processing information for the resource-copy operation to determine whether it completed successfully. The data set that you specified with the SYSPRINT DD statement contains the information. The type of information that Infoprint XT writes depends on the type of resources that you copied. Also, if Infoprint XT could not copy one or more of the resources, the overall return code for the resource-copy process is non-zero. Figure 10 on page 87 is an example of a resource-copy operation that was successful. Because this information is lengthy, and includes the names of all of the resources, the example is in abbreviated format

```
******************************** TOP OF DATA ********************************
          Date: 04/01/2003                    IBM Xerox Transform
          Time: 17:00:42              Resource Tape Unload Utility Report


AIORFT204I  Reading resource utility parameters.

AIOSEL220I  Processing selection criteria...

AIORFT208I  The resource utility parameters in effect are:

            LSKIP

AIORFT227I  The resource utility will process Xerox resources with internal file
            that match the following SELECT criteria:

                *.*

AIORFT250I  Processing Xerox resources...

AIORPT260I  The number of Xerox resources successfully processed was 1,590.

            850ERI.FNT    DC20PD.FNT    DMRLND.FNT    DMRTRL.FNT    DMRFLG.FNT
            DMRPOR.FNT    DMR2UP.FNT     FMT1.FNT      FMT2.FNT      FMT3.FNT
  :


          Date: 04/01/2003                    IBM Xerox Transform
          Time: 17:00:42              Resource Tape Unload Utility Report


AIORPT263I  The resource utility processed all requested Xerox resources
successfully.

AIORPT265I  The resource utility skipped no Xerox resources.

            Processing ended with return code 0.
******************************** TOP OF DATA ********************************
```

Figure 10. Example of a successful resource-copy operation

Should any errors occur, the report includes error messages from Appendix C, "Resource utility messages: 5017-nnn X (xxx)," on page 263.

Loading Xerox resources by using AIOZR2AR - initial load

This section describes how to load Xerox resources by using the Infoprint XT AIOZR2AR utility program. Infoprint XT requires that you use this program to initially load all of your Xerox resources before you begin to process jobs. Typically, you only need to run this utility program a single time. You should load all of your resources after you install Infoprint XT, complete all necessary configuration tasks, and before you begin to process Xerox jobs. If you need to load additional Xerox resources at a later time, you can use the AIOZRESL sample JCL. This JCL invokes the AIOZR2AR program. It also invokes the AIOZRPDS utility program to populate PDSs or PDSEs with the updated AFP resources that Infoprint XT generates through the load process.

The user ID from which you run this utility must be a member of the AIOUSER group. The user ID must also have read access to the data set specified by the XRSPDS DD statement.

Note: To provide the required read access for the XRSPDS data set, you can give read access to the AIOUSER group.

Memory considerations for AIOZR2AR

By default, the AIOZR2AR utility program runs above the 16MB address line, and primarily uses above-the-line storage. The z/OS default, which provides 32MB of above-the-line storage for all programs,

should be adequate for AIOZR2AR. If you override the default values for the Language Environment®
HEAP or STACK parameters in the EXEC PARM statement, such that the AIOZR2AR program runs below
the 16MB line, you must include a REGION size. The REGION value is either 6 MB or twice the size of
the largest Xerox resource that you load, whichever is larger. If you specify a smaller value, out-of-storage
errors might occur.

AIOZR2AR parameters

The AIOZR2AR utility program provides parameters that you can use to control how Infoprint XT loads the
resources. AIOZR2AR invokes the command **pdxtloadres**, if you load as a batch process through JCL
statements. See .

JCL statements for loading Xerox resources

Infoprint XT provides sample JCL that you can modify to load your Xerox resources. Infoprint XT provides
the sample JCL in the SAIOSAMP data set. shows
the sample JCL that Infoprint XT provides.

Sample JCL for loading Xerox resources

```
//AIOZR2AR JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2003,2019 IBM Corporation                              *
//* Copyright 2007,2019 RICOH Company, Ltd                           *
//*                                                                  *
//* Permission to use, copy, modify, and distribute this            *
//* software for any purpose with or without fee is hereby          *
//* granted, provided that the above copyright notices appear       *
//* in all copies.                                                  *
//*                                                                  *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY       *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE      *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR         *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH     *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER          *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER     *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR            *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE       *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.          *
//*                                                                  *
//*  USE THIS JOB TO CONVERT XEROX RESOURCES FOR USE WITH           *
//*  INFOPRINT XT FOR Z/OS.                                  @01C*
//*                                                                  *
//*  USUALLY THE AIOZRPDS JOB SHOULD BE RUN AFTER THIS JOB     @01C*
//*  COMPLETES SUCCESSFULLY.  SEE THE INFOPRINT XT FOR Z/OS    @01C*
//*  PRODUCT DOCUMENTATION FOR FURTHER INFORMATION.           @01C*
//*                                                                  *
//*  USE THIS JOB, IN COMBINATION WITH THE AIOZRPDS JOB, WHEN A LARGE *
//*  NUMBER OF XEROX RESOURCES ARE BEING LOADED.                    *
//*                                                                  *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE        *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE           *
//*  FOLLOWING MODIFICATIONS:                                       *
//*                                                                  *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS.  *
//*                                                                  *
//*  2) CHANGE hlq ON THE XRSPDS DD TO IDENTIFY THE DATA SET        *
//*     CONTAINING THE RESOURCES.  THIS DATA SET IS USUALLY        *
//*     POPULATED BY THE AIOZRTAP UTILITY.                         *
//*                                                                  *
//*  3) MODIFY THE SYSIN DD PARAMETERS AS DESIRED.                 *
//*                                                                  *
//*  4) MODIFY THE SELECT DD PARAMETERS AS DESIRED.               *
//*                                                                  *
//*  5) ENSURE YOU RUN THIS JOB FROM A USER ID THAT IS IN THE      *
//*     AIOUSER GROUP.                                             *
//*                                                                  *
//* CHANGE ACTIVITY:                                                *
//* $01=OA04543,H29Q100,030822,BLDDH  : Correct product name in   @01A*
//*                                     opening comments.        @01A*
//**********************************************************//*
//AIOZR2AR EXEC  PGM=AIOZR2AR
//*
```

```
//*********************************************************************
//* SPECIFY PROCESSING OPTIONS.  EXAMPLES ARE PROVIDED (COMMENTED).
//*********************************************************************
//SYSIN    DD *
* Specify a paper size (optional).  Uncomment the appropriate line.
* -m letter
* -m legal
*
* Specify a resource group (optional)
* -g my_group
*
/*
//*********************************************************************
//* SELECT RESOURCES TO LOAD
//*********************************************************************
//SELECT   DD *
* The following selects all resources:
   *.*
* The following selects all JDLs and all fonts:
*  *.jdl *.fnt
/*
//*********************************************************************
//* IDENTIFY THE PDS WITH THE LCDS/METACODE RESOURCES
//*********************************************************************
//XRSPDS   DD DSN=hlq.XRSPDS,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//*********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//*********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZR2AR.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

These describe the various statements in the sample JCL:

AIOZR2AR JOB

This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZR2AR with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

Note: Depending on the configuration of your system, you might need to specify a REGION parameter on the JOB statement. See "Memory considerations for AIOZR2AR" on page 87 to determine the value to use.

AIOZR2AR EXEC

This required EXEC statement specifies the Infoprint XT AIOZR2AR utility program. Optionally, you can specify AIOZR2AR parameters on the EXEC statement. See "AIOZR2AR parameters" on page 88. This shows an example of specifying AIOZR2AR parameters on the EXEC statement:

```
AIOZR2AR EXEC PGM=AIOZR2AR,
         PARM='-m A4 -p 300_2'
```

Notes:

1. You must enclose the value for the PARM parameter in single quotation marks, and it is case-sensitive.

2. If you also specify AIOZR2AR parameters in the SYSIN data set, Infoprint XT prepends parameters from the EXEC statement to those parameters. Therefore, if you specify the same parameter on both statements, Infoprint XT uses the parameter value from the SYSIN DD statement.

SYSIN DD

This optional DD statement specifies the AIOZR2AR parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. Infoprint XT uses these rules when it builds the parameter list from the information that you specify:

- You can use more than one line to specify parameter data.
- Infoprint XT considers any line that begins with an asterisk (*) in column one to be a comment.
- You can only specify parameter data in columns one through 71.
- Infoprint XT ignores any data in columns 73 through 80.
- Infoprint XT treats any non-blank character in column 72 as a continuation character.
- Infoprint XT ignores blank lines.
- Infoprint XT removes leading and trailing blanks from lines that contain parameter data.
- Infoprint XT concatenates multiple lines of parameter data together, and uses a single blank between the data from one line and the next line of data. The exception to this is continuation lines.
- For continuation lines, Infoprint XT concatenates the lines together, but does not use a single blank to separate the lines. It does, however, still remove any leading and trailing blanks from each continuation line.

Notes:

1. The SYSIN DD statement is optional. If it is present, Infoprint XT attempts to use any parameters that it specifies.
2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT issues informational messages that it encountered an empty SYSIN statement. It then attempts to read any AIOZR2AR parameters that the EXEC statement specifies.
3. If Infoprint XT does not find any AIOZR2AR parameters, as specified in the previous two items, it uses the AIOZR2AR default parameters.
4. Because AIOZR2AR automatically specifies the **pdxtloadres -l** option, you cannot specify the **-n** option in the SYSIN DD parameters. The **-l** and **-n** options are mutually exclusive.

SELECT DD

This optional DD statement specifies the names of the Xerox resources, in the Xerox *xrname.ext* format, that you want to load. You can either specify a sequential data set that contains the resource names, or you can specify the names directly in the DD statement. You can use wildcard characters to specify resource names:

- Use an asterisk, *, to represent a series of characters.
- Use a question mark, ?, to represent a single character.

You cannot use a wildcard character to represent the period between the resource name and the resource extension. You can, however, use a wildcard character in the extension.

You can specify one or more resource names or resource patterns on a single line. Separate each name or pattern with one or more spaces. You can also use multiple lines to specify resources. Infoprint XT ignores any resource information in columns 73 through 80. These are examples of how you can specify resources:

```
//SELECT     DD *
            TEST*.FNT   ?PROD.FNT
            POLICY.FRM
            STAR.LGO
            OFFLN.JDL
            *.IMG
            SCA*.*
            SCB*.C*
/*
```

You can include comments within the list of resources. Infoprint XT recognizes any line that begins with an asterisk in column one as a comment.

If you do not specify the SELECT DD statement, Infoprint XT attempts to load any resources that failed to load on the last invocation on the AIOZR2AR utility program.

Note: When Infoprint XT issues messages for the resource-load process, it refers to the resource patterns or resource names that you specify as the SELECT criteria.

XRSPDS DD

This required DD statement specifies the name of the PDS that contains the original Xerox resources. Typically, this PDS is the same PDS into which you copied the printer resources from tape. See XRSPDS DD for AIOZRTAP on page "XRSPDS DD" on page 85 for more information about this data set.

SYSPRINT DD

This required DD statement defines a sequential data set in which the AIOZR2AR utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD

This optional DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the resource-load process was successful

You can review the processing information for the job, and determine whether the resource-load process completed successfully. The data set that you specified with the SYSPRINT DD statement contains the information. The type of information that Infoprint XT writes depends on the types of resources that you loaded. Also, if one or more of the resources did not load correctly, the overall return code for the resource-load process is non-zero.

"Messages generated during the resource-load process" on page 91 is an example of a resource-load operation that includes both successes and failures, and therefore has a non-zero return code. Modifications were made to the format of this information, for presentation purposes. Explanations of the numbered information appear after the example.

Messages generated during the resource-load process

```
5016-600 Resource load process started for type "fnt".     1
5016-610 Resource conversion process started.
...Number of resources to convert: 7.
5016-613 Resource conversion process is complete.
...Number of successes: 7.
5016-617 Metrics generation process started.              2
5016-618 Metrics generation process is complete.
...Number of successes: 7.
5016-619 Install process started.                         3
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "fnt".
5016-600 Resource load process started for type "img".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 2.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "img".
5016-600 Resource load process started for type "lgo".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 2.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "lgo".
5016-600 Resource load process started for type "cmd".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
```

```
5016-618 Metrics generation process is complete.
...Number of successes: 1.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "cmd".

   xr2ar 'respath=/var/pdxt/resources/common/pdxtloadres:/var/pdxt/resources/common:'     ■ 4
   'xfmtlib=/var/pdxt/resources/common/pdxtloadres:/var/pdxt/resources/common/metrics:
   /usr/lpp/pdxt/resources' 'xformat=res' 'xpaper=letter'
   'xreslib=/var/pdxt/resources/common/pdxtloadres' 'xselect=rftres.sel'
   'xsrclib=/var/pdxt/resources/common/pdxtloadres' 'xxcheck=no' 2>> cmd_metr.lst 1>&2:
             Date: 04/01/2003              IBM Xerox Transform              Job:
Page: 01     Time: 16:01:02            Resource Utility Report             Step:
   AIORFT204I  Reading resource utility parameters.
   AIOSEL220I  Processing selection criteria...
   AIORFT208I  The resource utility parameters in effect are:

             FORMAT-PDS  NOSPC  NOCSRC  NOTRANSRC  USLETTER  NOPLIDUMP  NOXCHECK  LSKIP
             PTXSIZE=(52K,52K)  PTXMAXAREAS=30208  NOOVSAMPLE  NOLFORMFONTS  NOXRXSRCFILES  OVGEN
             NOCL2SRC  NOSRC2CL  XRESOLUTION=300  XAFPFUNCTION=IOCART  XPATTERN_SET=300-1

   AIORFT227I  The resource utility will process Xerox resources with internal file names
             that match the following SELECT criteria:
                GATES.CMD
                WRAP.CMD
   AIORFT250I  Processing Xerox resources...
   AIORPT260I  The number of Xerox resources successfully processed was 1.      ■ 5
                WRAP.CMD
   AIORPT265I  The resource utility skipped no Xerox resources.
   AIORPT268W  One or more Xerox resources do not conform to the typical source file format      ■ 6
             of sequenced 80-byte records.  1 may not have processed successfully.
                GATES.CMD
   AIORPT270I  The font correlation table has 1,066 entries.
   AIORPT270I  The image correlation table has 547 entries.
   AIORPT270I  The logo correlation table has 16 entries.

             Processing ended with return code 4.     ■ 7
   rc = 4

5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "cmd".
5016-600 Resource load process started for type "fsl".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 2.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "fsl".
5016-600 Resource load process started for type "jdl".
5016-610 Resource conversion process started.
...Number of resources to convert: 3.
5016-613 Resource conversion process is complete.
...Number of successes: 3.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 3.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "jdl".
5016-600 Resource load process started for type "jsl".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-611 Conversion step XRHDR failed for resource ddps.jsl (error 16).     ■ 8
   copy from //DD:XRSPDS(K$DDPS)
   rc = 0

   xrhdr 'ddps.jsl' > /dev/null 2>> 'ddps.jsl.lst':
   xrhdr: ddps.jsl does not have a multiple of 128 bytes
   rc = 16
5016-611 Conversion step XRHDR failed for resource qsod1.jsl (error 16).     ■ 9
   copy from //DD:XRSPDS(K$QSOD1)
   rc = 0

   xrhdr 'qsod1.jsl' > /dev/null 2>> 'qsod1.jsl.lst':
   xrhdr: qsod1.jsl does not appear to be a resource (RAD_EXTN)
   rc = 16
5016-613 Resource conversion process is complete.
...Number of successes: 0.
5016-601 Resource load process is complete for type "jsl".
5016-600 Resource load process started for type "lib".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 2.
5016-619 Install process started.
```

```
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "lib".
5016-600 Resource load process started for type "pde".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-611 Conversion step XRHDR failed for resource tst150.pde (error 16).
   copy from //DD:XRSPDS(P$TST150)
   rc = 0

   xrhdr 'tst150.pde' > /dev/null 2>> 'tst150.pde.lst':
   xrhdr: tst150.pde does not appear to be a resource (RAD_EXTN)
   rc = 16
5016-613 Resource conversion process is complete.
...Number of successes: 1.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 1.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "pde".
5016-600 Resource load process started for type "stk".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 2.
5016-619 Install process started.
5016-621 Install process is complete.
5016-601 Resource load process is complete for type "stk".
5016-600 Resource load process started for type "frm".
5016-610 Resource conversion process started.
...Number of resources to convert: 2.
5016-613 Resource conversion process is complete.
...Number of successes: 2.
5016-617 Metrics generation process started.
5016-618 Metrics generation process is complete.
...Number of successes: 0.

   xr2ar 'respath=/var/pdxt/resources/common/pdxtloadres:/var/pdxt/resources/common:'
   'xfmtlib=/var/pdxt/resources/common/pdxtloadres:/var/pdxt/resources/common/metrics:
   /usr/lpp/pdxt/resources' 'xformat=res' 'xpaper=letter' 'xpattern_set=300-1'
   'xovlylib=/var/pdxt/resources/common/pdxtloadres' 'xreslib=/var/pdxt/resources/common/pdxtloadres'
   'xselect=rftres.sel' 'xspacing=none' 'xsrclib=/var/pdxt/resources/common/pdxtloadres' 'xxcheck=no'
   2>> frm_metr.lst 1>&2:
            Date: 04/01/2003              IBM Xerox Transform          Job:  ▮10▮
Page: 01    Time: 16:01:04               Resource Utility Report       Step:
   AIORFT204I  Reading resource utility parameters.
   AIOSEL220I  Processing selection criteria...
   AIORFT208I  The resource utility parameters in effect are:

              FORMAT-PDS  NOSPC  NOCSRC  NOTRANSRC  USLETTER  NOPLIDUMP  NOXCHECK  LSKIP
              PTXSIZE=(52K,52K)  PTXMAXAREAS=30208  NOOVSAMPLE  NOLFORMFONTS  NOXRXSRCFILES  OVGEN
              NOCL2SRC  NOSRC2CL  XRESOLUTION=300  XAFPFUNCTION=IOCART  XPATTERN_SET=300-1

   AIORFT227I  The resource utility will process Xerox resources with internal file names
              that match the following SELECT criteria:
                  ACBAL1.FRM
                  DMRTRL.FRM
   AIORFT250I  Processing Xerox resources...
   AIOM@M254W  While converting form ACBAL1, the following errors occurred:    ▮11▮
   AIOXFN760E  The font processor could not find font LOGOSP in the font correlation table.
   AIOXFN762E  The font processor could not find reformatted font LOGOSP in the reformatted Xerox
              resource path.
   AIOXFN760E  The font processor could not find font P0612B in the font correlation table.
   AIOXFN762E  The font processor could not find reformatted font P0612B in the reformatted Xerox
              resource path.
   AIOXFN760E  The font processor could not find font P08TBC in the font correlation table.
   AIOXFN762E  The font processor could not find reformatted font P08TBC in the reformatted Xerox
              resource path.
   AIOXFN761S  No fonts available to print text.
   AIOM@M259S  The resource utility found an inconsistency in Xerox resource ACBAL1.FRM:
               3  font processing error.
   AIOM@M254W  While converting form DMRTRL, the following errors occurred:
   AIOXFN760E  The font processor could not find font DMR02L in the font correlation table.
   AIOXFN762E  The font processor could not find reformatted font DMR02L in the reformatted Xerox
              resource path.
   AIOXFN760E  The font processor could not find font UN224A in the font correlation table.
   AIOXFN762E  The font processor could not find reformatted font UN224A in the reformatted Xerox
              resource path.
   AIOXFN761S  No fonts available to print text.
   AIOM@M259S  The resource utility found an inconsistency in Xerox resource DMRTRL.FRM:
            Date: 04/01/2003              IBM Xerox Transform          Job:
Page: 02    Time: 16:01:04               Resource Utility Report       Step:

               3  font processing error.

   AIOM@M256E  The form converter could not find logo DMR04L in the reformatted Xerox
              resource path.
   AIOM@M255E  The form converter could not find logo DMR04L in the logo correlation table.
   AIORPT261I  The resource utility processed no Xerox resources successfully.
   AIORPT262W  The number of Xerox resources not successfully processed was 2.
```

```
                    ACBAL1.FRM   DMRTRL.FRM
    AIORPT265I  The resource utility skipped no Xerox resources.
    AIORPT270I  The font correlation table has 1,066 entries.
    AIORPT270I  The image correlation table has 547 entries.
    AIORPT270I  The logo correlation table has 16 entries.

            Processing ended with return code 12.
    rc = 12

 5016-601 Resource load process is complete for type "frm".
```

These describe the various areas of the information in "Messages generated during the resource-load process" on page 91:

1️, 2️, and 3️

When Infoprint XT loads a resource, there are three distinct steps. The first step is the conversion process. If the resource is a printable resource, Infoprint XT generates the corresponding AFP resource. During the second step, Infoprint XT saves information for the resource. In the third step, Infoprint XT stores the saved information. All three steps must complete successfully for the load process to be successful for a resource. Infoprint XT lists the successes for each step. In the example, Infoprint XT processed seven fonts, and it reported seven successes for each step. Infoprint XT completes these three steps for each type of Xerox resource that you instruct it to load. It has a specific order in which it loads the various types of resources.

4️, 5️, 6️, and 7️

When errors occur in the resource-load process for certain types of resources, Infoprint XT includes the report information that describes the failure, or failures. In the example, Infoprint XT was loading two CMD resources: GATES.CMD and WRAP.CMD. As the 5017-110 I message indicates, it successfully processed the WRAP.CMD resource. Infoprint XT detected an error in the format of the GATES.CMD resource, and issued 5017-117 W warning message. Because the severity of the error was at the warning level, CMD processing ended with a return code of four. For detailed information about the 5017 series of error messages, see Appendix C, "Resource utility messages: 5017-nnn X (xxx)," on page 263.

8️ and 9️

Other types of errors can cause Infoprint XT to issue messages from the 5016 series of messages. The Appendix B, "Infoprint XT messages: 5016-nnn," on page 221 also describes these messages.

10️ and 11️

Some types of Xerox resources refer to other resources. You must load those resources before Infoprint XT can process the resource that refers to them. In the example, the form resource ACBAL1 required a number of font resources. Infoprint XT loaded all fonts as the first category of resources in the resource-load process. However, the fonts that the form requires were not specified in the initial criteria, which defined the fonts to load. Therefore, to correct the error, you would load the fonts identified in the messages and then load the form. You can do this in a single resource-load operation as Infoprint XT tries to load all fonts before it loads forms.

Sampling Xerox FRMs by using AIOZR2AR

This section describes how to sample Xerox FRM resources by using the Infoprint XT AIOZR2AR utility program. Infoprint XT requires that you use the AIOZR2AR program to initially load all of your Xerox resources before you sample Xerox forms. See "Loading Xerox resources by using AIOZR2AR - initial load" on page 87.

The user ID from which you run this utility must be a member of the AIOUSER group. The user ID must also have read access to the data set specified by the XRSPDS DD statement.

Note: To provide the required read access for the XRSPDS data set, you can give read access to the AIOUSER group.

AIOZR2AR parameters

The AIOZR2AR utility provides parameters that you can use to control how Infoprint XT samples the Xerox FRM resources. If you use JCL statements to sample Xerox FRM resources as a batch process,

AIOZR2AR invokes the **pdxtloadres** command. See "Using the pdxtloadres command to load Xerox resources" on page 111.

JCL statements for sampling Xerox FRM resources

Infoprint XT provides sample JCL that you can modify to sample your Xerox FRM resources. Infoprint XT provides the sample JCL in the SAIOSAMP data set. Figure 11 on page 95 shows the sample JCL that Infoprint XT provides.

```
/AIOZSAMP JOB <JOB STATEMENT PARAMETERS>
//************************************************************************
//* Copyright 2018,2019 IBM Corporation                         *
//* Copyright 2018,2019 RICOH Company, Ltd                      *
//*                                                             *
//* Permission to use, copy, modify, and distribute this        *
//* software for any purpose with or without fee is hereby      *
//* granted, provided that the above copyright notices appear    *
//* in all copies.                                              *
//*                                                             *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY    *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE   *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR      *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH  *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER       *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER  *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR         *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE    *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.       *
//*                                                             *
//*  USE THIS JOB TO SAMPLE AFP OVERLAYS THAT INFOPRINT XT       *
//*  CREATED FORM XEROX FRM RESOURCES                           *
//*                                                             *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE     *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE         *
//*  FOLLOWING MODIFICATIONS:                                   *
//*                                                             *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                             *
//*  2) CHANGE hlq ON THE XRSPDS DD TO IDENTIFY THE DATA SET     *
//*     CONTAINING THE RESOURCES.  THIS DATA SET IS USUALLY      *
//*     POPULATED BY THE AIOZRTAP UTILITY.                       *
//*                                                             *
//*  3) MODIFY THE SYSIN DD PARAMETERS AS DESIRED.              *
//*                                                             *
//*  4) ENSURE YOU RUN THIS JOB FROM A USERID THAT IS IN THE     *
//*     AIOUSER GROUP.                                          *
//*                                                             *
//* CHANGE ACTIVITY:                                            *
//* $01=US45129,H29Q100,181026,BLDLS  : Samp & Version JCLs      @01A*
//************************************************************************
//*
//AIOZSAMP EXEC  PGM=AIOZR2AR
//*
//************************************************************************
//* SPECIFY PROCESSING OPTIONS.  EXAMPLES ARE PROVIDED (PARTIALLY
//* COMMENTED).
//************************************************************************
//SYSIN    DD *
* Specify the forms sampling function (mandatory)
 -f sample
*
* Specify a resource group (optional)
* -g my_group
*
/*
//************************************************************************
//* SELECT RESOURCES TO SAMPLE (MANDATORY)
//************************************************************************
//SELECT   DD *
   *.frm
/*
//************************************************************************
//* IDENTIFY THE PDS WITH THE XEROX RESOURCES
//************************************************************************
//XRSPDS   DD DSN=hlq.XRSPDS,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//************************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//************************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZSAMP.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 11. Sample JCL for sampling Xerox FRM resources

These describe the various statements in Figure 11 on page 95:

AIOZSAMP JOB
This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZSAMP with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

Note: Depending on the configuration of your system, you might need to specify a REGION parameter on the JOB statement. See "Memory considerations for AIOZR2AR" on page 87 to determine the value to use.

AIOZSAMP EXEC

This required EXEC statement specifies the Infoprint XT AIOZR2AR utility program. Optionally, you can specify AIOZR2AR parameters on the EXEC statement. See "AIOZR2AR parameters" on page 94. This shows an example of specifying AIOZR2AR parameters on the EXEC statement:

```
AIOZSAMP EXEC PGM=AIOZR2AR,
         PARM='-f sample -g mygroup'
```

Notes:

1. You must enclose the value for the PARM parameter in single quotation marks, and it is case-sensitive.

2. If you also specify AIOZR2AR parameters in the SYSIN data set, Infoprint XT prepends parameters from the EXEC statement to those parameters. Therefore, if you specify the same parameter on both statements, Infoprint XT uses the parameter value from the SYSIN DD statement.

SYSIN DD

This optional DD statement specifies the AIOZR2AR parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. See "AIOZR2AR parameters" on page 94.

Notes:

1. To sample Xerox FRM resources, either the SYSIN DD statement or the EXEC statement must specify the **-f sample** parameter.

2. The SYSIN DD statement is optional. If it is present, Infoprint XT attempts to use any parameters that it specifies.

3. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT issues informational messages that it encountered an empty SYSIN statement. It then attempts to read any AIOZR2AR parameters that the EXEC statement specifies.

4. If Infoprint XT does not find any AIOZR2AR parameters, as specified in the previous items, it uses the AIOZR2AR default parameters and the AIOZR2AR program tries to load the Xerox resources, as described in "Loading Xerox resources by using AIOZR2AR - initial load" on page 87.

SELECT DD

This optional DD statement specifies the names of the Xerox FRM resources, in the Xerox *xrname*.frm format, that you want to sample. Note that the file extension for Xerox FRM sampling is always `.frm`. You can either specify a sequential data set that contains the resource names, or you can specify the names directly in the DD statement. You can use wildcard characters to specify resource names:

- Use an asterisk, *, to represent a series of characters.
- Use a question mark, ?, to represent a single character.

You can use a wildcard character to represent only the resource name, not the period between the resource name and the resource extension.

You can specify one or more resource names or resource patterns on a single line. Separate each name or pattern with one or more spaces. You can also use multiple lines to specify resources. Infoprint XT ignores any resource information in columns 73 through 80. These are examples of how you can specify resources:

```
//SELECT    DD *
            POLICY.FRM
            A*.frm
            *T.frm
 /*
```

or

```
//SELECT    DD *
           *.frm
/*
```

You can include comments within the list of resources. Infoprint XT recognizes any line that begins with an asterisk in column one as a comment.

If you do not specify the SELECT DD statement, Infoprint XT fails to sample any Xerox FRM resources because no resource names match the SELECT criteria.

Note: When Infoprint XT issues messages for the resource-sample process, it refers to the resource patterns or resource names that you specify as the SELECT criteria.

XRSPDS DD
This required DD statement specifies the name of the PDS that contains the original Xerox FRM resources. Typically, this PDS is the same PDS into which you copied the FRM resources from tape. See XRSPDS DD for AIOZRTAP on page "XRSPDS DD" on page 85 for more information about this data set.

SYSPRINT DD
This required DD statement defines a sequential data set in which the AIOZR2AR utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD
This optional DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the form-sample process was successful

You can review the processing information for the job, and determine whether the form-sample process completed successfully. The data set that you specified with the SYSPRINT DD statement contains the information. If one or more of the resources was not sampled correctly, the overall return code for the form-sample process is non-zero.

"Messages generated during the form-sample process" on page 97 is an example of a form-sample operation that completed successfully with a zero return code. Modifications were made to the format of this information, for presentation purposes.

Messages generated during the form-sample process

```
5017-050 I (SEL) Processing selection criteria...

5017-056 I (USM) The resource utility processes Xerox resources that
                 match this SELECT criteria:

                 *D.FRM
                 *GS*.FRM

5016-650 Resource sample process started for type "frm".
5016-652 Resource sampling process started.
Number of resources to sample: 5.
5016-655 Resource sampling process is complete.
Number of successes: 5.
5016-651 Resource sample process is complete for type "frm".
```

For details of the form-sample process, see the notes for **-f load |delete |sample** in "Using the pdxtloadres command to load Xerox resources" on page 111.

Using the AIOZRPDS AFP resource population utility

If you use a printer driver such as PSF, or another printing program that requires resources to be in a PDS, you must make the AFP resources that Infoprint XT creates available to the driver or program. Infoprint XT provides the AIOZRPDS utility program, which copies AFP resources to a PDS or PDSE. You should run this utility immediately after you initially load all of your Xerox resources with the AIOZR2AR utility. By default, subsequent runs do not update the entire set of AFP resources, after the initial time that you run the AIOZRPDS utility. The AIOZRPDS utility only updates those AFP resources that were successfully processed since the last time the utility was run.

You use a different PDS or PDSE for each type of AFP resource. For a given resource group, there is a single PDS or PDSE for AFP fonts, one for AFP overlays, and one for AFP page segments. If you use PSF, you must ensure that each PDS or PDSE is in the appropriate search order for the resource type. See "Providing PSF with access to the AFP resources " on page 59.

Use these guidelines for copying AFP resources to either a PDS or PDSE:

1. If you use the **xinlr** parameter to inline all resources, you do not need to copy AFP resources.
2. If you have jobs that use the FILE DJDE commands with a file storage parameter of **P**, use PDSEs.
3. Otherwise, you can use either PDSs or PDSEs.

The user ID from which you run the AIOZRPDS utility must be a member of the AIOUSER group. It must also have write access for the data sets in which Infoprint XT copies the AFP fonts, AFP overlays, and AFP page segments. To provide the write access, you can make each data set writable by the AIOUSER group.

Notes:

1. Do not add AFP resources to the data sets with anything other than AIOZRPDS.
2. Do not modify the AFP resources in these data sets.
3. Infoprint XT provides another sample JCL, AIOZRESL, that both loads Xerox resources, and populates the PDSs or PDSEs for AFP fonts, overlays, and page segments. You might find this method more convenient than performing the load procedure and population procedure as separate steps. See "Loading resources and populating PDSs and PDSEs by using AIOZRESL" on page 102.

AIOZRPDS parameters

The AIOZRPDS utility provides three options that you can use to control how Infoprint XT updates the AFP resources. All of the options are optional.

-g common | *resgrp*
> This option specifies the name of the resource group that contains the AFP resources you want to update. The resource group name is the same name that you specified when you loaded the Xerox resource with the AIOZR2AR utility. See the description of the **-g** option in "Using the pdxtloadres command to load Xerox resources" on page 111. If you do not specify this option, Infoprint XT updates AFP resources for the common resource group. Valid values are:

> **common**
>> Infoprint XT uses the directory `/var/pdxt/resources/common`. This is the default.

> *resgrp*
>> Infoprint XT uses the directory `/var/pdxt/resources/`*resgrp*. The *resgrp* name must be alphanumeric and cannot contain any special characters.

> **Note:** If you specify the **-g** option, you cannot specify the **-i** option.

-i *inputdirectory*
> This option specifies an existing z/OS UNIX directory in which the resource information that the AIOZR2AR utility generates resides. The value is:

> *inputdirectory*
>> The full path to an existing z/OS UNIX directory.

> **Notes:**

1. If you specify the **-i** option, you cannot specify the **-g** option.
2. If you specified the **-o** option when you loaded resources with the AIOZR2AR utility, you should specify the same directory with this **-i** option. See pdxtloadres -o option on page "-o OtherDirectory" on page 119.

-r
This option specifies that the AIOZRPDS utility should update all of the AFP resources for the resource group and the specified PDSs. If you do not specify this option, the AIOZRPDS utility only updates those AFP resources that were successfully processed since the last time the utility was run.

Note: If you want to use a different PDS or PDSE for a given resource group, use the **-r** option.

JCL statements for AFP resource population

Infoprint XT provides sample JCL that you can modify to copy your AFP resources. Infoprint XT provides the sample JCL in the SAIOSAMP data set. shows the sample JCL that Infoprint XT provides.

```
//AIOZRPDS JOB <JOB STATEMENT PARAMETERS>
//************************************************************************
//* Copyright 2003,2019 IBM Corporation                         *
//* Copyright 2007,2019 RICOH Company, Ltd                      *
//*                                                              *
//* Permission to use, copy, modify, and distribute this        *
//* software for any purpose with or without fee is hereby       *
//* granted, provided that the above copyright notices appear    *
//* in all copies.                                               *
//*                                                              *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY    *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE   *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR      *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH  *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER       *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER  *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR         *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE    *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.       *
//*                                                              *
//*  THIS JOB IS USED TO LOAD THE AFP RESOURCES INTO PARTITIONED *
//*  DATASETS FOR USE BY OTHER PROGRAMS, SUCH AS PSF.            *
//*                                                              *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE     *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU WILL HAVE TO          *
//*  MAKE THE FOLLOWING MODIFICATIONS:                           *
//*                                                              *
//*  1) CHANGE THE JOB CARD TO MEET YOUR SYSTEM REQUIREMENTS.    *
//*                                                              *
//*  2) CHANGE hlq ON THE FONTLIB, OVLYLIB AND PSEGLIB DDS.      *
//*                                                              *
//*  3) MODIFY THE SYSIN DD PARAMETERS AS DESIRED.              *
//*                                                              *
//*  4) ENSURE YOU EXECUTE THIS JOB FROM A USER ID THAT IS IN THE *
//*     AIOUSER GROUP.                                           *
//*                                                              *
//************************************************************************
//*
//AIOZRPDS EXEC  PGM=AIOZRPDS
//*
//************************************************************************
//* SPECIFY PROCESSING OPTIONS.  EXAMPLES ARE PROVIDED (COMMENTED).
//************************************************************************
//SYSIN    DD *
* Specify a resource group (optional).
* -g my_group
*
/*
//************************************************************************
//* IDENTIFY THE AFP RESOURCE PARTITIONED DATASETS.
//************************************************************************
//FONTLIB  DD DSN=hlq.FONTLIB,DISP=SHR
//OVLYLIB  DD DSN=hlq.OVLYLIB,DISP=SHR
//PSEGLIB  DD DSN=hlq.PSEGLIB,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//************************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//************************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZRPDS.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 12. Sample JCL for copying AFP resources

These describe the various statements in Figure 12 on page 100:

Note: Do not specify any data set overrides, such as VOL=SER= or DCB, for the FONTLIB, OVLYLIB, and PSEGLIB DD statements.

AIOZRPDS JOB
> This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZRPDS with

the appropriate job name. Replace the `<JOB STATEMENT PARAMETERS>` portion of the sample statement with any parameters that your installation requires.

AIOZRPDS EXEC

This required EXEC statement specifies the Infoprint XT AIOZRPDS utility program.

SYSIN DD

This optional DD statement specifies the AIOZRPDS parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. See "AIOZRPDS parameters" on page 98.

Notes:

1. The SYSIN DD statement is optional. If it is present, Infoprint XT attempts to use any parameters that it specifies.

2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT issues informational messages that it encountered an empty SYSIN statement. It then attempts to read any AIOZRPDS parameters that the EXEC statement specifies.

3. If Infoprint XT does not find any AIOZRPDS parameters, as specified in the previous two items, it uses the AIOZRPDS default parameters.

FONTLIB DD

This required DD statement specifies the name of the PDS or PDSE into which Infoprint XT updates the AFP font resources. You must create this data set the first time that you run the utility for a specific resource group. You can either allocate the data set externally, or you can include a data control block (DCB) parameter in the JCL. In either case, the data set characteristics must include RECFM=VBM, LRECL=12284, and the BLKSIZE value must be at least 12288. The exact number of directory blocks depends on the number of AFP font resources that you create with the AIOZRPDS utility. For each newly-loaded Xerox font, Infoprint XT generates three AFP font members. If you use the ISPF Allocate New Data Set panel, use a value of LIBRARY for the **Data set name type** field. This specifies that the data set is a PDSE.

Replace hlq in the DSN value for the FONTLIB DD statement of the sample JCL with the appropriate high-level qualifier for your installation.

OVLYLIB DD

This required DD statement specifies the name of the PDS or PDSE into which Infoprint XT places the AFP overlay resources. You must create this data set the first time that you run the utility for a specific resource group. You can either allocate the data set externally, or you can include a DCB parameter in the JCL. In either case, the data set characteristics must include RECFM=VBM, LRECL=8205, and the BLKSIZE value must be at least 8209. The exact number of directory blocks depends on the number of AFP overlay resources that you create. For each newly-loaded Xerox form, Infoprint XT generates one AFP overlay member.

Replace hlq in the DSN value for the OVLYLIB DD statement of the sample JCL with the appropriate high-level qualifier for your installation.

PSEGLIB DD

This required DD statement specifies the name of the PDS or PDSE into which Infoprint XT places the AFP page segment resources. You must create this data set the first time that you run the utility for a specific resource group. You can either allocate the data set externally, or you can include a DCB parameter in the JCL. In either case the data set characteristics must include RECFM=VBM, LRECL=8205, and the BLKSIZE value must be at least 8209. The exact number of directory blocks depends on the number of AFP images and AFP logos that you create. For each newly-loaded image or logo, Infoprint XT generates one AFP page segment.

Replace hlq in the DSN value for the PSEGLIB DD statement of the sample JCL with the appropriate high-level qualifier for your installation.

SYSPRINT DD

This required DD statement defines a sequential data set in which the AIOZRPDS utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

DEBUG DD

This optional DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Verifying that the resource-population process was successful

You can review the processing information for the job, and determine whether the resource-population process completed successfully. The data set that you specified with the SYSPRINT DD statement contains the information. The type of information that Infoprint XT writes depends on the types of resources that were updated. Figure 13 on page 102 shows an example of a resource-population process that successfully updated AFP fonts, overlays, and page segments.

```
2003-04-01 13:20:23 MST pdxtloadpds -g payroll -F PM.FONTS -O PM.OVLY -P PM.PSEG   1
 5016-680 Update resource: PM.FONTS(C0H106JP)           2
 5016-680 Update resource: PM.FONTS(C0H107JP)
 5016-680 Update resource: PM.FONTS(C0H210JP)
 5016-680 Update resource: PM.FONTS(C0RK141P)
 5016-680 Update resource: PM.OVLY(O1KGJEG1)            3
 5016-680 Update resource: PM.PSEG(SIBK12A)             4
 5016-680 Update resource: PM.PSEG(SL1INSQ)
 5016-680 Update resource: PM.FONTS(T1H106JP)
 5016-680 Update resource: PM.FONTS(T1H107JP)
 5016-680 Update resource: PM.FONTS(T1H210JP)
 5016-680 Update resource: PM.FONTS(T1RK141P)
 5016-680 Update resource: PM.FONTS(X0H106JP)
 5016-680 Update resource: PM.FONTS(X0H107JP)
 5016-680 Update resource: PM.FONTS(X0H210JP)
 5016-680 Update resource: PM.FONTS(X0RK141P)
2003-04-01 13:20:25 MST pdxtloadpds (0)
```

Figure 13. Messages generated during the resource-population process

These describe the various areas of the information in Figure 13 on page 102:

1

This shows the underlying command that Infoprint XT issued to update the AFP resources. If you specified a resource group, **-g** identifies the group. The value for **-F** corresponds to the font data set that you specified with the FONTLIB DD statement. **-O** is the overlay data set, and **-P** is the page segment data set.

2, **3**, and **4**

The entries in this section list the AFP font, overlay, and page segment resources that Infoprint XT successfully updated. If errors occurred while updating AFP resources, this section also includes error information. The population process does not necessarily update resources in groups, by resource type. Therefore, you can use the resource names shown in parentheses to identify the types of resources to which the entries relate. Names that begin with C, T, and X are AFP font resources. Names that begin with O are AFP overlays, and names that begin with S are AFP page segments.

Loading resources and populating PDSs and PDSEs by using AIOZRESL

Infoprint XT provides the AIOZRESL sample JCL, which invokes the AIOZR2AR and AIOZRPDS utility programs as separate steps. Typically, you use this JCL when you need to update your resource data base. The user ID from which you run the JCL has the combined requirements of the AIOZR2AR and AIOZRPDS programs that it invokes. The user ID:

- Must be a member of the AIOUSER group.
- Must have read access to the data set specified by the XRSPDS DD statement.
- Must have write access to the data sets specified by these:
  - FONTLIB DD statement

- OVLYLIB DD statement
- PSEGLIB DD statement

JCL statements for loading Xerox resources and populating PDSs and PDSEs

Infoprint XT provides sample JCL that you can modify to both load your Xerox resources, and update your AFP resources. Infoprint XT provides the sample JCL in the SAIOSAMP data set. "Sample JCL for loading Xerox resources and copying AFP resources in a single job" on page 103 shows the sample JCL that Infoprint XT provides.

Sample JCL for loading Xerox resources and copying AFP resources in a single job

```
//AIOZRESL JOB Statement Parameters
//**********************************************************************
//* Copyright 2003,2019 IBM Corporation                               *
//* Copyright 2007,2019 RICOH Company, Ltd                            *
//*                                                                    *
//* Permission to use, copy, modify, and distribute this              *
//* software for any purpose with or without fee is hereby            *
//* granted, provided that the above copyright notices appear         *
//* in all copies.                                                     *
//*                                                                    *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY         *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE        *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR           *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH       *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER            *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER       *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR              *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE         *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.            *
//*                                                                    *
//*  USE THIS MULTI STEP JOB TO CONVERT XEROX RESOURCES FOR USE WITH  *
//*  INFOPRINT XT FOR Z/OS AND TO LOAD THE AFP RESOURCES INTO    @01C*
//*  PARTITIONED DATA SETS FOR USE BY OTHER PROGRAMS, SUCH AS PSF.    *
//*                                                                    *
//*  USE THIS JOB FOR LOADING A FEW SELECTED RESOURCES.              *
//*                                                                    *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE          *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE             *
//*  FOLLOWING MODIFICATIONS:                                         *
//*                                                                    *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS.    *
//*                                                                    *
//*  2) CHANGE hlq ON THE XRSPDS DD TO IDENTIFY THE DATA SET          *
//*     CONTAINING THE RESOURCES.  THIS DATA SET IS USUALLY          *
//*     POPULATED BY THE AIOZRTAP UTILITY.                           *
//*                                                                    *
//*  3) MODIFY THE SYSIN DD PARAMETERS IN THE FIRST STEP.  SPECIFY   *
//*     THE XEROX RESOURCES TO BE LOADED.                            *
//*                                                                    *
//*  4) MODIFY THE SELECT DD PARAMETERS AS DESIRED.                  *
//*                                                                    *
//*  5) CHANGE hlq ON THE FONTLIB, OVLYLIB AND PSEGLIB DDS.          *
//*                                                                    *
//*  6) MODIFY THE SYSIN DD PARAMETERS IN THE SECOND STEP IF         *
//*     NECESSARY.                                                    *
//*                                                                    *
//*  7) ENSURE YOU RUN THIS JOB FROM A USER ID THAT IS IN THE        *
//*     AIOUSER GROUP.                                               *
//*                                                                    *
//* CHANGE ACTIVITY:                                                  *
//* $01=OA04543,H29Q100,030822,BLDDH  : Correct product name in  @01A*
//*                                     opening comments.        @01A*
//**********************************************************************
//*//*----------------------------------------------------------------*
//*  FIRST STEP - CONVERT THE XEROX RESOURCES                        *
//*----------------------------------------------------------------*
//*
//AIOZR2AR EXEC  PGM=AIOZR2AR
//*
//**********************************************************************
//* SPECIFY PROCESSING OPTIONS.  EXAMPLES ARE PROVIDED (COMMENTED).
//**********************************************************************
//SYSIN    DD *
* Specify a paper size (optional).  Uncomment one of the following
```

```
* lines:
* -m letter
* -m A4
*
* Specify a resource group (optional)
* -g my_group
*
/*
//************************************************************************
//* SELECT RESOURCES TO LOAD
//************************************************************************
//SELECT    DD *
* The following selects a JDL called DFAULT:
   dfault.jdl
/*
//************************************************************************
//* IDENTIFY THE PDS WITH THE XEROX RESOURCES
//************************************************************************
//XRSPDS    DD DSN=hlq.XRSPDS,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//************************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//************************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZR2AR.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
//*
//*-----------------------------------------------------------------*
//*  SECOND STEP - LOAD THE RESOURCES INTO PARTITIONED DATA SETS     *
//*-----------------------------------------------------------------*
//*
//AIOZRPDS EXEC  PGM=AIOZRPDS
//*
//************************************************************************
//* SPECIFY PROCESSING OPTIONS.  EXAMPLES ARE PROVIDED (COMMENTED).
//************************************************************************
//SYSIN    DD *
* Specify a resource group (optional).
* -g my_group
*
/*
//************************************************************************
//* IDENTIFY THE AFP RESOURCE PARTITIONED DATA SETS.
//************************************************************************
//FONTLIB  DD DSN=hlq.FONTLIB,DISP=SHR
//OVLYLIB  DD DSN=hlq.OVLYLIB,DISP=SHR
//PSEGLIB  DD DSN=hlq.PSEGLIB,DISP=SHR
//*
//SYSPRINT DD SYSOUT=*
//*
//************************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//************************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZRPDS.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

These describe the various statements in "Sample JCL for loading Xerox resources and copying AFP resources in a single job" on page 103:

AIOZRESL JOB

This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZRESL with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

For descriptions of the statements for the first step of the AIOZRESL utility, and any changes that you should make, see "JCL statements for loading Xerox resources" on page 88. This reference applies to

the AIOZR2AR utility program. For descriptions of the statements for the second step, which apply to the AIOZRPDS utility, see "JCL statements for AFP resource population" on page 99.

Note: The resource group or directory for the AIOZR2AR and AIOZRPDS utility programs must be the same. For AIOZR2AR, you use the **-g** option to specify the group, or the **-o** option to specify the directory, or you can use the default **common** resource group. For AIOZRPDS, the corresponding options are **-g** or **-i**.

Understanding the load process for Xerox resources

In the Xerox environment, all printable and non-printable Xerox resources reside on the Xerox printer. You use the Infoprint XT load process to create the AFP versions of printable Xerox resources and to gather reformatted information from the non-printable resources into metrics files.

When you convert Xerox jobs, Infoprint XT must have access to the converted AFP resources and the reformatted information in the metrics files.

When you print converted Xerox jobs on Ricoh Production Print Solutions printers, the printer driver software must have access to the converted AFP resources. AFP archiving solutions must also have access to the converted AFP resources.

When you load Xerox resources:

- Infoprint XT creates AFP versions of Xerox font, image, logo, and form resources;
- Infoprint XT saves internal information about most types of resources in metrics files. Infoprint XT uses this information to reduce processing time when it converts a Xerox job that uses the resources.

Infoprint XT resource directories for the load process

Several directory-related actions occur when you use Infoprint XT to load Xerox resources:

AFP resource directory
Infoprint XT creates a directory for the AFP versions of Xerox font, image, logo, and form resources. You control the directory that Infoprint XT creates when you enter the **pdxtloadres** command. The AFP resource directory is one of these:

/var/pdxt/resources/common
This is the common Infoprint XT resource directory.

/var/pdxt/resources/*resgrp*
You can specify an Infoprint XT directory for a specific group of resources. *resgrp* is a name you choose.

/*OtherDirectory*
You can also specify a separate, existing directory on the z/OS system.

Metrics directory
For each type of Xerox resource that you load, Infoprint XT creates a related metrics file. This file contains information about the resource that Infoprint XT uses to reduce processing time when it converts a Xerox job that uses the resource. The directory in which Infoprint XT writes the metrics file depends on the load options. The metrics directory is one of these:

- /var/pdxt/resources/common/metrics
- /var/pdxt/resources/*resgrp*/metrics
- /*OtherDirectory*/metrics

Xerox resource directory
For all resources that successfully load, Infoprint XT copies the original Xerox resource to the system. The directory in which Infoprint XT writes the Xerox resources depends on the load options. The Xerox resource directory is one of these:

- /var/pdxt/resources/common/xrxres
- /var/pdxt/resources/*resgrp*/xrxres

- /*OtherDirectory*/xrxres

Resource samples directory

When you sample AFP overlays from Xerox FRM resources or create color samples, Infoprint XT creates a directory to contain the generated sample jobs. The directory where Infoprint XT saves the resource samples depends on the load options. The resource samples directory is one of these:

- /var/pdxt/resources/common/samples
- /var/pdxt/resources/*resgrp*/samples
- /*OtherDirectory*/samples

Note: Use these directory definitions when Infoprint XT procedures direct you to do actions that involve the AFP resource directory, metrics directory, Xerox resource directory, or resource samples directory.

Types of Xerox resources that you can load

Table 13 on page 106 contains information about the Xerox resources that you copy to the z/OS system and the files that Infoprint XT creates when you load the resources:

- Column one lists the types of Xerox resources and the valid file extension for each type. The actual names of Xerox resources are up to six characters. Xerox resource names can also contain numbers, and dollar signs ($). For example, p0612c.fnt is a common Xerox font.
- Column two specifies the prefixes for the AFP files that Infoprint XT generates from printable Xerox resources. Infoprint XT generates a single AFP file for each form, image, and logo. It generates three AFP files for each single-byte font; a coded font file, a character set file, and a code page file. If the entry in this column is empty, the associated Xerox resource is a non-printable resource.
- Column three specifies the extensions of the metrics files that Infoprint XT generates from the Xerox resources.

Table 13. Xerox resource extensions, AFP prefixes, and metrics extensions

Xerox resource type and extension	Resulting Infoprint XT AFP prefixes	Resulting Infoprint XT metrics extensions
Cluster Library - .lib		.alb
Command - .cmd [2]		.acm
Copy Modification Entry - .cme		.ace
Data - .dat [2]		.adt
Font - .fnt	C0, T1, X0 [1]	.afn (single-byte) .adm (double-byte)
Form - .frm	O1	.afr
Forms Source Library - .fsl [2]		.afs
Image - .img	SI	.aim
Ink Catalog - .ict [3]		
Ink Descriptor - .idr		.aid
Ink Source Library - .isl [2]		.ais
Job Descriptor Library - .jdl		.ajd
Job Source Library - .jsl		.ajs
Logo - .lgo	SL	.alg
Miscellaneous - .msc [2]		.ams

Table 13. Xerox resource extensions, AFP prefixes, and metrics extensions (continued)		
Xerox resource type and extension	**Resulting Infoprint XT AFP prefixes**	**Resulting Infoprint XT metrics extensions**
Page Descriptor Entry - .pde		.apd
Patch - .pch [2]		.apc
Stockset - .stk		.ast
Routing Text - .tst		.ats
Temporary - .tmp		.atp

Notes:

1. Not generated for double-byte character set fonts.

2. Infoprint XT loads these resources, but it does not use them when you process jobs. An IBM service representative might use the files for diagnostic purposes.

3. Infoprint XT does not load ink catalogs, but stores related information in the ink correlation table.

Loading Xerox double-byte character set (DBCS) and EBCDIC fonts

The Infoprint XT process that loads Xerox DBCS or EBCDIC fonts is different from the process that it uses for single-byte fonts. Infoprint XT does not generate the AFP character sets, coded fonts, and code pages for the Xerox DBCS or EBCDIC fonts. You must provide a set of double-byte AFP fonts that you use in place of the Xerox fonts. These fonts must be AFP outline fonts that fully conform to the MO:DCA FOCA standards (see *Font Object Content Architecture Reference*). You copy the AFP outline fonts to the appropriate AFP resource directory before you actually load the Xerox DBCS or EBCDIC fonts.

During the load process, Infoprint XT prepends XZ to the name of your Xerox DBCS or EBCDIC font when creating a default correlation entry for the font. For example, if you have a DBCS or EBCDIC Xerox font named HST25P.FNT, Infoprint XT creates a font correlation entry that specifies an AFP coded font name of XZHST25P.

To load a Xerox DBCS or EBCDIC font, you must:

1. If the font contains user-defined characters, make sure that the AFP font that you want to use in its place contains the same user-defined characters. Ricoh offers a separately-priced Infoprint XT feature for modifying AFP fonts.

2. Load all JDL, CME, PDE, STK and TST resources first to generate a resource group.

3. Copy the externally-created AFP outline font resources to the resource group before loading the Xerox resource.

4. If your AFP coded font name does not match the XZ*xxxxxx* naming convention, follow the procedure described in .

5. Load the Xerox DBCS or EBCDIC font.

Loading order for Xerox resources by resource type

You can load a single Xerox resource or you can load groups of Xerox resources. For groups, you can load resources that are all the same type, such as all fonts, or resources of different types. When you mix the types of resources, Infoprint XT loads them in a specific order. This is because some resources, such as forms, can require you to load other resources first. Xerox form resources often require fonts, images, and logos. The information returned from the load process lists the order.

Information files generated by Infoprint XT during resource tasks

Infoprint XT creates files in which it stores information about resource tasks, such as loading and deleting resources. The following list describes the various files that use the common resource group and its

AFP resource directory. If you load the resources in a different directory, substitute that AFP resource directory name:

/var/pdxt/resources/common/pdxtloadres.log
This file contains information about each time the **pdxtloadres** command runs. Infoprint XT writes new entries at the end of the file. The information for each invocation of the **pdxtloadres** command includes:

- The time when the command started.

- The options and values specified with the **pdxtloadres** command.

- The resources that Infoprint XT processed or tried to process. The entry for each resource includes the return code from resource processing. If a failure occurred, the entry includes the name of the processing step that failed. The entry also lists the path to the Xerox resource.

- The time when the command ended.

- The return code from the **pdxtloadres** command. If any of the resource entries has a non-zero return code, the command returns a non-zero return code.

These are examples of pdxtloadres.log entries:

```
2009-11-11 12:16:13 MST pdxtloadres -r -n *fnt
    tab.sft           0
    tab.aft           0
    ano1l.img        16 XRHDR    /tmp/waite/resources/ano1l.img
    po812p.fnt        0           /tmp/waite/resources/po812p.fnt
    rk26bp.fnt       16 FIXFNT   /tmp/waite/resources/rk26bp.fnt
    ra128p.fnt        0           /tmp/waite/resources/ra128p.fnt
2009-11-11 12:16:17 MST pdxtloadres (16)

2009-11-11 15:23:27 MST pdxtloadres -f delete -np0612c.fnt -g payroll
    p0612c.fnt        0 DELETED
    tab.sft           0
    tab.aft           0
2009-11-11 15:23:28 MST pdxtloadres (0)
```

These are examples of pdxtloadres.log entries for FRM sampling:

- When testjob resources required for FRM sampling are not loaded in the resource group you specified, **pdxtloadres** issues messages 5016-657 and 5016-658 in pdxtloadres.lst, and writes entries like these in pdxtloadres.log:

```
2013-01-16 08:36:05 MST pdxtloadres -f sample -g mygroup -Nxero*.frm
    l0112c.fnt       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/l0112c.fnt
    l01bob.fnt       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/l01bob.fnt
    p0612c.fnt       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/p0612c.fnt
    p06bob.fnt       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/p06bob.fnt
    un111e.fnt       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/un111e.fnt
    pdxton.jdl       12 SAMP_RES /usr/lpp/pdxt/V3R3M0/testjob/pdxton.jdl
2013-01-16 08:36:05 MST pdxtloadres (12)
```

The log entries display the testjob directory from which you should load the missing resources.

- When **pdxtloadres** cannot determine the page size for a sampled overlay, it issues message 5016-656 in pdxtloadres.lst, and writes an entry like this in pdxtloadres.log:

```
2013-01-16 09:05:17 MST pdxtloadres -f sample -g mygroup -Nbadpgd.frm
    O1BADPGD          12 SAMP_PGD /var/pdxt/resources/mygroup/O1BADPGD
2013-01-16 09:05:17 MST pdxtloadres (12)
```

- If **pdxtx2afp** cannot successfully convert an FRM sample job, **pdxtloadres** writes an entry like this in pdxtloadres.log:

```
2013-01-16 09:05:17 MST pdxtloadres -f sample -g mygroup -Nfsfail.frm
    O1FSFAIL          12 SAMP_X2A /var/pdxt/resources/mygroup/O1FSFAIL
2013-01-16 09:05:17 MST pdxtloadres (12)
```

- When other failures occur during FRM sampling, **pdxtloadres** writes messages describing the failures in pdxtloadres.lst, and writes entries like these in pdxtloadres.log:

```
2013-01-16 09:05:17 MST pdxtloadres -f sample -g mygroup -Nbadpgd.frm
    010VLSTA          12 SAMP_OVS /var/pdxt/resources/mygroup/010VLSTA
    010VLCAL          12 SAMP_OVC /var/pdxt/resources/mygroup/010VLCAL
    010VLOPN          12 SAMP_OVO /var/pdxt/resources/mygroup/010VLOPN
    010VLFRD          12 SAMP_OVR /var/pdxt/resources/mygroup/010VLFRD
    01XRIOPN          12 SAMP_XRO /var/pdxt/resources/mygroup/01XRIOPN
    01XRIWRI          12 SAMP_XRW /var/pdxt/resources/mygroup/01XRIWRI
2013-01-16 09:05:17 MST pdxtloadres (12)
```

- When **pdxtloadres** successfully samples one or more AFP overlays that it created from Xerox FRM resources, it writes entries like these in pdxtloadres.log:

```
2013-01-16 09:23:52 MST pdxtloadres -f sample -g mygroup -Nxero*.frm
    01XERO011          0 SAMPLE   /var/pdxt/resources/mygroup/01XERO011
    01XERO014          0 SAMPLE   /var/pdxt/resources/mygroup/01XERO014
    01XERO017          0 SAMPLE   /var/pdxt/resources/mygroup/01XERO017
2013-01-16 09:23:55 MST pdxtloadres (0)
```

Notes:

1. For convenience, Infoprint XT provides a link to this file in the /var/pdxt/resources/common/pdxtloadres directory.

2. Infoprint XT only records information in the log if the command tried to process a resource. For example, if you use the wrong command option or value, **pdxtloadres** stops immediately. It does not try to process any resources.

/var/pdxt/resources/common/pdxtloadres.lst

This file contains the messages that Infoprint XT wrote to standard error for the last time the **pdxtloadres** command ran. Infoprint XT overwrites the information in this file each time the command runs.

Note: For convenience, Infoprint XT provides a link to this file in the /var/pdxt/resources/common/pdxtloadres directory.

/var/pdxt/resources/common/pdxtloadres.rty

Infoprint XT creates a retry file if it did not load all the resources that the **pdxtloadres** command specified the last time the command ran. It writes the path and file name for each resource that failed on a separate line in the pdxtloadres.rty file. You can correct the problems that Infoprint XT reported and then try to load the resource or resources again. When you enter the **pdxtloadres** command, include the **-l** option with the command but do not enter a value for that option. This causes Infoprint XT to use the information in the pdxtloadres.rty file to determine the resources to load.

Note: Infoprint XT overwrites the information in the pdxtloadres.rty file with each time the **pdxtloadres** command runs.

Error information for resources that fail to load

Infoprint XT also stores information about the individual resources that fail in the working directory that it uses during the resource load process. Whether you load resources in the common resource group, a specific resource directory, or an existing directory determines what Infoprint XT uses as the working directory. The working directory for the resource load process is one of these:

- /var/pdxt/resources/common/pdxtloadres
- /var/pdxt/resources/*resgrp*/pdxtloadres
- /*OtherDirectory*/pdxtloadres

This list describes the various files in the working directory:

resname.ext.lst

Contains information that Infoprint XT generates while it converts the resource. *resname.ext* is the actual name of the resource. If the resource load process failed, Infoprint XT includes error information in this file.

xxx_corr.lst

Contains information that Infoprint XT generates while it builds the correlation table entry for one or more resources of a specific type. *xxx* specifies the type of Xerox resource.

xxx_metr.lst

Contains information that Infoprint XT generates while it creates the metrics files for one or more resources of a specific type. *xxx* specifies the type of Xerox resource.

The file includes error messages about any resource for which Infoprint XT did not generate a metrics file. For example, if you issue this command:

```
pdxtloadres -g myresgrp -n 'form01.frm'
```

and **pdxtloadres** generates an entry like this in `pdxtloadres.log`:

```
form01.frm 12 GEN_METR C:\mydir\xerox_res\form01.frm
```

you can find messages that explain the return code 12 in the GEN_METR step in `/var/pdxt/resources/myresgrp/pdxtloadres/frm_metr.list`. The `frm_metr.list` file might include messages like these:

```
5019-320 E (XFN) The font processor cannot find font: FONT01
                 in the font correlation table.
5019-322 E (XFN) The font processor cannot find reformatted
                 font: FONT01 in the reformatted Xerox resource
                 path.
5017-095 E (M@M) The form converter cannot find image: IMAGEX
                 in the image correlation table.
5017-097 E (M@M) The form converter cannot find image: IMAGEX
                 in the reformatted Xerox resource path.
5017-096 E (M@M) The form converter cannot find logo: LOGO54
                 in the logo correlation table.
5017-097 E (M@M) The form converter cannot find logo: LOGO54
                 in the reformatted Xerox resource path.
```

These messages identify three resources that `form01.frm` invokes: `font01.fnt`, `imagex.img`, and `logo54.lgo`. The resource utility cannot create a metrics file for `form01.frm` because it cannot rind these resources in the resource group you specified. The result is return code 12 in the GEN_METR step for `form01.frm`. To load the missing resources and load `form01.frm`, issue this command:

```
pxtloadres -g myresgrp -r -n 'font01.fnt' -n 'imagex.img
   -n 'logo54.lgo' -n 'form01.frm'
```

For more information, see .

xxx_metr.xrl

Infoprint XT generates this file when failures occur while it tries to create metrics files for a specific type of resource. *xxx* is the extension of the resource type, such as `cme` or `fnt`. The file lists those resources that Infoprint XT processed successfully.

resname.axx.failed

Contains output that Infoprint XT generates when a failure occurs while it tries to create a metrics file. *resname* is the actual name of the resource. a*xx* is the extension of the metrics file for the resource. For example, a`jd` is the extension of a metrics file for a Xerox JDL resource. You can ignore the information in this file.

Notes:

1. Infoprint XT deletes existing files in the **pdxtloadres** subdirectory and writes new information each time that you run the **pdxtloadres** command. It does not save any of the information for the previous time the command ran.

2. Infoprint XT provides a method to display the information from these files so that you do not have to go to the working directory to access the files. See the description of the **-e** command option for the **pdxtloadres** command in "Using the pdxtloadres command to load Xerox resources" on page 111.

Determining whether you require resource groups

Within Infoprint XT, a resource group contains all of the information for a set of resources. This includes the AFP resources, other information that it generates when you load resources, and copies of the original Xerox resources. Infoprint XT provides a default resource group, named **common**, that you can use to load all of your Xerox resources.

For some installations, a single resource group might not be adequate. The use of custom Infoprint XT resource groups lets you load different versions of the same Xerox resource. You can then request a specific version when you submit a job for conversion and processing. You might find this useful if you provide printing services to different customers. For example, **dfault.jdl** is a common name for a starting JDL that defines one or more JDEs. Because of the characteristics of their jobs, the **dfault.jdl** for one customer might be very different from the **dfault.jdl** for another customer. You can also use resource groups if you had several Xerox printers, and each printer had a different set of resources.

If you choose to use multiple resource groups, you use the AIOZR2AR utility program or the **pdxtloadres** command to load each set of resources separately. You can then use the **-g** or **-r** option of the AIOZ2AFP utility or the **pdxtx2afp** command to specify which set of resources to use for processing jobs. See "Using the pdxtloadres command to load Xerox resources" on page 111 for information about the **-g** and **-r** options.

If you use a printer driver, such as Print Services Facility for z/OS, to print the jobs that Infoprint XT generates, you can also use the AIOZRPDS utility program for each group of resources. This program copies the AFP resources to a location that you identify to the printer driver.

When you submit a job, you could instruct Infoprint XT to include the AFP resources inline in the AFP data stream. However, if the job uses a large number of resources, this method can impact performance. See xinlr transform conversion parameter on page "xinlr = all:cs:cp:cf:pseg:ovly:inlr" on page 210 for more information.

Scanning jobs for required resources

When you initially set up Infoprint XT, you loaded all the resources that were on the Xerox printer or printers. If you add applications that generate new jobs and that use new resources, you can scan the jobs to determine the resources they require. This is an iterative process because some Xerox resources require other Xerox resources. For example, a Xerox form might require one or more images and fonts.

You can use the AIOZ2AFP utility or the **pdxtx2afp** command to create a preliminary list of the resources that a job requires. When you scan the job, use the **xafprc=12** and **xconvert=no** conversion parameters. For the syntax of the **pdxtx2afp** command and examples of its use, see Chapter 7, "Submitting Xerox jobs for processing," on page 167.

Note: Before you scan the job, you must load the JDL for the job. You must also load all of the fonts that the starting JDL and JDE pair specify.

> Programming Interface Information

Using the pdxtloadres command to load Xerox resources

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the Infoprint XT **pdxtloadres** command to load all the Xerox resources on the z/OS system and to create the AFP versions of printable resources. The command provides options that you can use to control how and where Infoprint XT creates the converted resource files. You can also use the **pdxtloadres** command to delete resources or sample overlays that Infoprint XT creates from Xerox

FRMs. The z/OS user name from which you run the **pdxtloadres** command must be a member of the AIOUSER group.

The syntax of the **pdxtloadres** command is:

```
pdxtloadres [ -f load ]
            [ -a ioca_rt | no_ioca_rt ]
            [ -b spcprt | spcrmi ]
            [ -c xerox | grayscale | [ lp ]:[ mp ]:[ hp ]]
            [ -d auto | all | none ]
            [ -e listings | nolistings ]
            [[ -g common | resgrp ] | -o OtherDirectory ]
            [ -H color | nocolor ]
            [ -i | -r ]
            [ -l listfile | -n pattern ]
            [ -L listfile | -N pattern ]
            [ -m letter | medium ]
            [ -M none | all | xerox | xerox+font1:font2:fontn |
                xerox-font1:font2:fontn | font1:font2:fontn ]
            [ -p 300_1 | 300_2 ]
            [ -s none | word | trnw | char ]
            [ -S copies

pdxtloadres -f delete
            [ -e listings | nolistings ]
            [[ -g common | resgrp ] | -o OtherDirectory ]
            -l listfile | -n pattern

pdxtloadres -f sample
            [[ -g common | resgrp ] | -o OtherDirectory ]
            -L listfile | -N pattern
            [ -S copies ]
```

Note: These descriptions use the default values that Infoprint XT supplies for the **pdxtloadres** options. You can change the default values by using the PDXTLOADRES_ARGS environment variable. See "Controlling the default arguments when you compile JSLs (PDXTLOADRES_ARGS)" on page 35.

The **pdxtloadres** options are:

-a ioca_rt | no_ioca_rt

Specifies whether Infoprint XT uses the IOCA replicate-and-trim function for the shading patterns in data streams and forms. Valid values are:

ioca_rt

Infoprint XT uses the IOCA replicate-and-trim function. This is the default.

no_ioca_rt

Infoprint XT does not use the IOCA replicate-and-trim function.

Notes:

1. If one or more of your printers do not support the IOCA replicate-and-trim function, specify `no_ioca_rt`.

2. You can further refine the shading patterns with the **-p** option. See pdxtloadres -p option on page "-p 300_1 | 300_2" on page 119.

-b spcprt | spcrmi

Controls how Infoprint XT interprets spacing characters in a Xerox font during the load process. Valid values are:

spcprt

Infoprint XT interprets spacing characters in the font as Presentation Text Object Content Architecture text-string characters. This is the default.

spcrmi

Infoprint XT interprets spacing characters in the font as Relative Move Inline structured fields.

Notes:

1. Restrictions apply when you use the **-b** option. See Spacing characters in Xerox fonts on page "Spacing characters in Xerox fonts" on page 13.

2. If you use this option to load specific fonts, reload any forms that use those fonts.

3. You can also change how Infoprint XT interprets spacing characters in Xerox fonts when FILE DJDEs in a job specify the fonts. See xspcrmi transform conversion parameter on page "xspcrmi = yes | no" on page 217.

-c <u>xerox</u> | grayscale | [*lp*]:[*mp*]:[*hp*]

Controls how Infoprint XT interprets Xerox shading when it loads FRMs. Valid values are:

<u>xerox</u>

Infoprint XT emulates Xerox shading and produces raster dot patterns in the AFP that it generates. This is the default.

grayscale

Infoprint XT uses Logical Page and Object Area Coloring to substitute grayscale for the standard shading characters in FRMs. It uses default percentages of grayscale coverage for the levels of Xerox shading:

LIGHT

Five percent (5%) coverage.

MEDIUM

Ten percent (10%) coverage.

HEAVY

Fifteen percent (15%) coverage.

lp : mp : hp

Infoprint XT substitutes grayscale for the Xerox shading and uses coverage percentages you specify. For each position in the value, you can specify an integer from 0 through 100:

lp

The coverage percentage that Infoprint XT uses for LIGHT shading. The default is 5%.

mp

The coverage percentage that Infoprint XT uses for MEDIUM shading. The default is 10%.

hp

The coverage percentage that Infoprint XT uses for HEAVY shading. The default is 15%.

Each position in the value is optional: however, you must include the colons (:) between the positions. If you omit any position, Infoprint XT uses the default percentage for LIGHT, MEDIUM, or HEAVY. These are examples of values you can specify:

-c :8:16

Infoprint XT uses 5% coverage for LIGHT shading, 8% for MEDIUM, and 16% for HEAVY.

-c 3

Infoprint XT uses 3% coverage for LIGHT shading, 10% for MEDIUM, and 15% for HEAVY.

-c :11

Infoprint XT uses 5% coverage for LIGHT shading, 11% for MEDIUM, and 15% for HEAVY.

-c ::14

Infoprint XT uses 5% coverage for LIGHT shading, 10% for MEDIUM, and 14% for HEAVY.

-c 4:9:12

Infoprint XT uses 4% coverage for LIGHT shading, 9% for MEDIUM, and 12% for HEAVY.

Note: Restrictions apply when you use the **-c** option. See Grayscale substitution for Xerox shading on page "Grayscale substitution for Xerox shading" on page 11.

-d <u>auto</u> | all | none

Controls how Infoprint XT processes encrypted Xerox fonts. Valid values are:

<u>auto</u>

Infoprint XT automatically determines whether each font requires decryption. This is the default.

all
> Infoprint XT runs its decryption utility for every font that it processes. You can use this option to force Infoprint XT to decrypt individual fonts or groups of fonts when it cannot automatically detect that the fonts are encrypted.

none
> Infoprint XT does not run its decryption utility for any of the fonts that it processes. You can use this option to prevent Infoprint XT from attempting to decrypt individual fonts or groups of fonts when it cannot automatically detect that the fonts are not encrypted.

-e listings | nolistings
Controls whether Infoprint XT writes the listings from the individual steps of the resource-load or resource-delete process to standard error. These listings can contain error information. Valid values are:

listings
> Infoprint XT writes the listings to standard error.

nolistings
> Infoprint XT does not write the listings to standard error. This is the default.

-f load | delete | sample
Specifies whether Infoprint XT loads or deletes Xerox resources, or samples AFP resources that it creates from Xerox resources. The default is that Infoprint XT loads resources. Valid values are:

load
> Infoprint XT loads Xerox resources. This is the default.

delete
> Infoprint XT deletes Xerox resources. Infoprint XT deletes the information that it generated during the load process and deletes the original Xerox resources.

sample
> Infoprint XT samples AFP overlays that it creates from Xerox FRM resources. For each FRM you specify, **pdxtloadres** generates a small sample job and submits it to **pdxtx2afp** to create an AFP overlay sample.

Notes:

1. If the AFP resource directory contains DBCS and EBCDIC fonts, Infoprint XT does not delete them when it deletes the Xerox DBCS and EBCDIC font resources.

2. Before you sample FRMs, you must load the FNT and JDL resources from the SIOAXRES data set or `/usr/lpp/pdxt/V3R3M0/testjob` into the resource group that contains the FRMs and overlays you want to sample. If you have already loaded any of these resources in the resource group, you do not have to reload them.

3. If **pdxtx2afp** fails to convert a sample job, you can use the normal data stream conversion diagnostic methods to retain the job and view error messages in `pdxtx2afp.log`.

-g common | *resgrp*
Specifies a resource group name that Infoprint XT uses to build subdirectories in the directory. Infoprint XT uses these subdirectories to store the converted AFP resources, the metrics files, and copies of the original Xerox resource files. Valid values are:

common
> Infoprint XT builds subdirectories in `/var/pdxt/resources/common`. This is the default.

resgrp
> Infoprint XT builds subdirectories in `/var/pdxt/resources/`*resgrp*. The *resgrp* name must be alphanumeric and cannot contain any special characters.

Note: If you specify the **-g** option, you cannot specify the **-o** option. If you do not specify either **-g** or **-o**, the **pdxtloadres** command uses the common resource group, which is `/var/pdxt/resources/common`.

-H color | <u>nocolor</u>

Specifies whether Infoprint XT honors Xerox highlight color commands during resource conversion. Valid values are:

color

Infoprint XT processes highlight color commands that it finds in Xerox resources.

<u>nocolor</u>

Infoprint XT does not process highlight color commands. This is the default.

-i

For a specific Xerox resource that is already loaded, Infoprint XT reconverts the resource. If the Xerox resource is a printable resource, Infoprint XT also rebuilds the AFP file or files. Infoprint XT uses the original version of the Xerox resource that it copied to the Xerox resource directory when you originally converted the resource. You might find this option useful for reconverting a resource to use a different medium or a different shading pattern.

Notes:

1. If you specify the **-i** option, you cannot specify the **-r** option.

2. If you specify a Xerox resource that is not currently loaded, Infoprint XT issues an error message when you specify the **-i** option.

-l *listfile*

Specifies the resources that you want Infoprint XT to load or delete. The value is:

listfile

Either a file on the z/OS system that contains the resource names or a stream. Each resource in the file must be listed on a separate line. If you specify the list of resources in a stream, use one of these formats:

-l -

A dash indicates that Infoprint XT reads the resource names from standard input.

-l fd:*n*

`fd:`*n* indicates that Infoprint XT reads the resource names from the file descriptor that you specify; where *n* is the file descriptor number. For example, `fd:7`. Specify a file descriptor that the **pdxtloadres** command does not already use. See <u>"Streams used by the pdxtloadres command" on page 120</u> for a list of reserved file descriptors.

Notes:

1. If you specify the -l option, you cannot specify the -L or -n option. If you do not specify either -n or -l, the **pdxtloadres** command updates correlation tables, as needed.

2. If you specify the -l - option, you cannot specify the -L - option.

3. You cannot use wildcard characters in the entries in the list file.

4. If you are loading resources, you can specify Xerox resources with names that follow Infoprint XT for z/OS naming conventions. See <u>Table 14 on page 118</u>.

5. If you are loading resources, you can specify the -l option without a value. Infoprint XT tries to load resources by using the retry file. See <u>/var/pdxt/resources/common/pdxtloadres.rty file</u> on page <u>"/var/pdxt/resources/common/pdxtloadres.rty" on page 109</u>.

6. If you use both the -l option and the -i option, do not include path information with the resource names. Only specify the resource names in lowercase characters.

7. If you are deleting resources, you must specify either the -l option or the -n option. The resource names that you specify for deletion must be lowercase. You cannot specify resource names that follow Infoprint XT for z/OS naming conventions.

8. The entries in the resource list might be PDS members specified in the form `"pdsname(membername)"`. The PDS name must be completely specified. The resource list itself must be a stream or an HFS or zFS file. It cannot be a sequential data set or PDS member.

-L *listfile*

Specifies the FRM resources that you want Infoprint XT to sample. The value is:

listfile
> Either a file on the z/OS system that contains the resource names or a stream. Each resource in the file must be listed on a separate line. If you specify the list of resources in a stream, use one of these formats:

> **-L -**
>> A dash indicates that Infoprint XT reads the resource names from standard input.

> **-L fd:***n*
>> `fd:`*n* indicates that Infoprint XT reads the resource names from the file descriptor that you specify; where *n* is the file descriptor number. For example, `fd:7`.

Notes:

1. If you specify the `-L` option, you cannot specify the `-N` option.
2. If you specify the `-L  -` option, you cannot specify the `-l  -` option.
3. You cannot use wildcard characters in the entries in the list file.
4. You can specify Xerox resources with names that follow Infoprint XT for z/OS naming conventions. See Table 14 on page 118.

-m <u>letter</u> | *medium*
> Specifies the medium (paper) size that Infoprint XT uses when it loads Xerox forms. The values are:

> **<u>letter</u>**
>> Infoprint XT uses a letter medium size of 8.5 x 11 inches (215.9 x 279.4 mm) when it converts form resources. This is the default.

> *medium*
>> Infoprint XT uses one of these valid paper sizes:

>> folio
>> ledger
>> legal
>> A3
>> A4
>> A4LT
>> B4

Notes:

1. Infoprint XT only uses the paper size that you specify if the Xerox resource does not explicitly define the paper size. Any value in the resource overrides the value of the **-m** option.
2. A4LT is a custom paper size that is 8.5 inches by 11.69 inches, or 216 mm by 297 mm.

-M <u>none</u> | all | xerox | xerox+*font1:font2:fontn* **| xerox-***font1:font2:fontn* **|** *font1:font2:fontn*
> Specifies whether Infoprint XT generates AFP magnetic character ink recognition (MICR) fonts when it loads Xerox fonts. You can specify one of these values:

> **<u>none</u>**
>> Infoprint XT does not generate AFP MICR fonts for any of the Xerox fonts that it loads. This is the default.

> **all**
>> Infoprint XT generates AFP MICR fonts for all the Xerox fonts that it loads.

> **xerox**
>> Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with these standard prefixes for MICR font names:

>> - E13B
>> - E14B
>> - CMC7

For example, Infoprint XT generates AFP MICR fonts for these Xerox fonts: E13BPX.FNT, E14BL.FNT, CMC7J.FNT.

xerox+*font1:font2:fontn*

Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with E13B, E14B, or CMC7. In addition, it generates AFP MICR fonts for up to 33 fonts that you specify by name. Separate the font names with colons (:). The fonts you specify can be any Xerox fonts.

xerox-*font1:font2:fontn*

Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with E13B, E14B, or CMC7, except for the fonts you specify after the minus sign (-). You can specify up to 33 Xerox fonts that begin with the standard prefixes for MICR font names. Separate the font names with colons.

font1:font2:fontn

Infoprint XT generates AFP MICR fonts for the Xerox fonts you specify. You can specify up to 33 fonts. Separate the font names with colons. The fonts you specify can be any Xerox fonts. Infoprint XT does not generate AFP MICR fonts for any Xerox fonts that begin with the standard prefixes for MICR font names unless you specify them in the list of fonts.

-n *pattern*

Specifies the Xerox resources to load or delete. The value is:

pattern

The file or pattern-matching strings that specify groups of resources. For example:

- To load all Xerox font files in the directory fonts, specify:

```
pdxtloadres -n '/fonts/*.fnt'
```

- To load all resources in the current directory that begins with the letter a, specify:

```
pdxtloadres -n './a*'
```

- To delete a specific JDL file in a specific group, specify:

```
pdxtloadres -f delete -g payroll -n dplonl.jdl
```

You can specify more than one pair of **-n** options and patterns, up to a maximum of 50.

Notes:

1. If you specify the **-n** option, you cannot specify the **-l** option. If you do not specify either **-n** or **-l**, the **pdxtloadres** command updates correlation tables, as needed.

2. If you use both the **-n** option and the **-i** option, do not include path information in the value for the **-n** option.

3. When you specify a pattern-matching string, it is recommended that you enclose the string in single quotation marks (' '). Otherwise, a $ symbol in a pattern-matching string enclosed in double quotation marks (" ") represents a variable unless you specify a backslash (\) before the symbol. For example, you must specify -n 'F$P06*' or -n "F\$P06*" instead of -n "F$P06*".

4. When you specify pattern-matching strings, Infoprint XT looks for resource names that match the z/OS patterns. It does not convert the patterns to the Xerox $xrname$.ext format or search for resources whose names use that format.

5. When you delete resources, you must specify resource names in lowercase.

6. Infoprint XT can search a PDS for member names that match a given criteria. Only the member name can contain wildcard characters. The PDS name must be completely specified. For example:

   -n 'some.pds(F$*)' - Loads all fonts.
   -n 'some.pds(?$A*)' - Loads resources that begin with "A".

   You can load resources from more than one PDS or HFS or zFS directory, but you cannot load from both a PDS and an HFS or zFS directory at the same time.

7. When you load resources, the **pdxtloadres** command also recognizes Infoprint XT for z/OS naming conventions for Xerox resource files. You can transfer Xerox resources from a PDS to a UNIX System Services directory by using a method such as File Transfer Protocol (FTP). The Xerox resource data sets have specific naming conventions. See Table 14 on page 118.

Table 14. Infoprint XT for z/OS naming conventions for Xerox resource files	
Xerox resource extensions	**Corresponding z/OS name format**
*.CLS [1]	B#*
*.CME	C$*
*.CMD	D$*
*.DAT	A$*
*.FNT	F$*
*.FRM	M$*
*.FSL	G$*
*.ICT	U$*
*.IMG	I$*
*.IDR	V$*
*.ISL	W$*
*.JDL	J$*
*.JSL	K$*
*.LGO	L$*
*.LIB	B$*
*.MSC	S$*
*.PCH	H$*
*.PDE	P$*
*.STK	Y$*
*.TMP	E$*
*.TST	T$*

Note:

a. This is the source code, in an Infoprint XT format, for a reformatted Xerox cluster database LIB file.

-N *pattern*
Specifies the Xerox FRM resources to sample. The value is:

pattern
The file or pattern-matching strings that specify groups of resources. For example, to sample all Xerox FRM files in the resource group **forms**, specify:

```
pdxtloadres -f sample -g forms -N "*.frm"
```

You can specify more than one pair of -N options and patterns, up to a maximum of 50.

Notes:

1. If you specify the -N option, you cannot specify the -L option.

2. If you specify the -N option and the -i option, do not include path information in the value for the -N option.

3. When you sample resources, the **pdxtloadres** command also recognizes Infoprint XT for z/OS naming conventions for Xerox resource files. The Xerox resource data sets have specific naming conventions. See .

-o *OtherDirectory*

Specifies an existing directory in which you want Infoprint XT to store AFP versions of Xerox printable resources. Infoprint XT also creates a `metrics` subdirectory, an `xrxres` subdirectory, and a `pdxtloadres` subdirectory under the directory that you specify. The value is:

OtherDirectory

The directory other than `/var/pdxt/resources/common` or `/var/pdxt/resources/`*resgrp* where you want to store AFP resources.

Notes:

1. If you specify the **-o** option, you cannot specify the **-g** option. If you do not specify either **-o** or **-g**, the **pdxtloadres** command uses the common resource group.

2. If the directory that you specify does not exist, Infoprint XT issues an error message.

-p <u>**300_1**</u> **| 300_2**

Specifies the type of shading patterns that Infoprint XT uses when it converts Xerox forms. Valid values are:

<u>**300_1**</u>

Specifies the shading patterns used by Xerox 9700, 4x50, and 4x90 printers. This is the default.

300_2

Specifies the patterns used by Xerox 4x35 printers.

-r

For a specific Xerox resource that is already loaded, Infoprint XT loads a new version of the Xerox resource. If the Xerox resource is a printable resource, Infoprint XT also rebuilds the AFP file or files. If the load process is successful, Infoprint XT replaces the original copy of the Xerox resource in the `xrxres` subdirectory.

Note: If you specify the **-r** option, you cannot specify the **-i** option.

-s <u>none</u> **| word | trnw | char**

Specifies the type of spacing fidelity adjustments that Infoprint XT makes when it converts Xerox forms. Valid values are:

<u>**none**</u>

Infoprint XT does not make any spacing adjustments during conversion. This is the default and is adequate for most Xerox forms. However, if you see a noticeable difference between the Xerox printed form and the corresponding AFP overlay printed on an InfoPrint printer, you can make adjustments with the other values for this option.

word

Infoprint XT makes spacing adjustments at word boundaries.

trnw

Infoprint XT makes spacing adjustments at word boundaries, with minimal embedded blanks in Presentation Text Object Content Architecture text characters.

char

Infoprint XT makes spacing adjustments at both word and character boundaries.

Note: Use of word or character adjustments affects performance and results in larger AFP files.

-S *nnnnn*

Specifies the number of copies for each FRM sample you request. The value is:

nnnnn
>An integer from 1 through 32767. If you do not specify this parameter, Infoprint XT produces one copy of each FRM sample.

Streams used by the pdxtloadres command

The **pdxtloadres** command uses some file descriptors while it processes Xerox resources and ignores others:

fd0 (STDIN)
>The command does not use this stream.

fd1 (STDOUT)
>The command does not use this stream.

fd2 (STDERR)
>The command writes messages to this stream.

fd3
>If you define this stream, the command writes one record for each resource that it successfully loads or deletes. The command always reports the resource name in lowercase characters, such as p0612c.fnt.

fd8
>The default is that Infoprint XT appends information about the resource load process and the resource delete process to the pdxtloadres.log file, which is in the directory for the resource group. If you define this stream, the command redirects the information to this file descriptor. Infoprint XT automatically defines this stream when you process jobs that contain FILE DJDE commands that specify the D storage parameter. These are temporary resources; Infoprint XT loads the resources and then deletes them when the job finishes. Frequently processing jobs that specify temporary resources through FILE DJDE commands can cause the size of the log file to increase at a faster rate. Infoprint XT does not delete the pdxtloadres.log file from the directory for the resource group.
>
>**Note:** Infoprint XT writes the output from file descriptor eight to the pdxtloadres.log file in the working directory for the job. This file contains the names of the resources that Infoprint XT loaded and deleted.
>

fd9
>The command writes a file that contains problem determination information to file descriptor nine. It uses the z/OS **pax** command to generate a compressed archive of the resource directory. The archive is in USTAR format.

Return codes from the pdxtloadres command

Return codes from the **pdxtloadres** command have these meanings:

0
>The command successfully loaded or deleted all the specified resources.

EINVAL (121)
>An error exists with one of the command options.

E2BIG (145)
>The command contains too many command options.

ENOATTR (121)
>You specified a command option without a value, or you did not specify a required command option.

ENOENT (129)
>The command did not locate the resources to load or delete. The file or pattern that the **-l** or **-n** command option specified did not contain or match any valid file names.

ENOMEM (132)
Not enough memory is available for the command.

EEXIST (117)
A resource was already loaded; you did not specify the **-r** option with the command.

ECONNABORTED (1120)
The command did not load or delete one or more resources because of a non-zero return code from an associated subcommand.

ECONNRESET (1121)
The command did not load or delete one or more resources, but associated subcommands had return codes of zero.

other
Any other return codes that are not in this list are return codes from C functions. See "Error return code numbers" on page 247.

Examples: pdxtloadres command

You use the **pdxtloadres -b** command when you load one or more specific Xerox fonts. For example, after you issue:

```
pdxtloadres -g resgrp -n'*.font'
```

You might need to issue these:

- `pdxtloadres -g resgrp -b spcrmi -r -n'xrmicr.font'` to load all your Xerox font resources so that Infoprint XT interprets the spacing characters in the specified Xerox font as Relative Move Inline, rather than as Presentation Text Object Content Architecture text string characters.

- `pdxtloadres -g resgrp -r -n'*.form'` after reloading the specific fonts that this enhancement should affect to ensure that Infoprint XT interprets the spacing characters in the fonts you reloaded with **-b spcrmi** as Relative Move Inline in any overlays that invoke those fonts.

For more information about the syntax and use of the **pdxtloadres** command, see the **pdxtloadres** manual (man) page.

You can also set AIOZR2AR parameters by setting an environment variable. See "Controlling the default arguments when you compile JSLs (PDXTLOADRES_ARGS)" on page 35.

End Programming Interface Information

Correlating font, image, or logo resources manually

When you load Xerox fonts, images, and logos, Infoprint XT automatically generates the corresponding AFP resources. Infoprint XT also creates correlations that map the Xerox resources to their AFP counterparts. For most installations, the correlations that Infoprint XT makes satisfy all printing requirements. However, advanced users might want to change the correlations for purposes such as:

- Substituting a new font or image for an old one, which lets you change the appearance of the printed output. This eliminates any changes to the application that generates the jobs.

- Substituting AFP outline fonts for Xerox DBCS or EBCDIC fonts.

- Substituting AFP page segments for Xerox signature fonts. The size of some signature fonts can prevent Infoprint XT from creating a corresponding AFP font.

- Adjusting the horizontal or vertical placement of a signature or a logo.

To make correlation updates, create correlation tables in the metrics directory of the resource group. Separate tables exist for fonts, images, and logos. Each table has its own format. Each line in a correlation table is a separate entry consisting of keywords. All the text for the complete entry is in uppercase characters. No column restrictions exist. This means that the second keyword of one entry does not have to start at the same column location as the second keyword of another entry. You might want to use a specific columnar format, for readability, as you make entries.

After you create the manual correlation tables, use the **pdxtloadres** command to apply the updates.

Note: If Xerox spacing characters in fonts cause code page conflicts after you manually correlate a Xerox font to an AFP font, you can change how Infoprint XT interprets the spacing characters. See the **-b** command option in "Using the pdxtloadres command to load Xerox resources" on page 111.

Creating manual correlation entries for single-byte Xerox fonts

To make manual correlations for single-byte fonts, create a `tab.mft` file in the appropriate metrics directory. In the table, you can correlate a Xerox font to an AFP coded font, to an AFP character set and code page pair, or to an AFP page segment. The syntax for single-byte character set (SBCS) font entries in the correlation table is:

```
F   XName A2ETable { CFont | CSet Cpage | PSeg { Char | XChar } [ X=nn ] [ Y=nn ] }
```

Where:

F
Specifies that the entry is an SBCS font.

XName
Specifies the name of the Xerox font in uppercase characters and without the `.FNT` extension. For example, P0612C.

A2ETable
Specifies the name of the ASCII-to-EBCDIC translation table that Infoprint XT uses. Unless instructed otherwise by an IBM service representative, this value is X2AFP.

CFont
Specifies the name of the AFP coded font to use in place of the Xerox font. For example, X0KY96.

CSet Cpage
Specifies the name of an AFP character set and code page pair to use in place of the Xerox font. For example, C0H01030 T1H01030.

PSeg { Char | XChar } [X=nn] [Y=nn]
PSeg specifies the name of an AFP page segment, such as S1ABCA, to use in place of one character in the Xerox font. You have two methods by which you can identify the character in the Xerox font:

Char
Specifies the literal ASCII character in the font, such as A.

XChar
Specifies the code point of the character in hexadecimal notation, such as 41. If you have access to a Xerox printer, you can sample the font to determine the code point.

These are examples of both methods:

```
F ABC X2AFP S1ABCA A

F ABC X2AFP S1ABC41 41
```

Optionally, you can also adjust the positioning of the character that the page segment represents. The adjustments that you make are relative to the page segment when you look at it in the portrait orientation. The values are:

X=nn
Specifies a horizontal adjustment. *nn* is a value in pels. A positive value moves the page segment to the right. A negative value moves it to the left.

Y=nn
Specifies a vertical adjustment. *nn* is a value in pels. A positive value moves the page segment down on the page. A negative value moves it up.

Figure 14 on page 123 shows the various types of entries that you can make in a manual font correlation table for single-byte Xerox fonts.

```
F CRC12P X2AFP X0P0612C
F RK141P X2AFP C0UN411E T1UN411E
F CSFL30 X2AFP S1L3021  41
F CSFP01 X2AFP S1P0121  A
F CSFP02 X2AFP S1P0122  21 Y=-7
F CSFP03 X2AFP S1P0123  F X=3
F CSFP04 X2AFP S1P0124  Y X=-3 Y=4
```

Figure 14. Sample correlation entries for single-byte Xerox fonts

Creating manual correlation entries for double-byte Xerox fonts

Correlation table entries for DBCS Xerox fonts are similar to entries for SBCS fonts. However, you can only correlate a DBCS font to an AFP coded font. Add the DBCS entry to the same `tab.mft` file that has any SBCS entries you require. The syntax for a DBCS font entry is:

```
D XName A2ETable CFont
```

Where:

D
Specifies that the entry is a double-byte font.

XName
Specifies the name of the Xerox font in uppercase characters and without the `.FNT` extension.

A2ETable
Specifies the name of the ASCII-to-EBCDIC translation table that Infoprint XT uses. Unless instructed otherwise by an IBM service representative, this value is X2AFP.

CFont
Specifies the name of the AFP coded font to use in place of the Xerox font. For example, XZCX24L.

This shows an example of an entry for a DBCS font in the `tab.mft` table:

```
D CX24L X2AFP XZCX24L
```

If you require AFP DBCS outline fonts for use with double-byte Xerox fonts, contact your marketing representative for more information. You can also use AFP DBCS outline fonts from other sources. Those fonts must fully conform to the MO:DCA FOCA standards; see *Font Object Content Architecture Reference*.

Creating manual correlation entries for Xerox EBCDIC fonts

Correlation table entries for EBCDIC Xerox fonts are similar to entries for SBCS fonts. However, you can only correlate an EBCDIC font to an AFP coded font. Add the EBCDIC entry to the same `tab.mft` file that has any SBCS entries you require. The syntax for an EBCDIC font entry is:

```
E XName A2ETable CFont
```

Where:

E
Specifies that the entry is an EBCDIC font.

XName
Specifies the name of the Xerox font in uppercase characters and without the `.FNT` extension.

A2ETable
Specifies the name of the ASCII-to-EBCDIC translation table that Infoprint XT uses. Unless instructed otherwise by an IBM service representative, this value is X2AFP.

CFont
Specifies the name of the AFP coded font to use in place of the Xerox font. For example, XZEFMT6.

This is an example of an entry for an EBCDIC font in the `tab.mft` table:

```
E EFMT6 X2AFP XZEFMT6
```

If you require AFP EBCDIC outline fonts for use with double-byte Xerox fonts, contact your marketing representative for more information. You can also use AFP EBCDIC outline fonts from other sources. Those fonts must fully conform to the MO:DCA FOCA standards; see *Font Object Content Architecture Reference*, S544-3285.

Creating manual correlation entries for images

To create a manual correlation table for image resources, create a `tab.mit` file in the appropriate metrics directory. You can correlate a Xerox image to an AFP page segment. You can specify horizontal and vertical spacing values if you require them. The syntax for an image entry is:

```
I XName Pseg [ X=nn ] [ Y=nn ]
```

Where:

I
> Specifies that the entry is an image.

XName
> Specifies the name of the Xerox image in uppercase and without the `.IMG` extension.

***PSeg* [X=*nn*] [Y=*nn*]**
> *PSeg* specifies the AFP page segment, such as SILANCHE, to use in place of the Xerox image. The page segment name must have an SI prefix. As an option, you can also adjust the position of the page segment on the page. The adjustments that you make are relative to the page segment when you look at it in the portrait orientation. The values are:
>
> **X=*nn***
> > Specifies a horizontal adjustment. *nn* is a value in pels. A positive value moves the page segment to the right. A negative value moves it to the left.
>
> **Y=*nn***
> > Specifies a vertical adjustment. *nn* is a value in pels. A positive value moves the page segment down on the page. A negative value moves it up.

shows the various types of entries that you can make in a manual correlation table for Xerox images.

```
I  GOALIE  X2AFP  SILANCHE
I  KOALA1  X2AFP  SISKYET  Y=4
I  X14BAR  X2AFP  SIIBM13B X=-2
I  AIR767  X2AFP  SIPIPERC X=3 Y=-2
```

Figure 15. Sample correlation entries for Xerox images

Creating manual correlation entries for logos

To create a manual correlation table for logo resources, you create a `tab.mlt` file in the appropriate metrics directory. You can correlate a Xerox logo to an AFP page segment. You can specify horizontal and vertical spacing adjustments if you require them. The syntax for a logo entry is:

```
L XName Pseg [ X=nn ] [ Y=nn ]
```

Where:

L
> Specifies that the entry is a logo.

XName
> Specifies the name of the Xerox logo in uppercase characters and without the `.LGO` extension.

PSeg **[X=*nn*] [Y=*nn*]**

> *PSeg* specifies the AFP page segment, such as SLSUB01, to use in place of the Xerox logo. The page segment name must have an SL prefix. As an option, you can also adjust the position of the page segment on the page. The adjustments that you make are relative to the page segment when you look at it in the portrait orientation. The values are:

> **X=*nn***
>> Specifies a horizontal adjustment. *nn* is a value in pels. A positive value moves the page segment to the right. A negative value moves it to the left.

> **Y=*nn***
>> Specifies a vertical adjustment. *nn* is a value in pels. A positive value moves the page segment down on the page. A negative value moves it up.

Figure 16 on page 125 shows the various types of entries that you can make in a manual correlation table for Xerox logos.

```
L   PANDT   X2AFP   SLSUB01
L   L1980   X2AFP   SLBLUE   Y=4
L   L1990   X2AFP   SLGREEN  X=-2
L   L2003   X2AFP   SLDKRED  X=3 Y=-2
```

Figure 16. Sample correlation entries for Xerox logos

Processing a manual correlation table

You use the **pdxtloadres** command or the AIOZR2AR utility program to process and merge your resource information into the main resource correlation tables. Just be sure to specify the appropriate resource group.

> Programming Interface Information

Using the pdxtcluster command to create and modify cluster database resources

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the Infoprint XT **pdxtcluster** command to process Xerox cluster databases. The **pdxtcluster** command loads and modifies Xerox cluster database resources for use with Infoprint XT. The command provides options that you can use to control how and where Infoprint XT creates the reformatted cluster database resource files.

You can change the contents of cluster database source files by using the **pdxtcluster –f add | remove | edit** commands. You can also manually edit cluster data base source files.

The **pdxtcluster** command automatically stores cluster database files in the correct locations. If you edit a *name*.cls cluster database source file manually, the **pdxtcluster –f cls2alb** command requires that you store the file in the xrxres directory of the resource.

The z/OS user name you use to run the **pdxtcluster** command must be a member of the z/OS AIOUSER group.

The syntax of the **pdxtcluster** command is:

```
pdxtcluster [ -f lib2cls ]
            [ -n [directory/]clustr.lib ]
            [[ -g common | resgrp ] | -o OtherDirectory ]

pdxtcluster -f cls2alb
            [-n pattern.cls]
            [[ -g common | resgrp ] | -o OtherDirectory ]
            [ -r ]

pdxtcluster -f copy | rename
            [-n old.cls=new.cls]
```

```
            [[ -g common | resgrp ] | -o OtherDirectory ]

pdxtcluster -f create | revert | list
            [-n pattern.cls]
            [[ -g common | resgrp ] | -o OtherDirectory ]

pdxtcluster -f add | edit
            [-n pattern.cls]
            [-c cluster_name=tray_numbers]
            [[ -g common | resgrp ] | -o OtherDirectory ]
            [ -a ]

pdxtcluster -f remove
            [-n pattern.cls]
            [-c cluster_name]
            [[ -g common | resgrp ] | -o OtherDirectory ]
            [ -a ]
```

Note: Infoprint XT uses the `.cls` extension to indicate cluster database source files and the `.alb` extension to indicate reformatted cluster database resources. All *name*`.cls` and *name*`.alb` files must have valid Xerox resource names.

The **pdxtcluster** options are:

-a
> Specifies that after modifying *name*`.cls` with the **add**, **edit**, or **remove** function, **pdxtcluster** converts *name*`.cls` to *name*`.alb` and places the *name*`.alb` file in the metrics directory for the specified resource group. The command replaces the existing *name*`.alb` if it exists. This is the same as running a separate **pdxtcluster** command with **-f cls2alb**.

-c *cluster_name=tray_numbers* | *cluster_name*
> Specifies the cluster names to add, edit, or delete in the cluster database. You can specify more than one **-c** option, up to a maximum of 50. The values are:

> *cluster_name=tray_numbers*
>> Specifies a cluster name and its associated tray numbers to add or edit in the cluster database. The cluster name is 1 to 6 alphanumeric characters and must begin with a letter. Tray numbers must be in the range of 1 through 8 and can be specified in any order. Separate each tray number with a colon (`:`). The lowest tray number is used for the AFP tray. For example, to add cluster NEWCLS with tray numbers 3, 5, and 7, specify:

>> ```
>> pdxtcluster -f add -g resgrp -n myclst.cls -c newcls=3:5:7
>> ```

> *cluster_name*
>> Specifies a cluster name to remove from the cluster database. The cluster name is 1 to 6 alphanumeric characters and must begin with a letter. If any of the cluster names you specify do not exist in the cluster database, Infoprint XT issues an error message. Cluster names that do exist are removed.

> **Note:** Although you can enter cluster names with lowercase letters, Infoprint XT stores the cluster names in uppercase letters.

-f **lib2cls** | **add** | **cls2alb** | **copy** | **create** | **edit** | **list** | **remove** | **rename** | **revert**
> Indicates which function to perform. If specified, this option must precede all other **pdxtcluster** options. The functions are:

> **lib2cls**
>> **pdxtcluster** converts the `clustr.lib` file to `clustr.cls` and places both files in the `xrxres` directory for the specified resource group. Either issue **pdxtcluster** from the directory in which `clustr.lib` resides, or specify the path to the `clustr.lib` in the **-n** option. This is the default function.

>> **Notes:**

>> 1. If you run the AIOZCLS utility and specify the **lib2cls** function, Infoprint XT looks for `clustr.lib` in the `xrxres` directory of the specified resource group.

2. If you run the AIOZCLS utility and specify the CLSLIB DD, Infoprint XT saves a copy of `clustr.cls` in the B#CLUSTR member of the CLSLIB DD PDS.

add
> **pdxtcluster** adds the cluster entries you specify with the **-c** option to *name*.cls in the specified resource group. The command issues an error message if any of the clusters already exist. The command also creates a copy of the previous *name*.cls file, *name*.cls.bak, in the xrxres directory for the resource group.
>
> **Note:** If you run the AIOZCLS utility and specify the CLSLIB DD, Infoprint XT copies the changed *name*.cls to the B#*name* member of the CLSLIB DD PDS.

cls2alb
> **pdxtcluster** converts the *name*.cls file in the xrxres directory for the specified resource group to *name*.alb in the metrics directory for the specified resource group.
>
> **Note:** If you run the AIOZCLS utility and specify the CLSLIB DD, Infoprint XT copies the B#*name* member of the CLSLIB DD PDS to *name*.cls in the xrxres directory of the specified resource group, and converts *name*.cls to *name*.alb in the metrics directory of the specified resource group. If Infoprint XT cannot copy the B#*name* member from the CLSLIB DD PDS, it tries to convert *name*.cls in the xrxres directory.

copy
> **pdxtcluster** copies *old*.cls to *new*.cls in the specified resource group. This function is useful after specifying **-f lib2cls** to copy `clustr.cls` to a new name without affecting the `clustr.alb` file if it already exists.
>
> **Note:** If you run the AIOZCLS utility and specify CLSLIB DD, Infoprint XT copies *new*.cls to the B#*new* member of the CLSLIB DD PDS.

create
> **pdxtcluster** creates a new *name*.cls resource file in the xrxres directory for the specified resource group. The *name*.cls resource file is a copy of the `master.cls` file.
>
> **Note:** Infoprint XT also provides a copy of the `master.cls` file in the AIOZMCLS member of the SAIOSAMP PDS. You can copy AIOZMCLS to your CLSLIB DD PDS as member B#*name*.

edit
> **pdxtcluster** edits specified clusters that already exist in *name*.cls, or creates any cluster entries that do not exist. The command also creates a copy of the previous *name*.cls file, *name*.cls.bak, in the xrxres directory for the resource group.
>
> **Note:** If you run the AIOZCLS utility and specify the CLSLIB DD, Infoprint XT copies the changed *name*.cls to the B#*name* member of the CLSLIB DD PDS.

list
> **pdxtcluster** writes a list of the current clusters in the *name*.cls file for the specified resource group to standard output.

remove
> **pdxtcluster** removes the specified cluster entries from *name*.cls in the specified resource group. The command also creates a copy of the previous *name*.cls file, *name*.cls.bak, in the xrxres directory for the resource group.
>
> **Note:** If you run the AIOZCLS utility and specify the CLSLIB DD, Infoprint XT copies the changed *name*.cls to the B#*name* member of the CLSLIB DD PDS.

rename
> **pdxtcluster** renames *old*.cls to *new*.cls in the specified resource group. This includes all *name*.cls, *name*.alb and *name*.cls.bak files.
>
> **Note:** If you run the AIOZCLS utility and specify CLSLIB DD, Infoprint XT copies *new*.cls to the B#*new* member of the CLSLIB DD PDS and deletes the B#*old* member.

revert

pdxtcluster reverts to the previous version of *name*.cls. If there is no previous version, the command issues an error message.

Note: If you run the AIOZCLS utility and specify CLSLIB DD, Infoprint XT copies the previous version of *name*.cls to the B#*name* member of the CLSLIB DD PDS.

-g common | *resgrp*

Specifies the resource group name that Infoprint XT uses to build subdirectories in the directory. Infoprint XT uses these subdirectories to store and edit the cluster database files. Valid values are:

common

Infoprint XT uses the common resource group, `/var/pdxt/resources/common`, to build subdirectories. This is the default.

resgrp

The resource group name Infoprint XT uses to build subdirectories. The name must be alphanumeric and can contain the letters "a" through "z" and "A" through "Z", and the numbers 0 through 9.

Note: If you specify the **-g** option, you cannot specify the **-o** option. If you do not specify either option, **pdxtcluster** uses the common resource group.

-n [*directory*/]clustr.lib | *name*.cls | *old*.cls=*new*.cls

Specifies which one of these to process:

- Xerox cluster database
- Xerox cluster database source file
- Old and new names for the database source file and associated reformatted cluster database file.

The values are:

[*directory*/]clustr.lib

Specifies the Xerox cluster database to process with the **-f lib2cls** function. The name of the database must be `clustr.lib`. For example:

- To process `clustr.lib` in the directory *xerox_res*: pdxtcluster -f lib2cls -n "/*xerox_res*/clustr.lib"
- To process `clustr.lib` in the current directory: pdxtcluster -f lib2cls -n "clustr.lib"

If you do not specify **-n**, Infoprint XT processes `clustr.lib` in the current directory.

***pattern*.cls**

Specifies the Xerox cluster database source files to process. You can use pattern-matching strings to specify groups of resources. You can specify more than one pair of **-n** options and patterns, up to a maximum of 50. For example:

- To compile all Xerox cluster database source files in the `xrxres` directory:

```
pdxtcluster –f cls2alb -n "*.cls"
```

- To compile all Xerox cluster database source files that begin with the letter "a":

```
pdxtcluster –f cls2alb -n "a*.cls"
```

Note: When you process Xerox cluster database source files, the **pdxtcluster** command also recognizes Infoprint XT for z/OS naming conventions for Xerox resource files. See Table 14 on page 118. You can transfer Xerox resources from z/OS to the `xrxres` directory using a method such as File Transfer Protocol (FTP). The Xerox resource data sets have specific naming conventions.

old.cls=*new*.cls
> Specifies the old and new names for a Xerox cluster database source file and the associated reformatted cluster database file in the **-f copy** and **rename** functions. *old* and *new* must be valid Xerox resource names.
>
> To rename `/xrxres/`*old*`.cls` and `/metrics/`*old*`.alb`:
>
> ```
> pdxtcluster -f rename -n "old.cls=new.cls"
> ```
>
> Infoprint XT issues an error message if `old.cls` does not exist.

-o *OtherDirectory*
> Specifies an existing directory in which you want Infoprint XT to store the cluster database resources. The value is:

OtherDirectory
> Specifies the directory other than `/var/pdxt/resources/common` or `/var/pdxt/resources/`*resgrp* where you want to store the cluster database resources. Infoprint XT also creates a metrics subdirectory, an `xrxres` subdirectory, and a **pdxtcluster** subdirectory under the directory that you specify.

> **Note:** If you specify the **-o** option, you cannot specify the **-g** option. If you do not specify either option, Infoprint XT uses the directory for the common resource group.

-r
> Specifies that if a *name*`.cls` is already loaded, the **-f cls2alb** function loads a new version of *name*`.alb`. If the conversion is successful, Infoprint XT replaces the original copy of the *name*`.alb` in the metrics subdirectory for the resource group.

Master cluster database source file

Infoprint XT installs a master cluster database source file (`master.cls`) in `/usr/lpp/pdxt/V3R3M0/samples`.

Figure 17 on page 129 shows the cluster entries in the `master.cls` file.

```
*
* CLUSTER  AUTO   ---PREFERRED TRAYS--  ----CURRENT TRAYS---
*  NAME    SIZE  AFP ------Xerox-----   AFP ------Xerox-----     STATUS
* ------    -    MMC 12345678 future   MMC 12345678 future   ----------
*---+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8
*
   MAIN     A     1 1                   1 1                   HAS TRAYS
   AUX      A     2  2                  2  2                  HAS TRAYS
   AUTO     A     1 1234                1 1234                HAS TRAYS
   ONE            1 1                   1 1                   HAS TRAYS
   TWO            2  2                  2  2                  HAS TRAYS
   THREE          3   3                 3   3                 HAS TRAYS
   FOUR           4    4                4    4                HAS TRAYS
   FIVE           5     5               5     5               HAS TRAYS
   SIX            6      6              6      6              HAS TRAYS
   SEVEN          7       7             7       7             HAS TRAYS
   EIGHT          8        8            8        8            HAS TRAYS
```

Figure 17. Cluster entries in the master.cls file

Table 15 on page 129 shows the format of the master cluster database source file.

Table 15. Infoprint XT master cluster database source file format

Offset	Length	Value	Description
0	1	"*"	Indicates that the line is a comment
2	6	variable	Uppercase alphanumeric cluster name

Offset	Length	Value	Description
12	1	"A" or blank	Xerox Autosize value; not used
19	1	"1" - "8"	Preferred tray number Infoprint XT specifies in MMCs in the output AFP
21	8	"1" - "8"	Preferred Xerox tray numbers
29	8	blank	future use
41	1	"1" - "8"	Current tray number for output AFP; not used
43	8	"1" - "8"	Current Xerox tray numbers
51	8	blank	future use
61	19	variable	Xerox cluster status

Table 15. Infoprint XT master cluster database source file format (continued)

Streams used by the pdxtcluster command

fd0 (STDIN)
> The command does not use this stream.

fd1 (STDOUT)
> The **-f list** function writes to this stream.

fd2 (STDERR)
> The command writes messages to this stream.

Return codes from the pdxtcluster command

Return codes from the **pdxtcluster** command mean:

0
> The command was successful.

EINVAL (22)
> There is an error with one of the command options.

E2BIG (7)
> The command contains too many arguments or command options.

ENOATTR (112)
> The command contains a command option without a value or a required command option is missing.

ENOENT (2)
> The file or pattern you specified with the **-n** command option did not contain any valid file names.

EEXIST (17)
> The resource is already loaded, but you did not specify the **-r** command option.

ENOMEM (12)
> There is not enough memory available for the command.

other
> The error is from a C function, such as *open()* or *read()*.

Examples: pdxtcluster command

- Convert `clustr.lib` in the `/xerox_res` directory to a `clustr.cls` source file in the common resource group:

```
pdxtcluster -n "/xerox_res/clustr.lib"
```

Note: `-g common` and `-f lib2cls` are the defaults.

- Convert a `clustr.cls` file in the resource group common to a `clustr.alb` reformatted resource file:

  ```
  pdxtcluster -f cls2alb -n "clustr.cls"
  ```

- Add two new clusters to `clustr.cls` in the **common** resource group. The CL2 cluster is mapped to tray 2 and CL3 is mapped to tray 3:

  ```
  pdxtcluster -f add -n "clustr.cls" -c cl2=2 -c cl3=3
  ```

- Remove two clusters, CL2 and CL3, from `clustr.cls`:

  ```
  pdxtcluster -f remove -n "clustr.cls" -c cl2 -c cl3
  ```

- List the clusters in `clustr.cls` in the **common** resource group:

  ```
  pdxtcluster -f list -n "clustr.cls"
  ```

End Programming Interface Information

Using the AIOZCLS utility to control bin selection

Infoprint XT provides the AIOZCLS batch utility program to control bin selection during Xerox data stream conversions. The user ID from which you run the AIOZCLS utility must be a member of the AIOUSER group and have read access to the data set specified by the CLSLIB DD statement.

AIOZCLS parameters

The AIOZCLS utility program provides parameters that you can use to control how Infoprint XT configures bin selection. AIOZCLS runs as a batch process through JCL statements and invokes the command **pdxtcluster**. See .

JCL statements

Infoprint XT provides sample JCL that you can modify to configure bin selection. Infoprint XT provides the sample JCL in the SAIOSAMP data set. shows the sample JCL that Infoprint XT provides.

Sample JCL for configuring bin selection

```
//AIOZCLS  JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2012,2019 IBM Corporation                        *
//* Copyright 2012,2019 RICOH Company, Ltd                     *
//*                                                            *
//* Permission to use, copy, modify, and distribute this       *
//* software for any purpose with or without fee is hereby      *
//* granted, provided that the above copyright notices appear   *
//* in all copies.                                             *
//*                                                            *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY   *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE  *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR     *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER      *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR        *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE   *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.      *
//*                                                            *
//*  Run the pdxtcluster command in the UNIX System Services    *
//*  environment.                                              *
//*                                                            *
//*  CAUTION: This is neither a JCL procedure nor a complete    *
//*  job.  Before using this job step, you must make these      *
```

```
//*  modifications:                                            *
//*                                                            *
//*  1) Change the JOB statement to meet your system requirements.  *
//*                                                            *
//*  2) Change 'hlq' on the CLSLIB DD to an appropriate high level  *
//*     qualifier for your system.                             *
//*                                                            *
//*  3) Set the SYSIN parameters as desired.                   *
//*                                                            *
//*  4) Ensure that you run this job from a user ID that is in  the  *
//*     AIOUSER group.                                         *
//*                                                            *
//****************************************************************
//*
//AIOZCLS  EXEC PGM=AIOZCLS
//*
//****************************************************************
//* Diagnostic messages from the pdxtcluster command           *
//****************************************************************
//*
//SYSPRINT DD   SYSOUT=*
//*
//****************************************************************
//* Output from the -f list function of the pdxtcluster command  *
//****************************************************************
//*
//STDOUT   DD   SYSOUT=*
//*
//****************************************************************
//* PDS (RECFM=FB, LRECL=80) containing B#NAME cluster data base  *
//* source files.                                              *
//*                                                            *
//* When you specify the CLSLIB DD, the pdxtcluster command     *
//* ensures that /var/pdxt/resources/res_group/xrxres/name.cls is  *
//* the same as hlq.CLSLIB(B#NAME).                            *
//****************************************************************
//*
//CLSLIB   DD   DSN=hlq.CLSLIB,DISP=SHR
//*
//****************************************************************
//* Specify processing options                                 *
//****************************************************************
//*
//SYSIN    DD   *
*
* If CLSLIB DD specified:
*
*   (1) Convert clustr.lib to clustr.cls in the mygroup resource group
*       and save a copy of clustr.cls in hlq.CLSLIB(B#CLUSTR):
*
*       -f lib2cls -g mygroup
*
*   (2) Copy hlq.CLSLIB(B#ABC123) to /xrxres/abc123.cls in the mygroup
*       resource group, and convert abc123.cls to /metrics/alb123.alb
*       in the mygroup resource group:
*
*       -f cls2alb -g mygroup -n"abc123.cls"
*
*   (3) Copy /xrxres/abc123.cls to /xrxres/xyz456.cls in the mygroup
*       resource group, and save a copy of xyz456.cls in
*       hlq.CLSLIB(B#XYZ456):
*
*       -f copy -g mygroup -n"abc123.cls=xyz456.cls"
*
* If CLSLIB DD not specified:
*
*   (1) Convert clustr.lib to clustr.cls in the mygroup resource
*       group:
*
*       -f lib2cls -g mygroup
*
*   (2) Convert /xrxres/abc123.cls to /metrics/alb123.alb in the
*       mygroup resource group:
*
*       -f cls2alb -g mygroup -n"abc123.cls"
*
*   (3) Copy /xrxres/abc123.cls to /xrxres/xyz456.cls in the mygroup
*       resource group:
*
*       -f copy -g mygroup -n"abc123.cls=xyz456.cls"
```

```
  *
  /*
```

These describe the various statements in the sample JCL:

AIOZCLS JOB
> This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZCLS with the appropriate job name. Replace the `<JOB STATEMENT PARAMETERS>` portion of the sample statement with any parameters that your installation requires.

AIOZCLS EXEC
> This required EXEC statement specifies the Infoprint XT AIOZCLS utility program.

SYSPRINT DD
> This DD statement defines the data set where AIOZCLS writes the standard error from the **pdxtcluster** command (file descriptor 2).

STDOUT DD
> This DD statement defines the data set where AIOZCLS writes the standard output from the **-f list** function of the **pdxtcluster** command (file descriptor 1).

CLSLIB DD
> This optional DD statement specifies the name of a PDS in which Infoprint XT stores a copy of Xerox cluster database source files. These are copies of the cluster data base source files in the `xrxres` directory for the specified resource group. You can use ISPF to browse or edit the data base source file copies in the CLSLIB DD PDS. For details about how Infoprint XT uses the CLSLIB DD, see the descriptions of pdxtcluster functions. You can either allocate the PDS externally, through the ISPF Data Set Utility, or you can include specific parameters in the JCL. In either case, the PDS characteristics must include RECFM=FB, LRECL=80, and BLKSIZE=*nnnnn*. The numeric value, *nnnnn*, is the largest efficient size, and is a multiple of 80. This is an example of how you can allocate the data set on the CLSLIB DD statement:

```
//XRXCSLIB DD DSN=yourid.CLSLIB,
//         UNIT=SYSDA,VOL=SER=vvvvvv,
//         SPACE=(TRK,(90,5,45),RLSE),
//         DCB=(RECFM=FB,LRECL=80,BLKSIZE=27920),
//         DISP=(NEW,CATLG,CATLG)
```

SYSIN DD
> This optional DD statement specifies the AIOZCLS parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. When it builds the parameter list from the information that you specify, AIOZCLS uses the same rules that AIOZR2AR uses for the SYSIN DD statement. See SYSIN DD for AIOZR2AR on page .
>
> **Notes:**
>
> 1. If the SYSIN DD statement is present, Infoprint XT attempts to use the parameters it specifies.
>
> 2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT uses the AIOZCLS default parameters.

<div style="border:1px solid">

Programming Interface Information

</div>

Using the pdxtcolor command to manage the Infoprint XT ink correlation table

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the Infoprint XT **pdxtcolor** command to manage the Infoprint XT ink correlation table. This table associates Xerox highlight color ink names with CIELAB values that Infoprint XT generates in the AFP output that it produces. The command provides options that you can use to control how and where Infoprint XT creates the ink correlation table.

The **pdxtcolor** command also provides functions to help you customize your Xerox highlight color environment and begin migrating to full color output. With these functions, you can:

- Create new colors in addition to the solid colors and shades that Xerox supplies.
- Edit individual entries in the ink correlation table.
- Control how Infoprint XT selects an associated solid color or a shaded ink color when it processes text and IMGs.

Notes:

1. In order to use color customization that the **pdxtcolor** command provides, the applications that generate your LCDS and metacode data streams must let you specify the names of any custom colors that you add to the ink correlation table.

2. For more information about using color in your AFP environment, see AFP Consortium at www.afpcinc.org.

The z/OS user name you use to run the **pdxtcolor** command must be a member of the z/OS AIOUSER group.

The syntax of the **pdxtcolor** command is:

```
pdxtcolor -f create | refresh
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -d no | yes ]
        [ -m letter | A4 ]
        [ -s none | all | collection_colors | solid_color_name | solid_colors ]
```

```
pdxtcolor -f load
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -d no | yes ]
        [[ -k solid_color_name:srgb:max:red:green:blue ]
         [ -k solid_color_name:lab:L*:a*:b* ]
         [ -k solid_color_name:gs:gs_value ]]
        [ -m letter | A4 ]
        [ -p yes | no ]
        [ -s none | all | collection_colors | solid_color_name | solid_colors ]
        [ -t auto| black | shade | solid ]
```

```
pdxtcolor -f edit
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -d no | yes ]
        [[ -e catalog:palette:ink[:interp_cntl][:srgb:max:red:green:blue ]]
         [ -e catalog:palette:ink[:interp_cntl][:lab:L*:a*:b* ]]
         [ -e catalog:palette:ink[:interp_cntl][:gs:gs_value ]]]
        [ -m letter | A4 ]
        [ -p yes | no ]
        [ -s none | all | collection_colors | solid_color_name | solid_colors ]
```

```
pdxtcolor -f color_select
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -d no | yes ]
        [ -m letter | A4 ]
        [ -n solid_color_name ]
        [ -s none | all | collection_colors | solid_color_name | solid_colors ]
        [ -t auto|  black | shade | solid ]
```

```
pdxtcolor -f color_spectrum
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -d no | yes ]
        [[ -l L:minimum:maximum:increments ]
         [ -l a:minimum:maximum:increments ]
         [ -l b:minimum:maximum:increments ]]
        [ -m letter | A4 ]
        [ -p yes | no ]
```

```
          [ -s none | all | collection_colors | solid_color_name | solid_colors ]
          [ -t auto | black | shade | solid]
```

```
pdxtcolor -f color_collections
          [[ -g common | resgrp ] | -o OtherDirectory ]
          [ -c collection_colors | collection_name | color_name ]
          [ -d no | yes ]
          [ -m letter | A4 ]
          [ -p no | yes ]
          [ -s none | all | collection_colors | solid_color_name | solid_colors ]
          [ -t auto | black | shade | solid]
```

```
pdxtcolor -f rename | copy
          [[ -g common | resgrp ] | -o OtherDirectory ]
          [ -d no | yes ]
          [ -m letter | A4 ]
          [ -r old_name:new_name ]
          [ -s none | all | collection_colors | solid_color_name | solid_colors ]
          [ -t auto | black | shade | solid]
```

```
pdxtcolor -f delete
          [[ -g common | resgrp ] | -o OtherDirectory ]
          [ -u solid_color_name:all  | samples | shades | solid_color]
```

```
pdxtcolor -f sample
          [[ -g common | resgrp ] | -o OtherDirectory ]
          [ -d no | yes ]
          [ -m letter | A4 ]
          [ -s none | all | collection_colors | solid_color_name | solid_colors ]
```

The **pdxtcolor** options are:

-f create | refresh | load | edit | color_select | color_spectrum | color_collections | rename | copy | delete | sample

> Indicates which function to perform. This option does not have a default value. When specified, **-f** must precede all other **pdxtcolor** options. The values are:

> **create**

>> If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies /usr/lpp/pdxt/V3R3M0/resources/tab.skt and tab.akt to tab.skt and tab.akt in the specified resource group.

>> If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to tab.skt.bak and tab.akt.bak.

>> It then copies /usr/lpp/pdxt/V3R3M0/resources/tab.skt and tab.akt to tab.skt and tab.akt in the specified resource group, completely replacing the existing table with a copy of the standard table.

>> If you specify the **-s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

> **refresh**

>> If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies /usr/lpp/pdxt/V3R3M0/resources/tab.skt and tab.akt to tab.skt and tab.akt in the specified resource group.

>> If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to tab.skt.bak and tab.akt.bak

It then integrates the standard ink correlation table into the existing table, refreshing the CIELAB values for the standard solid colors and shades. Any custom colors you have created remain unchanged.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

load

If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` in the specified resource group.

If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

Infoprint XT then creates new ink correlation table entries for the solid color names that you specify. If you specify **-p yes** with **-k** *solid_color_name*:**srgb** or **-k** *solid_color_name*:**lab**, Infoprint XT also creates a full palette of color + black + white shaded colors for each of the solid colors you specify. Each of these palettes contains CIELAB values for the solid color and all the shaded colors associated with the solid color, based on the alphanumeric XEROX1 ink catalog naming convention: H*n* (color + white), K*n* (black + white), or H*n*K*n* (color + black + white). The solid color and palette entries that Infoprint XT creates have the same type of values (CIELAB or grayscale).

If you specify **-p yes** with **-k** *solid_color_name*:**gs,** Infoprint XT also creates a palette of 15 grayscale shades by using the K*n* names from the XEROX1 MONO palette. In this palette, K100 has the grayscale value that you specifiy for *solid_color_name*.

If you specify **-p no** and the new color name matches the name of an existing solid color in the ink correlation table, Infoprint XT only loads the new color if the color type you specify for the new color (CIELAB or grayscale) matches the color type of the existing associated palette. Solid color entries and their associated palette entries must have the same type of values.

Color values for the MONO solid color and the DFAULT.MONO and XEROX1.MONO palettes are always grayscale.

The load function does not affect ink correlation table entries for the DFAULT ink catalog.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

You can also manually customize existing entries in the ink correlation table by using information you supply in a `tab.mkt` ink correlation table source file. For more details, see "Creating manual correlation entries for inks" on page 148.

edit

If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.

If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

Infoprint XT then changes the entry that you specify by using the values you supply with the **–e** option. If you change one of the solid colors and specify **-p yes** with **-e srgb** or **-e lab**, Infoprint XT also creates a full palette of color + black + white shaded colors for each of the solid colors you change. Each of these palettes contains CIELAB values for the solid color and all the shaded colors associated with the solid color, based on the alphanumeric XEROX1 ink catalog naming convention: H*n* (color + white), K*n* (black + white), or H*n*K*n* (color + black + white). The solid color and palette entries that Infoprint XT changes must have the same type of values (CIELAB or grayscale).

If you specify **-p yes** with **-e gs:**_gs_value_, Infoprint XT also creates a palette of 15 grayscale shades by using the K_n_ names from the XEROX1 MONO palette. In this palette, K100 has the grayscale value that you specify for _solid_color_name_.

If you edit a solid color and specify **-p no**, your changes will only affect the solid color and will not affect the associated palette.

Color values for the MONO solid color and the DFAULT.MONO and XEROX1.MONO palettes are always grayscale.

You can edit ink correlation table entries for the DFAULT and XEROX1 ink catalogs.

If the entry does not exist, Infoprint XT issues an error message.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

You can also manually customize existing entries in the ink correlation table by using information you supply in a `tab.mkt` ink correlation table source file. For more details, see "Creating manual correlation entries for inks" on page 148.

color_select

If you specify a shaded ink such as XEROX1.BLUE.H54K4 for text in an FRM or input data stream, or for the color portion of an IMG, the Xerox LPS automatically selects the associated solid color or black when it prints the text or IMG, based on whether the shaded ink contains more solid color or black.

You use the **color_select** function and the **–t** option to control how Infoprint XT selects output colors associated with a specified solid color when it processes shaded inks specified for IMGs or text in FRMs or input data streams. Infoprint XT emulates Xerox color selection (with **–t auto**), selects the associated solid color for all shaded inks (with **–t solid**), selects black for all shaded inks (with **–t black**) or selects the specified shaded ink (with **–t shade**).

Use the **–n** option to specify a solid color name. The **color_select** function affects the SOLID.SIMPLE. _solid_color_name_ entry and all of the associated shaded ink entries (XEROX1._solid_color_name_.H_nn_K_nn_) in the ink correlation table. The **color_select** function does not affect ink correlation table entries for the DFAULT ink catalog.

For example, if you specify:

```
pdxtcolor -f color_select –g resgrp –n green –t shade
```

and then specify any of the XEROX1.GREEN.H_nn_K_nn_ shaded inks for printing text or IMGs, Infoprint XT selects the shaded ink that you specify, rather than solid GREEN or black.

If you specify:

```
pdxtcolor -f color_select –g resgrp –n magenta –t solid
```

and then specify any of the XEROX1.MAGENTA.H_nn_K_nn_ shaded inks for printing text or IMGs, Infoprint XT selects solid MAGENTA, rather than the shaded ink or black.

The **color_select** function does not affect how Infoprint XT processes highlight color shading in FRMs. Infoprint XT uses the specified shaded ink when it processes highlight color shading generated by the FILL parameter of the BOX FSL command.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

Before the **pdxtcolor** command performs the **color_select** function, Infoprint XT does these tasks:

- If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.

- If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

color_spectrum

Infoprint XT automatically generates a large assortment of solid colors and adds them to the ink correlation table in SOLID.SIMPLE.COLOR*qLLaabb* entries.

Infoprint XT generates a unique name for each color by using the format COLOR*qLLaabb*, where:

q

A quadrant of the CIELAB color space, as defined by the sign of the a and b values. illustrates how Infoprint XT uses quadrants of the CIELAB color space to derive color names for the **–f color_spectrum** function.

LL

The L value in hexadecimal.

aa

The absolute value of the a value in hexadecimal.

bb

The absolute value of the b value in hexadecimal.
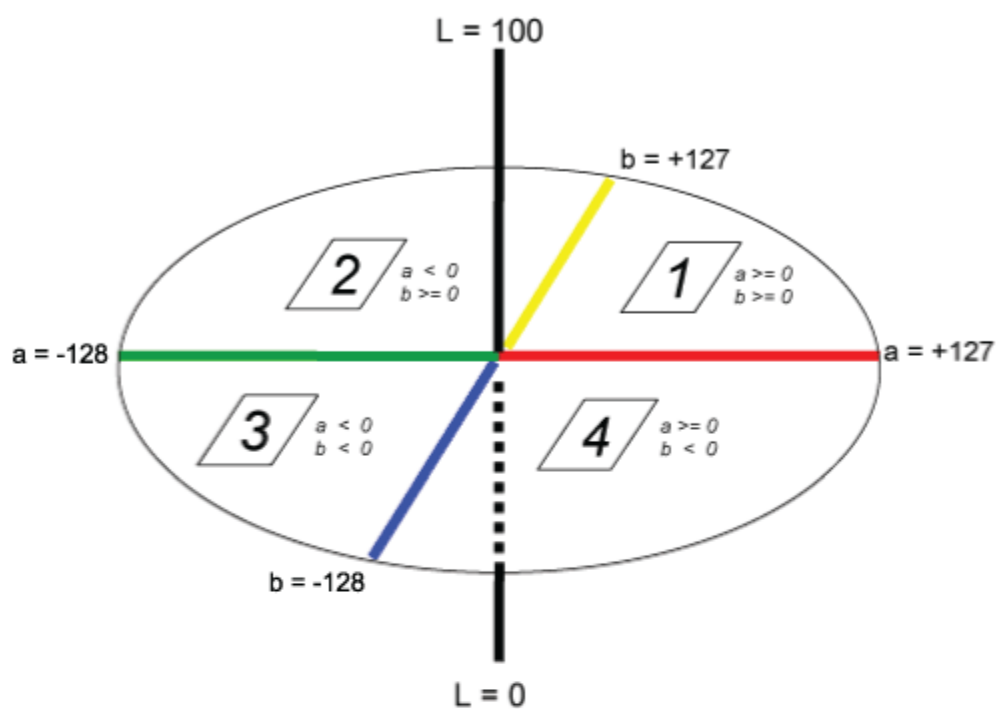
Figure 18. CIELAB color space quadrants for the –f color_spectrum function

Table 16 on page 140 describes the color ranges for the **a** and **b** values in the CIELAB color space quadrants.

Table 16. Color ranges for the a and b values in the CIELAB color space quadrants

CIELAB color space quadrant	a value	b value	Color range
1	0 or positive	0 or positive	Red to Yellow
2	negative	0 or positive	Yellow to Green
3	negative	negative	Green to Blue
4	0 or positive	negative	Blue to Red

If you specify **-p yes**, Infoprint XT also creates a full palette of color + black + white shaded colors for each of the COLOR*qLLaabb* solid colors that it generates, and stores them in the ink correlation table as XEROX1.COLOR*qLLaabb*.H*nn*K*nn*.

You can use this function to provide a wide spectrum of new solid colors and shades to assist you with color customization of your Xerox applications and resources, and with migration toward full color output.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See for details.

Before the **pdxtcolor** command performs the **color_spectrum** function, Infoprint XT does these tasks:

- If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.
- If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

color_collections

Infoprint XT creates sets of multiple SOLID.SIMPLE.*collection_color_name* predefined entries in the ink correlation table.

Use the **–c** option to specify the predefined colors to be created in the ink correlation table.

For example, if you specify:

```
pdxtcolor –f color_collections –g common –c collection_colors
```

Infoprint XT adds all the collections of predefined colors to the ink correlation table.

If you specify:

```
pdxtcolor –f color_collections –g common –c materials
```

Infoprint XT adds only the *Materials* collection from the entire set of predefined colors to the ink correlation table. The *Materials* collection contains these predefined colors: COBALT, STEEL, SILVER, CELADON, GOLD, COPPER, OAK, MAHOGANY, RUST, CORAL, BRICK, and ROSEWOOD. After command execution, the ink correlation table contains entries like SOLID.SIMPLE.COBALT, SOLID.SIMPLE.STEEL.

If you specify:

```
pdxtcolor –f color_collections –g common –c steel
```

Infoprint XT adds only the STEEL color from *Materials* collection to ink correlation table. After command execution, the ink correlation table contains this new added entry: SOLID.SIMPLE.STEEL.

Note: For the complete list of predefined colors and collections, see Appendix I, "InfoPrint XT Custom Color Collections," on page 401.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

Notes:

1. The **color_collections** function does not affect the ink correlation table entries for the DFAULT ink catalog.
2. The collection of colors contains 75 predefined colors organized into various groups.

Before the **pdxtcolor** command performs the **color_collections** function, Infoprint XT does these tasks:

- If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.
- If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

rename

Infoprint XT renames a SOLID.SIMPLE.*solid_color_name* in the ink correlation table, and also renames the palette names in the XEROX1.*solid_color_name*.H*nn*K*nn* entries that are associated with the solid color you specify.

Use the **–r** option to specify the old and new solid color names. Infoprint XT stores the new name in uppercase in the ink correlation table.

For example, if you specify:

```
pdxtcolor –f rename –g common –r color21e1a02:forest
```

Infoprint XT changes SOLID.SIMPLE.COLOR21E1A02 to SOLID.SIMPLE.FOREST and changes all occurrences of XEROX1.COLOR21E1A02.H*nn*K*nn* to XEROX1.FOREST.H*nn*K*nn*.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

Note: If you specify any of the standard Xerox solid color names (BLUE, BROWN, CARDINAL, CYAN, GRAY, GREEN, MAGENTA, RED, ROYAL, RUBY, VIOLET or YELLOW) as the old name in the **–r** option, Infoprint XT issues an error message and does not rename the solid color. The rename function does not affect ink correlation table entries for the DFAULT ink catalog.

Before the **pdxtcolor** command performs the **rename** function, Infoprint XT does these tasks:

- If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.
- If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

copy

Infoprint XT makes a copy of SOLID.SIMPLE.*old_solid_color_name* in the ink correlation table and names it SOLID.SIMPLE.*new_solid_color_name*. Infoprint XT also renames the palette names in the XEROX1.*new_solid_color_name*.H*nn*K*nn* entries that are associated with the solid color you specify.

Use the **–r** option to specify the old and new solid color names. Infoprint XT stores the new name in uppercase in the ink correlation table.

For example, if you specify:

```
pdxtcolor –f copy –g common –r color21e1a02:forest
```

Infoprint XT copies SOLID.SIMPLE.COLOR21E1A02 to SOLID.SIMPLE.FOREST and copies all occurrences of XEROX1.COLOR21E1A02.H*nn*K*nn* to XEROX1.FOREST.H*nn*K*nn*. SOLID.SIMPLE.COLOR21E1A02 and its shaded palette colors, XEROX1.COLOR155.H*nn*K*nn*, remain unchanged in the ink correlation table.

If you specify the **–s** option, Infoprint XT creates color sample AFP jobs for the solid color names that you specify. See –f sample function on page "sample" on page 142 for details.

Notes:

1. The **copy** function does not affect ink correlation table entries for the DFAULT ink catalog.
2. If you specify any of the standard Xerox solid color names (BLUE, BROWN, CARDINAL, CYAN, GRAY, GREEN, GRAY, MAGENTA, RED, ROYAL, RUBY, VIOLET or YELLOW) as the new solid color name in the **–r** option, Infoprint XT issues an error message and does not overwrite the standard solid color, associated shaded colors or AFP sample files.

Before the **pdxtcolor** command performs the **copy** function, Infoprint XT does these tasks:

- If the ink correlation table does not already exist in the resource group or output directory that you specify, Infoprint XT copies `/usr/lpp/pdxt/V3R3M0/resources/tab.skt` and `tab.akt` to `tab.skt` and `tab.akt` in the specified resource group.
- If the ink correlation table already exists in the resource group or output directory that you specify, Infoprint XT makes backup copies of the table files by renaming them to `tab.skt.bak` and `tab.akt.bak`.

delete

Infoprint XT deletes entries in the ink correlation table and associated AFP sample files.

Use the **–u** option to specify the entries to delete.

Note: If you specify any of the standard Xerox solid color names (BLUE, BROWN, CARDINAL, CYAN, GRAY, GREEN, MAGENTA, RED, ROYAL, RUBY, VIOLET or YELLOW) as the solid color name in the **–u** option, Infoprint XT issues an error message and does not delete the solid color, associated shaded colors or AFP sample files.

Infoprint XT makes backup copies of the ink correlation table files by renaming them to `tab.skt.bak` and `tab.akt.bak` before it performs the delete function.

sample

Infoprint XT creates color sample AFP jobs for the solid color names that you specify. Each sample job contains samples of the solid color and all the color + black + white shades that use the solid color, based on the alphanumeric XEROX1 ink catalog naming convention: H*n* (color + white), K*n* (black + white), or H*n*K*n* (color + black + white).

Infoprint XT stores the color sample AFP job files as *solid_color_name*`.sample.afp` (with **-s all** or **–s** *solid_color_name*) or `solid_colors.sample.afp` (with **-s solid_colors**) in the resource samples directory. Infoprint XT embeds all AFP resources inline in the color sample jobs that it generates.

-c collection_colors | *collection_name* **|** *color_name*

Specifies the predefined colors to be added in the ink correlation table when **-f color-collections** is specified. The values are:

collection_colors

Infoprint XT adds the entire set of predefined colors in the ink correlation table. This is the default.

collection_name

Infoprint XT adds the *collection_name*, containing several colors, in the ink correlation table.

color_name

Infoprint XT adds the *color_name* in the ink correlation table. The name is an alphanumeric value from 1 to 32 characters that does not contain any special characters. Infoprint XT stores the name

in uppercase in the ink correlation table and generates only the specified predefined color from the complete set of predefined colors.

Note: For the complete list of predefined colors and collections, see Appendix I, "InfoPrint XT Custom Color Collections," on page 401.

-d <u>no</u> | yes

Indicates whether Infoprint XT should generate detailed information about CIELAB and grayscale values when you specify the **-s** option to create color sample AFP jobs. The values are:

<u>no</u>

Infoprint XT does not generate detailed information about CIELAB or grayscale values in **pdxtcolor** AFP sample jobs.

yes

Infoprint XT generates detailed information about CIELAB and grayscale values in **pdxtcolor** AFP sample jobs.

-e *catalog:palette:ink*[*:interp_cntl*][:gs:*gs_value* | :lab:*L*:a*:b** | :srgb:*max:red:green:blue*]

For the **–f edit** function, specifies a fully qualified ink name (catalog, palette and ink) and the values that you want to change in the ink correlation table entry for the ink name. You must specify catalog, palette and ink values with the **-e** option. Any values that you specify are changed in the entry. Any values that you omit remain unchanged in the entry. If palette or ink contains embedded blanks, you must enclose *catalog:palette:ink* in double quotation marks. The values are:

catalog

The name of the Xerox ink catalog: DFAULT, XEROX1 or SOLID. You must specify SOLID for solid color entries. Infoprint XT stores the name in uppercase in the ink correlation table.

palette

The name of the Xerox palette. You must specify SIMPLE for solid color entries. If you specify DFAULT as the catalog name, you must specify BLUE, GREEN, MONO or RED as the palette name. If you specify XEROX1 as the catalog name, you must specify one of the standard Xerox solid color names (BLUE, BROWN, CARDINAL, CYAN, GRAY, GREEN, MAGENTA, RED, ROYAL, RUBY, VIOLET or YELLOW), or the name of a solid color you have defined, as the palette name. Infoprint XT stores the name in uppercase in the ink correlation table.

ink

The name of the Xerox ink. Infoprint XT stores the name in uppercase in the ink correlation table.

Note: If the ink name does not exist in the ink correlation table, Infoprint XT issues an error message.

interp_cntl

When the specified ink is used for text or IMGs this value controls whether Infoprint XT emits the associated solid color (**h**), black (**k**), or the specified shaded ink or grayscale (**s**) in the output AFP.

gs:*gs_value*

Indicates grayscale coverage percentage. You must also specify *gs_value*. Infoprint XT represents MONO and GRAY inks as grayscale in the ink correlation table. The percent coverage can be any value from 0% to 100% (X'00' - X'64').

Note: You must specify grayscale values for the K* ink names in the DFAULT.MONO and XEROX1.MONO palettes. If you specify CIELAB values for these inks, Infoprint XT issues an error message.

lab:*L*:a*:b**

Indicates the CIELAB color space. You must also specify L^*, a^* and b^* values. The value range for L* is 0.00 through 100.00. The value range for a^* and b^* is -128.00 to 127.00.

srgb:*max:red:green:blue*

Indicates the sRGB color space. You must also specify *max*, *red*, *green* and *blue* values. *max* indicates the range of values for *red*, *green*, and *blue*. Valid values are 255 (integers, 0 – 255), FF (hexadecimal, 00 – FF), or 100 (integers: 0 – 100).

Infoprint XT converts the sRGB values that you specify to CIELAB values.

Notes:

1. You can change both the interpretation control and the color values for an ink correlation table entry by specifying an interpretation control, a color space and the associated color values.

2. If you only want to change the interpretation control, do not specify a color space type or color values. You can also omit the interpretation control and only change the color values.

-g <u>common</u> **|** *resgrp*
> Specifies a resource group name that Infoprint XT uses to build the subdirectories in the `/var/pdxt/resources` directory. Infoprint XT uses the subdirectories to store the ink correlation table. Valid values are:

> <u>common</u>
>> Infoprint XT stores the ink correlation table in `/var/pdxt/resources/common/metrics`. This is the default.

> *resgrp*
>> Infoprint XT stores the ink correlation table in `/var/pdxt/resources/`*resgrp*`/metrics`. *resgrp* is a name that you choose. The name must be alphanumeric and it cannot contain any special characters. If you specify the **-g** option, you cannot specify the **-o** option. If you do not specify either **-g** or **-o**, the **pdxtcolor** command stores the ink correlation table in the common resource group, which is `/var/pdxt/resources/common`.

-k *solid_color_name***{:gs:***gs_value* **| :lab:***L*:a*:b** **| :srgb:***max:red:green:blue***}**
> For the **–f load** function, specifies a new color you want to add to the ink correlation table, or an existing color you want to modify in the ink correlation table. Infoprint XT adds the color and its CIELAB or grayscale values to the ink correlation table. The values are:

> *solid_color_name*
>> A color name from 1 to 32 characters. The name must be alphanumeric. It cannot contain any special characters. If *solid_color_name* contains embedded blanks, you must enclose it in double quotation marks. Infoprint XT stores the name in uppercase in the ink correlation table.

>> **Notes:**

>> 1. Names of new colors must be different from these standard Xerox solid color names: BLUE, BROWN, CARDINAL, CYAN, GRAY, GREEN, MAGENTA, RED, ROYAL, RUBY, VIOLET and YELLOW. For example, new names can be MIDNIGHT, TURQUOISE, OLIVE or ORANGE.

>> 2. If you specify an existing Xerox solid color name, Infoprint XT alters the entries associated with the specified name.

> **gs:***gs_value*
>> Indicates grayscale; *gs_value* is a grayscale coverage percentage. The value range is 0.00 through 100.00.

> **lab:***L*:a*:b**
>> Indicates the CIELAB color space. The value range for *L** is 0.00 through 100.00. The value range for *a** and *b** is -128.00 to 127.00.

> **srbg:***max:red:green:blue*
>> Indicates the sRGB color space. *max* indicates the range of values for *red*, *green* and *blue* values. Valid values are 255 (integers, 0 – 255), FF (hexadecimal, 00 – FF) or 100 (integers, 0 – 100).

>> Infoprint XT converts the sRGB values that you specify to CIELAB values.

> **Notes:**

> 1. If you specify **-p yes** with **-k** *solid_color_name***:srgb** or **-k** *solid_color_name***:lab**, Infoprint XT also creates a full palette of color + black + white shaded colors for each of the solid colors you specify. Each of these palettes contains CIELAB values for the solid color and all the shaded colors associated with the solid color, based on the alphanumeric XEROX1 ink catalog naming convention: H*n* (color + white), K*n* (black + white), or H*n*K*n* (color + black + white).

2. If you specify **-p yes** with **-k** *solid_color_name***:gs**, Infoprint XT also creates a palette of 15 grayscale shades by using the K*n* names from the XEROX1 MONO palette. In this palette, K100 has the grayscale value that you specifiy for *solid_color_name*.

3. If the color and its shades already exist in the table, Infoprint XT replaces their CIELAB or grayscale values with the solid color values you specify, and the CIELAB values that it calculates for the shades.

-l {L | a | b}:*minimum***:***maximum***:***increments*

Specifies the CIELAB value limits that Infoprint XT uses when processing the **–f color_spectrum** function. The values are:

L, a, b
  CIELAB color space value.

minimum
  An integer value representing the minimum **L**, **a**, or **b** CIELAB value. The supported *minimum* range for **L** is 10 through 90. The supported *minimum* range for **a** and **b** is -110 through 110.

maximum
  An integer value representing the maximum **L**, **a**, or **b** CIELAB value. The supported *maximum* range for **L** is 10 through 90. The supported *maximum* range for **a** and **b** is -110 through 110.

increments
  An integer value representing the number of values that Infoprint XT uses in the minimum to maximum range, including the minimum and maximum values. The supported *increments* range for **L** is 1 through 80. The supported *increments* range for **a** and **b** is 1 through 220.

For example, if you specify:

```
-l L:40:70:4 –l a:-100:100:6 –l b:-75:75:7
```

the Infoprint XT **–f color_spectrum** function generates an assortment of colors by using all possible combinations of the CIELAB values:

```
L = (40,50,60,70)
a = (-100,-60,-20,20,60,100)
b = (-75,-50,-25,0,25,50,75)
```

When calculating values for the **–f color_spectrum** function, Infoprint XT always includes the minimum and maximum values that you specify. It then calculates the intermediate values as integers by using rounding if necessary. For example, if you specify:

```
-l L:10:20:7
```

Infoprint XT uses these values:

```
L = (10,12,13,15,17,18,20)
```

If you do not specify the **–l** option, the default values are:

```
-l L:20:80:7 –l a:-110:110:12 –l b:-110:110:12
```

-m letter | A4
  Specifies the medium (paper) size that Infoprint XT uses when it creates samples of colors in the ink correlation table. The values are:

letter
  Infoprint XT uses a letter medium size of 8.5 x 11 inches (215.9 x 279.4 mm). This is the default.

A4
  Infoprint XT uses an A4 medium size of 8.3 x 11.7 inches (210 x 297 mm).

Note: If you do not specify the **–s** option with **all** or *solid_color_name*, Infoprint XT ignores the **–m** option.

-n *solid_color_name*
Specifies a solid color name for the **–f color_select** function. The value is:

solid_color_name
A color name from 1 to 32 characters. The name must be alphanumeric. It cannot contain any special characters. If *solid_color_name* contains embedded blanks, you must enclose it in double quotation marks. Infoprint XT stores the name in uppercase in the ink correlation table.

-o *OtherDirectory*
Specifies an existing directory in which you want Infoprint XT to store the ink correlation table. The value is:

OtherDirectory
Specifies the directory other than `/var/pdxt/resources/common/metrics` or `/var/pdxt/resources/`*resgrp*`/metrics` where you want to store the ink correlation table.

Notes:

1. If you specify the **-o** option, you cannot specify the **-g** option. If you do not specify either **-o** or **-g**, the **pdxtcolor** command uses the common resource group.

2. If the directory that you specify does not exist or you do not have permission to write to the directory, Infoprint XT issues an error message.

-p no | yes
Indicates whether Infoprint XT should generate a complete palette of color + black + white shaded colors for each of the solid colors you specify for the **–f edit**, **–f load**, **–f color_collections**, and **–f color_spectrum** functions.

no
Infoprint XT does not generate color + black + white shaded colors. This is the default for **–f color_collections**.

yes
Infoprint XT generates color + black + white shaded colors by using the ink naming convention XEROX1.*solid_color_name*.H*nn*K*nn* for solid color names with CIELAB values, and XEROX1.*solid_color_name*.K*nn* for solid color names with grayscale values. *solid_color_name* is the name of a solid color that you specify for the **–f edit**, **–f load**, **–f color_collections**, and **–f color_spectrum** functions. If the solid color name already exists in the ink correlation table, Infoprint XT replaces all of the shaded color entries associated with it. If the solid color name does not exist in the ink correlation table, Infoprint XT generates associated shaded color entries and adds them to the table, along with the new solid color entry. This is the default for **–f edit**, **–f load**, and **–f color_spectrum** functions.

-r *old_name:new_name*
Specifies the old and new solid color names for the **–f copy** and **–f rename** function. The values are:

old_name
An old solid color name from 1 to 32 characters. The name must be alphanumeric. It cannot contain any special characters. If *old_name* contains embedded blanks, you must enclose it in double quotation marks. Infoprint XT stores the name in uppercase in the ink correlation table.

new_name
A new solid color name from 1 to 32 characters. The name must be alphanumeric. It cannot contain any special characters. If *new_name* contains embedded blanks, you must enclose it in double quotation marks. Infoprint XT stores the name in uppercase in the ink correlation table.

-s <u>none</u> **| all | collection_colors |** *solid_color_name* **| solid_colors**
Specifies the color sets that Infoprint XT should sample. The values are:

<u>**none**</u>
Infoprint XT does not create AFP sample jobs for any of the colors in the ink correlation table. This is the default.

all
> Infoprint XT creates AFP sample jobs for each of the solid colors in the ink correlation table and their associated shades.

collection_colors
> Infoprint XT creates an AFP sample job for all of the predefined solid colors in the ink correlation table, ordered by collections, as presented on the web page for Infoprint XT color collections at `www.infoprint.com/internet/dcfdata.nsf/WebR10/1C3K3522`.

solid_color_name
> Infoprint XT creates an AFP sample job for *solid_color_name* and its associated shades.

solid_colors
> Infoprint XT creates an AFP sample job for all of the solid colors in the ink correlation table.

-t auto | black | shade | solid
> Controls how Infoprint XT selects output colors associated with a specified solid color when it processes shaded inks specified for IMGs or text in FRMs or input data streams. The **-t** option does not affect how Infoprint XT processes highlight color shading in FRMs. Infoprint XT uses the specified shaded ink when it processes highlight color shading generated by the FILL parameter of the BOX FSL command. The values are:

auto
> Infoprint XT emulates Xerox color selection. This is the default.

black
> Infoprint XT selects black for all shaded inks.

shade
> Infoprint XT selects the specified shaded ink.

solid
> Infoprint XT selects the associated solid color for all shaded inks.

-u *solid_color_name*:all | samples | shades | solid_color
> For the **-f delete** function, specifies the ink correlation table entries that Infoprint XT should delete. You must specify one of these values:

all
> Infoprint XT deletes the *solid_color_name*, the associated palette of color + black + white shaded colors and the associated AFP sample file.

samples
> Infoprint XT deletes the AFP sample file associated with *solid_color_name*. It does not delete *solid_color_name* entry or the associated palette of shaded colors.

shades
> Infoprint XT deletes the palette of shaded colors associated with *solid_color_name*. It does not delete *solid_color_name* or the associated AFP sample file.

solid_color
> Infoprint XT deletes the *solid_color_name* and the associated palette of shaded colors. It does not delete the associated AFP sample file.

solid_color_name
> Specifies a solid color ink name in the ink correlation table. Infoprint XT identifies the ink correlation table entry internally as SOLID.SIMPLE.*solid_color_name*.

Streams used by the pdxtcolor command

The **pdxtcolor** command uses some file descriptors while it processes ink correlation tables and ignores others:

fd0 (STDIN)
> The command does not use this stream

fd1 (STDOUT)
> The command does not use this stream.

fd2 (STDERR)
The command writes messages to this stream.

Return codes from the pdxtcolor command

Return codes from the **pdxtcolor** command are:

0
The command successfully processed all the requests.

EINVAL (22)
An error exists with one of the command options.

E2BIG (7)
The command contains too many command options.

ENOATTR (112)
You specified a command option without a value, or you did not specify a required command option.

ENOMEM (12)
Not enough memory is available for the command.

ECONNABORTED
The command failed because of a non-zero return code from an associated subcommand.

ECONNRESET
The command failed, but associated subcommands had return codes of zero.

other
Any other return codes that are not in this list are return codes from C functions. See "Error return code numbers" on page 247.

Creating manual correlation entries for inks

To make manual correlations for highlight color inks, create a `tab.mkt` file in the appropriate metrics directory. In the table, you can correlate a highlight color ink name to CIELAB values. The syntax for entries in the `tab.mkt` and `tab.skt` ink correlation table source files is:

```
----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----
+----0
K cccccc ppppppppppppppppppppppppppppppppp iiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii TV LLL.LL aaaa.aa
bbbb.bb
```

Table 17 on page 148 describes the syntax entries in the ink correlation table source files.

Table 17. Syntax for entries in ink correlation table source files		
Value	**Position**	**Description**
K	1	Ink correlation table entry identifier
c	3 – 8	Ink catalog name: 6 bytes
p	10 – 41	Palette name: 32 bytes
i	42 – 74	Ink name: 32 bytes
T	76	Interpretation control: H=solid color; K=black (device presentation default); S=specified shaded ink
V	77	Values type: C = CIELAB; G = grayscale percent of coverage
L	79 – 84	When values type = C, CIELAB *L* value* (0.00 through 100.00); when values type = G, grayscale percent of coverage value (0.00 through 100.00)
a	86 – 92	Values type = C, CIELAB *a* value* (-128.00 through 127.00); otherwise blank

Table 17. Syntax for entries in ink correlation table source files (continued)		
Value	Position	Description
b	94 – 100	When values type = C, CIELAB *b** *value* (-128.00 through 127.00); otherwise blank

Catalog names, palette names and ink names must be alphanumeric, and must not contain any special characters.

For solid color entries, the catalog name must be SOLID and the palette name must be SIMPLE. For example,

```
----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----
+----0

K SOLID  SIMPLE                     MIDNIGHT                           HC  15.00  -50.00
-65.00
K SOLID  SIMPLE                     TURQUOISE                          HC  65.00  -30.00
-40.00
K SOLID  SIMPLE                     OLIVE                              HC  35.00  -14.00
2.00
K SOLID  SIMPLE                     ORANGE                             HC  64.00   49.00
64.00
K SOLID  SIMPLE                     CHARCOAL                           KG  55.00
```

The interpretation control character indicates how Infoprint XT should interpret the color when it is specified for presenting text or for converting highlight color IMG files. H indicates that Infoprint XT uses the related solid color. K indicates that Infoprint XT uses black. S indicates that Infoprint XT uses the specified shaded ink. For example,

```
----+----1----+----2----+----3----+----4----+----5----+----6----+----7----+----8----+----9----
+----0

K XEROX1 CARDINAL                   H49K1                              SC  75.96   35.28
8.47
K XEROX1 CARDINAL                   H4K1                               HC  96.15    3.57
0.21
K XEROX1 CARDINAL                   H4K13                              KC  85.62    2.90
0.57
```

The values type character indicates whether the values that follow are CIELAB (C) or grayscale (G).

When converting FRMs, if the interpretation control character is H or S, Infoprint XT uses the specified shaded ink when it processes highlight color shading generated by the FILL parameter of the BOX FSL command.

Processing a manual ink correlation table

To process a manual ink correlation table and activate correlation entries:

1. Log in to the Infoprint XT system with an z/OS user name that is a member of the AIOUSER group.

2. If you made modifications for the common resources (located in `/var/pdxt/resources/common`), process the `tab.mkt` manual ink correlation table source file by entering the **pdxtcolor** command without any options:

   pdxtcolor

   If you are working with a resource group or a separate directory, use the **-g** or the **-o** option with the **pdxtcolor** command. For example:

   pdxtcolor -g statements

   If the `tab.mkt` file contains values for new or existing solid colors, use the **-p** option with the **pdxtcolor** command to control whether Infoprint XT generates a complete palette of color + black + white shaded colors for each of the solid colors. For example:

   pdxtcolor -p no

Infoprint XT displays information that is similar to this:

```
5016-600 Resource load process started for type "ink".
5016-614 Resource correlation process started.
5016-615 Resource correlation process is complete.
5016-601 Resource load process is complete for type "ink".
```

End Programming Interface Information

Using the AIOZCLR utility to manage the ink correlation table

Infoprint XT provides the AIOZCLR batch utility program to manage the ink correlation table. The user ID from which you run the AIOZCLR utility must be a member of the AIOUSER group.

AIOZCLR parameters

The AIOZCLR utility program provides parameters that you can use to manage the Infoprint XT ink correlation table. AIOZCLR runs as a batch process through JCL statements and invokes the command **pdxtcolor**. See "Using the pdxtcolor command to manage the Infoprint XT ink correlation table" on page 133.

JCL statements

Infoprint XT provides sample JCL that you can modify to configure the ink correlation table. Infoprint XT provides the sample JCL in the SAIOSAMP data set. Figure 19 on page 151 shows the sample JCL that Infoprint XT provides.

```
//AIOZCLR  JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2012,2019 IBM Corporation                               *
//* Copyright 2012,2019 RICOH Company, Ltd                            *
//*                                                                   *
//* Permission to use, copy, modify, and distribute this             *
//* software for any purpose with or without fee is hereby           *
//* granted, provided that the above copyright notices appear        *
//* in all copies.                                                   *
//*                                                                   *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY        *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE       *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR          *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH      *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER           *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER      *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR             *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE        *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.           *
//*                                                                   *
//*  Run the pdxtcolor command in the UNIX System Services           *
//*  environment.                                                     *
//*                                                                   *
//*  CAUTION: This is neither a JCL procedure nor a complete          *
//*  job.  Before using this job step, you must make these           *
//*  modifications:                                                   *
//*                                                                   *
//*  1) Change the JOB statement to meet your system requirements.    *
//*                                                                   *
//*  2) Set the SYSIN parameters to the command you want to run in    *
//*     UNIX System Services.                                         *
//*                                                                   *
//*  3) Ensure that you run this job from a user ID that is in the    *
//*     AIOUSER group.                                                *
//*                                                                   *
//**********************************************************************
//*
//AIOZCLR  EXEC PGM=AIOZCLR
//*
//**********************************************************************
//* Diagnostic messages from the pdxtcolor command                    *
//**********************************************************************
//*
//SYSPRINT DD   SYSOUT=*
//*
//**********************************************************************
//* Specify processing options                                        *
//**********************************************************************
//*
//SYSIN    DD   *
*
* (1) Create an ink correlation table in the mygroup resource group:
*
*     -f create -g mygroup
*
* (2) Add the complete Infoprint XT color collections to the ink
*     correlation table in the mygroup resource group
*
*     -f color_collections -g mygroup -c collection_colors
*
* (3) Create AFP sample jobs for all of the solid colors in the ink
*     correlation table and their associated shades
*
*     -f sample -g mygroup -s all
*
/*
```

Figure 19. Sample JCL for configuring the ink correlation table

These describe the various statements in the sample JCL:

AIOZCLR JOB
> This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZCLR with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZCLR EXEC
>This required EXEC statement specifies the Infoprint XT AIOZCLR utility program.

SYSPRINT DD
>This DD statement defines the data set where AIOZCLR writes the standard error from the **pdxtcolor** command (file descriptor 2).

SYSIN DD
>This optional DD statement specifies the AIOZCLR parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. When it builds the parameter list from the information that you specify, AIOZCLR uses the same rules that AIOZR2AR uses for the SYSIN DD statement. See SYSIN DD for AIOZR2AR on page "SYSIN DD" on page 90.

>**Notes:**

>1. If the SYSIN DD statement is present, Infoprint XT attempts to use the parameters it specifies.
>2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT uses the AIOZCLR default parameters.

Deblocking and reblocking CMDs, FSLs, ISLs, and JSLs

To see the contents of certain types of Xerox resource files, you must first change their format from blocked (binary LPS-labeled) to deblocked (80-byte card-image text). After you have completed the tasks for the deblocked resources, you reblock them. Infoprint XT provides two commands, **pdxtdblkres** and **pdxtblkres**, that you can use to deblock and block resources.

The user name that you use to enter the **pdxtdblkres** and **pdxtblkres** commands must be a member of the AIOUSER group.

Programming Interface Information

Using the pdxtdblkres command to deblock resources

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the **pdxtdblkres** command to deblock one or more Xerox resource files. The syntax for the command is:

```
pdxtdblkres [ -p yes | no ] [ file ... ]
```

The **pdxtdblkres** command options are:

-p yes | no
>Specifies whether the **pdxtdblkres** command passes through data from the deblocking process if the resource is already deblocked, or if the command cannot deblock the data. Valid values are:

>**yes**
>>If the resource is already deblocked or it cannot be deblocked, the command passes the resource data through as it is. This is the default.

>**no**
>>If the resource is already deblocked or it cannot be deblocked, the command stops processing.

file ...
>Specifies one or more Xerox resource files that you want the command to deblock. When the **pdxtdblkres** command deblocks a resource file, it replaces the contents of the existing file with the deblocked output. If you do not specify a file name, the command reads from standard input and writes to standard output.

>You can specify more than one file. Separate the file names with spaces.

Streams used by the pdxtdblkres command

The **pdxtdblkres** command uses file descriptors while it processes Xerox resources:

fd0 (STDIN)
If you do not specify any resource file names with the command, the command reads the blocked resource from standard input.

fd1 (STDOUT)
If you do not specify any resource files names with the command, the command writes the deblocked resource to standard output.

fd2 (STDERR)
The command writes messages from the deblocking process to standard error.

Return codes from the pdxtdblkres command

Return codes from the **pdxtdblkres** command mean:

0
The command successfully deblocked the resource.

EINVAL (121)
An error exists with one of the command options.

ENOATTR (121)
You specified a command option without a value.

other
Any other return codes that are not in this list are return codes from C functions. See "Error return code numbers" on page 247.

Restrictions

The **pdxtdblkres** command can only deblock these types of Xerox resources:

- Command (CMD) files
- Forms Source Libraries (FSLs)
- Ink Source Libraries (ISLs)
- Job Source Libraries (JSLs)

Note: Infoprint XT automatically runs the **pdxtdblkres** command when it loads these types of resources with the **pdxtloadres** command. Therefore, you can read the contents of the metrics files for these types of resources when the load process completes. If you loaded resources with V1R1M0 of Infoprint XT for z/OS before you applied PTF UA43329, reload these types of resources to generate readable versions of the metrics files.

End Programming Interface Information

Programming Interface Information

Using the pdxtblkres command to block resources

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the **pdxtblkres** command to block one or more Xerox resource files. The syntax for the command is:

pdxtblkres [-f *filename.ext*] [*file ...*]

The **pdxtblkres** command options are:

-f *filename.ext*

Specifies the file name that the command uses in the header record or label record of the blocked resource. If you do not use the **-f** command option, the default name that the command uses depends on how you specified the input data:

- If you explicitly specify the name of a Xerox resource file, the command uses the name of the resource file. The extension for the file name that you specify must be `.cmd`, `.fsl`, `.isl`, or `.jsl`.
- If you use standard input to pass the Xerox resource, the command uses the default name `dfault.jsl`.

    Note: The **pdxtblkres** command does not verify that the Xerox resource is a CMD, FSL, ISL, or JSL.

If you use the **-f** command option, you can only block one resource at a time.

file …

Specifies one or more Xerox resource files that you want the command to block. When the command blocks the resource, it replaces the contents of the existing file with the blocked output. If you do not specify a file name, the command reads from standard input and writes to standard output.

You can specify more than one file. Separate the file names with spaces.

Streams used by the pdxtblkres command

The **pdxtblkres** command uses file descriptors while it processes Xerox resources:

fd0 (STDIN)

If you do not specify a resource file name with the command, the command reads the deblocked resource from standard input.

fd1 (STDOUT)

If you do not specify a resource file name with the command, the command writes the blocked resource to standard output.

fd2 (STDERR)

The command writes messages from the blocking process to standard error.

Return codes from the pdxtblkres command

Return codes from the **pdxtblkres** command mean:

0

The command successfully blocked the resource.

EINVAL (121)

An error exists with one of the command options.

ENOATTR (121)

You specified a command option without a value.

E2BIG (145)

You specified the **-f** command option and more than one input file name.

other

Any other return codes that are not in this list are return codes from C functions. See "Error return code numbers" on page 247.

Restrictions

The **pdxtblkres** command can only block these types of Xerox resources:

- CMDs
- FSLs
- ISLs

- JSLs

Infoprint XT JSL (Job Source Library) Metrics Compiler

This compiler produces reformatted environment control resource files from JSL files.

The JSL Metrics Compiler performs these tasks:

- Reads and parses JSL files that can exist in any of these formats:
  - LF-delimited ASCII text files
  - CRLF-delimited ASCII text files
  - EBCDIC text files
  - Binary 80-byte card image format files
- Creates reformatted binary environment control file resources in the formats used by Infoprint XT during data stream conversions. Table 18 on page 155 shows the existing relationships between original Xerox environment control resource types and the corresponding reformatted resource types that Infoprint XT creates by using the **pdxtloadres** command. The **pdxtpdl** command creates these same reformatted resource types when it compiles JSL files.

Table 18. Original Xerox environment control resource types and corresponding reformatted resource types created with pdxtloadres command	
Original Xerox Resource Type	**Reformatted Resource in**
file_name.jdl	file_name.ajd
file_name.cme	file_name.ace
file_name.pde	file_name.apd
file_name.stk	file_name.ast
file_name.tst	file_name.ats

Note: The **pdxtpdl** command does not create JDLs, CMEs, PDEs, STKs or TSTs in their original Xerox formats when it compiles JSLs. The reformatted resources that the **pdxtpdl** command creates cannot be used to print jobs on a Xerox printer.

Using the pdxtpdl command to compile Xerox JSL resources

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You use the Infoprint XT **pdxtpdl** command to compile JSL files and create reformatted environment control resources. The **pdxtpdl** command can process JSL statements contained in files that have binary resource extensions, such as `.jdl`, `.cme`, `.idr`, `.pde`, `.stk`, or `.tst`, in addition to files that have the `.jsl` extension.

The command provides options that you can use to control how and where Infoprint XT creates the reformatted resource files. After the **pdxtpdl** command compiles the JSL resources, you do not have to load any associated resource files with the **pdxtloadres** command. Infoprint XT automatically uses the compiled resources when it processes jobs that require the resources.

Note: The z/OS user name that you run the **pdxtpdl** command from must be a member of the z/OS AIOUSER group.

The syntax of the **pdxtpdl** command is:

```
pdxtpdl [ -e listings | nolistings ]
        [[ -g common | resgrp ] | -o OtherDirectory ]
        [ -h 0 | 1 | 2-20 ]
        [ -H color | nocolor ]
        [ -m letter | medium ]
        [ -r  | -j pattern | -s ]
        [ -l listfile | -n pattern ]
        [ -t truncate | notruncate ]
        [ file ... ]
```

The **pdxtpdl** options are:

-e listings | <u>nolistings</u>
Controls whether Infoprint XT writes the listings from the individual steps of the JSL compilation process to standard error. These listings can contain error information. Valid values are:

listings
Infoprint XT writes the listings to standard error.

<u>nolistings</u>
Infoprint XT does not write the listings to standard error. This is the default.

file ...
Specifies one or more Xerox JSL files that you want to compile with the **pdxtpdl** command. *file* is a complete file name or a pattern-matching string that specifies a group of files.

Note: All **pdxtpdl** options that you specify must precede the JSL file or files.

-g <u>common</u> | *resgrp*
Specifies a resource group name that Infoprint XT uses to build subdirectories in the /var/pdxt/resources directory. Infoprint XT uses these subdirectories to store the reformatted resource files that the **pdxtpdl** command creates. Valid values are:

<u>common</u>
Infoprint XT builds subdirectories in /var/pdxt/resources/common. This is the default.

resgrp
Infoprint XT builds subdirectories in /var/pdxt/resources/*resgrp*. *resgrp* is a name that you choose. The name must be alphanumeric, and it cannot contain any special characters.

Note: If you specify the **-g** option, you cannot specify the **-o** option. If you do not specify either **-g** or **-o**, the **pdxtpdl** command uses the common resource group, which is /var/pdxt/resources/common.

-h <u>0</u> | 1 | 2-20
Controls how Infoprint XT processes horizontal tab characters in JSLs. Valid values are:

<u>0</u>
Infoprint XT converts horizontal tab characters to blanks internally, but does not expand the tabs into strings of blanks. This is the default.

1
Specifying 1 is the same as specifying 0.

2-20
During external processing, Infoprint XT converts horizontal tab characters to blanks and expands the tabs into strings of blanks. The -h value corresponds to the tab spaces setting on the system where you created the JSL. For example, if that system uses the ASCII standard of 8 tab spaces, specify -h 8. Infoprint XT converts each tab character to a blank followed by 7 blanks, for a total of 8.

Horizontal tab expansion is most useful when compiling JSLs that contain Xerox sequence numbers in bytes 75 to 80 of the JSL records.

-H color | <u>nocolor</u>
Specifies whether Infoprint XT accepts Xerox highlight color commands during resource conversion. Valid values are:

color
Infoprint XT processes highlight color commands that it finds in Xerox resources.

nocolor
Infoprint XT does not process highlight color commands. This is the default.

-m letter | *medium*
Specifies the medium (paper) size that Infoprint XT uses to compile Xerox JSL resources. The default is `letter`. Valid paper sizes are:

```
folio
ledger
legal
letter
A3
A4
A4LT
B4
```

Note: Any OUTPUT PAPERSIZE value in the Xerox JSL resource overrides the value of the `-m` option.

-j *pattern*
Specifies which Xerox resources the **pdxtpdl** command compiles within the JSLs that it processes. The **pdxtpdl** command creates new versions of all resources that you specify. The value is:

pattern
The file or pattern-matching string that specifies groups of resources. You can specify more than one pair of **-j** options and patterns, up to a maximum of 50. For example:

- To compile all internally defined JDLs, but not any other type of resources within each JSL, specify:

```
pdxtpdl -j "*.jdl"
```

- To compile only the internally defined resource ABC.CME within each JSL, specify:

```
pdxtpdl -j "abc.cme"
```

- To compile only the internally defined PDEs whose names begin with "FMT" within each JSL, specify:

```
pdxtpdl -j "fmt*.pde"
```

- To process three patterns in a single invocation of the compiler, specify multiple pairs of **-j** options and patterns, and separate the pairs with blanks:

```
pdxtpdl -j "*.stk" -j "xyz.jdl" -j "clear.cme"
```

Notes:

1. If you specify the **-j** option, you cannot specify the **-r** option or the **-s** option.

2. If you specify more than one JSL by using the **-n** option, and **pdxtpdl** finds the internally defined resources that you specify with the **-j** option in more than one of the JSLs, it uses the last occurrence of each resource that it finds.

-l *listfile*
Specifies the JCL resources that you want the **pdxtpdl** command to compile. The value is:

listfile
Either a file on the z/OS system that contains the resource names or a stream. Each resource in the file must be listed on a separate line. If you specify the list of resources in a stream, use one of these formats:

-l -
> A dash indicates that the **pdxtpdl** command reads the resource names from standard input.

-l fd:*n*
> **fd:***n* indicates that the **pdxtpdl** command reads the resource names from the file descriptor that you specify, where *n* is the file descriptor number. For example, **fd:7**. Specify a file descriptor that the **pdxtpdl** command does not already use. See "Streams used by the pdxtpdl command" on page 159 for a list of reserved file descriptors.

Notes:

1. If you specify the **-l** option, you cannot specify the **-n** option.

2. You cannot use wildcard characters in the entries in the list file.

3. You can specify Xerox JSL resources with names that follow Infoprint XT for z/OS naming conventions. See Table 14 on page 118.

4. You can specify the **-l** option without a value. The **pdxtpdl** command tries to load resources by using the retry file.

5. The entries in the resource list can be PDS members specified in the form "pdsname(membername)". The PDS name must be completely specified. The resource list itself must be a stream or an HFS or zFS file. It cannot be a sequential data set or PDS member.

-n *pattern*
> Specifies the Xerox JSL resources to compile. The value is:

pattern
> The file or pattern-matching string that specifies groups of resources. For example:
>
> - To compile all Xerox JSL files in the directory `jslsrc`, specify:
>
> ```
> pdxtpdl -n '/jslsrc/*.jsl'
> ```
>
> - To compile all resources in the current directory that begin with the letter "a", specify:
>
> ```
> pdxtpdl -n './a*'
> ```

You can specify more than one pair of **-n** options and patterns, up to a maximum of 50.

Notes:

1. If you specify the **-n** option, you cannot specify the **-l** option.

2. When you specify a pattern-matching string, it is recommended that you enclose the string in single quotation marks (' '). Otherwise, a $ symbol in a pattern-matching string enclosed in double quotation marks (" ") represents a variable unless you specify a backslash (\) before the symbol. For example, you must specify `-n 'K$DFAULT'` or `-n "K\$DFAULT"` instead of `-n "K$DFAULT"`.

3. When you specify pattern-matching strings, Infoprint XT looks for resource names that match the z/OS patterns. It does not convert the patterns to the Xerox *xrname*.ext format or search for resources whose names use that format.

4. When you compile JSL resources, the **pdxtpdl** command also recognizes Infoprint XT for z/OS naming conventions for Xerox resource files. See Table 14 on page 118. You can transfer Xerox resources from a PDS to a UNIX System Services directory by using a method such as File Transfer Protocol (FTP). The Xerox resource data sets have specific naming conventions.

5. Infoprint XT can search a PDS for member names that match a given criteria. Only the member name can contain wildcard characters. The PDS name must be completely specified and it must be an absolute reference. For example:

   `-n 'some.pds(K$*)'` - Compiles all JSLs.
   `-n 'some.pds(?$A*)'` - Compiles resources that begin with "A".

6. You can compile resources from more than one PDS or HFS or zFS directory, but you cannot compile from both a PDS and an HFS or z/OS directory at the same time.

-o *OtherDirectory*

Specifies an existing directory where you want Infoprint XT to store the reformatted resources that the **pdxtpdl** command creates. The value is:

OtherDirectory

Specifies the directory other than `/var/pdxt/resources/common` or `/var/pdxt/resources/`*resgrp* where you want to store resources.

Note:

1. If you specify the **-o** option, you cannot specify the **-g** option. If you do not specify either **-o** or **-g**, the **pdxtpdl** command uses the common resource group.

2. If the directory that you specify does not exist or you do not have permission to write to the directory, Infoprint XT issues an error message.

-r

Specifies that when compiling a JSL file, the **pdxtpdl** command creates new versions of all Xerox resources that the JSL defines. This includes JDLs and any other standalone Xerox resources that the JSL defines, such as PDEs and CMEs.

Note: If you specify the **-r** option, you cannot specify the **-j** option or the **-s** option.

-s

Specifies that when compiling a JSL file, the **pdxtpdl** command only creates a new version of a Xerox resource that the JSL defines if it does not find a reformatted version of the resource in the `/metrics` directory. If you specify more than one JSL by using the **-n** option, and **pdxtpdl** creates new reformatted versions of any internally defined resources in more than one of the JSLs, it uses the last occurrence of each resource that it finds.

Note: If you specify the **-s** option, you cannot specify the **-r** option or the **-j** option.

[-t truncate | notruncate]

Specifies whether the **pdxtpdl** command reads only the first 72 bytes of each input JSL record or all 80 bytes. Valid values are:

truncate

The **pdxtpdl** command only reads the first 72 bytes of each JSL input record. This is the default.

notruncate

The **pdxtpdl** command reads all 80 bytes of each JSL input record.

Streams used by the pdxtpdl command

The **pdxtpdl** command uses some file descriptors while it processes Xerox resources and ignores others:

fd0 (STDIN)

The command does not use this stream.

fd1 (STDOUT)

The command does not use this stream.

fd2 (STDERR)

The command writes messages to this stream

fd3

If you define this stream, the command writes one record for each resource that it successfully compiles. The command always reports the resource name in lowercase characters, such as `default.jsl`

fd8

The default is that Infoprint XT appends information about the resource compilation process to the `pdxtpdl.log` file, which is in the directory for the resource group. If you define the **fd8** stream, the command redirects the information to this file descriptor. Infoprint XT does not delete the **pdxtpdl.log** file from the directory for the resource group.

Note: Infoprint XT writes the output from file descriptor eight (**fd8**) to the **pdxtpdl.log** file in the working directory for the job. This file contains the names of the resources that Infoprint XT compiled.

fd9
> The command writes a file that contains problem determination information to file descriptor nine (**fd9**). It uses the z/OS **pax** command to generate a compressed archive of the resource directory. The archive is in USTAR format.

Return codes from the pdxtpdl command

Return codes from the **pdxtpdl** command are:

0
> The command successfully compiled all the specified resources.

EINVAL (121)
> An error exists with one of the command options.

E2BIG (145)
> The command contains too many command options.

ENOATTR (121)
> You specified a command option without a value, or you did not specify a required command option.

ENOENT (129)
> The command did not locate the resources to compile. The file or pattern that the **-l** or **-n** option specified did not contain or match any valid file names.

ENOMEM (12)
> Not enough memory is available for the command.

EEXIST (117)
> A resource was already compiled; you did not specify the **-r** option with the command.

ECONNABORTED (1120)
> The command did not compile one or more resources because of a non-zero return code from an associated subcommand.

ECONNRESET (1121)
> The command did not compile one or more resources, but associated subcommands had return codes of zero.

other
> Any other return codes that are not in this list are return codes from C functions. See "Error return code numbers" on page 247.

End Programming Interface Information

Using the AIOZPDL utility to compile Xerox JSL resources

Infoprint XT provides the AIOZPDL batch utility program to compile binary and text format Xerox JSL resources. The user ID from which you run the AIOZPDL utility must be a member of the AIOUSER group and have read access to the data set specified by the XRSPDS DD statement.

AIOZPDL parameters

The AIOZPDL utility program provides parameters that you can use to control how Infoprint XT compiles JSL resources. AIOZPDL runs as a batch process through JCL statements and invokes the command **pdxtpdl**. See "Using the pdxtpdl command to compile Xerox JSL resources" on page 155.

JCL statements for compiling binary format Xerox JSL resources

Infoprint XT provides sample JCL that you can modify to compile binary format Xerox JSL resources. Infoprint XT provides the sample JCL in the SAIOSAMP data set. "Sample JCL for compiling binary format Xerox JSL resources" on page 161 shows the sample JCL that Infoprint XT provides.

Sample JCL for compiling binary format Xerox JSL resources

```
//AIOZPDLB  JOB <JOB STATEMENT PARAMETERS>
//***********************************************************************
//* Copyright 2012,2019 IBM Corporation                                *
//* Copyright 2012,2019 RICOH Company, Ltd                             *
//*                                                                    *
//* Permission to use, copy, modify, and distribute this              *
//* software for any purpose with or without fee is hereby            *
//* granted, provided that the above copyright notices appear         *
//* in all copies.                                                    *
//*                                                                    *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY          *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE         *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR            *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH        *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER             *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER        *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR               *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE          *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.             *
//*                                                                    *
//*  This job compiles binary format Xerox JSL resources.             *
//*                                                                    *
//*  CAUTION: This is neither a JCL procedure nor a complete           *
//*  job.  Before using this job step, you must make these            *
//*  modifications:                                                    *
//*                                                                    *
//*  1) Change the JOB statement to meet your system requirements.     *
//*                                                                    *
//*  2) Change hlq on the XRSPDS DD to identify the data set           *
//*     containing binary Xerox JSL (K$*) resources.                   *
//*                                                                    *
//*  3) Modify the SYSIN DD parameters as desired.                     *
//*                                                                    *
//*  4) Modify the SELECT DD parameters as desired.                    *
//*                                                                    *
//*  5) Ensure you run this job from a user ID that is in the          *
//*     AIOUSER group.                                                 *
//*                                                                    *
//***********************************************************************
//*
//AIOZPDLB EXEC PGM=AIOZPDL
//*
//***********************************************************************
//* Diagnostic messages from the pdxtpdl command                       *
//***********************************************************************
//*
//SYSPRINT DD   SYSOUT=*
//*
//***********************************************************************
//* PDS (RECFM=FB, LRECL=128) containing binary format Xerox JSL       *
//* resources                                                          *
//***********************************************************************
//*
//XRSPDS   DD   DSN=hlq.XRSPDS,DISP=SHR
//*
//***********************************************************************
//* Specify processing options                                         *
//***********************************************************************
//*
//SYSIN    DD   *
*
* Specify a resource group (optional):
*
* -g my_group
*
/*
//*
//***********************************************************************
//* Specify resources to process                                       *
//***********************************************************************
//*
//SELECT   DD   *
  *.jsl
/*
//*
//***********************************************************************
//* To collect service data:                                          *
//*                                                                    *
//* 1) Uncomment the following DD.                                     *
```

```
//*                                                              *
//* 2) Change hlq to an appropriate high level qualifier for your    *
//*    system.                                                   *
//*                                                              *
//* 3) Change volser to an appropriate volume name for your system.    *
//**********************************************************************
//*
//*DEBUG    DD   DSN=hlq.PDXT.AIOZPDLB.PAX,
//*            UNIT=SYSDA,VOL=SER=volser,
//*            SPACE=(TRK,(450,90),RLSE),
//*            DCB=(LRECL=80,BLKSIZE=27920,RECFM=FB),
//*
DISP=(NEW,CATLG,CATLG)
```

These describe the various statements in the sample JCL:

AIOZPDLB JOB
This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZPDLB with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZPDLB EXEC
This required EXEC statement specifies the Infoprint XT AIOZPDL utility program.

SYSPRINT DD
This DD statement defines the data set where AIOZPDL writes the standard error from the **pdxtpdl** command (file descriptor 2).

XRSPDS DD
This DD statement specifies the name of a PDS containing Xerox binary format JSL resources that you wish to compile. You can either allocate the PDS externally, through the ISPF Data Set Utility, or you can include specific parameters in the JCL. In either case, the PDS characteristics must include RECFM=FB, LRECL=128, and BLKSIZE=*nnnnn*. The numeric value, *nnnnn*, is the largest efficient size, and is a multiple of 128. This is an example of how you could allocate the data set on the XRSPDS DD statement:

```
//XRSPDS DD DSN=yourid.XRSPDS,
//         UNIT=SYSDA,VOL=SER=vvvvvv,
//         SPACE=(TRK,(180,5,90),RLSE),
//         DCB=(RECFM=FB,LRECL=128,BLKSIZE=27904),
//         DISP=(NEW,CATLG,CATLG)
```

SYSIN DD
This optional DD statement specifies the AIOZPDL parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. When it builds the parameter list from the information that you specify, AIOZPDLB uses the same rules that AIOZR2AR uses for the SYSIN DD statement. See SYSIN DD for AIOZR2AR on page "SYSIN DD" on page 90.

Notes:

1. If the SYSIN DD statement is present, Infoprint XT attempts to use the parameters it specifies.

2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT uses the AIOZPDL default parameters.

3. Because AIOZPDL automatically specifies the **pdxtpdl -l** option, you cannot specify the **-n** option in the SYSIN DD parameters. The **-l** and **-n** options are mutually exclusive.

SELECT DD
This optional DD statement specifies the names of the Xerox JSL resources, in the Xerox `xrname.ext` format, that you want to compile. You can either specify a sequential data set that contains the resource names, or you can specify the names directly in the DD statement.

To specify resource names with wildcard characters, follow these guidelines:

• Use an asterisk (*) to represent a series of characters.

• Use a question mark (?) to represent a single character.

- Use a wildcard character in the resource extension; however, do not use a wildcard character to represent the period between the resource name and the resource extension.

You can specify one or more resource names or resource patterns on a single line. Separate each name or pattern with one or more spaces. You can also use multiple lines to specify resources. Infoprint XT ignores any resource information in columns 73 through 80. This example shows how you can specify resources:

```
//SELECT DD *
  TEST*.JSL ?PROD.JSL
  POLICY.JSL
  *.JSL
/*
```

You can include comments within the list of resources. Infoprint XT recognizes any line that begins with an asterisk in column one as a comment.

If you do not specify the SELECT DD statement, Infoprint XT attempts to load any resources that failed to load on the last invocation on the AIOZPDL utility program.

Note: When Infoprint XT issues messages for the resource-compile process, it refers to the resource patterns or resource names that you specify as the SELECT criteria.

DEBUG DD

This DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

JCL statements for compiling text format Xerox JSL resources

Infoprint XT provides sample JCL that you can modify to compile text format Xerox JSL resources. Infoprint XT provides the sample JCL in the SAIOSAMP data set. "Sample JCL for compiling text format Xerox JSL resources" on page 163 shows the sample JCL that Infoprint XT provides.

Sample JCL for compiling text format Xerox JSL resources

```
//AIOZPDLT  JOB <JOB STATEMENT PARAMETERS>
//************************************************************************
//* Copyright 2012,2019 IBM Corporation                       *
//* Copyright 2012,2019 RICOH Company, Ltd                     *
//*                                                            *
//* Permission to use, copy, modify, and distribute this       *
//* software for any purpose with or without fee is hereby      *
//* granted, provided that the above copyright notices appear   *
//* in all copies.                                             *
//*                                                            *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY   *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE  *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR     *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER      *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR        *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE   *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.      *
//*                                                            *
//*  This job compiles text format Xerox JSL resources.        *
//*                                                            *
//*  CAUTION: This is neither a JCL procedure nor a complete    *
//*  job.  Before using this job step, you must make these      *
//*  modifications:                                            *
//*                                                            *
//*  1) Change the JOB statement to meet your system requirements. *
//*                                                            *
//*  2) Change hlq on the XRSPDS DD to identify the data set    *
//*     containing text format Xerox JSL (K$*) resources.       *
//*                                                            *
//*  3) Modify the SYSIN DD parameters as desired.             *
//*                                                            *
//*  4) Modify the SELECT DD parameters as desired.            *
//*                                                            *
```

```
//*  5) Ensure you run this job from a user ID that is in the       *
//*     AIOUSER group.                                              *
//*                                                                 *
//*********************************************************************
//*
//AIOZPDLT EXEC PGM=AIOZPDL
//*
//*********************************************************************
//* Diagnostic messages from the pdxtpdl command                    *
//*********************************************************************
//*
//SYSPRINT DD   SYSOUT=*
//*
//*********************************************************************
//* PDS (RECFM=FB, LRECL=80) containing Xerox JSL resources as text  *
//* format files                                                    *
//*********************************************************************
//*
//XRSPDS   DD   DSN=hlq.SRCLIB,DISP=SHR
//*
//*********************************************************************
//* Specify processing options                                      *
//*********************************************************************
//*
//SYSIN    DD   *
*
* Specify a resource group (optional):
*
* -g my_group
*
/*
//*
//*********************************************************************
//* Specify resources to process                                    *
//*********************************************************************
//*
//SELECT   DD   *
  *.jsl
/*
//*
//*********************************************************************
//* To collect service data:                                        *
//*                                                                 *
//* 1) Uncomment the following DD.                                   *
//*                                                                 *
//* 2) Change hlq to an appropriate high level qualifier for your    *
//*    system.                                                       *
//*                                                                 *
//* 3) Change volser to an appropriate volume name for your system.  *
//*********************************************************************
//*
//*DEBUG    DD   DSN=hlq.PDXT.AIOZPDLT.PAX,
//*             UNIT=SYSDA,VOL=SER=volser,
//*             SPACE=(TRK,(450,90),RLSE),
//*             DCB=(LRECL=80,BLKSIZE=27920,RECFM=FB),
//*
DISP=(NEW,CATLG,CATLG)
```

These describe the various statements in the sample JCL:

AIOZPDLT JOB

This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZPDLT with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZPDLT EXEC

This required EXEC statement specifies the Infoprint XT AIOZPDL utility program.

SYSPRINT DD

This DD statement defines the data set where AIOZPDL writes the standard error from the **pdxtpdl** command (file descriptor 2).

XRSPDS DD

This DD statement specifies the name of a PDS containing text format Xerox JSL resources that you wish to compile. You can either allocate the PDS externally, through the ISPF Data Set Utility, or you can include specific parameters in the JCL. In either case, the PDS characteristics must include

RECFM=FB, LRECL=80, and BLKSIZE=*nnnnn*. The numeric value, *nnnnn*, is the largest efficient size, and is a multiple of 80. This is an example of how you could allocate the data set on the XRSPDS DD statement:

```
//XRSPDS DD DSN=yourid.SRCLIB,
//         UNIT=SYSDA,VOL=SER=vvvvvv,
//         SPACE=(TRK,(180,5,90),RLSE),
//         DCB=(RECFM=FB,LRECL=80,BLKSIZE=27920),
//         DISP=(NEW,CATLG,CATLG)
```

SYSIN DD

This optional DD statement specifies the AIOZPDL parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. When it builds the parameter list from the information that you specify, AIOZCLS uses the same rules that AIOZR2AR uses for the SYSIN DD statement. See SYSIN DD for AIOZR2AR on page "SYSIN DD" on page 90.

Notes:

1. If the SYSIN DD statement is present, Infoprint XT attempts to use the parameters it specifies.

2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT uses the AIOZPDL default parameters.

3. Because AIOZPDL automatically specifies the **pdxtpdl -l** option, you cannot specify the **-n** option in the SYSIN DD parameters. The **-l** and **-n** options are mutually exclusive.

SELECT DD

This optional DD statement specifies the names of the Xerox JSL resources, in the Xerox `xrname.ext` format, that you want to compile. You can either specify a sequential data set that contains the resource names, or you can specify the names directly in the DD statement.

To specify resource names with wildcard characters, follow these guidelines:

- Use an asterisk (*) to represent a series of characters.

- Use a question mark (?) to represent a single character.

- Use a wildcard character in the resource extension; however, do not use a wildcard character to represent the period between the resource name and the resource extension.

You can specify one or more resource names or resource patterns on a single line. Separate each name or pattern with one or more spaces. You can also use multiple lines to specify resources. Infoprint XT ignores any resource information in columns 73 through 80. This example shows how you can specify resources:

```
//SELECT DD *
  TEST*.JSL ?PROD.JSL
  POLICY.JSL
  *.JSL
/*
```

You can include comments within the list of resources. Infoprint XT recognizes any line that begins with an asterisk in column one as a comment.

If you do not specify the SELECT DD statement, Infoprint XT attempts to load any resources that failed to load on the last invocation on the AIOZPDL utility program.

Note: When Infoprint XT issues messages for the resource-compile process, it refers to the resource patterns or resource names that you specify as the SELECT criteria.

DEBUG DD

This DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Chapter 7. Submitting Xerox jobs for processing

This chapter describes how to submit Xerox LCDS and Metacode jobs for processing by Infoprint XT. Infoprint XT converts Xerox data streams by using the **pdxtx2afp** command or the AIOZ2AFP batch processing utility, which invokes the **pdxtx2afp** command. If you have Infoprint Server installed, and prefer to use one of its interfaces to submit and process jobs, see .

Before you submit a job, ensure that you have loaded the resources that the job requires. At a minimum, you must load the Job Descriptor Library (JDL) for the job, and at least one font, image, or logo resource. You load all of your resources as part of the initial configuration process, after you complete installation. You also need to know the starting Job Descriptor Entry (JDE) for the job.

> Programming Interface Information

Using the pdxtx2afp command to process jobs

This section documents intended programming interfaces that let the customer write programs to obtain the services of Infoprint XT.

You can use the **pdxtx2afp** command to control how Infoprint XT converts Xerox jobs.

Notes:

1. This section shows the default values for **pdxtx2afp** command options as supplied by Infoprint XT. You can change the default values by using the PDXTX2AFP_ARGS environment variable. See . You can also affect the default values for the **pdxtx2afp** command by using a parameter mapping file. See .

2. You can control some aspects of the conversion process by using transform directives. See .

The syntax of the **pdxtx2afp** command is:

```
pdxtx2afp [ -i inputfile | - ]
          [ -o outputfile | - ]
          [[ -g common | group ] | [ -r resourcepath ]]
          [ -x 'xjdl=dfault xjde=dflt' | 'cparms' ]
          [ -p passthru_values ]
          [ -t 'directives' ]
          [ -w workingdirectory ]
          [ -a jobcapturearchive ]
```

-a *jobcapturearchive*
Specifies the name of an archive file that contains the captured job information, including the input and output files, the data stream conversion log, and the resources used to convert the job. When you specify the -a option, **pdxtx2afp** forces the **xinlr=all** prameter in order to capture all the resources that the input stream requires. Infoprint XT saves the job capture archive in the current directory as *jobcapturearchive*.tar.gz.

-g common | *group*
Specifies the resource group that contains the resources for the job. This group name is the same name that you specified when you loaded the resources with the **pdxtloadres**, **pdxtcluster**, **pdxtcolor**, or **pdxtpdl** commands. The values are:

common
Infoprint XT looks in the common resource group, /var/pdxt/resources/common, for the resources that the job requires. This is the default.

group

Infoprint XT looks for resources in `/var/pdxt/resources/`*group*. The *group* name must be alphanumeric and cannot contain any special characters.

Note: If you specify the **-g** command option, do not specify the **-r** command option. If you specify both, Infoprint XT uses the value of the last command option specified with the command.

-i *inputfile* **| -**

Specifies the file from which Infoprint XT reads data for the conversion process. The values are:

inputfile

The name of the original Xerox LCDS or Metacode job file.

-

A dash (-) indicates that Infoprint XT reads from standard input. This is the default.

Note: If you use the AIOZ2AFP utility, Infoprint XT reads the Xerox LCDS or Metacode job file from the XRXIN DD statement.

-o *outputfile* **| -**

Specifies the file in which Infoprint XT writes the AFP output from the conversion process. The values are:

outputfile

The name of the file to which Infoprint XT writes the AFP output.

-

A dash (-) indicates that Infoprint XT writes to standard output. This is the default.

Note: If you use the AIOZ2AFP utility, Infoprint XT writes AFP output to the AFPOUT DD statement.

-p *passthru_values*

Specifies pass-through values that you can use to pass information to Infoprint XT, or that you can use to pass information to application exits. To pass information to Infoprint XT, use one of these formats:

```
-p passthru_values

-p -opa=passthru_values
```

When the value for the **-p** command option begins with **-opa=**, Infoprint XT reads information from the parameter mapping file `pdxtx2afp.map`. It also defines the temporary working directory in `/var/pdxt/jobs`.

passthru_values is a series of one or more keyword and value pairs. Valid keywords and values are:

class=*n*

Specifies the class for the job. This corresponds to the CLASS parameter that you specify if you submit the job with JCL. *n* is a single character.

destination=*dest*

Specifies the destination for the job. This corresponds to the DEST parameter that you specify if you submit the job with JCL. *dest* is a value from 1 to 8 characters.

forms=*form*

Specifies the name of the form for the job. This corresponds to the FORMS parameter that you specify if you submit the job with JCL. *form* is a value from 1 to 8 characters.

jobid=*jobid*

Specifies an ID for the job. *jobid* is a value from 1 to 8 characters. If you do not specify this keyword, Infoprint XT uses UNKNOWN for the job ID.

jobname=*name*

Specifies a name for the job. *name* is a value from 1 to 8 characters. If you do not specify this keyword, Infoprint XT uses UNKNOWN for the job name.

If you specify more than one keyword and value pair, separate the pairs with commas; do not include any spaces. These examples show different methods of specifying the **-p** command option, with keywords and values that Infoprint XT can use:

```
-p -opa=class=D,forms=BILLING

-p -opa=jobname=NOV004
```

Notes:

1. If you specify any keywords other than those that are shown, Infoprint XT ignores them.

2. If you use the AIOZ2AFP utility, Infoprint XT uses the **-p -opa** command option that it builds from JCL statements in the AIOZ2AFP job.

-r *resourcepath*
Specifies the AFP resource path. If you do not specify this command option, Infoprint XT looks for resources in the `/var/pdxt/resources/common` directory.

Note: If you specify the **-r** command option, do not specify the **-g** command option. If you specify both, Infoprint XT uses the value of the last command option specified with the command.

-t '_directives_**'**
Specifies any job-specific transform directives. For more information, see "Using transform directives" on page 42.

-w *workingdirectory*
Specifies the working directory that Infoprint XT uses when it processes the job. Infoprint XT uses the **-p -opa** values, *jobname* and *jobid*, to build a subdirectory name of *jobname-jobID-n*, where *n* is a sequence number. Unless errors occur, Infoprint XT always deletes the files that it creates in this directory after conversion finishes successfully.

If you do not specify this command option, Infoprint XT uses a subdirectory of the directory that the PDXTWORKDIR environment variable specifies as the working directory. For more information about the PDXTWORKDIR environment variable, see "Controlling the working directory that Infoprint XT uses for variable data (PDXTWORKDIR)" on page 25.

Notes:

1. Any directory that you specify must exist; Infoprint XT does not create the directory for you.

2. Infoprint XT ignores the **-k** transform directive when you specify a working directory with the **-w** command option.

3. Whether files remain in a user-specified working directory depends on the severity and the type of error.

4. Only one instance of the **pdxtx2afp** command can use a given working directory at a time. This is because the **pdxtx2afp** command creates and uses files that are not job-specific. For example, the command writes messages to the `x2afp.lst` file. If two instances of the command share the same working directory, you lose the messages from one of the instances.

-x '<u>xjdl=dfault xjde=dflt</u>**'** | **'**_cparms_**'**
Specifies the Xerox-specific conversion parameters for the job. You can specify more than one pair of **-x** options and values, up to a maximum of 50. The values are:

'_cparms_**'**
Xerox conversion parameters. See Appendix A, "Conversion parameters for converting Xerox jobs," on page 205.

'<u>xjdl=dfault xjde=dflt</u>**'**
The name of the Xerox JDL and JDE. This is the default.

Streams used by the pdxtx2afp command

The **pdxtx2afp** command uses file descriptors while it processes Xerox jobs:

fd0 (STDIN)
You can pass the Xerox data stream as standard input to file descriptor zero.

fd1 (STDOUT)
You can instruct Infoprint XT to write the AFP data stream that results from conversion to file descriptor one.

fd2 (STDERR)
Infoprint XT writes messages from the conversion process to standard error.

fd3
If you define this file descriptor and Infoprint XT tried to convert the job, Infoprint XT writes one record that contains the total number of pages that the conversion process produced.

fd9
If you specify the **-d** transform directive, the command writes a file that contains problem determination information to file descriptor nine. It uses the z/OS **pax** command to generate a compressed archive of the resource directory. The archive is in USTAR format.

For more information about specifying file descriptors with the **pdxtx2afp** command, see .

Return codes from the pdxtx2afp command

Return codes from the **pdxtx2afp** command have these meanings:

0
The command successfully produced one or more AFP pages.

EINVAL (22)
The parameter list for the command contains arguments that are not valid.

E2BIG (7)
The parameter list for the command contains too many arguments.

ENOATTR (112)
A parameter is missing.

ECONNABORTED (1120)
The command converted the job, but it produced no pages because of a non-zero return code from an associated subcommand.

ECONNRESET (1121)
The command converted the job, but it produced no pages. Associated subcommands had return codes of zero.

other
Any other return codes that are not in this list are return codes from C functions. See .

Examples: pdxtx2afp command

These are examples of **pdxtx2afp** commands for conversion and scanning tasks:

- In this example, the Xerox job and all files that the **pdxtx2afp** command generates are in the directory. The resources for the job are in the Infoprint XT common resource library.

```
pdxtx2afp -i /tmp/waite/51230/103355000 -o /tmp/waite/51230/103355000.afp \
-r /var/pdxt/resources/common -w /tmp/waite/51230 \
-x 'xjdl=lbb xjde=pay xcc=machine xclb=none xrecfm=variable' \
2> /tmp/waite/51230/conversion.log
```

- In this example, the Xerox job is in the current directory. The resources are loaded in the resource library for the resource group named **payroll** (the JDL for the job must be loaded before Infoprint XT can scan the job successfully). The conversion process only scans the job for the resources that it requires, as specified by the **xconvert=no** conversion parameter. Infoprint XT does not produce an

AFP file for the job. The `x2afp.lst` section of the file `scanlist` contains the names of the resources that the job requires.

```
pdxtx2afp -i ./103355000 -r /var/pdxt/resources/payroll \
-x 'xjdl=lbb xjde=pay xcc=machine xclb=none xrecfm=variable \
xconvert=no xafprc=12' 2> ./scanlist
```

- In this example, the Xerox job and all files that the **pdxtx2afp** command generates are in the working directory `/tmp/mydir`. The resources for the job are in the Infoprint XT payroll resource library. The **fd3** stream is redirected to a file called `checks_pages.lst`, and the **fd9** stream is redirected to a file called `checks_debug.pax`. The **-d** transform directive is specified so that problem determination information includes the job directory and the resource library used by the job.

```
pdxtx2afp -i /tmp/mydir/checks.meta -o /tmp/mydir/checks.afp \
-w /tmp/mydir -r /var/pdxt/resources/payroll -t '-d resdir -d jobdir' \
-x 'xjdl=payrol xjde=strton xcc=m xrecfm=f xlrecl=133 xclb=checks' \
2> /tmp/mydir/checks.log 3> /tmp/mydir/checks_pages.lst \
9> /tmp/mydir/checks_debug.pax
```

End Programming Interface Information

Using the AIOZ2AFP utility to process jobs

Infoprint XT provides a utility program, AIOZ2AFP, that you can use to submit Xerox jobs for conversion. The user ID from which you run the AIOZ2AFP utility program must be a member of the AIOUSER group.

Modifying your existing JCL to use Infoprint XT

If you already have JCL that submits jobs to the spool, you should determine if you want to make modifications to your existing JCL to include the use of Infoprint XT. Depending on your installation, you might only use a small number of JCL jobs to process your Xerox data, or you might have an extensive library of JCL jobs. The complexity of your environment determines whether you want to make modifications, or whether you should create new JCL that incorporates the sample job-submission JCL that Infoprint XT provides.

Memory considerations for AIOZ2AFP

By default, this utility program runs above the 16MB address line, and it primarily uses above-the-line storage. The z/OS default, which provides 32MB of above-the-line storage for all programs, should be adequate for the AIOZ2AFP utility program. If you override the default values for the Language Environment HEAP or STACK parameters in the EXEC PARM statement, such that the AIOZ2AFP program runs below the 16MB line, you must include a REGION size. Otherwise, you might significantly impact system performance. In this case, the minimum REGION value is 6MB, in addition to twice the size of the largest Xerox resource specified inline in the job. Inline resources include those that FILE DJDE commands and GRAPHIC DJDE commands specify. If you specify a smaller value, out-of-storage errors might occur.

If you do not override the AIOZ2AFP default values, you should ensure that the REGION size is twice the size of the Xerox input data set, plus 4MB. Because this is not always practical for every installation, the AIOZ2AFP utility program automatically stores data on disk to avoid out-of-memory conditions. Although this degrades system performance, you might find it necessary in order to process your largest jobs.

AIOZ2AFP parameters

The AIOZ2AFP utility program provides parameters that you can use to control how Infoprint XT processes the job. The AIOZ2AFP utility program invokes the command **pdxtx2afp**, if you load as a batch process through JCL statements. See "Using the pdxtx2afp command to process jobs" on page 167.

AIOZ2AFP directives

The AIOZ2AFP utility program also provides directives that you can use to further control how Infoprint XT processes the job. You can also use the directives to gather information about the transform process. See "Using transform directives" on page 42.

JCL statements for AIOZ2AFP

Infoprint XT provides sample JCL that you can modify to convert your LCDS jobs or metacode jobs in to Advanced Function Presentation jobs. Infoprint XT provides the sample JCL in the SAIOSAMP data set. Figure 20 on page 173 shows the sample JCL that Infoprint XT provides.

```
//AIOZ2AFP JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2003,2019 IBM Corporation                         *
//* Copyright 2007,2019 RICOH Company, Ltd                       *
//*                                                              *
//* Permission to use, copy, modify, and distribute this         *
//* software for any purpose with or without fee is hereby       *
//* granted, provided that the above copyright notices appear    *
//* in all copies.                                               *
//*                                                              *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY    *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE   *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR      *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH  *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER       *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER  *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR         *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE    *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.       *
//*                                                              *
//*  USE THIS JOB TO CONVERT AN LCDS OR METACODE JOB TO AFPDS.   *
//*                                                              *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE     *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE         *
//*  FOLLOWING MODIFICATIONS:                                    *
//*                                                              *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                              *
//*  2) CHANGE job.to.convert ON THE XRXIN DD TO IDENTIFY THE    *
//*     DATA SET CONTAINING THE LCDS OR METACODE PRINT DATA.     *
//*                                                              *
//*  3) MODIFY THE SYSIN DD PARAMETERS AS DESIRED.               *
//*                                                              *
//*  4) CHANGE THE AFPOUT DD AND OUT1 OUTPUT STATEMENTS TO DIRECT THE *
//*     JOB TO THE DESIRED PSF WRITER.                           *
//*                                                              *
//*  5) ENSURE YOU RUN THIS JOB FROM A USER ID THAT IS IN THE    *
//*     AIOUSER GROUP.                                           *
//*                                                              *
//**********************************************************************
//*
//AIOZ2AFP EXEC  PGM=AIOZ2AFP
//*
//**********************************************************************
//* SPECIFY PROCESSING OPTIONS.
//**********************************************************************
//SYSIN    DD *
 -x'xjde=dflt xjdl=dfault'
/*
//OUT1     OUTPUT FORMS=STD,DEST=LOCAL,CLASS=A
//XRXIN    DD DSN=job.to.convert,DISP=SHR
//AFPOUT   DD SYSOUT=*,OUTPUT=(*.OUT1),DCB=(LRECL=12284,RECFM=VBM)
//SYSPRINT DD SYSOUT=*
//*
//**********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//*    SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//**********************************************************************
//*DEBUG    DD DSN=hlq.PDXT.AIOZ2AFP.PAX,VOL=SER=volser,
//*         UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*         DCB=(LRECL=80,RECFM=FB),SPACE=(TRK,(225,75),RLSE)
```

Figure 20. Sample JCL for submitting jobs

These describe the various JCL statements in the sample JCL:

AIOZ2AFP JOB
> This required JOB statement marks the beginning of the job, and tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZ2AFP with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

Note: Depending on the configuration of your system, you might need to specify a REGION parameter on the JOB statement. The region size should be large enough to accommodate the largest Xerox job that you process. See "Memory considerations for AIOZ2AFP" on page 171.

AIOZ2AFP EXEC

This required EXEC statement specifies the Infoprint XT AIOZ2AFP utility program. Optionally, you can specify AIOZ2AFP parameters on the EXEC statement. See "Using the pdxtx2afp command to process jobs" on page 167. This shows an example of specifying AIOZ2AFP parameters on the EXEC statement:

```
AIOZ2AFP EXEC PGM=AIOZ2AFP,
         PARM='-x ''xjdl=isidfl xjde=onln xclb=trays'''
```

Notes:

1. Each quotation mark shown in the example is a single quotation mark.

2. If you also specify AIOZ2AFP parameters in the SYSIN data set, Infoprint XT prepends parameters from the EXEC statement to those parameters.

SYSIN DD

This optional data definition (DD) statement specifies the AIOZ2AFP parameters. You can specify a sequential data set that contains the parameters, or you can specify the parameters directly in the DD statement. If you specify a data set, it must have the DCB attributes of Fixed Block 80 (RECFM=FB, LRECL=80). These rules apply to the parameters, whether you specify them directly on the SYSIN DD statement, or in a data set that the statement references:

- You can specify the parameters on more than one line.
- Comment lines must contain an asterisk, *, in column one.
- You can only use columns one through 71 for parameter data.
- Column 72 is the continuation indicator column. Any non-blank character in column 72 indicates that the next line is a continuation line.
- Infoprint XT ignores any data in columns 73 to 80.
- Infoprint XT ignores blank lines.

Notes:

1. The SYSIN DD statement is optional. If it is present, Infoprint XT attempts to use any parameters that it specifies.

2. If the JCL contains a SYSIN DD DUMMY statement, or if the SYSIN DD specifies an empty data set, Infoprint XT issues informational messages that it encountered an empty SYSIN statement.

3. Infoprint XT also attempts to read any AIOZ2AFP parameters that the EXEC statement specifies. If any parameters are present on the EXEC statement, Infoprint XT prepends those parameters to the list of any parameters from the SYSIN data set.

4. If Infoprint XT does not find any AIOZ2AFP parameters on the SYSIN DD or EXEC statements, it uses the AIOZ2AFP default parameters. See "Using the pdxtx2afp command to process jobs" on page 167.

OUT1 OUTPUT

This OUTPUT statement, in conjunction with the AFPOUT DD statement, directs the job to the appropriate Print Services Facility writer.

XRXIN DD

This required DD statement defines the sequential data set that contains the Xerox LCDS or Metacode data stream.

Note: The AIOZ2AFP program uses the actual DCB attributes of the data set that you specify in the XRXIN DD to automatically set the **xrecfm**, **xlrecl**, and **xcc** parameters for the **pdxtx2afp** command that it invokes. These parameters override any **xrecfm**, **xlrecl**, or **xcc** parameter that you specify in the SYSIN DD.

AFPOUT DD

This required DD statement defines the data set in which Infoprint XT writes the AFP data stream that it generates. You can either allocate the data set externally, through the ISPF Data Set Utility, or you can include a data control block (DCB) parameter in the JCL. In either case, the PDS characteristics must include:

- RECFM=VBM.

- LRECL=12284, which specifies the logical record length. A value of 8205 is the minimum; you can increase the value as required.

- BLKSIZE=12288, which specifies the block size. You should use the most efficient BLKSIZE that is appropriate for your installation; the minimum block size that Infoprint XT requires is 12288.

This example shows how you can allocate the data set on the AFPOUT DD statement:

```
//AFPOUT   DD   DSN=PM.VOL1,
//           UNIT=SYSDA,VOL=SER=USR012,
//           SPACE=(TRK,(2000,45,1260),RLSE),
//           DCB=(BLKSIZE=27998,RECFM=VBA,LRECL=12284),
//           DISP=(NEW,CATLG,CATLG)
```

Note: If the job that you are processing contains FILE Dynamic Job Descriptor Entries (DJDEs), and you instruct Infoprint XT to include the resources inline, you need to increase the logical record length and block size. You must increase the LRECL and BLKSIZE values to accommodate the largest AFP resource that the job includes inline in the data stream. The maximum size of an AFP resource that Infoprint XT generates requires LRECL=12284. You should use the most efficient BLKSIZE that is appropriate for your installation; the minimum block size that Infoprint XT requires is 12288. See "Processing jobs that contain FILE DJDE commands" on page 177 for information about specifying inline resources. If the job includes AFP resources that were previously loaded, and you have modified those resources with other programs or substituted other AFP resources, you must ensure that the logical record length and block size supports the largest of those resources.

The AFP data stream that Infoprint XT generates contains an inline form definition. If you submit this job to Print Services Facility for z/OS, you must omit the FORMDEF parameter, or include a FORMDEF=DUMMY parameter on the OUTPUT DD statement. The AIOZ2AFP sample JCL omits the parameter.

SYSPRINT DD

This required DD statement defines a sequential data set in which the AIOZ2AFP utility program writes its messages. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume. If you are only scanning the job for the resources that it requires, this data set also contains the list of resources. See the description of xconvert transform conversion parameter on page "xconvert = yes | no" on page 208.

DEBUG DD

This optional DD statement provides a method of capturing service information. An IBM service representative provides directions for its use. For details about capturing service information, see "Capturing service information" on page 195.

Diagnostic and informational files that Infoprint XT produces

If errors exist in the output that Infoprint XT produced, the transform records information about the failure. To determine the exact cause of the problem, you can use the listing files that Infoprint XT produces: pdxtx2afp.log, x2afp.lst (included in the pdxtx2afp.log file), aioxlxbe.lst, aioxlxie.lst, aioxlxoe.lst, and aioxlxte.lst.

If you set the PDXTWORKDIR environment variable, as described in "Controlling the working directory that Infoprint XT uses for variable data (PDXTWORKDIR)" on page 25, Infoprint XT writes the log file and listing files to the *pdxtworkdir*/jobs directory, where *pdxtworkdir* is the current value of the PDXTWORKDIR environment variable. For example, /var/pdxt/jobs is the default directory Infoprint XT uses.

pdxtx2afp.log file

The pdxtx2afp.log file contains sections that list the arguments, any transform directives, the commands that Infoprint XT issued, and the return codes from those commands. It also includes the number of impressions (pages) of AFP output that Infoprint XT produced. You can use pdxtx2afp.log to review the processing information for the job, and determine whether the conversion processing completed successfully. The data set that you specified with the SYSPRINT DD statement contains the information. Figure 21 on page 176 is an example of the information in the pdxtx2afp.log file.

```
5016-501 2009-08-04 13:54:57 MDT (pid 31448) - transform started.

5016-503 Transform arguments (pdxtx2afp):               1
5016-504    -i "/var/pd/ballachulish/pdprw75iae"
5016-504    -o "/var/pd/ballachulish/pdprw75iae_xfml"
5016-504    -e "/var/pd/ballachulish/pdprw75iae_xfml_err"
5016-504    -U "/var/pd/ballachulish/pdprw75iae_update"
5016-504    -q "prtxt-ad"
5016-504    -p ""
5016-504    -d "ASCII"
5016-504    -# "ballachulish:4881900001"
5016-504    -D "1"
5016-504    -s "ballachulish"
5016-504    -x "xjdl=pdxton xjde=strton xcc=a xrecfm=v xclb=none xafprc=4"
5016-504    -r "/var/pdxt/resources/pdxttest"
5016-504    -p ""

5016-505 Transform directives (/var/pdxt/pdxtx2afp.directives):   2
5016-506    -x "xclb=none"

5016-509 Command Sequence:                    3
5016-510    1) aioxlxie -e '' -j 'ballachulish:4881900001' -q 'prtxt-ad' -p '' -x 'xjdl=pdxton xjde=strton
xcc=a xrecfm=v xclb=none xafprc=4 respath==/var/pdxt/resources/pdxttest::/usr/lpp/afpfonts:
xfmtlib=/var/pdxt/resources/pdxttest/metrics:/usr/lpp/afpfonts/metrics:/usr/lpp/pdxt/V3R3M0/resources
xclb=none xcaobs=yes
xonepass=no jobname=ballachulish:4881900001' 2> aioxlxie.lst < '/var/pd/ballachulish/pdprw75iae
5016-510    2) x2afp xjdl=pdxton xjde=strton xcc=a xrecfm=v xclb=none xafprc=4
respath=/var/pdxt/resources/pdxttest::/usr/lpp/afpfonts: xfmtlib=/var/pdxt/resources/pdxttest/metrics:
/usr/lpp/afpfonts/metrics:/usr/lpp/pdxt/V3R3M0/resources xclb=none xcaobs=yes xonepass=no
jobname=ballachulish:
4881900001 x2afp.fifo 2> x2afp.lst
5016-510    3) aioxcsfi -c3 -f1 2> aioxcsfi.lst 3> aioxcsfi.pgs > '/var/pd/ballachulish/pdprw75iae_xfml'

5016-511 Return codes:                              4
5016-512    1) 0 (pid 23010)
5016-512    2) 0 (pid 27106)
5016-512    3) 0 (pid 14104)

5016-513 Impressions (pages): 4                    5
5016-502 2009-08-04 13:55:28 MDT (rc 0) - transform ended.      6
```

Figure 21. Example of the pdxtx2afp.log file

These describe the different sections of the pdxtx2afp.log file in Figure 21 on page 176.

5016-503 Transform arguments (pdxtx2afp): **1**
This lists the transform arguments that were in effect for the job. The name in parentheses indicates the component that supplied the arguments. The arguments were explicitly specified, Infoprint XT derived the arguments, or they are a combination of specified and derived arguments. It is possible to have several transform argument sections. For example, the file might contain a section for arguments that were specified through the PDXTX2AFP_ARGS environment variable, and a section for arguments that were specified by the **pdxtx2afp** command:

```
5016-503 Transform arguments (PDXTX2AFP_ARGS):
5016-504    -x "xrptfile=."

5016-503 Transform arguments (pdxtx2afp):
5016-504    -x "xjdl=pdxton xjde=strton xcc=a xrecfm=v xclb=none xafprc=4"
```

5016-505 Transform directives (/var/pdxt/pdxtx2afp.directives): **2**
This shows the entries that the transform directives file contains. This section is only present an active transform directives file exists. See "Activating transform directives" on page 44.

If you specify transform directives through the PDXTX2AFP_DIRECTIVES environment variable, Infoprint XT adds a section that shows which directives the environment variable specifies.

5016-509 Command Sequence: 3

This lists the commands, in order, that Infoprint XT issued when it processed the job.

5016-511 Return codes: 4

This lists the return codes from each of the commands that were identified in the Command Sequence section.

5016-513 Impressions (pages): 5

If Infoprint XT generated AFP output for the job, this message lists the number of pages that Infoprint XT produced.

5016-502 (rc 0) - transform ended. 6

Infoprint XT shows the overall return code from the transform.

x2afp.lst file

The `x2afp.lst` file contains the results of the data stream conversion process. The contents of this file can help you determine what caused the failure. Infoprint XT also creates this file when the conversion process is successful. This is an example of how the information from the `x2afp.lst` file prints on the error sheet:

```
5016-521 x2afp.lst
    5019-004S Unrecognized option for the keyword: xrecfm=nv. Valid options for
this keyword are:

variable
fixed
nfs
Processing ended with return code 16
General error 7 occurred (errno 0)
```

aioxlxbe.lst file

If you use the **aioxlxbe** transform begin application exit, this listing file contains the standard error output that the application exit writes. See "Setting up a transform begin application exit" on page 48.

aioxlxie.lst file

If you use the **aioxlxie** transform input application exit, this listing file contains the standard error output that the application exit writes. See "Setting up a transform input application exit" on page 49.

aioxlxoe.lst file

If you use the **aioxlxoe** transform output application exit, this listing file contains the standard error output that the application exit writes. See "Setting up a transform output application exit" on page 51.

aioxlxte.lst file

If you use the **aioxlxte** transform end application exit, this listing file contains the standard error output that the application exit writes. See "Setting up a transform end application exit" on page 53.

Processing jobs that contain FILE DJDE commands

Infoprint XT supports jobs that include FILE DJDE commands; you do not have to specify any special conversion parameters to process jobs that contain them. In the Xerox environment, the use of FILE DJDE commands is a common method of updating the resources that are resident on the printer. Infoprint XT invokes the **pdxtloadres** command to load the resource that each FILE DJDE specifies into a specific resource group or location (see "Using the pdxtloadres command to load Xerox resources" on page 111). You control the resource group or location into which Infoprint XT loads the resources when you submit the job for conversion processing. When you convert the job, you can use the **-g** option or the **-r** option to specify the group or location. See "Using the pdxtx2afp command to process jobs" on page 167.

For jobs that use the FILE DJDE, Infoprint XT loads resources into either the resource group or directory for the job. The storage parameter of the FILE DJDE determines how long Infoprint XT retains the resource:

- The **P** storage parameter indicates the resource is permanent. After the job completes conversion, Infoprint XT keeps permanent resources so that subsequent jobs can use them. If either a PDS or a PDSE is associated with the resource group or directory, Infoprint XT copies both new and changed permanent resources to the data set.

- The **D** storage parameter indicates the resource is temporary. After the job completes conversion, Infoprint XT copies the AFP versions of the printable temporary resources into the AFP data stream for the job. It then deletes all of the temporary resources. Infoprint XT does not copy temporary resources to either the PDS or the PDSE that is associated with either the resource group or the directory.

Notes:

1. If you have multiple jobs that use the FILE DJDE and the same resource group or directory, do not submit them at the same time. Because Infoprint XT can convert multiple jobs at the same time, unpredictable results can occur.

2. Do not submit a job that uses the FILE DJDE to load two different resources of the same name. For example, if the first report loads one version of ABC.IMG and the second report loads another version of ABC.IMG, unpredictable results can occur.

There might be occasions when you want Infoprint XT to imbed some or all of the permanent resources inline in the AFP data stream. Infoprint XT provides the **xinlr** transform parameter, which lets you specify which permanent resources that you want Infoprint XT to imbed. You can specify one or more types of printable resources, such as AFP page segments and characters sets, or you can specify all permanent resources of all printable types. You use the **-x** option to specify transform parameters, including the **xinlr** parameter. See xinlr transform conversion parameter on page "xinlr = all:cs:cp:cf:pseg:ovly:inlr" on page 210.

Note: Infoprint XT always imbeds the temporary resources, identified by the **D** storage parameter, regardless of the setting of the **xinlr** conversion parameter.

Processing jobs that contain stapling commands

You can process jobs that contain Xerox stapling commands with Infoprint XT. Xerox OUTPUT STAPLE PDL commands, in conjunction with FACEUP and NTO1 commands, specify stapling actions. Infoprint XT supports these combinations of the three commands:

```
OUTPUT STAPLE=YES    and    OUTPUT FACEUP=YES    and    OUTPUT NTO1=YES
OUTPUT STAPLE=YES    and    OUTPUT FACEUP=YES    and    OUTPUT NTO1=n
```

To control stapling, Infoprint XT provides four conversion parameters that you can specify with the job. The parameters are **xhonorstaple**, **xstaplemax**, **xstapleorient**, and **xstaplesysgen**. See Appendix A, "Conversion parameters for converting Xerox jobs," on page 205 for further information about these parameters.

Notes:

1. Some restrictions apply when Infoprint XT processes jobs that contain stapling commands. See Stapling support on page "Stapling support" on page 14.

2. You should always refer to the documentation for your particular Ricoh Production Print Solutions printer for the latest information about features and capabilities. For example, stapling capacities and supported media differ between printer models. See "Ricoh Production Print Solutions Printers" on page 431.

Chapter 8. Processing jobs by using Infoprint Server

This chapter describes how to perform the tasks in the IBM Infoprint Server environment to submit Xerox LCDS jobs and Metacode jobs for processing by Infoprint XT.

Before you use the procedures in this chapter, ensure that all applicable customization activities for Infoprint Server are complete. See Chapter 5, "Customizing Infoprint Server," on page 61.

Note: To access job conversion messages, you must run commands in the z/OS UNIX environment. If you are not familiar with how to submit commands from the ISPF shell, or from the z/OS UNIX shell, see:

- "Using the ISPF shell to issue commands" on page 184
- "Accessing the UNIX System Services z/OS UNIX shell" on page 184

Determining the method of Infoprint Server job submission

There are two primary methods of processing Xerox jobs with Infoprint XT in conjunction with Infoprint Server. You can use the IP PrintWay component of Infoprint Server, which provides the advantage of eliminating the need to modify your existing job control language. You can use the Print Interface subsystem to process jobs. With this method, you must add the SUBSYS parameter to your JCL, and you can use the **filter-options** attribute to specify Infoprint XT processing options.

Form definition processing

When Infoprint XT converts a Xerox job, it builds a custom form definition from information that it derives from certain non-printable resources for the job. It then imbeds the form definition inline, in the Advanced Function Presentation data stream that it generates. For other programs, such as IBM Print Services Facility for z/OS, to use the inline form definition, you must omit the FORMDEF parameter or include a FORMDEF=DUMMY parameter with your job. This applies to any of the job submission methods that invoke Infoprint Server and its components. If you specify any external form definition name, your printed results are unpredictable.

FILE DJDE processing

In the Infoprint Server environment, Infoprint XT processes jobs that contain FILE DJDE commands in the same manner that it does if you processed the jobs through JCL, without Infoprint Server. The storage parameter that the FILE DJDE specifies, and whether you use the **xinlr** conversion parameter, influence how Infoprint XT processes the resources for the job. See "Processing jobs that contain FILE DJDE commands" on page 177 for detailed information about FILE DJDE processing.

Note: When you process jobs that contain FILE DJDE commands, there are configuration considerations for how you start Infoprint Server. See "Starting Infoprint Server for jobs that contain FILE DJDE commands" on page 79.

Printing jobs by using IP PrintWay

If you want to use IP PrintWay, you might be able to use your existing JCL without making any modifications. You can replicate the methods of using FORMS, CLASS, or DEST parameters to select the starting environment for jobs, through Infoprint XT configuration. "Customization and Administration tasks for IP PrintWay" on page 71 describes the various ways that you can set up a combined IP PrintWay and Infoprint XT environment. If you did not perform the configuration tasks, contact your system administrator for instructions about how to process your jobs through IP PrintWay.

Verifying whether the job converted correctly

If an error occurred and no AFP was generated, or the AFP printed differently than expected, you can use the **-L** attribute on the **x2afpd** command to list standard error output from the **pdxtx2afp** command. For more information about this support, see "x2afpd daemon command syntax" on page 64.

Printing jobs by using the Print Interface subsystem

If you use the Print Interface subsystem, you need to make minor modifications to the JCL that you use to generate and route the Xerox job. This section describes two methods that you can use. In the first method, you specify the Infoprint XT conversion parameters directly in the JCL. In the second method, you use a printer definition in the Infoprint Server Printer Inventory to apply the conversion parameters.

Modifying the application JCL and including conversion parameters

To modify an existing JCL procedure that submits Xerox data sets to the z/OS spool, you must change the JCL statements to submit the Xerox job to Infoprint Server through the Print Interface subsystem. This section describes how to do this, and how to include conversion parameters in the JCL. This method is suitable for installations that only have a single printer, or that only use a small number of JCL jobs to process Xerox data.

The following example shows the JCL that routes a Xerox data set to a Xerox printer with the name PRT10. This represents the original Xerox environment, without Infoprint XT and InfoPrint printers.

```
    ⋮
 //OUT1   OUTPUT DEST=PRT10,FORMS=STD
 //OUTDD      DD SYSOUT=W,OUTPUT=(*.OUT1)
    ⋮
```

Now, you have replaced the Xerox printer PRT10 with an InfoPrint IPDS printer with the name PRT20. You defined PRT20 through the same interfaces on z/OS that you originally used to define the Xerox printer. You have also created a printer definition through the Infoprint Server Printer Inventory Manager, and customized it to process Xerox jobs with Infoprint XT. The name of the printer definition is IPS_PRT10, and "Creating a PSF for z/OS printer definition with routing information" on page 70 describes this customization process. You then modify your JCL so that it specifies the InfoPrint printer and the printer definition. You also add the conversion parameters for the job, which Infoprint XT uses to produce the AFP output. You specify a starting JDL of ONLINE, and a starting JDE of STRT. Appendix A, "Conversion parameters for converting Xerox jobs," on page 205 describes the set of conversion parameters that you can use. This example shows your modified JCL:

```
 //OUT1   OUTPUT DEST=PRT20,FORMS=STD,CLASS=W
 //OUTDD      DD OUTPUT(*.OUT1),SUBSYS=(AOP1,'IPS_PRT10',
 //   'filter-options="-x xjdl=online -x xjde=strt"'),DCB=(RECFM=VBM)
```

Where:

- The DEST value of the OUT1 OUTPUT statement changes from PRT10 to PRT20, which specifies the InfoPrint printer.

- The OUT1 OUTPUT statement still includes the FORMS parameter. If your original JCL only used the FORMS value to select a specific starting environment (JDL and JDE combination) for the job, you can omit the FORMS parameter. You now specify the starting environment through the **filter-options** attribute. See "Filter option usage guidelines: printer definitions and jobs" on page 69 for more information.

- The OUT1 OUTPUT statement now includes the CLASS parameter, which replaces the class value that the SYSOUT parameter specified in the original JCL.

- On the OUTDD DD statement, the SUBSYS parameter value, AOP1, is the default name of the Print Interface subsystem. You define this in the Infoprint Server default configuration file, which is aopd.conf. All customization for the subsystem is independent of Infoprint XT. You use the procedures in the Infoprint Server documentation for all Print Interface subsystem tasks and

procedures. If your installation uses a name other than AOP1 for the subsystem, use that name in your modified JCL.

Note: For detailed information about the SUBSYS parameter, see the appropriate *User's Guide* for your version of Infoprint Server.

- You use the **filter-options** attribute to pass conversion parameters to Infoprint XT. There are usage guidelines, and a specific order of precedence that Infoprint Server uses to interpret the Infoprint XT filter options. See "Filter option usage guidelines: printer definitions and jobs" on page 69 for further information.
- The DCB parameter specifies the record format of the Xerox data set. You must specify this parameter, with the correct value, in order for Infoprint XT to derive the type of carriage controls, and to process the job correctly.

Note: In this example, the **filter-options** attribute did not include the **-g** option to specify a resource group. Therefore, Infoprint XT searched the default, **common** resource group for the resources that the job specified.

Using a printer definition to apply conversion parameters

If you have an extensive library of JCL jobs for your Xerox data, and if you have many printers, applying conversion parameters through printer definitions can streamline the process of updating your installation. You create a printer definition for each of your starting environments. See "Creating a printer definition that only applies Infoprint XT conversion parameters" on page 70 for how to set up the printer definition. This example shows the original JCL that you can modify:

```
    ⋮
//OUT1   OUTPUT DEST=PRT10,FORMS=STD
//OUTDD      DD SYSOUT=W,OUTPUT=(*.OUT1)
    ⋮
```

The modification specifies a destination of PRT20, which is the Infoprint printer. The JCL also specifies a printer definition, named STD, which applies the conversion parameters to the job:

```
//OUT1   OUTPUT DEST=PRT20
//OUTDD      DD OUTPUT(*.OUT1),SUBSYS=(AOP1,'STD'),DCB=(RECFM=VBM)
```

- The DEST value of the OUT1 OUTPUT statement changes from PRT10 to PRT20, which specifies the InfoPrint printer.
- The OUT1 OUTPUT statement does not use the FORMS parameter. The STD printer definition supplies the starting JDL and JDE combination for the job.
- On the OUTDD DD statement, the SUBSYS parameter value, AOP1, is the default name of the Print Interface subsystem.
- The SUBSYS parameter value STD specifies a printer definition that contains the custom processing values for the **Line data** and **Other** data formats. Figure 22 on page 182 shows the printer definition processing panel with line filter values, where **xjdl** and **xjde** specify the starting JDL and JDE, **xclb** turns off cluster-library processing, and **payjan** is the resource group.

```
                                       Processing
.----------------------------------Extended
field----------------------------.
| Command
==>                                                                       |
|
   |
| Line
Filter                                                                    |
| x2afp.dll %filter-options -x 'xjdl=online xjde=strt
xclb=none'                     |
| -g
payjan                                                                    |
|
   |
|  F1=HELP     F2=SPLIT   F3=END     F4=RETURN
F5=RFIND                             |
|  F6=RCHANGE  F7=UP      F8=DOWN    F9=SWAP
F10=LEFT                             |
.---------------------------------------------------------------------------
--.
```

Figure 22. Custom processing values for STD printer definition

- The DCB parameter specifies the record format of the Xerox data set. You must specify this parameter, with the correct value, in order for Infoprint XT to derive the type of carriage controls, and to process the job correctly.

Verifying whether the job converted correctly

If an error occurred and no AFP was generated, or the AFP printed differently than expected, you can use the **-L** attribute on the **x2afpd** command to list standard error output from the **pdxtx2afp** command. For more information about this support, see "x2afpd daemon command syntax" on page 64.

Chapter 9. UNIX System Services procedures

This chapter contains information about Infoprint XT and the z/OS UNIX System Services environment. The procedures in this chapter are for system administrators. Some of the procedures use the Interactive System Productivity Facility (ISPF) shell. Other procedures use the z/OS UNIX shell, which is similar to the UNIX Korn Shell. This chapter also includes rules for file and directory ownership and permissions.

Accessing the UNIX System Services ISPF shell

If you are an experienced MVS user, you might prefer to use the ISPF shell instead of shell commands or TSO/E commands to work with the z/OS UNIX file system. You can access the ISPF shell from a TSO/E command, or you can access it from within ISPF:

- To access the shell from the TSO/E **Ready** prompt, enter:

  ```
  ISHELL
  ```

- To access the shell from the **Option** line of an ISPF panel, enter:

  ```
  TSO ISHELL
  ```

- If you have the appropriate ISPF menu option installed, you can access the shell from the primary ISPF panel. Select option **6** and follow the panel instructions to access the shell.

shows the main panel for the ISPF shell.

```
  File  Directory  Special_file  Tools  File_systems  Options  Setup  Help
--------------------------------------------------------------------------
                    UNIX System Services ISPF Shell

Enter a pathname and do one of these:

   - Press Enter.
   - Select an action bar choice.
   - Specify an action code or command on the command line.

Return to this panel to work with a different pathname.
                                                          More:    +

   ----------------------------------------------------------------
   ----------------------------------------------------------------
   ----------------------------------------------------------------
   ----------------------------------------------------------------
EUID=1992



Command ===> _____
 F1=Help    F3=Exit    F5=Retrieve  F6=Keyshelp  F7=Backward  F8=Forward
F10=Actions F11=Command F12=Cancel
```

Figure 23. UNIX System Services ISPF shell main panel

The **EUID** field shows the current effective user ID for the session. If you have authorization, you can enter su on the command line to switch to the superuser. The EUID for the superuser is 0. For detailed information about using the ISPF shell, see *z/OS UNIX System Services User's Guide*.

Using the ISPF shell to view or edit a file

Infoprint XT provides executable files, sample files, and informational files in the z/OS UNIX directory structure. The directory structure also contains the operating system files that control the environment. Depending on the task, you might need to view or edit some of the files. This procedure shows one method of accessing a file from the ISPF shell:

1. Open the ISPF shell, as previously described.

2. If you want to edit the file, and the file requires superuser authority, enter su on the command line.

3. Move the cursor to the first of the four lines in the center of the panel. Then, enter the name of an existing file. For example:

```
/etc/profile
```

4. Press Enter. The resulting action depends on the actions performed in the last shell session. The shell either presents a menu from which you can select options such as viewing or editing the file, or the shell opens the file.

Note: There are other methods of accessing hierarchical file system (HFS) or z/OS File System (zFS) files from the ISPF shell. You can use the online help for the shell to review the other methods.

Using the ISPF shell to issue commands

You can issue commands, such as the Infoprint XT **pdxtloadres** command, from the ISPF shell. You need to use a menu selection to access the panel from which you can issue a command:

1. Open the ISPF shell, as previously described.

2. Press F10 to move the cursor to the menu bar of the UNIX System Services ISPF Shell panel.

3. Move the cursor to the **Tools** menu selection and press Enter.

4. Type 3 to select the **3. Run program (EX)...** selection. Then, press Enter. The Execute a command panel opens.

5. Enter the command that you want to run on the **Command . . .** lines.

6. Use the **1. Direct** run method, and press Enter to run the command.

Accessing the UNIX System Services z/OS UNIX shell

If you are an experienced UNIX user and are familiar with using the Korn Shell, you might prefer to use the z/OS UNIX shell to work in the UNIX System Services environment. You can access the z/OS UNIX shell from the TSO/E **Ready** prompt by entering:

```
OMVS
```

shows an example of the main panel of the z/OS UNIX shell.

```
IBM
Licensed Material - Property of IBM
5694-A01 Copyright IBM Corp. 1993, 2011
(C) Copyright Mortice Kern Systems, Inc., 1985, 1996.
(C) Copyright Software Development Group, University of Waterloo, 1989.

All Rights Reserved.

U.S. Government Users Restricted Rights
Use, duplication or disclosure restricted by
GSA ADP Schedule Contract with IBM Corp.

IBM is a registered trademark of the IBM Corp.




 ===>

ESC=  1=Help      2=SubCmd   3=HlpRetrn    4=Top      5=Bottom   6=TSO
      7=BackScr   8=Scroll   9=NextSess   10=Refresh 11=FwdRetr 12=Retrieve
```

Figure 24. UNIX System Services z/OS UNIX shell main panel

You can issue commands from the command line. For example, you can issue the Infoprint XT **pdxtloadres** command to load resources. You can also issue z/OS UNIX shell commands, such as

cd to change to a specific directory, and **pwd** to display the current working directory. Other z/OS UNIX shell procedures are beyond the scope of this document. See *z/OS UNIX System Services User's Guide* for detailed information about the shell.

Exiting from the z/OS UNIX shell

To exit the z/OS UNIX shell, after all foreground processes are complete, type exit. When the shell acknowledges the **exit** command, press Enter. You can also exit from the shell by pressing the Esc + D keys, in sequence, where **Esc** is a defined escape character that is displayed on the screen. Any processes that were spawned by using the **nohup** command continue to run after you exit. Any processes that were spawned in the background without using the **nohup** command stop when you exit.

Using the OEDIT command to view or edit a file

While it is not a part of the z/OS UNIX shell, you can access another editor by issuing the **OEDIT** command when you are at the TSO/E **Ready** prompt. After you issue the command, you see the EDIT - ENTRY panel in .

```
------------------------------  EDIT - ENTRY PANEL
--------------------------

Directory      ===>/u/tuna

Filename       ===>

Profile name   ===>

Initial macro  ===>
```

Figure 25. EDIT - Entry panel

The **Directory** field displays the last directory accessed from the previous invocation of the **OEDIT** command. Use the **Directory** field and the **Filename** field to specify the file that you want to view or edit. For example, if you wanted to edit your z/OS UNIX profile:

1. Type your z/OS UNIX home directory in the **Directory** field. For example:

   ```
   /u/tuna
   ```

2. Type the name of your profile in the **Filename** field:

   ```
   .profile
   ```

3. Press Enter. The editing session opens with information similar to .

```
  File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
 -------------------------------------------------------------------------
EDIT      /u/tuna/.profile                          Columns 00001 00072
****** **************************** Top of Data *****************************
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
000001 export EDITOR=vi
000002 export PATH=/usr/lpp/pdxt/V3R3M0/bin:$PATH
```

Figure 26. Editing session

You can use the menu items and the function keys on the panel to work with the file.

General rules for ownership and permissions

The user ID associated with Infoprint Server should also be included in the AIOUSER group. Also if IP PrintWay Basic is used, the user ID associated with the IP PrintWay started task must also be included in the AIOUSER group.

The Infoprint XT installation process sets the permissions for all Infoprint XT directories and files. After installation and customization, if you experience problems that result in lack-of-authority messages, you can check the directories and files. You can ensure that none of those that relate to the Infoprint XT executables are corrupt, or correct them if they are. These list the general rules for Infoprint XT components:

User ID ownership
> Generally, the user ID that owns a component is unimportant. The installation process uses the ID of the user that installs the product.

/usr/lpp/pdxt directory permissions and group ownership
> The group for the Infoprint XT `/usr/lpp/pdxt` installation directory, its subdirectories, and all of the files in that directory tree should be the AIOUSER group. See "Set the owner for Infoprint XT directories and files" on page 19. The owner of the executable files in the `/usr/lpp/pdxt/V3R3M0/bin` subdirectory should have read, write, and execute permission. The group should have read and execute permission.

/var/pdxt directory permissions and group ownership
> The owner and the group should have read, write, and execute permission. The group for the `/var/pdxt` directory, its subdirectories, and all of the files in that directory tree should be the AIOUSER group.

/etc/pdxt.cfg file permissions and group ownership
> The owner of the file should have read, write, and execute permission. The group for the file should be AIOUSER, and it should have read and execute permission. The use of this file is optional. See /etc/pdxt.cfg file on page "/etc/pdxt.cfg" on page 23.

Chapter 10. Performing diagnostics and requesting service

Infoprint XT generates reports through its program utilities and Infoprint Server components.

You can use the information in this chapter to diagnose problems when either transferring resources or submitting jobs.

Reviewing reports that Infoprint XT generates

Infoprint XT generates these reports through its program utilities that you can use to diagnose problems when either transferring resources or submitting jobs:

AIOZ2AFP: Job conversion utility
You use the AIOZ2AFP utility to convert Xerox LCDS and Metacode jobs into AFP. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZ2AFP utility writes messages about the conversion process.

AIOZCLR: Ink correlation table utility
You use the AIOZCLR utility to manage the ink correlation table. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZCLR utility writes messages about ink correlation table configuration process.

AIOZCLS: Bin selection utility
You use the AIOZCLS utility to control bin selection during Xerox data stream conversions. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZCLS utility writes messages about the bin selection configuration process.

AIOZPDL: JSL resource compilation utility
You use the AIOZPDL utility to compile binary and text format Xerox JSL resources. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZPDL utility writes messages about the compilation process.

AIOZR2AR: Resource conversion utility
You use the AIOZR2AR utility to load Xerox resources. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZR2AR utility writes messages about the resource conversion process.

AIOZRPDS: AFP PDS population utility
You use the AIOZRPDS utility to load AFP resources into PDSs for use by programs such as printer drivers. Infoprint XT creates the AFP resources when you load the original Xerox resources. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZRPDS utility writes messages about the load process.

AIOZRTAP: Resource tape unload utility
You use the AIOZRTAP utility to unload Xerox resources from a 3480 tape cartridge, or a 1/2" 6250 reel tape into a PDS. The JCL SYSPRINT statement specifies the data set in which the Infoprint XT AIOZRTAP utility writes messages about the unload process.

Infoprint Server Print Interface subsystem and IP PrintWay
You use either the Infoprint Server Print Interface subsystem or IP PrintWay to convert Xerox LCDS and Metacode jobs into AFP. Infoprint XT manages messages about the conversion process in a special directory. You can specify how to manage these messages with **x2afpd** command options. See "x2afpd daemon command syntax" on page 64.

In some cases, **x2afpd** writes messages to its **stderr** stream. Infoprint Server redirects these messages to the `/var/Printsrv/xfd/x2afp_class.n`.stderr file. The messages that **x2afpd** writes here are not generally associated with the conversion of a job. For example, **x2afpd** writes messages here when the command syntax in `/etc/Printsrv/aopxfd.conf` is incorrect.

Building a keyword string

A problem that you encounter with Infoprint XT might be one that other users have reported, and that IBM has fixed. IBM stores records of such problems, and their fixes, in an online database called the IBM Software Support Facility. To search this database, you can construct a keyword string, which consists of a series of terms. Each term describes one aspect of the problem. By constructing an accurate keyword string, you can help to make the search quick, easy, and reliable.

Preparing to build the keyword string

Before you build a keyword string to perform a search, do these:

1. Ensure that the problem is in Infoprint XT rather than from a user error.
2. If Infoprint XT has changed since the last time that you used it, examine the changes. If you suspect that the problem is because of incompatibilities between your program and the changed Infoprint XT program, note the area in which the incompatibility seems to occur.
3. If the operating system has changed, or the applications that generate the jobs have changed, review those changes.
4. Correct any problems that caused Infoprint XT to generate error messages. Use the message chapters in this document to guide you in problem resolution.
5. Note the sequence of events that led to the problem. You might find this information useful in developing a keyword string, which you need this if the problem requires an authorized program analysis report (APAR).

Understanding keywords

Each keyword in a keyword string is a word or abbreviation that describes one aspect of an Infoprint XT program problem. The first keyword is the name of the Infoprint XT component. By searching the IBM Software Support Facility with this keyword, you can find all of the APARs written for the Infoprint XT component. By adding other keywords to the keyword string, you reduce the number of matches. This increases the chances of finding a solution to your specific problem.

A complete string of keywords contains one keyword of each of these types:

- Component identification number
- Type of problem, with qualifiers
- Module or modifier
- Environment
- Release level or maintenance level

If one of the types does not seem to apply to your problem, you can go on to the next type. In general, however, do not start your search until you have a complete string of keywords.

Your search is most successful if you do these:

- Use only the keywords presented and described in this document.
- Spell the keywords exactly as this document specifies.
- Follow the keyword procedures in the order shown.

Each keyword section provides a partial keyword string that describes what you know about the problem so far. For some keywords, you might need to add a specific piece of information, for example, replacing the *x* of the MSG*x* keyword with the actual message number that Infoprint XT generated. Continue to develop the keyword string until the directions instruct you to use it as a keyword.

The position of the keywords is not important; however, you do need to separate them with spaces.

Specifying component identification numbers

The component identification (ID) number is the first keyword in a keyword string. Whenever you suspect that the problem is in Infoprint XT, use 5655O1500 as the first keyword. Then, add the type-of-failure keywords.

Specifying type-of-failure keywords

The type-of-failure keyword identifies the type of program problem. The possibilities are:

ABEND*x*
>   This specifies an abnormal end to the Infoprint XT program. See "ABENDx" on page 189.

LOOP
>   This specifies a program in an uncontrolled loop. See "LOOP" on page 189.

WAIT
>   This specifies unexpected program suspension. See "WAIT" on page 189.

MSG*x*
>   This specifies an error signaled by, or associated with messages. See "MSGx" on page 189.

INCORROUT
>   This specifies incorrect output or missing output that is not related to a message. See "INCORROUT" on page 190.

PERFM
>   This specifies a degradation in performance. Use this keyword only when no other keyword seems to describe the problem. See "PERFM" on page 192.

DOC
>   This specifies a problem with the online information or hardcopy documentation for Infoprint XT. See "DOC" on page 192.

ABENDx

Use the ABEND*x* keyword when the host system, Infoprint XT, or any program that services Infoprint XT ends abnormally. Do not use this keyword if the host system forced the abnormal end, or the operator forced the end because of a prolonged wait state or an endless loop. For these situations, see the LOOP keyword and the WAIT keyword. The format of the keyword string now is similar to this:

```
565501500 ABEND024 RC0194
```

Where the first keyword is the Infoprint XT component ID number, the second is the type of error, and the third is the reason code.

LOOP

Use the LOOP keyword if part of Infoprint XT seems to go into an endless loop, for example, if part of the output repeats endlessly. The format of the keyword string is now similar to this:

```
565501500 LOOP
```

WAIT

Use the WAIT keyword when the host system, Infoprint XT, or a program that services Infoprint XT suspends its activity without issuing a message. The format of the keyword string is now similar to this:

```
565501500 WAIT
```

MSGx

Use the MSG*x* keyword when one of these occurs:

• A message is issued when it should not have been.

- A message was not issued when it should have been.
- A message contains data that is not valid, or a message has missing data.
- The corrective action for the message did not correct the problem.

The format of the keyword string is now similar to 5655O1500 MSG5016_123, where the user has received the 5016–123 message. Note that any dashes in messages should be replaced with underscores.

INCORROUT

Use the INCORROUT keyword when you do not receive any output, or the output is not what you expected. Do not use this keyword for output that repeats endlessly. In that condition, use the LOOP keyword. See "LOOP" on page 189. You need to include modifier keywords with your keyword string:

1. Add the INCORROUT keyword to your keyword string. The format of the keyword string is now similar to this:

```
556501500 INCORROUT
```

2. Use modifier keywords, in this order, to describe the incorrect output:

   a. Select one modifier keyword from Table 19 on page 190 to describe the document in which the incorrect output occurred. When the output is the converted Advanced Function Presentation (AFP) output that Infoprint XT created from the Xerox job, select COMPOSED.

   Table 19. Modifier keywords: document description

Keyword	Explanation
LINE	The document consisted of one ore more line-formatted pages, and optionally included structured fields.
COMPOSED	The document consisted of one or more composed-text pages.
MIXED	The document consisted of both line-formatted and composed-text pages.

   b. Select one or more modifier keywords from Table 20 on page 190 to describe the part that is incorrect. For example, if the incorrect output involves an overlay, OVERLAY.

   Table 20. Modifier keywords: description of incorrect part

Keyword	Explanation
BIN	You did not get the bin number that you specified.
DBLFONT	You did not get the double-byte font that you specified.
DOCUMENT	You did not get the document as you specified it.
DUPLEX	You did not get the simplexed or duplexed printing that you specified.
EXIT	You did not get the user exits that you requested.
SNGLFONT	You did not get the single-byte font that you specified.
GROUP	You did not get the correct number of identical copies of a form.
IMAGE	You did note get the image that you specified, the image was not in the orientation or position that you specified, a scaling error occurred, or the image was not repeated correctly.
MARGIN	The side, top, or bottom margin is not what you specified.
MOD	Data was not added or was not suppressed in selected copies of certain pages of the data set.

Table 20. Modifier keywords: description of incorrect part (continued)	
Keyword	**Explanation**
OVERLAY	You did not get the overlay that the job specified, the overlay was not in the correct orientation or position, or part of the overlay was wrong. You require additional modifiers from Table 21 on page 191.
PAGE	You did not get the page as you specified it.
RULE	The position, direction, length, or weight of one or more rules is not what you specified.
SEGMENT	You did not get the page segment that you specified, or you did not get the orientation or position that you specified.
TEXT	The context, position, line spacing, or orientation of the text is not what you specified.

c. Select one or more modifier keywords from Table 21 on page 191 to describe what is wrong with the incorrect part. This example shows a keyword string that describes extra, identical copies of one or more sheets of data:

```
556501500 INCORROUT GROUP EXTRA
```

Table 21. Modifier keywords: description of how the part is incorrect	
Keyword	**Explanation**
CONTENT	The content of the part was wrong.
DIRECTION	The rule direction was wrong.
EXTRA	An extra part was included in the output.
LENGTH	The rule length was wrong.
LINESPACE	The line spacing for a document, a page, or a text string was wrong.
MISSING	The part was missing from the output.
ORIENT	The orientation of the part was wrong.
POSITION	The position of the part was wrong.
REPEAT	The repetition of text or image cells was wrong.
SCALE	A scaling error occurred in an image.
SIZE	The size of the part was wrong.
WEIGHT	The rule weight was wrong.

3. You can narrow the search further by defining the incorrect output more precisely. These are a few examples of INCORROUT keyword strings:

- In a composed-text AFP page, the text in an included page segment was not in the expected orientation:

```
556501500 INCORROUT COMPOSED SEGMENT TEXT ORIENT
```

- On a composed-text AFP page, a scaled image printed at normal size:

```
556501500 INCORROUT COMPOSED IMAGE SCALE
```

- On a composed-text AFP page, an overlay was missing:

```
556501500 INCORROUT COMPOSED OVERLAY MISSING
```

PERFM

Use the PERFM keyword when part of Infoprint XT performs below your expectations, and you cannot correct the performance problem through system tuning. Use this keyword only when no other keyword seems applicable. Ensure that you have thoroughly examined the application programs, the JCL, and the data set definitions.

The number and complexity of the resources for a job can affect the speed at which Infoprint XT processes a job. The format of the keyword string is now similar to this:

```
556501500 PERFM
```

DOC

Use the DOC keyword when information in the Infoprint XT publications is vague, incorrect, or missing. Skip one space after the DOC keyword and add the order number of the publication. Do not include the hyphens in the order number. This example shows the format of the keyword string for this publication:

```
556501500 DOC GI11949200
```

Note: If you find too many matches, add keywords that are unique to the documentation error that you suspect. For example, add MSG*x* as a keyword if you are looking for a particular Infoprint XT message because you suspect that its contents are incorrect or unclear, or because it is not documented in this publication.

Specifying module keywords

The module keyword identifies the module related to the program problem.

If you have a storage dump, do these steps to find the name of the module associated with the program problem (this is not necessarily the module containing the problem):

1. In the storage dump, find the instruction address at which the abend occurred, the supervisor call instruction (SVC) for the WAIT was sent, or the LOOP occurred.
2. Back up from that instruction until you find a 6- to 8-character module ID (for example, AIOZUCOM) followed by a module date. Include the module ID as part of the keyword string.
3. The format of the keyword string might now be:

```
556501500 ABEND8C3 AIOZUCOM
```

Specifying version, release, and maintenance level keywords

The keywords of this type give exact details about the version, release, and maintenance level of the Infoprint XT component: 5655O1500. The System Modification Program/Extended (SMP/E) consolidated software inventory data set (CSI) contains the ID of the latest Program Temporary Fix (PTF) that has been applied to your program. This ID, two letters and five numerals, gives the maintenance level of your program. For help in finding the PTF ID, see *SMP/E User's Guide*.

To get the maintenance level of your program:

1. Specify the Infoprint XT version, release, and modification level as a 3-digit code. For example, 310 represents Version 3 Release 1 Modification Level 0.
2. From the CSI listing, specify the ID, preceded by the prefix UY, UW, or UZ, of the latest PTF applied to your Infoprint XT program. Use the PTF number as a keyword only if you suspect that the PTF has caused the problem.
3. The format of the keyword string might now be:

```
569504002 WAIT AIOZUCOM 110
```

Using the keyword string as a search argument

You now have the information needed for an effective search of the problem listings in the IBM Software Support Facility. If you do not have access to the IBM Software Support Facility or EWS, consult your IBM Support Center; otherwise, perform the following procedure. The procedure explains how to use the keyword string as a search argument. Each keyword describes one aspect of the problem. The more precisely that the keyword string describes the problem, the more selective the search.

To specify the keyword string as a search argument:

1. Use the full keyword string that you have developed, and a search tool, such as Info Access, to search the IBM Software Support Facility or EWS.
2. From the list of matches, eliminate any APAR fixes or PTFs that you have already applied to your system.
3. Compare the closing description for each remaining APAR or PTF with the problem symptoms that you have observed.
4. If you find a match and a fix, apply the fix described in the APAR record, and test the fix.
5. If you find a match but no fix, ask your IBM representative to notify you when the fix becomes available.
6. If you find no match, broaden the search by dropping keywords, one at a time, from the right side of the search argument. Then, repeat the search.
7. If you still cannot find a match, contact your IBM Support Center.

Determining the Infoprint XT code level

When you place a service call to report a problem, your technical support representative may ask for the code level for your Infoprint XT installation. Infoprint XT provides the **pdxtversion** command and AIOZVRSN JCL to help you supply this information. The syntax of the **pdxtversion** command is:

```
pdxtversion
```

Infoprint XT displays the product version, the code level, and the date and time when the code level was compiled; for example:

```
Infoprint XT for z/OS V3R3M0 Level code_level compile_date compile_time
```

Infoprint XT also displays the same product version, code level, and compile date and time information in messages that it writes to these command listings and log files:

- pdxtcluster.lst
- pdxtcolor.lst
- pdxtkeys.log
- pdxtloadres.lst
- pdxtpdl.lst
- pdxtx2afp.log

The compile time shown in pdxtpdl.lst might be slightly different from the compile time shown in other command listing and log files.

If you load resources as a batch process using JCL statements, the AIOZVRSN utility invokes **pdxtversion**. See .

JCL statements for determining the Infoprint XT code level

Infoprint XT provides sample JCL that you can modify to determine the Infoprint XT code level. Infoprint XT provides the sample JCL in the SAIOSAMP data set. shows the sample JCL that Infoprint XT provides.

```
//AIOZVRSN  JOB <JOB STATEMENT PARAMETERS>
//**********************************************************************
//* Copyright 2018,2019 IBM Corporation                          *
//* Copyright 2018,2019 RICOH Company, Ltd                       *
//*                                                              *
//* Permission to use, copy, modify, and distribute this         *
//* software for any purpose with or without fee is hereby       *
//* granted, provided that the above copyright notices appear     *
//* in all copies.                                               *
//*                                                              *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY     *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE    *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR       *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH   *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER        *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER   *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR          *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE     *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.        *
//*                                                              *
//*  Run the pdxtversion command in the UNIX System Services      *
//*  environment.                                                *
//*                                                              *
//*  CAUTION: This is neither a JCL procedure nor a complete      *
//*  job.  Before using this job step, you must make these        *
//*  modifications:                                              *
//*                                                              *
//*  1) Change the JOB statement to meet your system requirements. *
//*                                                              *
//*  2) Ensure that you run this job from a user ID that is in the *
//*     AIOUSER group.                                           *
//*                                                              *
//* CHANGE ACTIVITY:                                              *
//* $01=US45129,H29Q100,181026,BLDLS  : Samp & Version JCLs    @01A*
//**********************************************************************
//*
//AIOZVRSN  EXEC PGM=AIOZVRSN
//*
//**********************************************************************
//* SPECIFY PROCESSING OPTIONS. EMPTY FOR PDXTVERSION.
//**********************************************************************
//SYSIN    DD *
/*
//**********************************************************************
//* Infoprint XT version message from the pdxtversion command     *
//**********************************************************************
//*
//SYSPRINT DD   SYSOUT=*
//*
```

Figure 27. JCL statements for determining the Infoprint XTcode level

These describe the various statements in :

AIOZVRSN JOB

This required JOB statement marks the beginning of the job. It tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZVRSN with the appropriate job name. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZVRSN EXEC

This required EXEC statement specifies the Infoprint XT AIOZVRSN utility program. Do not specify any parameters on the EXEC statement.

SYSIN DD

This optional DD statement does not specify any parameters.

SYSPRINT DD

This required DD statement defines a sequential data set in which the AIOZVRSN utility program writes the Infoprint XT code level. The utility program can write the messages to a system output device, a tape volume, or a direct access storage device (DASD) volume.

Preparing APARs

Prepare an authorized program analysis report only when you have followed the diagnostic procedures in this chapter, and when the keyword search is unsuccessful:

1. Initiate an APAR. If, after consulting with your IBM Support Center for assistance, no fix for your problem is found, the IBM service representative works with you to diagnose the problem. If the problem is a new one, the representative initiates an APAR. Be prepared to supply this information:

   - Customer number
   - Release level
   - Current service level (the PTF list and list of APAR fixes applied)
   - Keyword string or strings that you used to search the IBM Software Support Facility
   - Processing unit number: serial number, type, and model
   - Printer type and model

2. Gather information to support further diagnostics. IBM might ask you to supply any or all of the following information, to further describe the environment in which the problem occurs:

   - A full description of the problem
   - A small segment of the input statements and the data, which are sufficient to reproduce the problem.
   - A small segment of the output that is sufficient to illustrate the problem.
   - Any traces, storage dumps, or diagnostics that IBM has directed you to perform. For example, the capture information that "Capturing service information" on page 195 describes.
   - The terminal operator log, of the control statement listing from the library.
   - A full listing of the JCL used.
   - Any printed output of the data related to the job or data set in error, such as data set error messages.
   - A copy of the host system log
   - For a WAIT problem, if possible, the name of the resource on which the program is waiting, or the program module that is waiting.
   - For a LOOP problem, the location of the loop, or at least a partial trace of the loop.
   - For a DOC problem, the location of the error in the publication or online information, and a description of the problem that it caused.

3. Submit the information. When submitting information for an APAR to IBM, carefully pack and clearly identify any storage media that contains source programs, job data, data sets, or libraries.

   Attach the following information, and ensure that it is visible, to any storage media that you submit to IBM:

   - The APAR number assigned by IBM.
   - A list of the data sets on the storage media, such as the application source program, JCL, or data.
   - A description of how you created the storage media, including:
     - The JCL required to get the information from the tape
     - The exact JCL listing or list of commands used
     - Label information that you used for the volume and its data sets
     - The recording mode and density.
     - The attributes that you used for each data set.

Capturing service information

This section describes how you can capture service information for Infoprint XT:

Capturing service information for the AIOZ2AFP utility

If you have a problem using the AIOZ2AFP utility, you might be asked to gather service information. To obtain service information for the AIOZ2AFP utility, use a variation of this procedure:

1. In addition to any other required parameters, specify the **-a jobcapturearchive** parameter on the SYSIN DD statement, between existing datastream conversion parameters:

   ```
   //SYSIN    DD   *
        -a jobcapture
   ```

   For more information about this transform parameter, see "Using the pdxtx2afp command to process jobs" on page 167.

2. Submit the job.

   This job should produce a job capture archive in the current directory in UNIX System Services. The current directory is:

   - If the **-w** *work_dir* parameter is specified, *work_dir*
   - Otherwise, a subdirectory in `/var/pdxt/jobs`

   You are asked to send this file to an IBM service representative.

Capturing service information for the AIOZPDL utility

If you have a problem using the AIOZPDL utility, you might be asked to gather service information. To obtain service information for the AIOZPDL utility, use a variation of this procedure:

1. To modify your JCL for collecting service information, you must specify a DEBUG DD statement in the AIOZPDL program step.

   The JCL sample provided in *hlq*.SAIOSAMP(AIOZPDLB) or *hlq*.SAIOSAMP(AIOZPDLT) contains a commented out DEBUG DD statement that you can copy and uncomment in your own JCL.

2. Specify an appropriate high-level qualifier for the **DSN=** parameter on the DEBUG DD statement that replaces the **hlq** variable.

3. Specify an appropriate value for the **VOL=SER=** parameter on the DEBUG DD statement that identifies an appropriate volume on your system.

4. Submit the job.

   This job should produce a *hlq*.PDXT.AIOZPDLB.PAX or *hlq*.PDXT.AIOZPDLT.PAX sequential data set. You are asked to send this file to an IBM service representative.

   Note: You might need to increase the size on the **SPACE=** parameter from the `(TRK,(450,90)` default in order to store the *hlq*.PDXT.AIOZPDLB.PAX or *hlq*.PDXT.AIOZPDLT.PAX sequential data set.

Capturing service information for the AIOZR2AR utility

If you have a problem using the AIOZR2AR utility, you might be asked to gather service information. To obtain service information for the AIOZR2AR utility, use a variation of this procedure:

1. To modify your JCL for collecting service information, you must specify a DEBUG DD statement in the AIOZR2AR program step.

The JCL sample provided in *hlq*.SAIOSAMP(AIOZR2AR) contains a commented out DEBUG DD statement that you can copy and uncomment in your own JCL.

2. Specify an appropriate high-level qualifier for the **DSN=** parameter on the DEBUG DD statement that replaces the **hlq** variable.

3. Specify an appropriate value for the **VOL=SER=** parameter on the DEBUG DD statement that identifies an appropriate volume on your system.

4. Submit the job.

   This job should produce a *hlq*.PDXT.AIOZR2AR.DBG sequential data set. You are asked to send this file to an IBM service representative.

   Note: You might need to increase the size on the **SPACE=** parameter from the (TRK,(225,75) default in order to store the *hlq*.PDXT.AIOZR2AR.DBG sequential data set.

Capturing service information for the AIOZRPDS utility

If you have a problem using the AIOZRPDS utility, you might be asked to gather service information. To obtain service information for the AIOZRPDS utility, use a variation of this procedure:

1. To modify your JCL for collecting service information, you must specify a DEBUG DD statement in the AIOZRPDS program step.

   The JCL sample provided in *hlq*.SAIOSAMP(AIOZRPDS) contains a commented out DEBUG DD statement that you can copy and uncomment in your own JCL.

2. Specify an appropriate high-level qualifier for the **DSN=** parameter on the DEBUG DD statement that replaces the **hlq** variable.

3. Specify an appropriate value for the **VOL=SER=** parameter on the DEBUG DD statement that identifies an appropriate volume on your system.

4. Submit the job.

   This job should produce a *hlq*.PDXT.AIOZRPDS.DBG sequential data set. You are requested to send this file to an IBM service representative.

   Note: You might need to increase the size on the **SPACE=** parameter from the (TRK,(225,75) default in order to store the *hlq*.PDXT.AIOZRPDS.DBG sequential data set.

Capturing service information for the AIOZRTAP utility

If you have a problem using the AIOZRTAP utility, you might be asked to gather service information. To obtain service information for the AIOZRTAP utility, use a variation of this procedure:

1. To modify your JCL for collecting service information, you must specify a DEBUG DD statement in the AIOZRTAP program step.

   The JCL DEBUG DD statement should look like the sample provided in , which you can uncomment and modify to fit your needs.

```
//*
//**********************************************************************
//* TO COLLECT SERVICE DATA:
//* 1) UNCOMMENT THE FOLLOWING DD
//* 2) CHANGE hlq TO AN APPROPRIATE HIGH LEVEL QUALIFIER FOR YOUR
//* SYSTEM.
//* 3) CHANGE volser TO AN APPROPRIATE VOLUME NAME FOR YOUR SYSTEM.
//* 4) ADD THE APPROPRIATE TRACE PARAMETER(S) TO THE SYSIN DATA SET
//* OR THE EXEC STATEMENT, AS DIRECTED BY IBM.
//**********************************************************************
//*DEBUG   DD DSN=hlq.PDXT.AIOZRTAP.DBG,VOL=SER=volser,
//*        UNIT=SYSDA,DISP=(NEW,CATLG,CATLG),
//*        DCB=(LRECL=133,RECFM=FBA),SPACE=(TRK,(225,75),RLSE)
```

Figure 28. Sample JCL Debug DD for the AIOZRTAP utility

2. Specify the required trace parameters on the SYSIN DD statement.

For example, if your IBM service representative asked you to capture the ALL1 and ALL2 trace parameters, your SYSIN DD statement should resemble this:

```
//SYSIN    DD    *
      ALL1 ALL2
```

3. Specify an appropriate high-level qualifier for the **DSN=** parameter on the DEBUG DD statement that replaces the **h1q** variable.

4. Specify an appropriate value for the **VOL=SER=** parameter on the DEBUG DD statement that identifies an appropriate volume on your system.

5. Submit the job.

   This job should produce a *hlq*.PDXT.AIOZRTAP.DBG sequential data set. You are requested to send this file to an IBM service representative.

   Note: You might need to increase the size on the **SPACE=** parameter from the (TRK,(225,75) default in order to store the *hlq*.PDXT.AIOZRTAP.DBG sequential data set.

Capturing service information in the Infoprint Server environment

A service representative in the IBM Support Center might ask you to run a trace to aid in diagnosing a problem. For information about running traces in Infoprint Server, see *z/OS Infoprint Server Messages and Diagnosis*.

Capturing Infoprint XT service information

Additionally, Infoprint XT includes a capture utility, AIOZBAT, that copies information into a service package that you can transmit to IBM for analysis. After you place a service call, an IBM service representative tells you if problem analysis requires output from the capture utility. The user ID from which you run the capture utility must have superuser authority for performing tasks in the UNIX System Services environment.

Running commands that generate binary output

Infoprint XT provides a utility program, AIOZBAT, that you can use to run z/OS UNIX commands. The SAIOSAMP data set contains a sample JCL, AIOZBATB, to run commands that produce binary output. See .

```
//AIOZBATB JOB <JOB STATMENT PARAMETERS>
//***********************************************************************
//* Copyright 2003,2019 IBM Corporation                          *
//* Copyright 2007,2019 RICOH Company, Ltd                       *
//*                                                              *
//* Permission to use, copy, modify, and distribute this        *
//* software for any purpose with or without fee is hereby       *
//* granted, provided that the above copyright notices appear    *
//* in all copies.                                               *
//*                                                              *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY    *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE   *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR      *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH  *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER       *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER  *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR         *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE    *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.       *
//*                                                              *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE     *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE         *
//*  FOLLOWING MODIFICATIONS:                                    *
//*                                                              *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                              *
//*  2) CHANGE 'hlq' ON THE STDOUTB DD TO AN APPROPRIATE HIGH    *
//*     LEVEL QUALIFIER FOR YOUR SYSTEM.                         *
//*                                                              *
//*  3) CHANGE 'volser' ON THE STDOUTB DD TO AN APPROPRIATE VOLUME *
//*     NAME FOR YOUR SYSTEM.                                    *
//*                                                              *
//*  4) SET THE SYSIN PARAMETERS TO THE DESIRED UNIX SYSTEM SERVICE *
//*     COMMAND.                                                 *
//*                                                              *
//*  5) ENSURE YOU RUN THIS JOB FROM A USERID THAT HAS THE       *
//*     OMVS AUTHORIZATION TO RUN THE SELECTED COMMAND AND ACCESS *
//*     REFERENCED DIRECTORIES.                                  *
//*                                                              *
//***********************************************************************
//*
//AIOZBATB EXEC  PGM=AIOZBAT
//*
//***********************************************************************
//* SPECIFY THE SINGLE COMMAND TO RUN.  ONLY ONE COMMAND CAN BE  *
//* SPECIFIED PER RUN.                                           *
//***********************************************************************
//SYSIN    DD *
* (1) The following command packs up the entire /var/pdxt directory.
sh -c 'cd /var/pdxt;pax -wz -b 5 .'
*
* (2) The following command packs up the entire /usr/lpp/pdxt directory.
*sh -c 'cd /usr/lpp/pdxt;pax -wz -b 5 .'
*
/*
//SYSPRINT DD SYSOUT=*
//***********************************************************************
//* THESE DDS ARE INPUT/OUTPUT TO THE COMMAND SPECIFIED.        *
//***********************************************************************
//STDIN    DD *
/*
//STDOUTB  DD UNIT=SYSDA,VOL=SER=volser,DISP=(NEW,CATLG,CATLG),
//         DCB=(LRECL=80,RECFM=FB),SPACE=(CYL,(15,5),RLSE),
//         DSN=hlq.PDXT.AIOZBATB.PAX
//STDERR   DD SYSOUT=*
```

Figure 29. Sample JCL for z/OS UNIX commands that produce binary output

AIOZBATB JOB
>   This JOB statement marks the beginning of the job, and tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZBATB with the appropriate, eight-character user ID string. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZBATB EXEC
>   This EXEC statement specifies the Infoprint XT AIOZBAT utility program.

SYSIN DD

Defines a sequential data set that contains the z/OS UNIX command string to run. The command data set normally resides in the input stream; however, it can be defined as a member of a partitioned data set or PDSE. The command data set has a logical record length of 80 bytes, and consists of fixed length, blocked records. AIOZBAT uses these rules to build the command string from SYSIN:

- AIOZBAT reads columns 1 to 71. Column 72 is for continuation. AIOZBAT ignores columns 73 to 80.
- AIOZBAT ignores blank lines and lines that start with an asterisk, *, in column 1.
- AIOZBAT removes leading and trailing blanks.
- AIOZBAT catenates non-continued lines, inserting a blank between the text for each line.

SYSPRINT DD

This DD statement defines a sequential data set for messages. The data set can be written to a system output device, a tape volume, or a DASD volume.

STDIN DD

This DD statement defines the data set that AIOZBAT passes to the command's standard input (file descriptor 0) . The data set must be comprised of text records. The record format can be fixed or variable, and there are no restrictions on the record length. You cannot use non-text data such as a compressed file. As each record is read from the data set, AIOZBAT inserts a new-line character at the end.

STDOUTB DD

This DD statement defines the data set where AIOZBAT writes the command's standard output (file descriptor 1). Use this DD when the command generates non-text output such as a compressed file. The record format can be fixed or variable. AIOZBAT reads from the command and writes full records to STDOUTB. You can use STDOUT or STDOUTB, but not both.

STDERR DD

This DD statement defines the data set where AIOZBAT writes the command's standard error (file descriptor 2). The standard error data from the USS command must be comprised of text records. The record format can be fixed or variable, and the record length must be long enough to hold the longest record emitted by the command. New-line characters in the output define record boundaries. AIOZBAT does not write the new-line characters to the data set.

Running commands that generate text output

Infoprint XT provides a utility program, AIOZBAT, that you can use to run z/OS UNIX commands. The SAIOSAMP data set contains a sample JCL, AIOZBATT, to run commands that produce text output. See .

```
//AIOZBATT JOB <JOB STATEMENT PARAMETERS>
//***************************************************************************
//* Copyright 2003,2019 IBM Corporation                        *
//* Copyright 2007,2019 RICOH Company, Ltd                     *
//*                                                            *
//* Permission to use, copy, modify, and distribute this       *
//* software for any purpose with or without fee is hereby     *
//* granted, provided that the above copyright notices appear  *
//* in all copies.                                             *
//*                                                            *
//* THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY  *
//* KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE *
//* WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR    *
//* PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL RICOH, RICOH *
//* SUBSIDIARIES, ANY OF ITS SUPPLIERS OR ANY OF THE OTHER     *
//* COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER *
//* LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR       *
//* OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE  *
//* SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.     *
//*                                                            *
//*  USE THIS JOB TO RUN COMMANDS IN THE UNIX SYSTEM           *
//*  SERVICES ENVIRONMENT THAT GENERATE TEXT OUTPUT.           *
//*                                                            *
//*  CAUTION: THIS IS NEITHER A JCL PROCEDURE NOR A COMPLETE   *
//*  JOB.  BEFORE USING THIS JOB STEP, YOU MUST MAKE THE       *
//*  FOLLOWING MODIFICATIONS:                                  *
//*                                                            *
//*  1) CHANGE THE JOB STATEMENT TO MEET YOUR SYSTEM REQUIREMENTS. *
//*                                                            *
//*  2) CHANGE 'volser' ON THE STDOUT DD TO AN APPROPRIATE VOLUME *
//*     NAME FOR YOUR SYSTEM.                                  *
//*                                                            *
//*  3) SET THE SYSIN PARAMETERS TO THE DESIRED UNIX SYSTEM SERVICE *
//*     COMMAND.                                               *
//*                                                            *
//*  4) ENSURE YOU RUN THIS JOB FROM A USERID THAT HAS THE     *
//*     OMVS AUTHORIZATION TO RUN THE SELECTED COMMAND AND ACCESS *
//*     REFERENCED DIRECTORIES.                                *
//*                                                            *
//***************************************************************************
//*
//AIOZBATT EXEC  PGM=AIOZBAT
//*
//***************************************************************************
//* SPECIFY THE SINGLE COMMAND TO RUN.  ONLY ONE COMMAND CAN BE   *
//* SPECIFIED PER RUN.                                         *
//***************************************************************************
//SYSIN    DD *
* (1) The following command lists the contents of /usr/lpp/pdxt
*     directory.
ls -alR /usr/lpp/pdxt
* (2) The following command lists the contents of /usr/lpp/pdxt/local*
*     directory.
*ls -l /usr/lpp/pdxt/local*
* (3) The following command lists the running processes.
* ps -ef
* (4) The following command lists the disk utilizations.
* df
* (5) The following command lists system defined limits.
* ulimit -a
/*
//SYSPRINT DD SYSOUT=*
//***************************************************************************
//* THESE DDS ARE INPUT/OUTPUT TO THE COMMAND SPECIFIED.       *
//***************************************************************************
//STDIN    DD *
/*
//STDOUT   DD SYSOUT=*
//STDERR   DD SYSOUT=*
```

Figure 30. Sample JCL for z/OS UNIX commands that produce text output

AIOZBATT JOB

This JOB statement marks the beginning of the job, and tells the system how to process the job through the positional and keyword parameters of the statement. Replace AIOZBATT with the appropriate, eight-character user ID string. Replace the <JOB STATEMENT PARAMETERS> portion of the sample statement with any parameters that your installation requires.

AIOZBATT EXEC

This EXEC statement specifies the Infoprint XT AIOZBAT utility program.

SYSIN DD

Defines a sequential data set that contains the z/OS UNIX command string to run. The command data set normally resides in the input stream; however, it can be defined as a member of a PDS or PDSE. The command data set has a logical record length of 80 bytes, and consists of fixed length, blocked records. AIOZBAT uses these rules to build the command string from SYSIN:

- AIOZBAT reads columns 1 to 71. Column 72 is for continuation. AIOZBAT ignores columns 73 to 80.
- AIOZBAT ignores blank lines and lines that start with an asterisk, *, in column 1.
- AIOZBAT removes leading and trailing blanks.
- AIOZBAT catenates non-continued lines, inserting a blank between the text for each line.

SYSPRINT DD

This DD statement defines a sequential data set for messages. The data set can be written to a system output device, a tape volume, or a DASD volume.

STDIN DD

This DD statement defines the data set that AIOZBAT passes to the command's standard input (file descriptor 0) . The data set must be comprised of text records. The record format can be fixed or variable, and there are no restrictions on the record length. You cannot use non-text data such as a compressed file. As each record is read from the data set, AIOZBAT inserts a new-line character at the end.

STDOUT DD

This DD statement defines the data set where AIOZBAT writes the command's standard output (file descriptor 1). Use this DD when the command generates text output.. Do not use it for non-text data such as a compressed file. The record format can be fixed or variable, and the record length must be long enough to hold the longest record emitted by the command. New-line characters in the output define record boundaries. AIOZBAT does not write the new-line characters to the data set. You can use STDOUT or STDOUTB, but not both.

STDERR DD

This DD statement defines the data set where AIOZBAT writes the command's standard error (file descriptor 2). The standard error data from the USS command must be comprised of text records. The record format can be fixed or variable, and the record length must be long enough to hold the longest record emitted by the command. New-line characters in the output define record boundaries. AIOZBAT does not write the new-line characters to the data set.

Service coordinator responsibilities

It is your responsibility to provide a service coordinator for Infoprint XT. The service coordinator must be a knowledgeable z/OS system support person. The service coordinator does these tasks:

1. Screens all on-site problems before reporting them to make sure that the problem is not a result of an operator error. The coordinator uses the troubleshooting information in this document to do diagnostic tasks, and corrects any condition that the troubleshooting information addresses. The coordinator also makes sure that the problem has not been previously reported. See "Building a keyword string" on page 188.

2. Establishes the severity for a reported problem by using the severity definitions in "Determining problem severity" on page 203.

3. Assists IBM service representatives in analyzing new problems.

4. Applies and verifies fixes that IBM supplies. The service coordinator tests all fixes before releasing them to the production environment.

Determining problem severity

IBM supplies fixes for all valid defects in Infoprint XT. An IBM service representative and your service coordinator assign a severity to each valid defect by using this criteria:

Severity 1
> A function is inoperable.

Severity 2
> A function is operable, but it has severe restrictions.

Severity 3
> A function is operable, with minor impact, or a work-around is available.

Severity 4
> A function is operable with little or no impact.

Placing a service call

To report a problem, call the IBM Support Center. Make sure you have the customer number for your account available. The program identification (PID) for Infoprint XT V3R3M0 is 5655-O15 and the component ID is 5655O1500.

Appendix A. Conversion parameters for converting Xerox jobs

Infoprint XT uses transform conversion parameters to set up the starting environment when it converts a Xerox job. Through a subset of the parameters, you specify the same information that a Xerox printer would receive through the START command for the job. Other parameters control how Infoprint XT actually processes the job. Infoprint XT provides a number of methods through which you can specify the conversion parameters:

- You can use the following ways to specify transform conversion parameters, for all job-submission methods. These apply whether you batch-process jobs through job control language, process jobs in either of the Infoprint Server environments, or process jobs from the command line.

  - With the PDXTX2AFP_ARGS environment variable. You can use this to set your own default values. See "Controlling the default arguments when you compile JSLs (PDXTX2AFP_ARGS)" on page 35.

  - In the transform mapping file. You can also use this to set your own default values. See "Creating a custom parameter mapping file" on page 38.

- If you only batch process jobs and use the AIOZ2AFP utility program, you can specify conversion parameters through the SYSIN data definition (DD) statement, or the EXEC DD statement when you use JCL to invoke the AIOZ2AFP utility program for job conversion. See "JCL statements for AIOZ2AFP" on page 172.

- If you have Infoprint Server installed, you can specify the parameters when you:

  - Modify your JCL and use the Infoprint Server Print Interface subsystem. See "Modifying the application JCL and including conversion parameters" on page 180.

  - Create printer definitions. If you use the Print Interface subsystem, you can specify conversion parameters in the PSF for z/OS printer definition. See "Creating printer definitions that specify the Infoprint XT transform filter" on page 68. If you use IP PrintWay, you can specify the parameters in the IP PrintWay printer definition. See "Creating an IP PrintWay printer definition" on page 78.

- If you have the need to process jobs from the command line with the **pdxtx2afp** command, you can use the -x command option. You issue the **pdxtx2afp** command in the UNIX System Services environment. See "Using the pdxtx2afp command to process jobs" on page 167.

This list describes the conversion parameters for Xerox jobs:

xaccount = _yes_ | no
    Specifies whether Infoprint XT prints a Xerox-style accounting page for the job. The default is that Infoprint XT prints the accounting page.

    Note: There can be occasions when you request the accounting page, but no accounting page prints with the job. If the job does not produce an accounting page on a Xerox printer, Infoprint XT does not produce an accounting page regardless of the presence of this parameter.

xafpfunction = _ioca_rt_ | no_ioca_rt
    Specifies whether the printer supports the IOCA replicate-and-trim function. Infoprint XT uses this function for the shading patterns in data streams and forms. The default is that Infoprint XT assumes the printer supports the IOCA replicate-and-trim function.

    Notes:

    1. If one or more of your printers do not support the IOCA replicate-and-trim function, specify `no_ioca_rt` for the `xafpfunction` parameter.

    2. The value of this attribute affects how Infoprint XT processes jobs that contain FILE DJDE commands.

    3. If you are using Infoprint Server's `afpxps`, `afpxpdf`, or `afpxpcl` transform to transform the AFP output of the Infoprint XT, specify a value of `no_ioca_rt`.

xafprc = <u>12</u> | 0 through 16
Specifies the largest return code that lets Infoprint XT generate AFP output. If you do not specify this parameter, the default is 12. Infoprint XT does not generate any AFP when the return code is greater than the value of this parameter.

xalign = 0 | *scan_value*| :*dot_value* | *scan_value*:*dot_value*
Controls how Infoprint XT aligns the AFP output with the pages of the job. The value range for *scan_value* is -100 through 300 pels. The value range for *dot_value* is -300 through 1500 pels. If you only specify *dot_value*, precede it with a colon (:). If you specify both *scan_value* and *dot_value*, separate them with a colon. Scan and dot values have these effects:

- A positive scan value moves the page image to the right in the portrait orientation, or down in the landscape orientation.
- A negative scan value moves the page image to the left in the portrait orientation, or up in the landscape orientation.
- A positive dot value moves the page image up in the portrait orientation, or to the right in the landscape orientation.
- A negative dot value moves the page image down in the portrait orientation, or to the left in the landscape orientation.

If you do not specify the `xalign` conversion parameter, the default is 0 for both the scan value and the dot value. If you specify the `xalign` conversion parameter but omit either the scan value or the dot value, Infoprint XT uses a default of 0 for the omitted value.

Notes:

1. Infoprint XT only supports values for the Xerox scan and dot directions in 300 dots-per-inch (dpi) resolution. It does not support values in 600 dpi resolution.
2. Infoprint XT does not support the TEST parameter of the Xerox ALIGN command.
3. See xhonorinvert transform conversion parameter on page "xhonorinvert = yes | no" on page 209 and xinvertalign transform conversion parameter on page "xinvertalign = no | yes " on page 210. These parameters affect how Infoprint XT aligns inverted output.

xbinerror = <u>ignore</u> | stop | continue

The `xbinerror` parameter controls printing when the wrong media is loaded on the printer.

The `xbinerror` parameter has these options:

<u>ignore</u>
Infoprint XT does not include a media error instruction in the inline form definition. This is the default.

stop
Infoprint XT includes a media error instruction in the inline form definition. If the specified input media is not found when the job is printed, printing stops and the job is held in a state that it can be resubmitted from.

continue
Infoprint XT includes a media error instruction in the inline form definition. If the specified input media is not found when the job is printed, printing continues by using the printer default input media.

xcaobs = <u>yes</u> | no
Specifies whether Infoprint XT collects accounting observations while converting Xerox data streams.

The `xcaobs` parameter has these options:

<u>yes</u>
Infoprint XT collects accounting observations if the transform accounting exit **aioxlxae** is in the path. This is the default.

no
> Infoprint XT does not collect accounting observations.

xcc = <u>ansi</u> | machine | none
> Specifies the type of carriage controls that are present in the data, or specifies that no carriage controls exist. If you do not specify this parameter, Infoprint XT expects American National Standards Institute (ANSI) carriage controls.
>
> **Notes:**
>
> 1. Infoprint XT only uses the value that you specify for this parameter, or the default value, when you manually convert jobs with the **pdxtx2afp** command. See "Using the pdxtx2afp command to process jobs" on page 167. For all other job submission methods, Infoprint XT derives the carriage-control value from the attributes of the input data set.
>
> 2. If you convert a job by using Infoprint Server Print Interface subsystem with Infoprint XT, and the job contains carriage controls, you must use the DCB parameter. The record format specified by that parameter identifies the type of carriage controls that Infoprint XT expects in the job. For example, if the Xerox data is fixed-block, ANSI, you would specify:
>
>    ```
>    DCB=(RECFM=FBA)
>    ```
>
>   There is a wide variety of record formats that you can specify. See the JCL documentation for the values that you can specify.

xckdupmsg = yes | <u>no</u>
> Specifies whether Infoprint XT detects and suppresses duplicate data stream conversion messages.
>
> **yes**
> > Infoprint XT does not issue 5019 messages that were previously issued for the job. This value reduces the size of x2afp.lst and pdxt2afp.log. For example, if Infoprint XT issues many duplicate instances of message 5019-220 (Interpret FEED=*tray_name* as FEED=MAIN) for a job, specifying xckdupmsg = yes causes Infoprint XT to issue this message only once.
>
> **<u>no</u>**
> > Infoprint XT issues duplicate messages. This is the default.
>
> **Notes:**
>
> 1. This parameter affects only messages that Infoprint XT writes to x2afp.lst and pdxt2afp.log. It does not affect messages that Infoprint XT writes to the DJDE report.
>
> 2. This parameter affects only data stream converter messages (5019-*nnn X*) whose severity is I, W, E, or S. It does not affect messages whose severity is U.
>
> 3. This parameter does not affect message 5019-040 (Number of pages that have been converted) or certain other messages that are specific to the Xerox reports in the job.
>
> 4. Infoprint XT examines message numbers, text, and variable data to determine whether messages are duplicates.
>
> 5. If you specify xckdupmsg = yes and any of the 5019-*nnn X* messages that Infoprint XT issues are important for diagnosing problems, make sure that your diagnosis considers every occurrence of the data or DJDEs that caused the message. For example, if Infoprint XT issues message 5019-220 (Interpret FEED=*tray_name* as FEED=MAIN) only once, consider all occurrences of the FEED DJDE in the job.

xckdupnlimg = yes | <u>no</u>
> Specifies whether Infoprint XT checks inline images to prevent duplicate image processing when it converts online jobs. When you specify xckdupnlimg=yes, Infoprint XT can reduce its execution time for jobs that contain many duplicate inline images. The default is xckdupnlimg=no.
>
> **Notes:**
>
> 1. This conversion parameter only applies to inline images that GRAPHIC DJDEs specify. It does not apply to inline images that IMAGE DJDEs specify.
>
> 2. xckdupnlimg does not apply to offline jobs.

xclb = <u>clustr</u> | *clusterlib_name* **| none**
Specifies the name of the cluster database in use, or specifies that no cluster database is in use. If you do not specify this parameter, the default is `clustr` for the cluster database name.

Notes:

1. If the job uses stocksets and you print the job on a continuous-forms printer, specify `xclb=none`. This causes Infoprint XT to ignore stock references. Specifying a paper drawer has no meaning when the job prints on a continuous-forms printer.

2. The `clustr.lib` file can specify both a preferred tray and a current tray for a specific cluster name. If a cluster name specifies both a preferred tray and a current tray, Infoprint XT uses the value for the current tray. This matches the operation of a Xerox printer.

3. The **pdxtcluster** command can help you customize your Xerox cluster databases. See "Using the pdxtcluster command to create and modify cluster database resources" on page 125.

xcmt2nop = yes | <u>no</u>
Specifies whether Infoprint XT generates No Operation (NOP) structured fields for the text of C DJDEs in the job. If you specify `xcmt2nop=yes`, Infoprint XT includes all C DJDE text for a Xerox input page in the corresponding page of the AFP output. The default is `xcmt2nop=no`. See the information about the XRXCDJDE keyword in "Infoprint XT AIOX2AFP NOP keywords" on page 55.

Notes:

1. The C DJDE is record-oriented and takes effect on the next record that follows the next END; DJDE packet terminator. If a C DJDE occurs in a packet that contains one or more page-oriented DJDEs, Infoprint XT associates the AFP NOP that it creates from the C DJDE with the page on which the DJDE occurs. It does not associate the AFP NOP with the page on which the page-oriented DJDEs in the packet take effect.

2. Each C DJDE text string that is processed by `xcmt2nop=yes` must be all ASCII or all EBCDIC alphanumeric or blank characters, and must not contain any special characters.

xconsecutivedjde = <u>ignore</u> | process
Specifies whether Infoprint XT ignores or processes consecutive DJDEs.

<u>ignore</u>
Infoprint XT ignores extra DJDE records directly following a previously terminated DJDE packet. This is the default.

process
Infoprint XT processes extra DJDE records directly following a previously terminated DJDE packet.

xconvert = <u>yes</u> | no
Specifies whether Infoprint XT converts the job and produces AFP output. You can specify `xconvert=no` with the **pdxtx2afp** command, or you can specify it in the JCL that you use to run the AIOZ2AFP utility program. If you specify `xconvert=no`, Infoprint XT lists the resources that the job requires. If you use the **pdxtx2afp** command, Infoprint XT writes the list of required resources to STDERR. If you use JCL, the SYSPRINT data set contains the list of resources. By default, Infoprint XT converts the job, and produces AFP output.

Note: You must load the JDL for the job before you can scan a job for the other resources that it requires. You must also load all of the fonts that the starting JDL and JDE pair specify.

xcopies = *nnnnn*
Specifies the starting value for the number of copies. *nnnnn* is an integer from 1 through 32767. This parameter provides compatibility with the Xerox START command. If you specify this parameter and value, it overrides the number of copies for each file as requested by the Job Descriptor Entry (JDE) or Dynamic Job Descriptor Entry (DJDE) COPIES option. If you do not specify this parameter, either the DJDE in the data stream or in the active JDE determines the number of copies.

xcsmmname = yes | <u>no</u>
Specifies how Infoprint XT derives the medium map names that it uses in the inline form definition for a job. The default is that Infoprint XT uses sequentially numbered names that are not related to the contents of the medium maps. The default numbering begins with AIO00001. If you specify yes

as the value of this conversion parameter, Infoprint XT creates medium map names in a format that describes the contents of the medium map. For information about the format that Infoprint XT uses for content-sensitive medium map names, see "Working with content-sensitive medium map names" on page 57.

xdeblock = yes | no
Specifies whether Infoprint XT deblocks records in offline jobs during conversion, based on the starting JDE. If you do not specify this parameter, Infoprint XT does not deblock records.

xdecrypt = auto | all | none
Controls font decryption during data stream conversion when Infoprint XT loads Xerox fonts that FILE DJDEs identify. You can use one of these values:

auto
Infoprint XT automatically determines whether each font that it loads from a FILE DJDE command requires decryption. This is the default

all
Infoprint XT runs its decryption utility for every font that it loads from a FILE DJDE command. You can use this option to force Infoprint XT to decrypt fonts when it cannot automatically detect that the fonts are encrypted.

none
Infoprint XT does not run its decryption utility for any of the fonts that it loads from a FILE DJDE command. You can use this option to prevent Infoprint XT from attempting to decrypt when it cannot automatically detect that the fonts are not encrypted.

xhonorcolor = yes | no
Specifies whether Infoprint XT accepts Xerox highlight color commands during data stream conversion.

yes
Infoprint XT processes highlight color commands that it finds in the job data stream.

no
Infoprint XT does not process highlight color commands. This is the default.

xhonorfcb2 = yes | no
Specifies whether Infoprint XT accepts Forms Control Buffers (FCBs) specified by the JDL or JDLs for the job. If you specify xhonorfcb2=yes and the JDL specifies FCB=PROCESS, Infoprint XT processes FCBs that it finds in the job data stream. If the JDL specifies FCB=IGNORE, Infoprint XT ignores the FCBs. If you specify xhonorfcb2=no, or if you omit this parameter, Infoprint XT does not process FCBs, regardless of whether the JDL specifies FCB=PROCESS or FCB=IGNORE.

xhonorinvert = yes | no
Specifies whether Infoprint XT accepts INVERT commands that JDLs or DJDEs for the job specify. If you specify xhonorinvert=yes, Infoprint XT processes INVERT commands that it finds in the job data stream. If you specify xhonorinvert=no, Infoprint XT does not process INVERT commands. If you do not specify this parameter, the default is no.

Note: See xalign transform conversion parameter on page "xalign = 0 | scan_value| :dot_value | scan_value:dot_value" on page 206 and xinvertalign transform conversion parameter on page "xinvertalign = no | yes " on page 210. If you specify xhonorinvert=no or xinvertalign=no, Infoprint XT aligns all output pages in the same direction.

xhonorshift = yes | no
Specifies whether Infoprint XT accepts SHIFT and XSHIFT commands that JDLs or DJDEs specify for the job. If you specify xhonorshift=yes, Infoprint XT processes SHIFT and XSHIFT commands that it finds in the job data stream. If you specify xhonorshift=no, Infoprint XT does not process SHIFT or XSHIFT commands. If you do not specify this parameter, the default is no. Restrictions apply when you use xhonorshift=yes. See SHIFT and XSHIFT JDL and DJDE commands on page "SHIFT and XSHIFT JDL and DJDE commands" on page 13.

xhonorstaple = yes | no
Specifies whether Infoprint XT accepts FACEUP, NTO1, and STAPLE commands, which are subparameters of the OUTPUT PDL command. These commands control how the printer hardware

staples the reports in the job. The default is that Infoprint XT ignores stapling commands. See the descriptions of xstaplemax transform conversion parameter on page "xstaplemax = n" on page 217, xstapleorient transform conversion parameter on page "xstapleorient = yes | no" on page 217, and xstaplesysgen transform conversion parameter on page "xstaplesysgen = nto1 | 1ton" on page 217. See Stapling support on page "Stapling support" on page 14 for information about stapling restrictions.

xinlr = all:cs:cp:cf:pseg:ovly:inlr
Specifies the printable AFP resources that Infoprint XT embeds inline in the AFP data stream for the job. You can specify one or more values. If you specify more than one value, separate the values with colons (:). Do not include any spaces. Valid values are:

all
Infoprint XT embeds all AFP character sets, code pages, coded fonts, overlays, and page segments that the job requires in the AFP data stream. Specifying `xinlr=all` is the same as specifying `xinlr=cs:cp:cf:ovly:pseg`.

cs
Infoprint XT embeds all AFP character sets that the job requires in the AFP data stream.

cp
Infoprint XT embeds all AFP code pages that the job requires in the AFP data stream.

cf
Infoprint XT embeds all AFP coded fonts that the job requires in the AFP data stream.

pseg
Infoprint XT embeds all AFP page segments that the job requires in the AFP data stream.

ovly
Infoprint XT embeds all AFP overlays that the job requires in the AFP data stream.

inlr
Infoprint XT embeds the resources that it loaded from the Xerox job, as directed by the FILE DJDE commands that the job contains. This includes both permanent and temporary resources, as defined by the storage parameter.

The default is that Infoprint XT only embeds temporary resources that it loaded through FILE DJDE commands with the D storage parameter.

By default, Infoprint XT does not imbed any permanent resources inline in the AFP data stream. If you include the `xinlr` parameter without a value, Infoprint XT issues an error message. See "Processing jobs that contain FILE DJDE commands" on page 177 for detailed information about how Infoprint XT processes FILE DJDE commands.

xinvertalign = no | yes
Controls how Infoprint XT aligns the AFP output with pages that are inverted by the Xerox OUTPUT INVERT command or INVERT DJDE. `xhonorinvert=yes` must be set for the job.

If you specify `xinvertalign=yes`, scan and dot values that you specify with the `xalign` conversion parameter align output on the inverted pages in the opposite direction as the alignment of non-inverted pages. For example, if you specify `xalign=0:-56` for a job that is in the landscape orientation, non-inverted pages are aligned 56 dots to the left, and inverted pages are aligned 56 dots to the right.

If you specify `xinvertalign=no` or omit the `xinvertalign` conversion parameter, Infoprint XT aligns all output pages in the same direction. This is also true if you specify `xhonorinvert=no`.

Note: See xalign transform conversion parameter on page "xalign = 0 | scan_value| :dot_value | scan_value:dot_value" on page 206 and xhonorinvert transform conversion parameter on page "xhonorinvert = yes | no" on page 209.

xjde = dflt | jde_name
Specifies the name of the Xerox JDE that the operator starts on the Xerox printer before the job prints. If you do not specify this parameter, the default is `dflt`.

xjdl = <u>dfault</u> | *jdl_name*
Specifies the Xerox JDL that contains the starting JDE. If you do not specify this parameter, the default is `dfault`.

xlinecount = *n*
Specifies the maximum number of lines per page for jobs that have no explicit page breaks, as defined through the Job Entry Subsystem (JES) line spacing parameter.

xlrecl = <u>80</u> | *nnnnn*
Specifies the record length of the records in the job. If you specify the `xrecfm=fixed` parameter, the valid range is 1 through 32760. If you do not specify the `xlrecl` parameter with the `xrecfm=fixed` parameter, the default is 80.

If you specify `xrecfm=variable`, the valid range is 1 through 32756. However, Infoprint XT derives the record length from the 2-byte length field at the beginning of each record and does not use the `xlrecl` value.

xmediatypes = <u>none</u> | *blank_sub***:***type1***:***type2***:***type3***:***type4*
Specifies Xerox input tray numbers that are associated with MO:DCA media types or component IDs. Infoprint XT includes the media types or component IDs in the medium maps of the inline form definition that Infoprint XT creates during data stream conversion. The values are:

<u>none</u>
Infoprint XT does not specify media types in the inline form definition. This is the default.

blank_sub:***type1***:***type2***:***type3***:***type4***
Infoprint XT specifies MO:DCA media types in the inline form definition that it creates.

These are the usage guidelines for the MO:DCA media types:

- You can specify up to four media type identifiers. The identifiers can be media names or component IDs.
- Media names must be from 1 to 12 bytes long. Infoprint XT validates media names by using a subset of IBM code page 500, character set 640 (plus space character). This subset includes:
  - uppercase A-Z
  - lowercase a-z
  - 0 – 9
  - blank
  - period (.)
  - special characters @ % * - _ = + , / ?
- Media names that you specify in the `xmediatypes` parameter should not contain single quotation marks or double quotation marks. Media names cannot contain colons because colons are used to delimit media type values in the parameter.
- If a media name contains embedded blanks, you must replace the blanks with the character you specify as the *blank_sub* value. The *blank_sub* value can be any of these special characters: @ % * - _ = + , / ?
- If you omit the *blank_sub* value, the default is the underscore character (_). Infoprint XT internally converts all occurrences of the *blank_sub* value in media names to blanks. For example, if the *blank_sub* value is the underscore character, Infoprint XT matches '210x340_MED' to the registered MO:DCA media name '210x340 MED'.
- Media names are case-sensitive. For example, if you specify the underscore character as the *blank_sub* value, Infoprint XT recognizes '210x340_MED' as the registered MO:DCA media name '210x340 MED', but it processes '210x340_med' as user-defined, non-registered media name '210x340 med'.
- Component IDs must be integers in the range 0 – 268,435,455. Infoprint XT assumes that non-numeric media types are media names.

- If you enclose a numeric media type in braces, { }, Infoprint XT interprets the numeric value as a media type name, rather than as a component ID. Numeric media type names enclosed in braces must be from 1 to 12 bytes long.
- Separate the media type identifiers with colons. The identifiers are positional: Infoprint XT substitutes *type1* for tray 1, *type2* for tray 2, and so on. If you omit any of the media type identifiers, Infoprint XT uses the tray number instead.
- Infoprint XT searches the MO:DCA media types registry for entries that match the media names or component IDs that you specify. Infoprint XT processes any media names or component IDs that are not found in the registry as user-defined.
- You can specify the xmediatypes parameter twice in one **pdxtx2afp** command, for a total of eight media type identifiers.

These are examples of values you can specify:

- ```
  xmediatypes=@:ISO@A4:50::MY@MEDIA
  xmediatypes=*:8x13*MED:13000:LEDGER
  ```

Xerox tray numbers	Media type substitutions in AFP output
1	Registered MO:DCA media name 'ISO A4' (component ID 0)
2	Registered MO:DCA component ID 50 (media name LETTER)
3	Tray 3, no substitution
4	User defined media name 'MY MEDIA'
5	Registered MO:DCA media name '8x13 MED' (component ID 163)
6	User defined component ID 13000
7	Registered MO:DCA media name LEDGER (component ID 67)
8	Tray 8, no substitution

- ```
  xmediatypes=-:BLUE-MED:GREEN-STOCK:LETTER
  xmediatypes=:MY_PAPER:{65432}:8x13_MED:69
  ```

Xerox tray numbers	Media type substitutions in AFP output
1	User defined media name 'BLUE MED'
2	User defined media name 'GREEN STOCK'
3	Registered MO:DCA media name LETTER (component ID 50)
4	Tray 4, no substitution
5	User defined media name 'MY PAPER'
6	User defined media name '65432'
7	Registered MO:DCA media name '8x13 MED' (component ID 163)
8	Registered MO:DCA component ID 69 (media name STATEMNT)

xmicrfont = <u>none</u> | all | xerox | xerox+*font1:font2:font3* | xerox-*font1:font2:font3* | *font1:font2:font3*
   Specifies whether Infoprint XT generates AFP magnetic ink character recognition (MICR) fonts when it loads Xerox fonts that FILE DJDEs identify. You can use one of these values:

<u>none</u>
   Infoprint XT does not generate AFP MICR fonts for any of the Xerox fonts that it loads from FILE DJDE commands. This is the default.

all
> Infoprint XT generates AFP MICR fonts for all the Xerox fonts that it loads from FILE DJDE commands in the job.

xerox
> Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with these standard prefixes for MICR font names:
>
> - E13B
> - E14B
> - CMC7
>
> For example, Infoprint XT generates AFP MICR fonts for these Xerox fonts: `E13BPX.FNT`, `E14BL.FNT`, `CMC7J.FNT`.

xerox+*font1:font2:font3*
> Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with E13B, E14B, or CMC7. In addition, it generates AFP MICR fonts for up to three fonts that you specify by name. Separate the font names with colons (:). The fonts you specify can be any Xerox fonts.

xerox-*font1:font2:font3*
> Infoprint XT generates AFP MICR fonts for all Xerox fonts whose names begin with E13B, E14B, or CMC7 except for the fonts you specify after the minus sign (-). You can specify up to three Xerox fonts that begin with the standard prefixes for MICR font names. Separate the font names with colons.

font1:font2:font3
> Infoprint XT generates AFP MICR fonts for the Xerox fonts you specify. You can specify up to three fonts. Separate the font names with colons. The fonts you specify can be any Xerox fonts. Infoprint XT does not generate AFP MICR fonts for any Xerox fonts that begin with the standard prefixes for MICR font names unless you specify them in the list of fonts.

Note: To name more than three fonts, you can specify more than one `xmicrfont` conversion parameter, up to 11 occurrences that specify a combined total of 33 fonts. Values for all occurrences of the conversion parameter must be of the same type, either `xerox+`, `xerox-`, or user-specified names.

xpaper = <u>letter</u> | legal | ledger | folio | A3 | A4 | A4LT | B4
> Specifies the paper size for jobs that specify inline forms through FILE DJDEs. Use this parameter only if the inline forms do not specify a paper size internally, or if the JDL and JDEs for the job do not specify a paper size. If you do not specify this parameter, Infoprint XT uses a default of `letter` when it processes FILE DJDE jobs that do not explicitly specify paper sizes.

> **Notes:**
>
> 1. A4LT is a custom paper size that is 8.5 inches by 11.69 inches, or 216 mm by 297 mm.
> 2. The value of this attribute affects how Infoprint XT processes jobs that contain FILE DJDE commands.

xpattern_set = <u>300-1</u> | 300-2
> Specifies the type of shading patterns that Infoprint XT uses when it processes Xerox FORMS$, FORMSX, and ISISPX fonts during metacode data-stream conversion. The default `300-1` specifies the shading patterns that Xerox 97*xx*, 4*x*50, and 4*x*90 printers use. `300-2` specifies the patterns that Xerox 4*x*35 printers use.

> **Note:** The value of this attribute affects how Infoprint XT processes jobs that contain FILE DJDE commands.

xpcctest = <u>yes</u> | no
> Specifies whether Infoprint XT automatically tests the online Xerox data stream to verify whether the carriage controls are ANSI or machine code. Infoprint XT passes the type of carriage control to its online carriage-control processing component. It first looks at the value of the `xcc` conversion parameter. Then, if the value of the `xpcctest` conversion parameter is `yes`, it reads the first records of the job to further verify the type of carriage controls. If Infoprint XT determines that the carriage

controls are different, it ignores the value of the `xcc` conversion parameter and uses the carriage control type that it found. `xpcctest=yes` is the default.

The `xpcctest` parameter is useful for installations that have Xerox jobs that contain both ANSI and machine carriage controls. For example, a multi-step job on z/OS might have an initial step that consists of banner pages with ANSI carriage controls. The subsequent steps that contain the actual data for the job have machine code carriage controls. When Infoprint XT reads the first records of the job as directed by `xpcctest=yes`, it finds the ANSI carriage controls in the banner pages. It then ignores the value of the `xcc` parameter and uses a value of ANSI. The AFP output that Infoprint XT generates is not correct. In this case, you can use `xpcctest=no`. This prevents Infoprint XT from verifying the carriage controls in the first few records of the job, and causes it to use the value of the `xcc` parameter.

In some cases, specifying `xpcctest=no` might not produce correct output because of the particular combination of ANSI and machine code carriage controls in the job data. In these cases, you must correct your application so that it specifies either ANSI or machine code carriage controls throughout the job data that it generates.

xpginterval = 0 | <u>500</u>-50000
Controls how often Infoprint XT issues message 5019-040 to indicate data stream conversion progress.

0
>   Infoprint XT never issues message 5019-040.

<u>500</u>-50000
>   Infoprint XT issues message 5019-040 when the number of pages converted is a multiple of this value. For example, if `xpginterval=1000`, Infoprint XT issues message 5019-040 after converting pages 1000, 2000, 3000, and so on. <u>500</u> is the default.

>   **Notes:**

>   1. This parameter is useful for monitoring the progress of large jobs. While the job is running, 5019-040 messages appear in the `x2afp.lst` file in the job directory. When job conversion is complete, they appear in the `pd2xtafp.log` file in the job directory.

>   2. Message 5019-040 can also be issued when an error occurs to show the approximate number of pages converted.

xptxmaxareas = _areas_
Specifies the total number of primary and secondary internal data areas that Infoprint XT uses during data stream conversion.

If you omit the parameter, Infoprint XT calculates the maximum number of primary and secondary internal data areas that can be allocated by using the available virtual storage.

Notes:

1. The intent of `xptxsize` and `xptxmaxareas`, combined with the Language Environment HEAP parameter, is to let you allocate an area of virtual storage above the 16 MB line that is large enough to hold all the internal data that Infoprint XT needs to convert the data stream. Since it is difficult to know in advance exactly how much virtual storage is needed, you can use the secondary `xptxsize` parameter value to decrease the chances of using I/O to SYSUT1 and yet avoid requesting more storage than your job actually needs.

2. To make effective use of the `xptxsize` parameter with the AIOZ2AFP program, you must include the HEAP Language Environment parameter in your JCL EXEC statement. If you are using Infoprint XT with Infoprint Server, add the HEAP parameter to _CEE_RUNOPTS in the environment section of the `x2afp` transform definition in the `aopxfd.conf` file.

   The effect of HEAP is to provide sufficient virtual storage to allocate the Infoprint XT internal data areas above the 16 MB line. The initial HEAP value should be at least as large as the `xptxsize` primary value. The secondary HEAP value should be at least as large as the secondary `xptxsize` value.

You should use the default HEAP ANYWHERE subparameter. Do not specify BELOW with the HEAP parameter. Even though Infoprint XT is able to determine storage limits below the 16 MB line, the use of BELOW does not improve Infoprint XT performance and might even degrade it.

3. If a large amount of data is being processed and too much virtual storage is being used, `xptxmaxareas` lets you limit the number of secondary data areas that are allocated.

4. If you request a primary `xptxsize` greater than the maximum amount of available virtual storage, Infoprint XT issues a message to indicate that your request exceeded the upper limit and that it has adjusted the requested primary `xptxsize` to conform to the maximum allowed. If you also requested a secondary `xptxsize` value, Infoprint XT issues a message indicating that it does not allocate secondary data areas since the primary area uses all of the available space. Infoprint XT also issues this message if the space remaining after the allocation of the primary data area is less than 12 KB.

5. If the internal data storage requirements exceed the size of the primary data area, Infoprint XT allocates and uses secondary areas as long as space is available and the number of areas does not exceed the maximum. This limit is the smaller of the maximum calculated by Infoprint XT or the value you specify for the `xptxmaxareas` parameter.

6. When more than one area is used, Infoprint XT issues a message to indicate how many areas were allocated and the primary `xptxsize` value that Infoprint XT would require to use only one area. This information can be helpful in improving performance of other jobs, since allocating multiple internal data areas can increase execution time because of the additional requests to get system storage.

7. If the amount of data processed exceeds the size of the available primary and secondary internal areas, Infoprint XT writes the remaining internal data to temporary dataset SYSUT1. This additional I/O might increase execution time.

8. When Infoprint XT writes data to SYSUT1, it issues a message to indicate how much data is involved and to recommend `xptxsize` and HEAP values that could avoid I/O to SYSUT1.

xptxsize = *primary_sizeU*:*secondary_sizeU*
Specifies the sizes of the primary and secondary internal data areas that Infoprint XT uses during data stream conversion. The minimum size for the primary and secondary data areas is 12 KB. The maximum size depends on the amount of virtual storage available to the job.

U specifies the data size units as K (kilobytes) or M (megabytes).

For example, if you specify `xptxsize=32M:4M`, Infoprint XT allocates one primary internal data area of 32 MB and as many secondary areas of 4 MB as are required to convert the data stream, up to the maximum amount of virtual storage available to the job.

If you omit the parameter, Infoprint XT uses the default value of `xptxsize=832K:832K`.

xrecfm = <u>fixed</u> | variable
Specifies the record format of the records in the job. For fixed length records, as specified by the default `xrecfm=fixed`, the `xlrecl` parameter specifies the length of the record. `xrecfm=variable` specifies that the records are variable length, with a 2-byte length field at the beginning of each record. The record length does not include the 2-byte length field itself.

xrptfile = . | *fullpath*
Specifies the path and file in which Infoprint XT writes a report of all DJDEs found in the job. Specifying `xrptfile=.` causes Infoprint XT to write the report to the `x2afp.djde` file in the working directory for the job. The default working directory for the job is `/var/pdxt/jobs/`*jobname*-*jobID*-*n*. If you do not specify this parameter, Infoprint XT does not generate a DJDE report.

Note: If you specify a path, make sure that it is the full path. You cannot use a relative path with the `xrptfile` parameter.

xshading = <u>xerox</u> | grayscale | [*lp*]:[*mp*]:[*hp*]
Controls how Infoprint XT interprets Xerox shading when it converts the Xerox data stream and any inline FRMs that FILE DJDEs specify. Valid values are:

xerox

Infoprint XT emulates Xerox shading and produces raster dot patterns in the AFP that it generates. This is the default.

grayscale

Infoprint XT uses Logical Page and Object Area Coloring to substitute grayscale for the standard shading characters in FRMs. It uses default percentages of grayscale coverage for the levels of Xerox shading:

LIGHT

Five percent (5%) coverage.

MEDIUM

Ten percent (10%) coverage.

HEAVY

Fifteen percent (15%) coverage.

[*lp*]:[*mp*]:[*hp*]

Infoprint XT substitutes grayscale for the Xerox shading and uses the coverage percentages you specify. For each position in the value, you can specify an integer from 0 through 100:

lp

The coverage percentage that Infoprint XT uses for LIGHT shading.

mp

The coverage percentage that Infoprint XT uses for MEDIUM shading.

hp

The coverage percentage that Infoprint XT uses for HEAVY shading.

Do not include the brackets in the value; the brackets indicate each position in the value is optional. Include the colons (:) between the positions of the value. If you omit any position, Infoprint XT uses the default percentage for LIGHT, MEDIUM, or HEAVY. These are examples of values you can specify:

xshading = :8:16

Infoprint XT uses 5% coverage for LIGHT shading, 8% for MEDIUM, and 16% for HEAVY.

xshading = 3

Infoprint XT uses 3% coverage for LIGHT shading, 10% for MEDIUM, and 15% for HEAVY.

xshading = :11

Infoprint XT uses 5% coverage for LIGHT shading, 11% for MEDIUM, and 15% for HEAVY.

xshading = ::14

Infoprint XT uses 5% coverage for LIGHT shading, 10% for MEDIUM, and 14% for HEAVY.

xshading = 4:9:12

Infoprint XT uses 4% coverage for LIGHT shading, 9% for MEDIUM, and 12% for HEAVY.

Restrictions apply when you use the xshading conversion parameter. See Grayscale substitution for Xerox shading on page "Grayscale substitution for Xerox shading" on page 11.

xspacing = none | word | trnw | char

Specifies adjustments that Infoprint XT makes to the spacing to match the original Xerox output as closely as possible. This conversion parameter also affects spacing fidelity for inline FRMs in FILE DJDE jobs. Valid values are:

none

Specifies no spacing adjustment. This is the default.

word

Specifies spacing adjustments between words only.

trnw

Specifies spacing adjustments between words only and reduces or eliminates embedded blanks in Presentation Text Object Content Architecture text characters.

char

Specifies spacing adjustments between words and characters.

Notes:

1. Use of word adjustments or character adjustments affects Infoprint XT performance and results in larger AFP files.

2. The value of this attribute affects how Infoprint XT processes jobs that contain FILE DJDE commands.

xspcrmi = yes | <u>no</u>

Controls how Infoprint XT interprets spacing characters in Xerox fonts during job processing for fonts that FILE DJDEs specify:

<u>no</u>

Infoprint XT interprets spacing characters in the font as Presentation Text Object Content Architecture text-string characters. This is the default.

yes

Infoprint XT interprets spacing characters in the font as Relative Move Inline structured fields.

Restrictions apply when you use the `xspcrmi` conversion parameter. See <u>Spacing characters in Xerox fonts</u> on page <u>"Spacing characters in Xerox fonts" on page 13</u>.

Note: The `xspcrmi` conversion parameter does not control how Infoprint XT interprets spacing characters in Xerox fonts that you have previously loaded with the **pdxtloadres** command. If you specify `xspcrmi=yes` and the job does not contain FILE DJDE commands, Infoprint XT does not generate RMI structured fields for any of the fonts the job uses. In this case, reload the fonts that the job requires with the **pdxtloadres** command and use the `-b` option.

xstaplemax = *n*

Specifies the maximum number of sheets that accumulate before a staple action occurs. You can specify a value from 1 through 32767. This matches the values that Xerox printers support. However, Xerox printers do not staple more than 102 sheets at a time. Infoprint XT issues a warning message for each sheet, over 102 sheets, that accumulates for a single stapling action.

Notes:

1. The printer model that you are using determines the number of sheets that you can staple at one time. For detailed information, see the documentation for the printer.

2. If you do not specify the `xstaplemax` conversion parameter, Infoprint XT accepts the NTO1 limits that the JDEs for the job specify.

xstapleorient = yes | <u>no</u>

Specifies whether Infoprint XT accepts the orientation of the first page of a report when it determines the corner in which to staple. The default is that Infoprint XT always staples in the upper left corner of the pages, as you look at them in the portrait orientation. If you specify `xstapleorient=yes`, Infoprint XT detects reports whose first pages are in the landscape orientation. It staples these in the lower-left portrait corner. This corresponds to the upper-left landscape corner.

xstaplesysgen = nto1 | <u>1ton</u>

Specifies whether the default printing order that was specified to the Xerox printer at SYSGEN time was 1TON or NTO1. This determines whether the Xerox printer delivers the printed output starting with the first page of the job or with the last. If you use the default `xstaplesysgen=1ton`, the starting JDL and JDE pair for the job must include:

- STAPLE=YES
- NTO1=YES or NTO1=*n*
- FACEUP=YES

If these values are present in the starting JDL and JDE pair, Infoprint XT includes stapling commands in the AFP output that it generates. If the values are not present, no stapling occurs. This is true even if subsequent JDL and JDE pairs in the job specify stapling.

If you specify `xstaplesysgen=ntol` and subsequent JDL and JDE pairs in the job specify stapling, Infoprint XT includes stapling commands in the AFP regardless of whether the starting JDL and JDE pair specifies stapling.

xtblkln = *n*

For offline jobs, this conversion parameter specifies the block length. If you do not specify this parameter, Infoprint XT uses the value that the starting JDE specifies. For Infoprint XT to accept the `xtblkn` conversion parameter, you must specify `xdeblock=yes`.

xtoffset = *n*

For offline jobs, this conversion parameter specifies the buffer offset. If you so not specify this parameter, Infoprint XT uses the value that the starting JDE specifies. For Infoprint XT to accept the `xtoffset` conversion parameter, you must specify `xdeblock=yes`.

xtrblanks = <u>no</u> | yes
Specifies whether Infoprint XT removes the trailing blanks on each line of the input data stream. If you do not specify this parameter, Infoprint XT does not remove the trailing blanks.

xwarnrc = <u>none</u> | all | *msg1:msg2:msg3*
Controls the return code that Infoprint XT generates when it issues warning messages.

<u>none</u>
Warning messages result in a return code of at least 4. This is the default.

all
Infoprint XT changes the return code associated with all warning messages from 4 to 0.

msg1:msg2:msg3
Infoprint XT changes the return code associated with the message numbers that you specify from 4 to 0. You can specify up to three warning message numbers. Separate the message numbers with colons.

These are examples of values you can specify:

xwarnrc=all
If Infoprint XT issues any warning messages while converting a job, and does not issue any messages with a severity higher than W, it changes the resulting return code for the job from 4 to 0.

xwarnrc=5019-181:5019-192
While converting a job, if Infoprint XT issues message 5019-181 for an ignored DJDE record or message 5019-192 for an incorrect COLLATE DJDE, and does not issue any other warning messages or messages with a severity higher than W, it changes the resulting return code for the job from 4 to 0.

Notes:

1. This parameter can be useful when the job should end with return code 0 for Infoprint XT to interact properly with other software, such as Infoprint Server, and the warnings that Infoprint XT issues do not affect the AFP output for the job. For example, if an input file contains multiple consecutive DJDE packets, you can specify the default `xconsecutivedjde=ignore` parameter to cause Infoprint XT to process the first DJDE packet and ignore the second DJDE packet. Infoprint XT issues a warning message when it ignores the second DJDE packet. If the AFP output for the job is correct, you can use the `xwarnrc` parameter to change the ending return code from 4 to 0.

2. If Infoprint XT issues one or more data stream converter messages with severities of E, S or U, the job ends with the highest corresponding return code, regardless of whether you specified the `xwarnrc` parameter.

3. The `xwarnrc` parameter only applies to data stream converter warning messages (5019-*nnn* W).

xzctrace = yes | <u>no</u>
> Captures trace information that an IBM service representative can use for problem analysis. If you do not specify this parameter, Infoprint XT does not capture trace information. Use this parameter only at the direction of an IBM service representative.

xztrace = all1:all2
> Captures trace information in the resource utility and data stream converter components that an IBM service representative can use for problem analysis. If you do not specify this parameter, Infoprint XT does not capture trace information. Use this parameter only at the direction of an IBM service representative.

Appendix B. Infoprint XT messages: 5016-*nnn*

This appendix lists the 5016 series of messages that Infoprint XT can issue, additional error return codes that the messages might include, and a description of how to use the **pdxtmsg** command to see detailed error message information.

Using the pdxtmsg command

Infoprint XT provides the **pdxtmsg** command, which you can use to display detailed information about messages on the z/OS system that is running Infoprint XT.

The syntax for the **pdxtmsg** command is:

pdxtmsg [-d] [-t] *nnnn-nnn*

[-d]
> Displays only the explanation, system action, and response information for the message. For example, `pdxtmsg -d 5016-001` displays:

```
Explanation: You issued a command and included an option that is not valid.
The message text identifies the option.
System action: Infoprint XT cannot process the command.
User response: Review the command syntax. Then, issue the command again.
```

[-t]
> Displays only the message text. For example, `pdxtmsg -t 5016-001` displays:

```
The command option -option is not valid.
```

nnnn-nnn
> Identifies the 7-digit Infoprint XT message number. The number must be in the format shown. The 4-digit prefix must be an Infoprint XT message prefix. For example, `5016-001`.

If you do not specify either of the options for the command, Infoprint XT shows the message text, the explanation, the system action, and the response. For example, `pdxtmsg 5016-001` displays:

```
The command option -option is not valid.
Explanation: You issued a command and included an option that is not valid.
The message text identifies the option.
System action: Infoprint XT cannot process the command.
User response: Review the command syntax. Then, issue the command again.
```

Infoprint XT message explanations

5016-001 **The command option *-option* is not valid.**

Explanation

You issued a command and included an option that is not valid. The message text identifies the option.

System action

Infoprint XT cannot process the command.

User response

Review the command syntax. Then, issue the command again.

5016-002 **Cannot process command option *-option*. The value for the option is missing.**

Explanation

You issued a command with an option that requires a value. The value for the option was missing. The message text identifies the option that requires a value.

System action

Infoprint XT cannot process the request.

User response

Specify a value for the option. Then, issue the command again.

5016-003	The command did not expect the value *"value"*.

Explanation

You issued a command and included an option or other argument that is not valid. The message text identifies the unexpected value.

System action

Infoprint XT cannot process the request.

User response

Specify a valid value. Then, issue the command again

5016-004	Command options *-option* and *-option* are mutually exclusive.

Explanation

You issued a command and included two options that the command cannot process together.

System action

Infoprint XT cannot process the request.

User response

Specify only one of the options. Then, issue the command again.

5016-005	Value *invalid_value* is not valid for command option *-option*.

Explanation

You issued a command and included a value for an option that is not one of the allowed values. Or, the value is not in the correct format. For example, you entered an alphanumeric value instead of a numeric value. The message text identifies the incorrect value and the name of the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-006	There are too many instances of the *-option* command option. You can specify up to *nn* instances.

Explanation

You issued a command and included more than one instance of a command option. You specified the command option more times than Infoprint XT allows. The message text indicates the maximum number of times that you can specify the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-008	Cannot parse *environment_variable* (error *ReturnCode*). *…msg*

Explanation

You issued a command that reads an environment variable to obtain default command options. An error occurred when Infoprint XT tried to parse the value of that environment variable. The most likely cause is a problem with the content of the variable. For example, it might require quotation marks because the command contains special characters, or the command might contain an unbalanced set of quotation arks.

System action

Infoprint XT cannot process the request.

User response

Correct the value of the environment variable. Then, issue the command again.

5016-009	An error occurred while parsing JCL specified parameters (error *ReturnCode*). *…msg*

Explanation

You submitted a job that specified command options by using the EXEC PARMS, in the SYSIN DD, or both.

An error occurred when Infoprint XT attempted to parse those parameters. The most likely cause is a problem with the parameters. For example, they might require quotation marks due to the use of special characters or they might contain unbalanced quotation marks.

System action

Infoprint XT cannot process the request.

User response

Correct the value of the parameters. Then, issue the command again.

5016-010	One or more required command options are missing.

Explanation

You issued a command that has required command options, but you did not specify one or more of the required command options.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-011	*ddname* data set name *current_data_set_name* does not match previously used data set name *previous_data_set_name*.

Explanation

You ran the AIOZRPDS utility to copy resources to data sets. You specified a data set that is different from the data set that was used the last time the resources were copied.

System action

Infoprint XT cannot process the request.

User response

If you specified the wrong data set name, issue the command again with the correct data set name. If you want to use the data set you specified, issue the command again with the **-r** command option.

5016-013	Value "*value*" is too long for command option *-option*.

Explanation

You issued a command and included a value for an option that is too long.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-014	Command options *-first_command_option* and *-second_command_option* conflict with each other.

Explanation

You issued a command with two command options that do not work together.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-015	Command options -f_none and *-command_option* conflict with each other.

Explanation

You issued a command with two command options that do not work together.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-016	Command parameters *-parameter* and *-parameter* are mutually exclusive.

Explanation

You issued a command and included two parameters that the command cannot process together.

System action

Infoprint XT cannot process the request.

User response

Specify only one of the parameters, or specify a valid combination of both parameters. Then, issue the command again.

5016-050   **The directive *directive* is not valid.**

Explanation

You issued a command that uses directives, but you specified a directive that is not valid.

System action

Infoprint XT cannot process the request.

User response

Correct the directive. Then, issue the command again.

5016-051   **Cannot process directive *-directive*. The value for the directive is missing.**

Explanation

You issued a command with a directive that requires a value, but the value for the directive was missing.

System action

Infoprint XT cannot process the request.

User response

Specify a value for the directive. Then, issue the command again.

5016-052   **Value "*value*" is not valid for directive *-directive*.**

Explanation

You issued a command with a directive that was not in the correct format. For example, the directive specified an alphanumeric value instead of a numeric value.

System action

Infoprint XT cannot process the request.

User response

Specify a valid value for the directive. Then, issue the command again.

5016-053   **The value for directive *-directive* is too long.**

Explanation

You issued a command with a directive value that was longer than the allowed length.

System action

Infoprint XT cannot process the request.

User response

Specify a valid value for the directive. Then, issue the command again.

5016-054   **Cannot parse a directive (error *ReturnCode*). ...*msg***

Explanation

You issued a command with a directive value that Infoprint XT cannot parse. The most likely cause is a problem with the content of the directive. For example, it might contain an unbalanced set of quotation marks.

System action

Infoprint XT cannot process the request.

User response

Specify a valid value for the directive. Then, issue the command again.

5016-100   **The resource *resource_name* is already loaded. Use the -r command option to replace it.**

Explanation

You issued the **pdxtloadres** command to load the resource specified in the message, but that resource is already loaded on the system. If this is a new version of the resource and you want to load it again, you must specify the **-r** option.

System action

Infoprint XT cannot process the request.

User response

Specify the **-r** option. Then, issue the command again.

5016-102   **The input list file did not contain any valid resources.**

Explanation

You issued the **pdxtloadres** command and included the **-l** option, which specified a file that contains a list of resources. The entries in the file might not be in a valid format. Each entry in the file must be on a separate line. Or, the resources might not exist in the path explicitly specified in the file. You must specify a full path or a relative path in the file. Infoprint XT also issues this message if the file is empty.

System action

Infoprint XT cannot process the request.

User response

Correct the problem with the input list file. Then, issue the command again.

5016-103	The input pattern-matching string use for the search did not match any valid resources.

Explanation

You issued the **pdxtloadres** command and included the **-n** option, which specified a pattern-matching string to use to locate specific Xerox resources. Infoprint XT did not locate any valid resources when it used the pattern-matching string.

System action

Infoprint XT cannot process the request.

User response

Correct the problem with the pattern-matching string. Then, issue the command again.

5016-104	You cannot use command option *-option* when you delete resources.

Explanation

You issued the **pdxtloadres** command and included the **-f delete** option, which is a request to delete resources. You also included another option that does not apply when you delete resources.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-114	Specify a message number.

Explanation

You issued the **pdxtmsg** command, but you did not specify a message number. You must specify a message number to view further information.

System action

Infoprint XT cannot process the request.

User response

Specify a message number. Then, issue the command again.

5016-115	*nn* is not a valid message number.

Explanation

You issued the **pdxtmsg** command and specified the number identified in the message. That number is not in the *nnnn-nnn* format.

System action

Infoprint XT cannot process the request.

User response

Specify a valid message number in the correct format. Then, issue the command again.

5016-116	Message *nn* does not exist.

Explanation

You issued the **pdxtmsg** command and specified the number identified in the message. That number is not in the message catalog.

System action

Infoprint XT cannot process the request.

User response

Specify a valid message number. Then, issue the command again.

5016-120	The command option *option* is not valid.

Explanation

The **pdxtx2afp** command included an option that is not valid.

System action

Infoprint XT cannot process the command.

User response

Make sure that the **pdxtx2afp** command syntax is correct in the calling program, script or line command. For example, with Infoprint Server, check the syntax of the transform entry in aopxfd.conf.

5016-121	**Cannot process command option *-option*. The value for the option is missing.**

Explanation

The **pdxtx2afp** command includes an option that requires a value. The value for the option was missing.

System action

Infoprint XT cannot process the request.

User response

Make sure that the **pdxtx2afp** command syntax is correct in the calling program, script or line command. For example, with Infoprint Server, check the syntax of the transform entry in aopxfd.conf.

5016-122	**The command did not expect the value "*value*".**

Explanation

The **pdxtx2afp** command included an option or other argument that is not valid.

System action

Infoprint XT cannot process the request.

User response

Make sure that the **pdxtx2afp** command syntax is correct in the calling program, script or line command. For example, with Infoprint Server, check the syntax of the transform entry in aopxfd.conf.

5016-124	**The -a parameter of the pdxtx2afp command has replaced the pdxtcapture command, which is deprecated.**

Explanation

The **pdxtcapture** command is deprecated and is no longer operational. To capture diagnostic job

information, run the **pdxtx2afp** command with the **-a** *jobcapturearchive* parameter.

System action

Infoprint XT processes the request without capturing job information.

User response

Add the **-a** *jobcapturearchive* parameter to the **pdxtx2afp** command and issue the command again.

5016-200	**Cannot access *file_or_directory* (error *ReturnCode*). *...msg***

Explanation

The file or directory identified in the message is not accessible. It might not exist or it might not have the permissions that are required to provide access. The message provides additional information about why the action failed.

Note: For the accessing the ink correlation table, the explanation is: a directory containing the ink correlation table is not accessible.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file or directory and correct the problem. Then, issue the command again.

5016-201	**Cannot open file *file_name* (error *ReturnCode*). *...msg***

Explanation

Infoprint XT cannot open the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file or the directory that contains the file and correct the problem. Then, issue the command again.

5016-202	**Cannot read file *file_name* (error *ReturnCode*). *...msg***

Explanation

Infoprint XT cannot read the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, issue the command again.

5016-203	Cannot write to file *file_name* (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot write to the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file or use the additional information that the message specifies to correct the problem. Then, issue the command again.

5016-204	File *file_name* does not exist.

Explanation

The file identified in the message does not exist. The file might be one you specified or one that Infoprint XT tried to create.

System action

Infoprint XT cannot process the request.

User response

Specify a valid file name. Then, issue the command again. Or, use other error information to determine why Infoprint XT cannot create the file.

5016-205	File *file_name* is empty.

Explanation

The file identified in the message exists, but it does not contain any data.

System action

Infoprint XT cannot process the request.

User response

Correct the problem with the file. Then, issue the command again.

5016-206	Cannot rename file *file_name* to *file_name* (error *ReturnCode*). *...msg*

Explanation

You issued a command, but Infoprint XT cannot rename the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, issue the command again.

5016-209	Cannot lock locking file *file_name* (error *ReturnCode*). *...msg*

Explanation

You issued a command, but Infoprint XT cannot lock the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, issue the command again.

5016-210	Cannot read from fd*n* (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot read from the file descriptor identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-211   **Cannot write to fd*n* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT cannot write to the file descriptor identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-212   **An error occurred while allocating the *partitioned_data_set_name* data set (return code: *return_code*) (error code: *error_code*) (information code: *information_code*).**

Explanation

Infoprint XT could not allocate the required data set. Supervisor Call (SVC) 99 returned the error and information codes.

System action

Infoprint XT cannot process the request.

User response

For more information about error and information codes, see the *Interpreting DYNALLOC Return Codes* section in the *Requesting Dynamic Allocation Functions* chapter of *z/OS MVS Programming: Authorized Assembler Services Guide*.

5016-213   **An error occurred while allocating the *partitioned_data_set_name* data set (return code: *return_code*).**

Explanation

Infoprint XT could not allocate the required storage. Either Supervisor Call (SVC) 99 is not supported or the Supervisor Call could not build a text string from the input values.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-214   **An error occurred while closing file *path/fname_of_the_file* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not close the file identified in the message. The message provides additional information about why the action failed. On z/OS, this error can occur when the directory of a partitioned data set is full.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file, or the location that contains the file, and correct the problem. Then, issue the command again.

5016-216   **Cannot load module *module_name* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT cannot load the module identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified module or the directory that contains the module, and correct the problem. Then, enter the original command that resulted in this error message again.

5016-220   **AFP record *record_number* (offset *offset*) is not valid. The structured field introducer is not complete.**

Explanation

Infoprint XT cannot read the AFP data stream. The introducer portion of a structured field is not complete.

System action

Infoprint XT cannot process the request.

User response

Correct the AFP data stream. Then, issue the command again If you cannot determine the cause of the problem, report this message to your technical support representative.

5016-221	**AFP record** *record_number* **(offset** *offset***) is not valid. The structured field data is not complete.**

Explanation

Infoprint XT cannot read the AFP data stream. Not enough data exists to satisfy the length specified in the structured field introducer.

System action

Infoprint XT cannot process the request.

User response

Correct the AFP data stream. Then, issue the command again. If you cannot determine the cause of the problem, report this message to your technical support representative.

5016-222	**AFP record** *record_number* **(offset** *offset***) is not valid. The carriage control is 0x***nn***, not 0x5A.**

Explanation

Infoprint XT cannot read an AFP data stream. The carriage control is not correct.

System action

Infoprint XT cannot process the request.

User response

Correct the AFP data stream. Then, issue the command again. If you cannot determine the cause of the problem, report this message to your technical support representative.

5016-230	**Cannot create directory** *directory_name* **(error** *ReturnCode***). ...***msg*

Explanation

Infoprint XT cannot create the directory identified in the message. The parent directory might not exist or might not have the permissions required to create the specified directory. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the directory or directories and correct the problem. Then, issue the command again.

5016-231	**Cannot change to directory** *directory_name* **(error** *ReturnCode***). ...***msg*

Explanation

Infoprint XT cannot change to the directory identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified directory and correct the problem. Then, issue the command again.

5016-232	**Cannot open directory** *directory_name* **(error** *ReturnCode***). ...***msg*

Explanation

Infoprint XT cannot open the directory identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified directory and correct the problem. Then, issue the command again.

5016-234	**Cannot resolve directory** *directory_name* **(error** *ReturnCode***). ...***msg*

Explanation

Infoprint XT cannot resolve the directory identified in the message. The directory might not exist or might not have the correct permissions. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Verify that the specified directory exists and that it has the correct permissions. Then, issue the command again.

5016-235	Cannot delete directory *directory_name* (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot resolve the directory identified in the message. The directory might not exist or might not have the permissions required to delete it. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the directory ownership and permissions and correct the problem. Then, issue the command again.

5016-236	Cannot access current directory (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot access the current directory. The user might not have the permissions required to access it. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the ownership and permissions of the current directory and correct the problem. Then, issue the command again.

5016-239	Cannot copy *source_file_name* to *target_file_name* (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot copy from or to the files identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

For more information about error codes 1 and 2, see the exit values section of the **cp** command description in the *z/OS UNIX System Services Command Reference*. For other error codes, use the information that the message provides to correct the problem. Then, issue the command again.

5016-240	Cannot search *directory_name* (error *ReturnCode*). *...msg*

Explanation

You issued a command that required Infoprint XT to scan a directory by using a pattern-matching string. The scan operation failed. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-241	An error occurred while searching *PDS_search_pattern*(error *ReturnCode*). *...msg*

Explanation

You issued a command, which required Infoprint XT to scan a partitioned data set by using a pattern-matching string. The scan operation failed. The message provides additional information about why the scan action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-242   **An error occurred while deallocating the *partitioned_data_set_name* data set (return code: *return_code*) (error code: *error_code*) (information code: *information_code*).**

Explanation

Infoprint XT could not deallocate the required data set. Supervisor Call (SVC) 99 returned the error and information codes.

System action

Infoprint XT cannot process the request.

User response

For more information about error and information codes, see the *Interpreting DYNALLOC Return Codes* section in the *Requesting Dynamic Allocation Functions* chapter of *z/OS MVS Programming: Authorized Assembler Services Guide*.

5016-250   **Cannot allocate storage (error *ReturnCode*). ...msg**

Explanation

Infoprint XT cannot allocate the required storage. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-251   **Unable to duplicate file descriptor (error *ReturnCode*). ...msg**

Explanation

Infoprint XT cannot duplicate a file descriptor. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-252   **Unable to accept a new connection on a socket (error *ReturnCode*). ...msg**

Explanation

Infoprint XT cannot accept a new connection on a socket. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-279   **Unable to recognize valid environment variables in the output from the *command* command (error *ReturnCode*). ...command_output**

Explanation

You issued a command that reads environment variables to obtain default command options. An error occurred when Infoprint XT attempted to parse the values of the environment variables. The most likely cause is a problem with the content of the variables. For example, they might require quotation marks due to the use of special characters or they might contain unbalanced quotation marks.

System action

Infoprint XT cannot process the request.

User response

Correct the values of the environment variables. Then, issue the command again.

5016-280   **Command *command* failed (error *ReturnCode*). ...stderr**

Explanation

Infoprint XT issued the command identified in the message, but it failed. The message provides additional information about why the command failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-281 **Command *command* failed (error *ReturnCode*).**

Explanation

Infoprint XT issued the command identified in the message. The command does not return any standard error output when it failed.

System action

Infoprint XT cannot process the request.

User response

Depending on the command, there might be additional information in an error log or a system error log. Use the log information to correct the problem. Then, issue the command again.

5016-282 **Cannot launch the command *command* (error *ReturnCode*). *...msg***

Explanation

Infoprint XT issued the command identified in the message, but it failed. The message provides additional information about why the command failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-283 **Cannot read from command *command* (*ReturnCode*). *...msg***

Explanation

Infoprint XT cannot read the output from the command identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-284 **Cannot write to command *command* (*ReturnCode*). *...msg***

Explanation

Infoprint XT cannot write data to the command identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5016-289 **Cannot find an entry for *group_name* in the system group database (error *ReturnCode*). *...msg***

Explanation

Infoprint XT cannot find an entry for the specified group name in the system group database. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Contact your system administrator. Verify that the specified group exists on the system and is correctly configured. Use the information that the message provides to correct the problem. Then, issue the command again.

5016-292   **You must be in the *group_name* group to issue this command.**

Explanation

You issued the command while logged in with a user name that is not in the required group.

System action

Infoprint XT cannot process the request.

User response

Either add the user name to the group, or log in with a user name that is already in the group. Then, issue the command again.

5016-293   **An error occurred while retrieving data set attributes for *DD_name* (error *ReturnCode*). ...msg**

Explanation

You submitted a job that specified one or more data sets. Infoprint XT cannot determine the data set attributes. The message provides additional information about why the attempt failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, submit the job again.

5016-294   **Cannot determine a data set name for DD *DD_name*.**

Explanation

You submitted a job that specified the DD contained in the message. Infoprint XT could not determine the data set name associated with this DD.

System action

Infoprint XT cannot process the request.

User response

Ensure that this DD contains the DSN keyword. Then, submit the job again.

5016-295   **The data set specified by DD *DD_name* is not a PDS or PDS/E.**

Explanation

You submitted a job that specified the DD contained in the message. Infoprint XT determined that this DD does not reference a PDS or PDS/E.

System action

Infoprint XT cannot process the request.

User response

Ensure that this DD references a PDS or PDS/E. Then, submit the job again.

5016-296   **DD *DD_name* contains concatenated data sets**

Explanation

You submitted a job that specified the DD contained in the message. Infoprint XT determined that this DD references concatenated data sets.

System action

Infoprint XT cannot process the request.

User response

Ensure that this DD does not reference concatenated data sets. Then, submit the job again.

5016-297   **An error occurred while retrieving the OUTPUT characteristics for DD *DD_name*, return code *return_code* (SJFREQ error *ReturnCode*).**

Explanation

You submitted a job that specified the DD contained in the message. An error occurred while retrieving the DD or OUTPUT information for the DD by using the SJFREQ system macro.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to determine why the SJFREQ request failed and correct the problem. Then, submit the job again.

5016-298   **An empty SYSIN data set was encountered. It will be ignored.**

Explanation

A SYSIN DD was provided but either the SYSIN DD is a DUMMY or the data set referred to was empty.

System action

Infoprint XT ignores the SYSIN DD.

User response

If no parameters need to be specified in SYSIN, do not specify a SYSIN DD. If parameters should have been specified, correct the problem. Then, submit the job again.

5016-299	DD *first_DD_name* and DD *second_DD_name* are mutually exclusive.

Explanation

You submitted a job by using two data definitions that cannot be used together.

System action

Infoprint XT cannot process the request.

User response

Change the JCL to specify one or the other data definition. Then, submit the job again.

5016-300	The *DD_name* DD data set has incorrect DCB attributes.

Explanation

You submitted a job that specified a data set with one or more incorrect DCB attributes.

System action

Infoprint XT cannot process the request.

User response

Specify a data set with the correct attributes. Then, submit the command again.

5016-410	Cannot parse line *line* in *file_name* (error *ReturnCode*). *...msg*

Explanation

You specified parameters in the parameter mapping file. An error occurred when Infoprint XT tried to parse the value of one of the lines in the file. The most likely cause is a problem with the content of the variable.

For example, it might contain an unbalanced set of quotation marks.

System action

Infoprint XT cannot process the request.

User response

Correct the line in the parameter mapping file. Then, issue the command again.

5016-411	An error occurred while processing file. The internal list of AFP resources is empty or invalid. Use -r to reload the resources.

Explanation

Infoprint XT could not obtain information about a resource. The internal list of AFP resources is either empty or it is corrupt.

System action

Infoprint XT cannot process the request.

User response

Specify the **-r** command option. Then, issue the command again. This causes Infoprint XT to rebuild the internal list of AFP resources.

5016-412	Resource *partitioned_data_set_name* was skipped because of a previous error with data set *resource_file_name*.

Explanation

An Infoprint XT attempt to copy a resource to partitioned data set was ignored. A previous error occurred that caused the copy process to be skipped.

System action

Infoprint XT cannot process the request.

User response

See the previous message to determine why the action failed, and correct the problem. Then, issue the command again.

5016-420	A request to the Transform Manager to start a transform failed.

Explanation

An Infoprint XT request to the Transform Manager to start a transform failed. The Transform Manager could not start the transform.

System action

Infoprint XT cannot process the request.

User response

Check if the maximum number of transforms are currently running. Check if the proper transform class has been selected. Review those conditions and the Infoprint Server documentation to correct the problem. Then, issue the command again.

5016-422	**The connection to the transform was lost.**

Explanation

Infoprint XT connection to the transform was lost.

System action

Infoprint XT cannot process the request.

User response

Restart the Transform Manager. See the Infoprint Server documentation for the required steps. Then, issue the command again.

5016-424	**The transform ended with return code *return_code*. ...Refer to *name_of_the_file* for details.**

Explanation

Infoprint XT converted the Xerox job, but it did not generate any AFP pages. This might be normal for the job or it might be the result of an error. The file named in the message contains messages from the transform command.

System action

Infoprint XT continues processing.

User response

See the file named in the message for additional information.

5016-425	**The transform ended with return code *return_code*.**

Explanation

Infoprint XT converted the Xerox job, but it did not generate any AFP pages. This might be normal for the job or it might be the result of an error.

System action

Infoprint XT continues processing.

User response

If you want more information, configure **x2afpd** to save listings when transform errors occur. See the Infoprint XT documentation for information about configuring **x2afpd**.

5016-470	**Resource name *file* is not valid for deblocking.**

Explanation

You issued the **pdxtdblkres** command and specified a resource name that is not supported. The **pdxtdblkres** command can deblock CMD, FSL, ISL, and JSL resources.

System action

Infoprint XT cannot process the request.

User response

Specify a valid resource name. Then, issue the command again.

5016-471	**The label record is not valid.**

Explanation

You issued the **pdxtdblkres** command to deblock a resource. The first record in the resource is not a valid label record.

System action

Infoprint XT cannot process the request.

User response

Specify a different resource. Then, issue the command again.

5016-472	**A block is too short. It should be *nn* bytes, not *nn* bytes.**

Explanation

You issued the **pdxtdblkres** command to deblock a resource. A block in the resource is too short. The resource itself might be truncated.

System action

Infoprint XT cannot process the request.

User response

Specify a different resource. Then, issue the command again.

5016-473	Resource name *file* is not valid for blocking.

Explanation

You issued the **pdxtblkres** command and specified a resource name that is not valid. The **pdxtblkres** command can block CMD, FSL, ISL, and JSL resources.

System action

Infoprint XT cannot process the request.

User response

Specify a valid resource name. Then, issue the command again.

5016-474	Cluster name *cluster_name* already exists in *file*.

Explanation

You issued the **pdxtcluster** command with the **-f add** function. The cluster name you specified by using the **-c** parameter already exists in the cluster source file.

System action

Infoprint XT cannot process the request.

User response

Specify a cluster name that does not already exist in the cluster source file, or specify **pdxtcluster -f edit** to modify the existing cluster entry.

5016-475	A resource processor could not find cluster name *cluster_name* in *file*..

Explanation

You issued the **pdxtcluster** command with the **-f remove** function, but the cluster name you specified by using the **-c** parameter does not exist in the cluster source file.

System action

Infoprint XT continues processing.

User response

Use **pdxtcluster -f list** to display a list of clusters in the cluster source file. Then, issue the command again with the correct cluster name.

5016-476	Unable to process the cluster database request. The -n parameter matched *n* files.

Explanation

You issued the **pdxtcluster** command, but the pattern you specified by using the **-n** parameter matches more than one cluster database resource. The **pdxtcluster** command can only process one cluster database at a time.

System action

Infoprint XT cannot process the request.

User response

Specify the complete filename for the cluster database. Then, issue the command again.

5016-477	Name: AFP Tray: Xerox Trays:

Explanation

The **pdxtcluster** command with the **-f list** function displays a list of cluster names and their associated AFP Tray and Xerox Trays.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5016-478	Cluster name *cluster_name* is not valid.

Explanation

You issued the **pdxtcluster** command and specified the **-f add**, **-f edit** or **-f remove** function; however, you entered a cluster name that is not valid. Xerox cluster names must begin with a letter and contain 1 to 6 alphanumeric characters.

System action

Infoprint XT cannot process the request.

User response

Specify a valid cluster name. Then, issue the command again.

5016-500   **Infoprint XT for z/OS 3.3.0.0 Level** *code_level compile_date compile_time*

Explanation

This message displays the Infoprint XT version and code level.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-501   *Date_Time* **(pid** *ProcessID***) - transform started.**

Explanation

Infoprint XT started to convert the Xerox job to AFP.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-502   *Date_Time* **(rc** *ReturnCode***) - transform ended.**

Explanation

Infoprint XT completed converting the Xerox job to AFP.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-503   **Transform arguments (***argument_source***) :**

Explanation

This message, with message 5016-504, lists the transform arguments in use.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-504   *-Option "value"*

Explanation

This message, with message 5016-503, lists the transform arguments in use.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-505   **Transform directives: (***directive_source***)**

Explanation

This message, with message 5016-506, lists the transform directives in use.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-506   *-directive "value"*

Explanation

This message, with message 5016-505, lists the transform directives in use.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-509   Command Sequence:

Explanation

This message, with message 5016-510, lists the commands that make up transform processing.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-510   *Sequence_nn command_string*

Explanation

This message, with message 5016-509, lists the position of the command in the sequence of commands, and the command string itself.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-511   Return Codes:

Explanation

This message, with message 5016-512, lists the error return codes from each of the commands in the transform process.

System action

Infoprint XT processes the request.

User response

Depending on the error return codes, you might need to do diagnostic tests or look through error logs to correct any problems.

5016-512   *Sequence_nn ReturnCode* (pid *ProcessID*)

Explanation

This message, with message 5016-511, lists the error return codes from each of the commands in the transform process. The first variable corresponds to the sequence number listed in message 5016-510. The second variable is the error return code. The third variable is the process ID number for the command.

System action

Infoprint XT processes the request.

User response

Depending on the error return codes, you might need to do diagnostic tests or look through error logs to correct any problems.

5016-513   Impressions (pages): *nn*

Explanation

This message shows the number of impressions that Infoprint XT created for the job.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-515   Infoprint XT received these job attributes for matching with keywords in parameter mapping file pdxtx2afp.map:

Explanation

This message, with message 5016-516, lists the job attributes that Infoprint XT received for the current job. Infoprint XT attempts to match these attributes with keywords in pdxtx2afp.map in order to select conversion parameters.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-516   *job_attributes*

Explanation

This message, with message 5016-515, lists the job attributes that Infoprint XT received for the current job. **forms**, **jobid**, **jobname**, or the special keyword and value pair, ***=***. If the value shown for an attribute is **(none)**, the attribute was not specified.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-517   **Infoprint XT matched these job attribute keywords in parameter mapping file pdxtx2afp.map:**

Explanation

This message, with message 5016-518, lists the job attributes that Infoprint XT matched in order to select conversion parameters from pdxtx2afp.map. Matched keywords can include **class**, **dest**, **forms**, **jobid**, **jobname**, or the special keyword and value pair, ***=***. Infoprint XT does not display keywords that it cannot match.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-518   *keyword_values*

Explanation

This message, with message 5016-517, lists the job attributes that Infoprint XT matched in order to select conversion parameters from pdxtx2afp.map.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-519   **Infoprint XT did not select any conversion parameters from parameter mapping file pdxtx2afp.map because it found no matching job attribute keywords.**

Explanation

This message indicates that Infoprint XT found no keywords in pdxtx2afp.map that match the attribute keywords for the job. Therefore, it did not select any conversion parameters from the parameter mapping file.

System action

Infoprint XT processes the request.

User response

Make sure that pdxtx2afp.map includes a conversion parameter entry that specifies the correct combination of attribute keywords for the job. Then, issue the command again.

5016-521   *file_name*:

Explanation

This message identifies the name of the log file or listing file that supplied the information in the error report.

System action

Infoprint XT processes the request.

User response

Use the information from the error report to correct the problem. Then, submit the job again.

5016-590   **Application exit *exit_name* stopped the transform (error *ReturnCode*).**

Explanation

An application exit ended with an error return code other than 0. This directs Infoprint XT to stop the transform process.

System action

Infoprint XT stops the transform process.

User response

This is an informational message and requires no user response for Infoprint XT. Correct the problem with the application exit.

5016-600   **Resource load process started for type "*resource_type*"**

Explanation

Infoprint XT has started to load resources of a specific type. The message identifies the type of resource that Infoprint XT is loading.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-601   **Resource load process is complete for type "*resource_type*"**

Explanation

Infoprint XT has finished loading resources of a specific type. The message identifies the type of resource that Infoprint XT loaded.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-610   **Resource conversion process started. Number of resources to convert: *nn*.**

Explanation

Infoprint XT started to convert resources of a specific type. The message indicates how many resources Infoprint XT is converting.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-611   **Conversion step *step nn* failed for resource *resource_name* (error *ReturnCode*).**

Explanation

Infoprint XT writes this message to the listing file for the resource identified in the message. Depending on your operating system platform, the listing file is in the `/var/pdxt/resources/common/pdxtloadres` directory or the `%PDXTWORKDIR%\resources\common\pdxtloadres` directory. Or, it is in the directory for a specific resource group or the directory specified by the **-o** option. The message indicates the conversion step that failed. The return code provides additional information about why the conversion failed.

System action

Infoprint XT cannot process the request.

User response

Use the return code to determine why the conversion process failed and correct the problem. Then, load the resource again.

Note: Infoprint XT overwrites the listing file each time you run the **pdxtloadres** command.

5016-612   **nn resources have completed conversion.**

Explanation

When converting a group of resources, Infoprint XT periodically issues this message to show the progress of the conversion process.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-613   **Resource conversion process is complete. Number of successes: *nn*.**

Explanation

Infoprint XT has converted a group of resources. The message specifies the number of resources that Infoprint XT converted successfully.

System action

Infoprint XT processes the request.

User response

If any accompanying messages indicate that conversion failures occurred, determine the cause of the conversion failures and correct the problems. Then, load the resources again. If no conversion failures occurred, no action is necessary.

5016-614   **Resource correlation process started.**

Explanation

During the resource-load process, Infoprint XT issues this message when it starts to build a resource correlation table.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-615   **Resource correlation process is complete.**

Explanation

During the resource-loading process, Infoprint XT issues this message when it finishes building a resource correlation table.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-616   **Resource correlation step *step_name* failed (error *ReturnCode*).**

Explanation

During the resource-load process, Infoprint XT issues this message when it cannot build a resource correlation table. The error return code provides additional information about why the correlation failed.

System action

Infoprint XT cannot process the request.

User response

Use the error return code to determine why the correlation process failed, and correct the problem. Then, load the resource again.

5016-617   **Metrics generation process started.**

Explanation

During the resource-load process, Infoprint XT issues this message when it starts to generate the metrics files.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-618   **Metrics generation process is complete. Number of successes: *nn*.**

Explanation

Infoprint XT issues this message after it generates the metrics files for one or more resources. The message specifies the number of metrics files that Infoprint XT created successfully.

System action

Infoprint XT processes the request.

User response

If any accompanying messages indicate that failures occurred, determine the cause of the failures and correct the problems. Then, load the resources again. If no other failures occurred, no action is necessary.

5016-619   **Install process started.**

Explanation

During the resource-load process, Infoprint XT issues this message when it starts to copy the AFP resources and metrics files to their appropriate directories.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-620   *nn* **resources have completed installation.**

Explanation

When installing a group of resources, Infoprint XT periodically issues this message to show the progress of the install process.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-621   **Install process is complete.**

Explanation

Infoprint XT issues this message after it finishes copying the AFP resources and metrics files to the appropriate directories.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-622   **Ink correlation table process failed (error *ReturnCode*).**

Explanation

During the ink correlation process, Infoprint XT issues this message when it cannot build the ink correlation table. The error return code provides additional information about why the correlation failed.

System action

Infoprint XT processes the request.

User response

Use the error return code to determine why the ink correlation table process failed, and correct the problem. Then, issue the **pdxtcolor** command again.

5016-650   **Resource sample process started for type "*resource_type*".**

Explanation

Infoprint XT has started to sample resources of a specific type. The message identifies the type of resource that Infoprint XT is sampling.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-651   **Resource sample process is complete for type "*resource_type*".**

Explanation

Infoprint XT has finished sampling resources of a specific type. The message identifies the type of resource that Infoprint XT sampled.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-652   **Resource sampling process started. Number of resources to sample: *nn*.**

Explanation

Infoprint XT has started sampling resources of a specific type. The message identifies how many resources Infoprint XT is sampling.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-653	**Sampling failed for resource** *resource_name* **(error** *ReturnCode***).**

Explanation

The message indicates that sampling failed for the resource identified in the message. The return code provides additional information about why sampling failed.

System action

Infoprint XT cannot process the request.

User response

Use the return code to determine why the sampling process failed and correct the problem. Then, sample the resource again.

5016-654	*nn* **resources have completed sampling.**

Explanation

When sampling a group of resources, Infoprint XT periodically issues this message to show the progress of the sampling process.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-655	**Resource sampling process is complete. Number of successes:** *nn***.**

Explanation

Infoprint XT has sampled a group of resources. The message specifies the number of resources that Infoprint XT sampled successfully.

System action

Infoprint XT processes the request.

User response

If any accompanying messages indicate that sampling failures occurred, determine the cause of the sampling failures and correct the problem. Then, sample the resources again. If no sampling failures occurred, no action is necessary.

5016-656	**Cannot determine overlay sample page size for resource** *overlay_name***.**

Explanation

Infoprint XT cannot find page size information in the resource identified in the message. The Page Descriptor (PGD) structured field is missing or corrupt.

System action

Infoprint XT cannot process the request.

User response

Make sure that the AFP overlay contains a valid PGD structured field. If necessary, reload the corresponding Xerox FRM. Then, sample the resource again.

5016-657	**One or more sampling resources are not loaded in resource library** *resource_library***.**

Explanation

You issued the **pdxtloadres** command to sample an AFP resource, but resource sampling requires one or more resources that are not loaded in the specified resource library. Message 5016-658 lists the missing resources.

System action

Infoprint XT cannot process the request.

User response

Load the resources from SIOAXRES | `/usr/lpp/pdxt/V3R3M0/testjob` to the resource library. Then, issue the command again.

5016-658   *resource_name*

Explanation

This message, with message 5016-657, lists the missing resources required for resource sampling.

System action

Infoprint XT cannot process the request.

User response

Load the resources from SIOAXRES | `/usr/lpp/pdxt/V3R3M0/testj`ob to the resource library. Then, issue the command again.

5016-659   **You cannot use command option -*option* when you sample resources.**

Explanation

You issued the **pdxtloadres** command and included the **-f** sample option, which is a request to sample resources. You also included another option that does not apply when you sample resources.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5016-680   **Update resource: *file_name*(*data_set_name*)**

Explanation

Infoprint XT issues this message after each file has been successfully uploaded to its partitioned data set location.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-681   **Delete resource: *file_name*(*data_set_name*)**

Explanation

Infoprint XT issues this message after each file has been deleted from the resource directory.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-690   **Resource delete process started for type *resource_type*. Number of resources to delete: *n*.**

Explanation

Infoprint XT issues this message when it starts to delete resources of a specific type. The message indicates the type of resource and how many resources Infoprint XT is deleting.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-691   **Resource delete process is complete for type *resource_type*. Number of deletes: *nn*.**

Explanation

Infoprint XT issues this message after it deletes a group of resources. The message specifies the number of resources that Infoprint XT deleted.

System action

Infoprint XT processes the request.

User response

If any accompanying messages indicate that deletion failures occurred, determine the cause of the deletion failures and correct the problems. If no deletion failures occurred, no action is necessary.

5016-692   **Cannot delete resource *resource_name*. The resource is not loaded in resource library *resource_library*.**

Explanation

You issued the **pdxtloadres** command to delete the resource specified in the message, but that resource is not loaded in the specified resource library.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5016-733	Cannot process duplicate cluster name *cluster_name*.

Explanation

You issued the **pdxtcluster** command and specified one or more duplicate cluster names using the **-c** parameter option.

System action

Infoprint XT cannot process the request.

User response

Issue the **pdxtcluster** command with unique cluster names.

5016-734	Resource: *resource_name* does not have a valid extension.

Explanation

Infoprint XT did not recognize the resource name extension, or the extension is not correct for the command function you specified.

System action

Infoprint XT cannot process the request.

User response

Make sure you enter the correct extension. Then, issue the command again.

5016-735	The file format for resource *resource_name* is not correct or is not supported.

Explanation

Infoprint XT cannot process the resource because the file format is not valid.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

Verify that the resource file is valid. If the problem continues, report this message to your technical support representative.

5016-840	Resource dump process started for type *resource_type*.

Explanation

Infoprint XT has started to dump resources of the type identified in the message.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-841	Resource dump process is complete for type *resource_type*.

Explanation

Infoprint XT has finished dumping resources of the type identified in the message.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-842	Resource dumping process started. Number of resources to dump: *number_of_resources*.

Explanation

Infoprint XT has started to dump resources.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-843   **Resource dumping process is complete. Number of successes:** *number_of_successes*.

Explanation

Infoprint XT successfully dumped the number of resources specified in the message.

System action

Infoprint XT processes the request.

User response

If any accompanying messages indicate that dumping failures occurred, determine the cause of the dumping failures and correct the problem. Then, dump the resources again. If no dumping failures occurred, no action is necessary.

5016-844   *number_of_resources* **resources have completed dumping..**

Explanation

When dumping a group of resources, Infoprint XT periodically issues this message to show the progress of the dumping process.

System action

Infoprint XT processes the request.

User response

This is an informational message and requires no user response.

5016-845   **Dumping failed for resource** *resource_type* **(error** *ReturnCode*)**. ...msg**

Explanation

The message indicates that dumping failed for the resource identified in the message. The return code provides additional information about why the operation failed.

Explanation

Infoprint XT cannot process the request.

User response

Use the return code to determine why the dumping process failed and correct the problem. Then, dump the resource again.

5016-850   **Could not add file** *file_name* **to job capture archive** *file_name* **(error** *ReturnCode*)**. ...msg**

Explanation

The message indicates a failure when adding the specified file to the job capture archive. The return code provides additional information about why the operation failed.

Explanation

Infoprint XT processes the request.

User response

Use the return code to determine why the file was not added to the job capture archive and correct the problem. Then, issue the command again.

5016-851   **Could not create the job capture archive file** *file_name* **(error** *ReturnCode*)**. ...msg**

Explanation

The message indicates a failure when creating the job capture archive. The return code provides additional information about why the operation failed.

Explanation

Infoprint XT cannot process the request.

User response

Use the return code to determine why the job capture archive was not created and correct the problem. Then, run the job again.

5016-900   **Message** *nnnn-nnn* **does not exist.**

Explanation

Infoprint XT found an error while processing a message.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

Error return code numbers

This section describes the error return code numbers (errno) that some Infoprint XT messages contain.

1

Explanation

A domain error occurred.

2

Explanation

A range error occurred.

3

Explanation

Truncation of a record occurred during an I/O operation.

4

Explanation

The size of the specified record was too small.

5

Explanation

A write operation might not immediately follow a read operation.

6

Explanation

A read operation might not immediately follow a write operation.

7

Explanation

The I/O buffer could not be allocated.

8

Explanation

The LRECL or BLKSIZE exceeded the maximum allowable value.

9

Explanation

An I/O operation was attempted by using an invalid FILE pointer.

10

Explanation

A read operation was attempted on a file that was not opened for reading.

11

Explanation

The number of ungetc() push-back characters has exceeded the maximum allowed.

12

Explanation

File positioning is not allowed for this data set.

13

Explanation

No hiperspace blocks are available for expansion.

14

Explanation

An attempt was made to acquire a position that is before the start of the file.

15

Explanation

The file position value was beyond the limits that ftell() can represent in a long integer value.

16

Explanation

Byte I/O was attempted on a file that was opened for record I/O.

17

Explanation

A write operation was attempted on a file that was not opened for writing.

18

Explanation

An ungetc() function call cannot immediately follow a write operation.

19

Explanation

An unrecoverable error has permanently marked the file in error.

20

Explanation

An attempt to allocate memory in the Language Environment has failed.

21

Explanation

The file attributes for open create an invalid combination.

22

Explanation

An error occurred while generating a temporary name.

23

Explanation

An attempt to back up position has failed.

24

Explanation

An attempt was made to close a file that had been opened on another thread.

25

Explanation

An I/O function was invoked when a read was pending for a file that had been intercepted.

26

Explanation

An error occurred when expanding hiperspace.

27

Explanation

The position specified to fseek() was not valid.

28

Explanation

A previous I/O error has marked the stream not valid for further I/O processing.

29

Explanation

An unrecognized signal value was passed to the signal() or raise() function.

30

Explanation

An invalid argument was passed.

31

Explanation

An attempt was made to close a stream not belonging to the current main program.

32

Explanation

An error was detected in the input string passed to the system() function.

33

Explanation

An attempt was made to extend a non-extendable file.

34

Explanation

An unsupported buffering mode was specified for the setvbuf() function.

35

Explanation

An attempt was made to change the buffering mode after an operation on a file.

36

Explanation

The specification of a member is not valid.

37

Explanation

The specified ddname was not found.

38

Explanation

An error occurred when the system flushed terminal output before retrieving terminal input.

39

Explanation

A writable CMS minidisk could not be found to hold the output file specified.

40

Explanation

An attempt was made to open a flat file as a PDS.

41

Explanation

An error was detected at the system level when opening a file.

42

Explanation

A special internally-generated memory file name was specified for opening, but a memory file with this name does not exist.

43

Explanation

An attempt was made to open a non-memory file as a memory file.

44

Explanation

An error occurred when attempting to erase a CMS file.

45

Explanation

The operation attempted could not be performed because the file was open.

46

Explanation

The file could not be deleted.

47

Explanation

An invalid file name was specified as a function parameter.

48

Explanation

A Language Environment internal routine has failed unexpectedly.

49

Explanation

The specified file name could not be located.

50

Explanation

Unused.

51

Explanation

An error occurred when renaming a file.

52

Explanation

The application is running with AMODE=24 while the runtime library was installed above the line.

53

Explanation

The Language Environment runtime library load module EDCZ24 could not be loaded.

54

Explanation

An attempt to override the disposition was ignored. The file might still be removed.

55

Explanation

An error occurred trying to remove the file before its expiration date.

56

Explanation

Unused.

57

Explanation

The open mode string was not valid.

58

Explanation

Unused.

59

Explanation

An attempt to reposition a VSAM file failed.

60

Explanation

An invalid file position was passed to the fsetpos() function.

61

Explanation

An error occurred when attempting to define a file to the system.

62

Explanation

Unused.

63

Explanation

Unused.

64

Explanation

A write system error was detected.

65

Explanation

A read system error was detected.

66

Explanation

An attempt was made to open a nonexistent file for read.

67

Explanation

Unused.

68

Explanation

Unused.

69

Explanation

Unused.

70

Explanation

Unused.

71

Explanation

Unused.

72

Explanation

An attempt was made to open a KSDS or Path VSAM data set without specifying record I/O.

73

Explanation

The maximum number of attempts to obtain temporary names was exceeded.

74

Explanation

The open parameters were missing the 'type=record' specifier.

75

Explanation

Unused.

76

Explanation

An fread() was not performed before calling the fdelrec() or fupdate() functions.

77

Explanation

An error occurred trying to erase a VSAM record.

78

Explanation

The requested operation is valid only for VSAM data sets.

79

Explanation

The file was not opened with a 'type=record' specification.

80

Explanation

An invalid option was passed to the flocate() function.

81

Explanation

Unused.

82

Explanation

Unused.

83

Explanation

An error occurred attempting to load a module into storage.

84

Explanation

The program was not run because of redirection errors on the command line.

85

Explanation

Unused.

86

Explanation

An unsupported open mode was specified for a PDS member.

87

Explanation

The specified file characteristics does not match those of the existing file.

88

Explanation

An invalid open mode was specified for the current device.

89

Explanation

Open mode is not valid for a SYSIN or SYSOUT dataset.

90

Explanation

Unused.

91

Explanation

The requested function could not be performed because a system utility failed.

92

Explanation

An I/O abend was trapped.

93

Explanation

Unused.

94

Explanation

An attempt was made to push back the EOF character by using ungetc().

95

Explanation

The requested CMS minidisk was not accessed.

96

Explanation

Unused.

97

Explanation

Unused.

98

Explanation

An invalid RECFM was specified when opening a PDS member.

99

Explanation

The function specified is not supported under CICS®.

100

Explanation

An attempt was made to perform disk file I/O under CICS.

101

Explanation

The transient data queue was not enabled for the standard streams.

102

Explanation

The transient data queue was not opened for the standard streams.

103

Explanation

An attempt was made to map remote queues to the standard streams under CICS.

104

Explanation

Unused.

105

Explanation

Unused.

106

Explanation

An error occurred creating a hiperspace memory file.

107

Explanation

An error occurred writing to a hiperspace memory file.

108

Explanation

An error occurred reading from a hiperspace memory file.

109

Explanation

Unused.

110

Explanation

Unused.

111

Explanation

Permission denied.

112

Explanation

Resource temporarily unavailable.

113

Explanation

Bad file descriptor.

114

Explanation

Resource busy.

115

Explanation

No child processes.

116

Explanation

Resource deadlock avoided.

117

Explanation

File exists.

118

Explanation

Incorrect address.

119

Explanation

File too large.

120

Explanation

Interrupted function call.

121

Explanation

Invalid argument.

122

Explanation

Input/output error.

123

Explanation

A directory.

124

Explanation

Too many open files.

125

Explanation

Too many links.

126

Explanation

File name too long.

127

Explanation

Too many open files in system.

128

Explanation

No such device.

129

Explanation

No such file or directory.

130

Explanation

Exec format error.

131

Explanation

No locks available.

132

Explanation

Not enough memory.

133

Explanation

No space left on device.

134

Explanation

Function not implemented.

135

Explanation

Not a directory.

136

Explanation

Directory not empty.

137

Explanation

Inappropriate I/O control operation.

138

Explanation

No such device or address.

139

Explanation

Operation not permitted.

140

Explanation

Broken pipe.

141

Explanation

Read-only file system.

142

Explanation

Invalid seek.

143

Explanation

No such process.

144

Explanation

Improper link.

145

Explanation

The parameter list is too long, or the message to receive was too large for the buffer.

146

Explanation

Too many levels of symbolic links.

147

Explanation

Illegal byte sequence.

148

Explanation

Unused.

149

Explanation

Value Overflow Error.

150

Explanation

OpenEdition MVS is not active.

151

Explanation

Dynamic allocation error.

152

Explanation

Catalog Volume Access Facility error.

153

Explanation

Catalog obtain error.

154

Explanation

Unused.

155

Explanation

Unused.

156

Explanation

Process initialization error.

157

Explanation

An internal error has occurred.

158

Explanation

Bad parameters were passed to the service.

159

Explanation

The Physical File System encountered a permanent file error.

160

Explanation

Bad character in environment variable name.

161

Explanation

Unused.

162

Explanation

The Physical File System encountered a system error.

163

Explanation

SAF/RACF extract error.

164

Explanation

SAF/RACF error.

165

Explanation

System TOD clock not set.

166

Explanation

Access mode argument on function call conflicts with PATHOPTS parameter on JCL DD statement.

167

Explanation

Access to the OpenEdition MVS or OpenEdition VM version of the C RTL is denied.

168

Explanation

Password has expired.

169

Explanation

Password is not valid.

170

Explanation

An error was encountered with WLM.

171-199

Explanation

Unused.

200

Explanation

The application contains a Language Environment member language that cannot tolerate a fork().

201

Explanation

The Language Environment message file was not found in the hierarchical file system.

202

Explanation

DLL facilities are not supported under SPC environment.

203

Explanation

DLL facilities are not supported under POSIX environment.

204

Explanation

Not enough storage to load DLL module.

205

Explanation

DLL module not found.

206

Explanation

DLL module name too long.

207

Explanation

Load request for DLL load module unsuccessful.

208

Explanation

dllHandle supplied to the dllqueryvar() function is not available for use.

209

Explanation

No variables exported from this dllHandle.

210

Explanation

Requested variable not found in this DLL.

211

Explanation

DLL load module does not contain a fixed writeable area.

212

Explanation

dllHandle supplied to dllqueryfn() function is not available for use.

213

Explanation

No functions exported from this dllHandle.

214

Explanation

Requested function not found in this DLL.

215

Explanation

Not enough storage available for fixed writeable area.

216

Explanation

dllHandle supplied is NULL.

217

Explanation

No DLLs to be freed.

218

Explanation

Logical delete performed, but the DLL is not physically deleted.

219

Explanation

Unused.

220

Explanation

Invalid dllHandle.

221

Explanation

Load request for DLL not supported while running C++ destructors.

222

Explanation

IOStreams do not support Record Mode I/O.

223

Explanation

Too many characters.

224

Explanation

Singularity: log((0,0)).

225

Explanation

DLL function is not allowed because destructors are running for the DLL.

226

Explanation

A load of DLL from the HFS failed.

227

Explanation

Buffer is not long enough to contain a path definition.

228

Explanation

The file referred to is an external link.

229

Explanation

No path definition for ddname in effect.

230

Explanation

ESM error.

231

Explanation

CP or the external security manager had an error.

232

Explanation

The function failed because it was invoked from a multithread environment.

233

Explanation

The linkage of the specified locale doesn't match the current runtime environment.

234

Explanation

The DLL cannot be loaded because it does not contain a CEESTART CSECT.

235

Explanation

The fetched executable does not contain a fetchable entry point.

236

Explanation

The fetched executable was compiled XPLINK but the XPLINK environment is not active.

237

Explanation

The DLL was not found in an authorized library.

238

Explanation

Not enough storage to fetch module.

239

Explanation

Fetched module not found.

240

Explanation

Fetched module name too long.

241

Explanation

Load request for fetch load module unsuccessful.

242

Explanation

The fetched module was not found in an authorized library.

1000

Explanation

A bad socket-call constant was found in the IUCV header.

1001

Explanation

An error was found in the IUCV header.

1002

Explanation

A socket descriptor is out of range.

1003

Explanation

A socket descriptor is in use.

1004

Explanation

Request failed because of an IUCV error.

1005

Explanation

Offload box error.

1006

Explanation

Offload box restarted.

1007

Explanation

Offload box down.

1008

Explanation

Already a conflicting call outstanding on socket.

1009

Explanation

Request canceled by using a SOCKcallCANCEL request.

1010

Explanation

Unused.

1011

Explanation

A name of a PFS was specified that either is not configured or is not a Sockets PFS.

1012-1099

Explanation

Unused.

1100

Explanation

Block device required.

1101

Explanation

Text file busy.

1102

Explanation

Operation would block.

1103

Explanation

Operation now in progress.

1104

Explanation

Connection already in progress.

1105

Explanation

Socket operation on non-socket.

1106

Explanation

Destination address required.

1107

Explanation

Message too long.

1108

Explanation

Protocol wrong type for socket.

1109

Explanation

Protocol not available.

1110

Explanation

Protocol not supported.

1111

Explanation

Socket type not supported.

1112

Explanation

Operation not supported on socket.

1113

Explanation

Protocol family not supported.

1114

Explanation

Address family not supported.

1115

Explanation

Address already in use.

1116

Explanation

Address not available.

1117

Explanation

Network is down.

1118

Explanation

Network is unreachable.

1119

Explanation

Network dropped connection on reset.

1120

Explanation

Connection ended abnormally.

1121

Explanation

Connection reset.

1122

Explanation

No buffer space available.

1123

Explanation

Socket already connected.

1124

Explanation

Socket not connected.

1125

Explanation

Cannot send after socket shutdown.

1126

Explanation

Too many references; cannot splice.

1127

Explanation

Connection timed out.

1128

Explanation

Connection refused.

1129

Explanation

Host is not available.

1130

Explanation

Host cannot be reached.

1131

Explanation

Too many processes.

1132

Explanation

Too many users.

1133

Explanation

Disk quota exceeded.

1134

Explanation

Stale file handle.

1135

Explanation

Unused.

1136

Explanation

File is not a STREAM.

1137

Explanation

STREAMS ioctl() timeout.

1138

Explanation

No STREAMS resources.

1139

Explanation

The message identified by set_id and msg_id is not in the message catalog.

1140

Explanation

Bad message.

1141

Explanation

Identifier removed.

1142

Explanation

Unused.

1143

Explanation

Unused.

1144

Explanation

The link has been severed.

1145-1147

Explanation

Unused.

1148

Explanation

Protocol error.

1149

Explanation

Multihop not allowed.

1150-1158

Explanation

Unused.

1159

Explanation

Function call was interrupted before any data was received.

1160

Explanation

Socket reuse is not supported.

Appendix C. Resource utility messages: 5017-*nnn X* (*xxx*)

This appendix lists the messages that the Infoprint XT resource utility program and resource converters can issue while loading resources.

Infoprint XT calls the resource utility and the resource converters when it loads Xerox resources. During the load process, the resource utility creates the associated metrics files for all types of Xerox resources that Infoprint XT processes. The resource converters create the Advanced Function Presentation versions of Xerox fonts, images, logos, and forms.

Resource path names used in messages

Some of the messages and message explanations include information about where the program looked for reformatted Xerox resources and AFP resources. The reformatted Xerox resource path is the location of the metrics files that Infoprint XT generates when it loads a Xerox resource. Depending on whether the resources were loaded as common resources, or resources in a specific resource group, or resources in a specific directory, the reformatted Xerox resource path is one of these:

- `/var/pdxt/resources/common/metrics`
- `/var/pdxt/resources/`*resource_group*`/metrics`
- *OtherDirectory*`/metrics`

The AFP resource path is the directory that contains the AFP resources that Infoprint XT generates when it loads Xerox printable resources. The AFP resource path is one of these:

- `/var/pdxt/resources/common`
- `/var/pdxt/resources/`*resource_group*
- *OtherDirectory*

Resource utility message format and severity

Many of the messages contain variable data, such as *file_name*, which is shown in italics. Infoprint XT replaces the variable-data strings with specific information when it issues the messages. A vertical bar (|) between portions of message text, such as `BLOCK | RECORD`, means that Infoprint XT uses only one of the text strings when it issues the message. The error condition determines the text string that Infoprint XT uses.

The message identifiers use this format: 5017-*nnn X* (*xxx*). *nnn* is the 3-digit message number. (*xxx*) is the 3-character identifier that identifies the program module that issued the message. If you need to place a service call, the IBM service representative might ask you for the program module identifier. *X* is a letter that indicates the severity of the message:

I

Informational. Processing continues. This corresponds to return code 0. Infoprint XT processes the resource or resources successfully.

W

Warning. Processing continues. This corresponds to return code 4. The resource utility found a possible problem in the input resource. However, the resource or resources processed successfully.

E

Error. Processing continues. This corresponds to return code 8. An error caused Infoprint XT to complete a default action. Error messages issued when the resource utility is converting an FRM indicate that the AFP overlay generated by Infoprint XT and printed on an IPDS printer might or might

not match the output of the same resource printed on a Xerox printer. Otherwise, an error prevented Infoprint XT from loading the resource.

S

Severe error. Infoprint XT processing stops. This corresponds to return code 12. An error prevented Infoprint XT from loading the resource.

U

Unrecoverable error. Infoprint XT processing stops. This corresponds to return code 16. An error prevented Infoprint XT from loading the resource or from generating AFP output for the job.

Resource utility message explanations

5017-001 S   **Unknown logic error.**

Explanation

An unexpected error condition occurred in the parameter parser.

System action

Infoprint XT cannot process the resource.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-002 S   **Unrecognized keyword:** *keyword*.
Valid keywords are:
keyword:*keyword*

Explanation

The parameter parser found a keyword that it does not recognize.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-003 S   **Specified option for keyword:** *keyword* **is too long. The maximum length is:** *nn*.

Explanation

The parameter parser found a value for a keyword that is too long.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-004 S   **Unrecognized option for the keyword:** *keyword*. **Valid options for this keyword are:** *option*:*option*

Explanation

The parameter parser found a keyword option or value that is not valid.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-005 S   **Value for keyword:** *keyword* **is out of range. The valid range is:** *lower_limit*:*upper_limit*.

Explanation

The parameter parser found a keyword value that is not in the range of valid values.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-006 S **Extra data: *data_string* was found after the file name. Data ignored.**

Explanation

The parameter parser found extraneous data among the keywords.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-020 I **The number of Xerox resources not preceded by a tape mark was: *number*.**

Explanation

This message indicates that the resource utility found one or more resources on a Xerox labeled tape volume that were concatenated together, but had no intervening tape mark. Under certain conditions, the Xerox LPS might fail to write a tape mark after some of the files it writes to tape. If you issued the TAPE LIST,PRINT command on the Xerox printer, the list of resources written to the tape might not include the file names that the resource utility identified with this message.

System action

The resource utility separates the concatenated resources, and continues tape processing.

User response

This is an informational message and requires no user response.

5017-021 W **One or more Xerox resources do not contain the expected number of 512-byte blocks. *xxxx* may not have processed successfully.**

Explanation

This message indicates that the resource utility found one or more resources on a Xerox labeled tape volume with either fewer or more 512-byte blocks than indicated in the label of the file.

System action

The resource utility copies the entire resource to the XRSPDS and continues tape processing.

User response

Verify that the XRSTAPE DD statement in the AIOZRTAP JCL references a valid Xerox LPS-labeled tape volume, and that the data on the tape is not corrupt. Use a valid tape and rerun the AIOZRTAP JCL.

5017-022 E **Internal Xerox file name *file* (X'*hex*') is not valid. The resource utility will not process the file.**

Explanation

The resource utility found an internal Xerox file name or extension that is not valid. The tape volume might not be a valid Xerox LPS-labeled tape volume, or the data on the tape might be corrupt. Also, a program that is external to the Xerox printer might have incorrectly created the file identified in the message.

System action

Infoprint XT skips this file on the tape, and attempts to read the other files on the tape.

User response

Verify whether the XRSTAPE DD statement in the AIOZRTAP JCL references a valid Xerox LPS-labeled tape volume, and that the data on the tape is not corrupt. Use a valid tape and rerun the AIOZRTAP JCL.

5017-023 S **The internal block count in file *file* is not a positive integer.**

Explanation

The resource utility found an internal block count that is not valid. The tape volume might not be a valid Xerox LPS-labeled tape volume, or the data on the tape might be corrupt.

System action

Infoprint XT could not process the tape.

User response

Verify whether the XRSTAPE DD statement in the AIOZRTAP JCL references a valid Xerox LPS-labeled tape volume, and that the data on the tape is not corrupt. Use a valid tape and rerun the AIOZRTAP JCL.

5017-024 S   **Label end marker (X'*nnn*') in file *file* is not valid.**

Explanation

The last byte of a resource label record in not equal to X'2A', as required. The tape volume might not be a valid Xerox LPS-labeled tape volume, or the data on the tape might be corrupt.

System action

Infoprint XT could not process the tape.

User response

Verify whether the XRSTAPE DD statement in the AIOZRTAP JCL references a valid Xerox LPS-labeled tape volume, and that the data on the tape is not corrupt. Use a valid tape and rerun the AIOZRTAP JCL.

5017-025 S   **The resource utility could not open the tape data set. Tape processing cannot continue.**

Explanation

This message indicates that an error occurred when the resource utility attempted to open the tape file. The tape volume might not be a valid Xerox LPS-labeled tape volume, or the data on the tape might be corrupt.

System action

The resource utility stops tape processing.

User response

Verify whether the XRSTAPE DD statement in the AIOZRTAP JCL references a valid Xerox LPS-labeled tape volume, and that the data on the tape is not corrupt. Use a valid tape and rerun the utility.

5017-030 I   ***utility_program* reading parameters from the JCL EXEC PARM after finding an empty parameters file. Defaults will take effect if *utility_program* finds no parameters.**

Explanation

This is an informational message, and it indicates that *utility_program* uses parameters passed through the PARM parameter of the JCL EXEC statement for the job.

System action

utility_program uses parameter defaults if no parameters are specified in the EXEC PARM.

User response

Make sure that the intended parameters are specified for the job, or that the defaults should be used.

5017-031 S   **Module: *code_module* cannot read parameters because of an error. The data set information is not complete.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the resource.

User response

Report this message to your technical support representative.

5017-032 S   **Module: *code_module* cannot read parameters because of DCB parameter errors. Infoprint XT uses LRECL=80 and RECFM=FB.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the resource.

User response

Report this message to your technical support representative.

5017-033 S   **Module: *code_module* cannot read parameters because of an error. The password is missing or incorrect.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the resource.

User response

Report this message to your technical support representative.

5017-034 S **Module:** *code_module* **cannot read parameters because of an error. The ONCODE is:** *nn*.

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the resource.

User response

For ONCODE 92, verify that the directory for the resource group you specified has correct ownership and permissions. Then, do the operation again. If the problem continues, or if the message displays an ONCODE other than 92, report this message to your technical support representative.

5017-035 I **Reading resource utility parameters...**

Explanation

This is an informational message that indicates that Infoprint XT has begun reading the resource conversion parameters. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-036 I **The resource utility parameters in effect are:** *option1 option2 option3 optionN*

Explanation

This message reports the runtime options.

System action

Infoprint XT continues to process the resources.

User response

This is an informational message and requires no user response.

5017-037 E **Incorrect resource utility parameter:** *parameter*.

Explanation

A user-supplied conversion parameter does not match the valid parameters or parameter values.

System action

Infoprint XT cannot process the resource.

User response

Correct the parameter and rerun the program.

5017-040 I **The transform wrote** *nnnn* **bytes to temporary data set SYSUT1. To avoid I/O to SYSUT1, the transform requires a minimum primary xptxsize value of** *primary_size*, **with a suggested minimum initial HEAP value of** *initial_heap*.

Explanation

While converting the data stream, Infoprint XT required more internal data storage than was available and wrote *nnnn* bytes to the SYSUT1 temporary disk storage file. This might have caused increased execution time.

System action

Infoprint XT continues processing the job.

User response

To improve performance, specify an initial **xptxsize** value of at least *primary_size* and an initial HEAP value of *initial_heap*.

5017-043 I **The transform allocated 1 primary and** *nn* **secondary internal data areas. To optimize performance, the transform requires a minimum primary xptxsize value of** *primary_size* **with a suggested initial HEAP value of at least** *initial_heap*.

Explanation

Infoprint XT required more internal storage than was available in the primary area, and allocated *nnnn* additional areas. This might have caused increased execution time.

System action

Infoprint XT continues processing the job.

User response

Specify a primary **xptxsize** of *primary_size* or greater and an initial HEAP value of *initial_heap* or greater, and then rerun the job.

5017-044 I	**The primary intermediate format data area will use all of the available storage. The transform will not allocate secondary areas.**

Explanation

Infoprint XT calculated that there is not be enough virtual storage to allocate any secondary internal data areas. Either the requested primary **xptxsize** value is too large, or less than 12 KB is available after allocating the primary area.

System action

Infoprint XT continues processing the job.

User response

Specify a larger REGION size, or REGION=0M, to allow the job to access a larger amount of virtual storage. Then rerun the job.

5017-045 W	**The transform substituted a minimum xptxsize value of *nnnn* for the requested primary amount, which was too small.**

Explanation

An **xptxsize** request was too small (less than 12 KB).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5017-046 W	**The transform substituted a minimum xptxsize value of *nnnn* for the requested secondary amount, which was too small.**

Explanation

An **xptxsize** request was too small (less than 12 KB).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5017-047 W	**The transform substituted a maximum xptxsize value of *nnnn* for the requested primary amount, which was too large.**

Explanation

An **xptxsize** request was too large (greater than the available storage).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5017-048 W	**The transform substituted a maximum xptxsize value of *nnnn* for the requested secondary amount, which was too large.**

Explanation

An **xptxsize** request was too large (greater than the available storage).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5017-050 I	**Processing selection criteria...**

Explanation

This is an informational message and requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-051 E   **The value for the SELECT parameter is too long. Parameter:** *value.*

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-052 E   **Incorrect character:** *character* **in SELECT parameter value:** *value.*

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-053 E   **The resource utility did not find any resource names that match the specified SELECT criteria.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-054 U   **The resource utility detected the SELECT option but could not find a SELECT file.**

Explanation

This message indicates that the SELECT DD statement is missing from the JCL that you used to run the resource utility. The SELECT DD statement identifies the Xerox resources that you want to copy from the tape.

System action

The resource utility stops processing.

User response

Make sure that the SELECT DD statement is present in your JCL and that it refers to valid inline data or to a valid data set.

5017-055 I   **The resource utility did not find any resource names that match one or more SELECT criteria:** *criteria1 criteria2 criteria3 criteriaN*

Explanation

This is an informational message that reports SELECT criteria for which the resource utility found no matching resource names.

System action

Infoprint XT continues processing.

User response

None.

5017-056 I   **The resource utility processes Xerox resources that match this SELECT criteria:** *criteria1 criteria2 criteriaN*

Explanation

This is an informational message that reports the types of resources that Infoprint XT is processing.

System action

Infoprint XT continues processing.

User response

None.

5017-058 I   **Processing occurs for files with these file types:** *file_type1 file_type2* ⋮ *filet_typeN*

Explanation

This is an informational message that reports the types of resources that Infoprint XT is processing.

System action

Infoprint XT continues processing.

User response

None.

5017-060 I	Processing correlation source file...

Explanation

This is an informational message that indicates that Infoprint XT is rebuilding the correlation tables. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-061 E	Line: *nn* for correlation resource: *resource_name* contains incorrect characters.

Explanation

A resource name in the resource correlation table contains characters that are not valid.

System action

Infoprint XT continues processing the resource, but it does not process line *line_number*.

User response

If you manually updated the correlation table, correct the entry and rerun the failing command. Otherwise, this indicates an internal error in Infoprint XT. Report this message to your technical support representative.

5017-062 E	Correlation source record: *nn* does not start with D, E, F, I, or L.

Explanation

An entry in the resource correlation table starts with an incorrect record type indicator.

System action

Infoprint XT continues processing the resource, but it does not process line *line_number*.

User response

If you manually updated the correlation table, correct the indicator and rerun the failing command. Otherwise, this indicates an internal error in Infoprint XT. Report this message to your technical support representative.

5017-063 E	The correlation source file processor found a duplicate entry for resource: *resource_name* on line: *line_number*. The resource utility uses the last valid entry.

Explanation

The resource correlation table contains more than one entry for a specific Xerox resource.

System action

Processing continues. Infoprint XT uses the last valid correlation entry in the table.

User response

If you manually updated the correlation table, remove the duplicate entry and rerun the failing command. Otherwise, this indicates an internal error in Infoprint XT. Report this message to your technical support representative.

5017-064 E	A required field on line: *line_number* of the correlation source file is blank.

Explanation

A correlation record is incomplete.

System action

Processing continues, but Infoprint XT does not process line *line_number*. This is the line with the incomplete correlation record.

User response

If you manually updated the correlation table, complete the incomplete record and rerun the command. Otherwise, this indicates an internal error in Infoprint XT. Report this message to your technical support representative.

5017-065 E   **The correlation source file processor found an incorrect X or Y offset for page segment: *pseg_name* on line: *line_number*.**

Explanation

The X- or Y-offset specified for a page segment in the resource correlation table is not valid.

System action

Infoprint XT cannot process the resource.

User response

Correct the offset value and rerun the failing command.

5017-066 E   **The resource utility found an incorrect correlation for Xerox DBCS font: *font_name* on line: *line_number*. The correlated AFP object must be a coded font.**

Explanation

You must correlate each Xerox DBCS font to an AFP coded font, which associates an AFP code page with an AFP outline character set. You cannot correlate a DBCS font to an AFP character set and AFP code page pair.

System action

Infoprint XT cannot process the resource.

User response

Specify an AFP coded font for the Xerox DBCS font. Rebuild the font correlation table.

5017-067 I   **The correlation source processor cannot create the font correlation table.**

Explanation

Infoprint XT did not find any valid font entries in the correlation source file. Other messages might provide more information about the problem.

System action

Infoprint XT might continue processing, or it might not process a particular resource.

User response

Make sure that at least one font resource is loaded for the resource group. Infoprint XT cannot process more resources without at least one font already loaded. If you manually updated the resource correlation table and expected Infoprint XT to create the table, verify that the entries for the missing table are correct. Then, rerun the command that resulted in this message. If you does not update the resource correlation table, but you expected Infoprint XT to create the table, report this message to your technical support representative.

5017-068 I   **The correlation source processor cannot create the image correlation table.**

Explanation

Infoprint XT did not find any valid image entries in the correlation source file. Other messages might provide more information about the problem.

System action

Infoprint XT might continue processing, or it might not process a particular resource.

User response

If you manually updated the resource correlation table and expected Infoprint XT to create the table, verify that the entries for the missing table are correct. Then, rerun the command that resulted in this message. If you does not update the resource correlation table, but you expected Infoprint XT to create the table, report this message to your technical support representative.

5017-069 I   **The correlation source processor cannot create the logo correlation table.**

Explanation

Infoprint XT did not find any valid logo entries in the correlation source file. Other messages might provide more information about the problem.

System action

Infoprint XT might continue processing, or it might not process a particular resource.

User response

If you manually updated the resource correlation table and expected Infoprint XT to create the table, verify

that the entries for the missing table are correct. Then, rerun the command that resulted in this message. If you does not update the resource correlation table, but you expected Infoprint XT to create the table, report this message to your technical support representative.

5017-070 I	The correlation source processor created the font correlation table with: *nn* entries.

Explanation

This is an informational message that indicates the type of correlation table that Infoprint XT created and the number of entries in the table. Infoprint XT creates correlation tables for fonts, images, and logos. This message requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-071 I	The correlation source processor created the image correlation table with: *nn* entries.

Explanation

This is an informational message that indicates the type of correlation table that Infoprint XT created and the number of entries in the table. Infoprint XT creates correlation tables for fonts, images, and logos. This message requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-072 I	The correlation source processor created the logo correlation table with: *nn* entries.

Explanation

This is an informational message that indicates the type of correlation table that Infoprint XT created and the number of entries in the table. Infoprint XT creates correlation tables for fonts, images, and logos. This message requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-073 I	The correlation source processor cannot create the ink correlation table.

Explanation

Infoprint XT did not find any valid ink entries in the correlation source file. Other messages might provide more information about the problem.

System action

Infoprint XT might continue processing, or it might not process a particular resource.

User response

If you manually updated the resource correlation table and expected Infoprint XT to create the table, verify that the entries for the missing table are correct. Then, rerun the command that resulted in this message. If you did not update the resource correlation table, but you expected Infoprint XT to create the table, report this message to the technical support representative.

5017-074 I	The correlation source processor created the ink correlation table.

Explanation

This is an informational message that indicates the type of correlation table that Infoprint XT created and the number of entries in the table. Infoprint XT creates correlation tables for fonts, images, logos, and inks. This message requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-080 I	Processing Translation Source File...

Explanation

This is an informational message that indicates Infoprint XT is rebuilding the translation tables. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-081 E   **Hexadecimal value: X***'hex_value'* **on line:** *line_number* **of translation table:** *table_name* **is not valid.**

Explanation

An internal error exists in a translation table source record.

System action

Infoprint XT cannot process the resource.

User response

Report this message to your technical support representative.

5017-082 E   **The translation source file processor found duplicate translation table name:** *table_name* **on line:** *line_number*. **The processor will use the last valid definition.**

Explanation

An internal error exists in a translation table source record.

System action

Infoprint XT continues processing.

User response

If you manually updated the translation source file, correct the record identified in the message. Then, rerun the command that caused this error. Otherwise, report this message to your technical support representative.

5017-083 E   **Not enough records in translation table:** *table_name* **on line:** *line_number*.

Explanation

An internal error exists in a translation table source record.

System action

Infoprint XT cannot process the resource.

User response

If you manually updated the translation source file, correct the record identified in the message. Then, rerun the failing command. Otherwise, report this message to your technical support representative.

5017-084 E   **Translation table:** *table_name* **has incorrect characters on line:** *line_number*.

Explanation

An internal error exists in a translation table source record.

System action

Infoprint XT cannot process the resource.

User response

If you manually updated the translation source file, correct the record identified in the message. Then, rerun the failing command. Otherwise, report this message to your technical support representative.

5017-085 E   **The translation source file processor found an incorrect record on line:** *line_number*.

Explanation

An internal error exists in a translation table source record.

System action

Infoprint XT cannot process the resource.

User response

If you manually updated the translation source file, correct the record identified in the message. Then, rerun the failing command. Otherwise, report this message to your technical support representative.

5017-086 I   **The translation source file processor created:** *table_count*

translation tables in the reformatted Xerox resource path:

Explanation

This is an informational message that indicates the number of translation tables that the Infoprint XT translation source file processor created. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-087 E   The resource utility created no translation tables.

Explanation

The translation source entries in the translation tables contained errors.

System action

Infoprint XT cannot process the resource.

User response

If you manually updated the translation source file, correct the file and rerun the failing command. Otherwise, report this message to your technical support representative.

5017-090 I   Processing Xerox resources...

Explanation

This is an informational message that indicates that Infoprint XT is creating the metrics tables for resources. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-091 I   The resource utility did not find any reformatted Xerox DBCS fonts for metrics extraction.

Explanation

Infoprint XT tried to extract DBCS AFP font metrics, but it did not find a corresponding reformatted Xerox font file.

System action

Infoprint XT cannot process the resource.

User response

Verify that the fonts you are loading include Xerox DBCS fonts.

5017-092 W   The data stream converter cannot use JDL and JDE pair: *JDL_name/ JDE_name* for data stream conversion because of one or more unsupported BLOCK | RECORD command functions: *function1 function2 function3*

Explanation

The JDL and JDE pair successfully loads, but Infoprint XT issues message 5019-350 or 5019-351 and stops processing if data stream conversion uses the JDL and JDE pair. The unsupported functions that Infoprint XT might list are FORMAT≠ BIN and LMULT≠ 1.

System action

Infoprint XT continues to process the resource.

User response

If the JDL and JDE pair is essential to printing operations, report this message to your technical support representative.

5017-093 W   The resource utility processed Xerox resource: *file_name.file_type* by using paper size: *paper_size1* instead of the requested paper size: *paper_size2*.

Explanation

The resource utility was given a paper size to use during Xerox form conversion that is different from the paper size defined internally in the form. Infoprint XT used the internally specified paper size.

System action

Infoprint XT continues processing the resource.

User response

No action is necessary, unless you want to use the paper size that you specified. In that case, you must specify the PAPER command in the FSL for the Xerox FRM resource, and recompile it by using the Xerox FDL command. This sets the internally specified size to the size that you want. Then, reload the FRM by using the Infoprint XT **pdxtloadres** command.

5017-094 W	These errors occurred while converting form: *form_name*:

Explanation

Additional error messages provide specific information about the errors that Infoprint XT found during the conversion of form *form_name*.

System action

Infoprint XT might or might not have processed the resource, depending on the errors.

User response

Review the errors listed and do corrective actions as necessary.

5017-095 E	The form converter cannot find image: *image_name* in the image correlation table.

Explanation

Infoprint XT did not find entries for the named image in the correlation tables located in the reformatted Xerox resource path. The image correlation tables are `tab.ait` and `tab.sit`.

System action

Infoprint XT cannot process the request.

User response

Load the image identified in the message.

5017-096 E	The form converter cannot find logo: *logo_name* in the logo correlation table.

Explanation

Infoprint XT did not find entries for the named logo in the correlation tables located in the reformatted Xerox resource path. The logo correlation tables are `tab.alt` and `tab.slt`.

System action

Infoprint XT cannot process the request.

User response

Load the logo identified in the message.

5017-097 E	The form converter cannot find image: *image_name* in the reformatted Xerox resource path.

Explanation

While processing a Xerox form, Infoprint XT determined that the form referenced a Xerox IMG file (*image_name*) that is not loaded on the system.

System action

Infoprint XT cannot process the resource.

User response

Load the resource identified in the message and the form that generated the error.

5017-098 E	The form converter cannot find logo: *logo_name* in the reformatted Xerox resource path.

Explanation

While processing a Xerox form, Infoprint XT determined that the form referenced a Xerox LGO file (*logo_name*) that is not loaded on the system.

System action

Infoprint XT cannot process the resource.

User response

Load the resource identified in the message and the form that generated the error.

5017-110 I	The number of Xerox resources that were successfully processed was: *nn*. *resource1 resource2 resourceN*

Explanation

This is an informational message and requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-111 I **The resource utility did not process any Xerox resources successfully.**

Explanation

This is an informational message. Other messages report the reasons why Infoprint XT cannot successfully process the resources.

System action

Infoprint XT continues processing.

User response

None.

5017-112 W **The number of Xerox resources that were not successfully processed was: *nn*.**

Explanation

Infoprint XT did not process *nn* resources. Other messages report the errors that Infoprint XT found.

System action

Infoprint XT cannot process the resource or resources listed.

User response

Review the other messages and correct the problems. Then, load the resources again.

5017-113 I **The resource utility processed all requested Xerox resources successfully.**

Explanation

Infoprint XT successfully processed all the Xerox resources. This is an informational message and requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-114 S **The resource utility did not process any of the requested Xerox resources successfully.**

Explanation

Infoprint XT cannot successfully process any of the Xerox resources. Other messages report the errors that Infoprint XT found.

System action

Infoprint XT cannot process the resources.

User response

Review the other messages and correct the problems. Then, load the resources again.

5017-115 I **The resource utility does not skip any Xerox resources.**

Explanation

This is an informational message. Other messages indicate whether Infoprint XT successfully completed the task.

System action

Infoprint XT continues processing.

User response

None.

5017-116 I **The number of Xerox resources that the resource utility skipped was: *nn*.**

Explanation

This is an informational message that lists the internal names of the Xerox resources that the resource utility did not process. Other messages indicate whether Infoprint XT successfully completed the task.

System action

Infoprint XT continues processing.

User response

None.

5017-117 W **One or more Xerox resources do not conform to the typical source file format of sequenced**

80-byte records. *nn* **might not have processed successfully.**
file01.xxx file02.xxx ... filenn.xxx

Explanation

Infoprint XT might not have recognized the Xerox source file format in the files listed. Possible causes are that the internal record length was not 80, the sequence numbers were not found in columns 75 to 80 of every possible 80-byte record, or both conditions exist. Infoprint XT tried to reformat the resource. However, because the listed files might not contain ASCII text, the corresponding resources might not be usable.

System action

Infoprint XT continues processing the resource.

User response

Print a job that uses the resources to determine whether they are usable. If they are not, create them again.

5017-128 I **The font correlation table has:** *nn* **entries.**

Explanation

This is an informational message that summarizes the number of entries in the font resource correlation table. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-129 I **The image correlation table has:** *nn* **entries.**

Explanation

This is an informational message that summarizes the number of entries in the image resource correlation table. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-130 I **The logo correlation table has:** *nn* **entries.**

Explanation

This is an informational message that summarizes the number of entries in the logo resource correlation table. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-131 W **AFP resource:** *AFP_resource* **correlated to Xerox resource:** *Xerox_resource* **does not exist in the AFP resource path.**

Explanation

Infoprint XT cannot find the *AFP_resource* resource for Xerox resource *Xerox_resource* in the AFP resource path. The AFP resource name might be incorrect, or it might not be available on the system.

System action

The process failed.

User response

If you manually updated the correlation table, verify that the entry is correct and that the AFP resource exists. Then, rerun the failing command. Otherwise, report this message to your technical support representative.

5017-132 W **No correlation exists between Xerox resource:** *Xerox_resource* **and an AFP resource.**

Explanation

The resource correlation table does not contain a correlation entry for the Xerox reformatted resource *Xerox_resource*. The reformatted Xerox resource path contains the reformatted resource.

System action

The process failed.

User response

Reload the Xerox resource and rerun the command.

5017-133 W   **Xerox font:** *font_name* **in the font correlation table does not exist in the reformatted Xerox resource path.**

Explanation

The resource correlation table does not contain an entry for the Xerox font *font_name*. The reformatted Xerox resource path contains the reformatted resource.

System action

The process failed.

User response

Reload the Xerox resource and rerun the command.

5017-134 W   **Translation table:** *table_name* **in the font correlation table does not exist in the reformatted Xerox resource path.**

Explanation

The font correlation table contains an entry for the table *table_name*, but the table does not exist.

System action

The process failed.

User response

If you manually updated the correlation table, verify that the translation table identified in the message exists and correct the entry. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-135 W   **Xerox logo:** *logo_name* **in the logo correlation table does not exist in the reformatted Xerox resource path.**

Explanation

The resource correlation table does not contain an entry for the Xerox logo *logo_name*. The reformatted Xerox resource path contains the reformatted resource.

System action

The process failed.

User response

Reload the Xerox resource and rerun the command.

5017-136 W   **Xerox image:** *image_name* **in the image correlation table does not exist in the reformatted Xerox resource path.**

Explanation

The resource correlation table does not contain an entry for the Xerox image *image_name*. The reformatted Xerox resource path contains the reformatted resource.

System action

The process failed.

User response

Reload the Xerox image resource and rerun the command.

5017-150 I   **Processing cluster database source file:** *cls_name*...

Explanation

This is an informational message that lists the name, *cls_name*, of the cluster database source file that Infoprint XT is compiling. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-151 E   **The resource utility found an incorrect cluster name:** *cl_name* **in cluster database source file:** *cls_name*, **on line:** *nn*. **Cluster names must begin with a letter and must consist of 1 to 6 alphanumeric characters.**

Explanation

Cluster names must conform to the convention for Xerox file names that the message describes.

System action

Infoprint XT cannot process the request.

User response

Correct the cluster name and rerun the command.

5017-153 W   **Undefined cluster name:** *cl_name* **in cluster database source file:** *cls_name*, **on line:** *nn* **has no current or preferred AFP MMC trays assigned and is excluded from reformatted cluster database:** *clb_name*.

Explanation

The *cl_name* cluster entry on record *nn* of a cluster database source file *cls_name* is not meaningful because it does not reference any current or preferred input media sources.

System action

If Infoprint XT finds no other errors that are more serious than this for *cls_name*, it writes the reformatted cluster database to the resource library without the undefined cluster entry.

User response

Check for any other errors that Infoprint XT might have found while reformatting the cluster database.

5017-154 W   **Undefined cluster name:** *cl_name* **in cluster database source file:** *cls_name*, **on line:** *nn* **has no current or preferred AFP MMC trays assigned.**

Explanation

The *cl_name* cluster entry on record *nn* of a cluster database source file *cls_name* is not meaningful because it does not reference any current or preferred input media sources.

System action

Because Infoprint XT found other, more serious errors in *cls_name*, it does not write the reformatted cluster database to the resource library.

User response

Correct the cluster database source file and rerun the command.

5017-155 E   **The resource utility did not find any valid cluster entries in Xerox cluster database:**

file_name.lib. **It could not process the resource.**

Explanation

While processing Xerox cluster database *file_name*.lib, Infoprint XT did not find any cluster entries.

System action

Infoprint XT does not reformat the database. If a source file was requested, Infoprint XT does not produce it.

User response

Verify that the Xerox cluster database that Infoprint XT is processing contains cluster entries, and then reload the file.

5017-160 U   **The resource utility cannot find the correlation source file.**

Explanation

Infoprint XT cannot find the correlation source file in the reformatted Xerox resource path.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-161 U   **The resource utility cannot find the translation source file.**

Explanation

Infoprint XT cannot find the translation source file in the reformatted Xerox resource path.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-162 U   **The resource utility cannot find the source file:** *file_name*.

Explanation

Infoprint XT cannot find the translation source file in the reformatted Xerox resource path.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-163 U   **The LRECL of the reformatted Xerox resource library must be 8004.**

Explanation

The record length of the reformatted Xerox resource library is not valid.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-164 W   **A record in file: *file_name* was longer than the maximum record length of: *nn*. The transform ignored data in the bytes beyond the expected length.**

Explanation

A logic error occurred while reading from file *file_name*.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-171 U   **Resource utility processing stopped because of unrecoverable errors.**

Explanation

The resource utility program ended abnormally. The previous messages give the reason for abnormal end of the program.

System action

Infoprint XT cannot process the resource.

User response

Review the other messages that Infoprint XT issued and correct the problems. Then, rerun the command.

5017-172 I   **Processing ended with return code: *nn*.**

Explanation

This informational message indicates the return code from resource processing.

System action

Infoprint XT ends processing.

User response

None.

5017-173 U   **Temporary data set *temp_ds* is undefined. Resource utility cannot continue.**

Explanation

A temporary data set was not defined.

System action

The process fails.

User response

Contact your technical support representative.

5017-180 I   **The number of text and graphic fonts listed in the form: *FRM_name* was: *nn*.**

Explanation

This is an informational message that indicates the font resources that Xerox form *FRM_name* uses. The message text includes:

.fnt name:	AFP name:	Line spacing value:
FNT_name	*AFP_name*	*x* inches or *y* pels

.fnt name:	AFP name:	Line spacing value:
FNT_name	*AFP_name*	*x* inches or *y* pels

⋮

FNT_name identifies a Xerox font name and *AFP_name* identifies the corresponding AFP font name (either a coded font name or a character set and code page pair). *x* and *y* are numeric values.

System action

Infoprint XT processes the resources.

User response

This message requires no user response.

5017-182 I **The number of fonts correlated to page segments in form: *FRM_name* was: *nn*.**

Explanation

This is an informational message that indicates the font resources that Xerox form *FRM_name* uses. The message text includes:

.fnt name:	Page segment name:	Trigger:	Line spacing value:
FNT_name	*PSEG_name*	*X'hh'*	*x* inches or *y* pels
FNT_name	*PSEG_name*	*X'hh'*	*x* inches or *y* pels

⋮

FNT_name identifies a Xerox font name and *PSEG_name* identifies the corresponding AFP page segment name. *x* and *y* are numeric values. X'*hh*' is the hexadecimal value of the trigger character associated with a page segment.

System action

Infoprint XT processes the resources.

User response

This message requires no user response.

5017-184 I **The number of logo references in form: *FRM_name* was: *nn*.**

Explanation

This is an informational message that indicates the logo resources that Xerox form *FRM_name* uses. The message text includes:

.lgo name:	Page segment name:	Position:
LGO_name	*PSEG_name*	*x,y* inches or *x,y* pels
LGO_name	*PSEG_name*	*x,y* inches or *x,y* pels

⋮

LGO_name identifies a Xerox logo name and *PSEG_name* identifies the corresponding AFP page segment name. *x* and *y* are numeric values. The positions shown for logos reference the upper left corner of the associated page segments as viewed with the sheet in the portrait orientation. The list of logo references does not include the names of logos that might occur in the internal logo entries for the form, but that are not actually used in the form.

System action

Infoprint XT processes the resources.

User response

This message requires no user response.

5017-186 I **The number of image references in form: *FRM_name* was: *nn*.**

Explanation

This is an informational message that indicates the image resources that Xerox form *FRM_name* uses. The message text includes:

.img name:	Page segment name:	Scaling factor:	Position:
IMG_name	*PSEG_name*	*n/d*	*(x,y)* inches or *(x,y)* pels
IMG_name	*PSEG_name*	*n/d*	*(x,y)* inches or *(x,y)* pels

⋮

IMG_name identifies a Xerox image name and *PSEG_name* identifies the corresponding AFP page segment name. *n* and *d* are numeric values for the numerator and denominator of the scaling factor requested for the images. *x* and *y* are numeric values. The positions shown for the images reference the upper left corner of the associated page segments as viewed with the sheet in the portrait orientation.

System action

Infoprint XT processes the resources.

User response

This message requires no user response.

5017-188 I   The number of highlight color ink references in form: *FRM_name* **was:** *nn***.**

Explanation

This is an informational message that indicates the highlight color resources that Xerox form *FRM_name* uses. The message text includes:

Ink catalog name:	Palette name:	Color name:
ICT_name	*palette_name*	*color_name*
ICT_name	*palette_name*	*color_name*
⋮		

ICT_name identifies an ink catalog, *palette_name* identifies a palette in the catalog, and *color_name* identifies a color in the palette.

System action

Infoprint XT processes the resources.

User response

This message requires no user response.

5017-200 E   The resource utility cannot identify AFP resources referenced in overlay: *overlay_name* **for form:** *form_name***.**

Explanation

The resource utility tried to collect global FRM information for form *form_name*, but it could not determine the list of AFP resources that the FRM requires.

System action

Infoprint XT continues processing.

User response

Make sure that the AFP overlay is correct. If necessary, reload the Xerox FRM to create both the metrics file and the overlay again so that the metrics information and the overlay match the original Xerox resource.

5017-201 E   The transform cannot identify AFP fonts and page segments from form: *form_name***. Reload the form to verify resource availability.**

Explanation

Infoprint XT found a reformatted list file for a form resource in a format that is not at the current level. The file does not include some of the required information.

System action

Infoprint XT continues processing the job.

User response

Reload the corresponding Xerox form to update the resource list file to the latest format and to create the overlay again.

5017-202 E   Overlay: *overlay_name* **does not match the overlay that was available when the transform converted resource:** *resource_list_name***.**

Explanation

Infoprint XT found that overlay *overlay_name* has changed since the last time it was loaded.

System action

Infoprint XT continues processing the job.

User response

Reload the corresponding Xerox form to make sure that the information in the resource list file *resource_list_name* matches the information in overlay *overlay_name*.

5017-203 E   The form converter did not find *frm_name.AFS* **in the reformatted Xerox resource path. Internal EBCDIC font processing in** *frm_name.FRM* **cannot continue.**

Explanation

Infoprint XT found one or more internal EBCDIC font entries in form *frm_name.FRM*. Internal EBCDIC font processing requires the corresponding *frm_name.AFS*, but Infoprint XT did not find this resource.

System action

Infoprint XT cannot process the request.

User response

Load *frm_name.FSL* and make sure that *frm_name.AFS* is in the reformatted Xerox resources path. This FSL must be the same one that you used to create *frm_name.FRM*. Then reload the form. To avoid internal EBCDIC font processing, you can specify the GENERIC command in the FSL, recompile it and then reload the resulting FRM.

5017-204 E   **The form converter found a font list mismatch between *frm_name.FRM* and *frm_name.FSL*. Internal EBCDIC font processing in *frm_name.FRM* cannot continue.**

Explanation

One or more fonts specified in form *frm_name.FRM* or the corresponding *frm_name.FSL* is not specified in the other.

System action

Infoprint XT cannot process the request.

User response

Make sure that you have loaded *frm_name.FSL* is the same file that you used to create *frm_name.FRM*. Then reload the form. To avoid internal EBCDIC font processing, you can specify the GENERIC command in the FSL, recompile it and then reload the resulting FRM.

5017-205 E   **The form converter found a conflict during internal EBCDIC font processing for *frm_name.FRM*.**

Explanation

Infoprint XT found one or more internal EBCDIC font references in form *frm_name.FRM*, but the corresponding *frm_name.FSL* specifies the GENERIC command. The FRM and FSL do not match.

System action

Infoprint XT cannot process the request.

User response

Make sure that you have loaded *frm_name.FSL* is the same file that you used to create *frm_name.FRM*. Then reload the form. To avoid internal EBCDIC font processing, you can specify the GENERIC command in the FSL, recompile it and then reload the resulting FRM.

5017-206 E   **The form converter could not process *frm_name.AFS* in the reformatted Xerox resource path. Internal EBCDIC font processing in *frm_name.FRM* cannot continue.**

Explanation

Infoprint XT found an unsupported format in *frm_name.AFS*. Internal EBCDIC font processing requires the corresponding *frm_name.AFS* in text format.

System action

Infoprint XT cannot process the request.

User response

Load *frm_name.FSL* and make sure that *frm_name.AFS* is in the reformatted Xerox resources path. This FSL must be the same one that you used to create *frm_name.FRM*. Then reload the form. To avoid internal EBCDIC font processing, you can specify the GENERIC command in the FSL, recompile it and then reload the resulting FRM.

5017-207 E   **The form converter could not find a bitmap for code point *x'hh'* in *fnt_name.FNT*. Internal EBCDIC font processing in *fnt_name.FRM* cannot continue.**

Explanation

Infoprint XT found an internal EBCDIC font bitmap that it could not correlate to a DBCS font bitmap.

System action

Infoprint XT cannot process the request.

User response

Make sure that the code points specified for *fnt_name.FNT* in *frm_name.FRM* exist in the DBCS font. Then, reload the form.

5017-210 E   **Unrecognized parameter: *parameter*.**

Explanation

Infoprint XT did not recognize the input parameter (*parameter*) as a valid parameter.

System action

Infoprint XT ignores the parameter and continues processing.

User response

Correct the parameter and reconvert the job.

5017-211 E   **Incorrect numeric argument:** *argument*.

Explanation

Infoprint XT expected a numeric argument in a parameter, but found a nonnumeric argument instead.

System action

Infoprint XT ignores the parameter and continues processing.

User response

Correct the parameter. Do the operation again.

5017-212 W   **Numeric argument:** *numeric_argument* **is outside the range of permitted values. The transform uses this value:** *nn*.

Explanation

Infoprint XT expects the argument *numeric_argument* for the job to be numeric. It is not numeric, or the numeric value is too large or too small.

System action

Infoprint XT replaces the incorrect value with the system default value.

User response

Correct the numeric argument and reconvert the job.

5017-220 E   **The transform found a relative move in the dot direction with no preceding absolute move on page:** *nn* **at logical record:** *nn*.

Explanation

Before the print position was established, Infoprint XT either found characters to print or relative moves in a metacode print control record of a form.

System action

Infoprint XT ignores the current print control record and continues processing with the next record.

User response

Correct the input form and rerun the command.

5017-222 W   **The transform detected an attempt to reshape graphic characters by using nongraphic Xerox font:** *font_name*, **on page:** *nn*, **at logical record:** *nn*. **Of** *nn* **active fonts, font:** *font_name* **is number:** *nn* **and there are no graphic fonts in the active font list.**

Explanation

Infoprint XT found a character-reshaping metacode print control sequence in a form, but a nongraphic font was in effect. The message indicates that no graphic fonts were active.

System action

Processing continues, but graphics might be missing from the output.

User response

Correct the font list for the form and reload the form.

5017-223 W   **The transform detected an attempt to reshape graphic characters by using nongraphic Xerox font:** *font_name*, **on page:** *nnr*, **at logical record:** *nn*. **Of** *nn* **active fonts, font:** *font_name* **is number:** *nn*. **Active graphic fonts include** *graphic_font1* **(number** *n*), *graphic_font2* **(number** *n*), **and** *graphic_font3* **(number** *n*).

Explanation

Infoprint XT found a character-reshaping metacode print control sequence in a form, but a nongraphic font was in effect. The message indicates that no graphic fonts were active.

System action

Processing continues, but graphics might be missing from the output.

User response

Correct the font list for the form and reload the form.

5017-224 E   **A translation error occurred while processing input character: X'*input_hex*' at logical record: *nn*. Code page: *code_page* does not contain EBCDIC character: X'*EBCDIC_hex*'. The transform substituted a blank. This is the original Xerox font: *font_name*.**

Explanation

While processing metacode print controls in a form, Infoprint XT translated ASCII input character X'*input_hex*' into EBCDIC character X'*EBCDIC_hex*'. However, because this character is not available in code page *code_page*, Infoprint XT uses a blank in its place. This might occur because of incorrect characters, such as binary zeros, in a text line in a form. It might also occur if you have manually correlated a Xerox font to an AFP font and the AFP font does not have characters that correspond to some of the characters in the Xerox font. Or, a character translation table was altered so that a character in the job does not map to the correct character in the AFP font.

System action

Infoprint XT continues processing.

User response

Correct the form or correlation and reload the form.

5017-225 E   **Infoprint XT found an incorrect repeat sequence on record: *nn*. The transform ignored the repeat command.**

Explanation

Infoprint XT found an error during repeat command processing at the location identified in the message.

System action

Infoprint XT ignores the repeat command.

User response

Correct the repeat command. Then, submit the job and convert it again.

5017-226 E   **Infoprint XT found incorrect font enlargement factors:**

* *enlargement_vertical* * *enlargement_horizontal* on record: *nn* and substituted factors: * 1 * 1. Valid factors are 1, 2, 4, 8, or 16.

Explanation

The Xerox LPS does not support DBCS font enlargement factors other than 1, 2, 4, 8, or 16.

System action

Infoprint XT ignores the specified enlargement factor.

User response

Correct the font enlargement factor. Then, submit the job and convert it again.

5017-227 E   **Infoprint XT did not find font information for this AFP DBCS coded font: *font_name*. Characters print as blanks.**

Explanation

Infoprint XT did not process DBCS information for *font_name*.

System action

Infoprint XT continues processing the form, but the output is not correct.

User response

Reload the corresponding Xerox font to make sure that the information is available.

5017-230 E   **Correlation of Xerox DBCS font: *font_name* to non-DBCS AFP font resource: *resource_name* is not valid.**

Explanation

During AFP font processing, Infoprint XT found a correlation between a Xerox DBCS font and an AFP single-byte font. Infoprint XT does not support this type of correlation.

System action

Infoprint XT cannot process the font.

User response

Correct the entry in the font correlation table so that the correlation is between a Xerox DBCS font and

an AFP DBCS outline font. Then, rebuild the font correlation table.

5017-231 E   **Reformatted font information for Xerox font: *font_name* is not complete. Reload the resource to extract and store DBCS information.**

Explanation

During AFP font processing, Infoprint XT determined that the reformatted Xerox font metrics file for *font_name* does not contain DBCS information.

System action

Infoprint XT cannot process the font.

User response

Reload the Xerox DBCS font. Then, reconvert the job.

5017-232 E   **Font processing found a reference to Xerox DBCS font: *font_name*, but option: *option* is in effect. DBCS mode requires xresolution=300.**

Explanation

During AFP font processing, Infoprint XT found a reference to Xerox DBCS font *font_name*, but it also found an `xresolution` data stream conversion parameter value other than 300.

System action

Infoprint XT cannot process the font.

User response

Correct the resolution specification so that it specifies 300-pel resolution.

5017-233 I   **Valid keywords are:**
keyword
:*keyword*

Explanation

This is an informational message and requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-240 S   **The resource utility found an inconsistency in Xerox resource: *filename.filetype*:: Error category *phase_number*: the CME length is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-241 S   **The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the orientation of ASCII X'*hex_value*' is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-242 S   **The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the high code must be at least 16.**

A high code of *high_code* was found.

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-243 S	The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the font file does not contain enough 512-byte blocks.

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-244 S	The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the IMG file format is not correct or is not supported.

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-245 S	The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the image scan orientation is not correct.

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-246 S	The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the number of ink names is not correct.

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the

diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

| 5017-247 S | The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the number of samples per pixel is not correct. |

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

| 5017-248 S | The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the JDE address is not correct. |

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

| 5017-249 S | The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: cannot process TST data. |

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

| 5017-250 S | The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: cannot process PDE data. |

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

| 5017-251 S | The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the FRM address is not correct. |

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-252 S   **The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **the MODIFY address is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-253 S   **The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **the KCODE address is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-254 S   **The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*:

Error category *phase_number*: **cannot process carriage control data.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-255 S   **The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **the JDE length is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-256 S   **The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **the file extension** *file_extension* **is not FNT, LGO, or INK.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-257 S	**The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **one or more font processing errors occurred.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-258 S	**The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **a block count error occurred.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If

the problem continues, report this message to your technical support representative.

5017-259 S	**The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **overlay sampling ended with an error.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-260 S	**The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **an overlay generation error occurred.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-261 S	**The resource utility found an inconsistency in Xerox resource:** *file_name.file_type*: **Error category** *phase_number*: **the PDE length is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-262 S	**The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: no more than 128 fonts are allowed.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-263 S	**The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: no more than 63 BEGIN statements are allowed.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-264 S	**The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the PDE font entry length error.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-265 S	**The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: a minimum length error occurred.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If

the problem continues, report this message to your technical support representative.

5017-266 S   **The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *phase_number*: the TST length is not correct.**

Explanation

The program found a resource (*file_name.file_type*) that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-267 S   **The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *error_cat*: the IDR length is not correct.**

Explanation

Infoprint XT found a resource with *file_name.file_type* that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-268 S   **The resource utility found an inconsistency in Xerox resource: *file_name.file_type*: Error category *error_cat*: the IDR ink list is not correct.**

Explanation

Infoprint XT found a resource with *file_name.file_type* that it cannot process.

System action

Processing continues, but Infoprint XT does not convert the resource.

User response

A phase number and diagnostic information follow this message to help identify the problem. Use the diagnostic information to correct the problem. If the problem continues, report this message to your technical support representative.

5017-270 E   **The resource utility found an incorrect character string: *character_string* (X'*hex_string*') in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. ASIZ must be coded as an A or a blank.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the failing command.

5017-271 E   **The resource utility found an incorrect character string: '*EBCDIC_char*' (X'*EBCDIC_hex*') in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The preferred AFP MMC tray must be a blank; an E; an M; or a number from 1 through 255, right justified.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the failing command.

5017-272 E	**The resource utility found an incorrect character string: *'EBCDIC_char'* (X*'EBCDIC_hex'*) in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The preferred Xerox trays are positional and must be a blank or a number from 1 through 8.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the command.

5017-273 E	**The resource utility found an incorrect character string: *'EBCDIC_char'* (X*'EBCDIC_hex'*) in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The preferred Xerox tray position is not correct.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the failing command.

5017-274 E	**The resource utility found an incorrect character string:**

'EBCDIC_char' (X*'EBCDIC_hex'*) in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The current AFP MMC tray must be a blank; an E; an M; or a number from 1 through 255, right justified.

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the failing command.

5017-275 E	**The resource utility found an incorrect character string: *'EBCDIC_char'* (X*'EBCDIC_hex'*) in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The current Xerox trays are positional and must be a blank or a number from 1 through 8.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the command.

5017-276 E	**The resource utility found an incorrect character string: *character_string* (X*'hex_string'*) in cluster database source file: *cls_name*, cluster name: *cl_name*, on line: *nn*, at column: *nn*. The current Xerox tray position is not correct.**

Explanation

The cluster database source file *cl_name* contains an incorrectly coded character at the location described in the message. The message includes information about the incorrect character.

System action

Infoprint XT cannot process the request.

User response

Correct the character and rerun the failing command.

5017-280 U	A program or operating system error has occurred. The internal diagnostic information is: ON-ERROR: ONCODE *nn*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-281 U	A program or operating system error has occurred. The internal diagnostic information is: The print control value: X'*hex_value*' was not recognized on page: *page* for logical record: *record_nn*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-282 U	A program or operating system error has occurred. The internal diagnostic information is: The absolute print position is not set on page: *page* for logical record: *record_nn*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-283 U	A program or operating system error has occurred. The internal diagnostic information is: The font orientation value: *orientation* was not recognized on page: *page* for logical record: *record_nn* of Xerox font: *font_name*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-284 U	A program or operating system error has occurred. The internal diagnostic information is: The value for the text placement identifier is not correct. Value: *value*. Program area: *program_area*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-285 U   A program or operating system error has occurred. The internal diagnostic information is: The font orientation value: *orientation* is not correct for Xerox font: *font_name*. Program area: *program_area*.

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5017-333 S   Message *nnnn-nnn* does not exist.

Explanation

Infoprint XT found an error while processing a message.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-340 I   Usage: aiocifd [-f *path/font_name*] | -h | -?

Explanation

This is an informational message that indicates the correct parameters for the font analyzer.

System action

Infoprint XT continues processing.

User response

None.

5017-341 S   Missing or incorrect arguments.

Explanation

The font analyzer found a parameter that it did not recognize.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-342 S   The font analyzer cannot find or open font: *font_name*.

Explanation

The font analyzer did not find the *font_name* font. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the font resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-343 S   Font: *font_name* is not a valid Xerox font.

Explanation

The font analyzer found an error in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5017-344 S   Font: *font_name* contains this unknown extension value: X'*extension_value*'.

Explanation

The font analyzer did not recognize the extension value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5017-345 S   **Font: *font_name* contains this unknown orientation value: X'*orientation_value*'.**

Explanation

The font analyzer did not recognize the orientation value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5017-346 S   **Font: *font_name* contains this unknown font type value: X'*font_type_value*'.**

Explanation

The font analyzer did not recognize the font type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5017-347 S   **The font analyzer ended with this internal code: *error_code*.**

Explanation

The font analyzer found an internal error during font processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-348 I   **Font: *font_name* is a Xerox SBCS font.**

Explanation

This is an informational message that indicates that Infoprint XT found a Xerox single-byte character set font.

System action

Infoprint XT continues processing.

User response

None.

5017-349 S   **Font: *font_name* contains this unsupported font type value: X'00'.**

Explanation

Infoprint XT does not support this type of font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5017-350 I   **Font: *font_name* is a Xerox EBCDIC font.**

Explanation

This is an informational message that indicates that Infoprint XT found a Xerox EBCDIC font. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-351 I   **Font: *font_name* is a Xerox DBCS font that uses this type of encoding: *encoding_type*.**

Explanation

This is an informational message that indicates that Infoprint XT found a Xerox double-byte character set font. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-352 S   **Font: *font_name* contains this unknown DBCS font type value: X'*font_type_value*'.**

Explanation

The font analyzer did not recognize the DBCS font type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5017-353 S   **Font: *font_name* contains this unknown encoding type value: X'*encoding_type_value*'.**

Explanation

The font analyzer did not recognize the encoding type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5017-360 I   **Usage: xrhdr | -i | -t | -? [*path/resource_name*]**

Explanation

This is an informational message that indicates the correct parameters for the resource header utility.

System action

Infoprint XT continues processing.

User response

None.

5017-361 S   **Missing or incorrect arguments.**

Explanation

The resource header utility found a parameter that it did not recognize.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-362 I   **The resource header utility modified resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility modified a resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-363 I   **The resource header utility added a header to resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility created a resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-364 S	The resource header utility cannot find resource: *resource_name*.

Explanation

The resource header utility did not find the *resource_name* resource. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-365 S	The resource header utility cannot access resource: *resource_name*.

Explanation

The permissions for resource *resource_name* do not let the resource header utility access the resource.

System action

Infoprint XT cannot process the request.

User response

Verify that the permissions for the resource are correct. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-366 S	A memory allocation error occurred in the resource header utility while it processed resource: *resource_name*.

Explanation

Header processing for *resource_name* resource failed because of insufficient memory.

System action

Infoprint XT cannot process the request.

User response

Verify that sufficient memory is available on the system. Then, rerun the command.

5017-367 S	The resource header utility cannot open resource: *resource_name*.

Explanation

The resource header utility did not open the *resource_name* resource. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5017-368 S	Resource: *resource_name* does not contain a multiple of 128 bytes.

Explanation

Valid Xerox resources must contain a multiple of 128 bytes.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5017-369 S	Resource: *resource_name* does not have a valid Xerox resource name or extension.

Explanation

Valid Xerox resource names contain a 1-to-6 character resource name before the period, and a 3-character extension after the period. The valid Xerox resource name characters are uppercase alphabetic characters, numeric characters, and the dollar sign ($).

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5017-370 S   **Resource: *resource_name* contains an unknown extension.**

Explanation

The resource header utility does not recognize the extension of the *resource_name* resource

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5017-371 S   **Resource: *resource_name* contains an unknown block size value.**

Explanation

The resource header utility does not recognize the block size value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5017-372 S   **Resource: *resource_name* contains an unknown extension value.**

Explanation

The resource header utility did not recognize the extension value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5017-373 S   **Resource: *resource_name* contains an unknown blocking factor value.**

Explanation

The resource header utility does not recognize the blocking factor value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5017-374 S   **The resource header utility cannot write to resource: *resource_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-375 S   **The resource header utility ended with this internal code: *nn* while processing resource: *resource_name*.**

Explanation

The resource header utility found an error during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5017-376 S   **The resource header utility padded resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility padded a resource to ensure that it contains one or more complete 512-byte blocks. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-377 S The resource header utility did not process *resource_name*, which only contains text.

Explanation

The resource name has an extension for a binary resource, but the file only contains text.

System action

Infoprint XT cannot process the request.

User response

Examine the file to determine its contents. The file might contain Xerox source data. For example, if the file contains JSL data, you can rename it to *file_name*.jsl and process it with the **pdxtpdl** command.

5017-378 S The resource header utility cannot read *resource_name*.

Explanation

Infoprint XT cannot read the file identified in the message.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, issue the command again.

5017-379 I The resource header utility removed padding from the header in resource: *resource_name*.

Explanation

This is an informational message that indicates that the resource header utility removed extraneous padding from an existing resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5017-400 E The resource converter could not access the ink correlation table.

Explanation

Infoprint XT requires the ink correlation table to process a resource, but the table is not accessible in memory.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink correlation table is in the reformatted Xerox resource path and rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-401 E The resource converter could not resolve Xerox highlight color catalog name *color_name* in the ink correlation table while searching for *resource_name*.

Explanation

Infoprint XT could not recognize the named Xerox highlight color catalog.

System action

Infoprint XT cannot process the request.

User response

Make sure that the catalog name is DFAULT, XEROX, or XEROX1. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-402 E The resource converter could not resolve Xerox highlight color palette name *color_name* in the ink correlation table while searching for *resource_name*.

Explanation

Infoprint XT could not recognize the named Xerox highlight color palette.

System action

Infoprint XT cannot process the request.

User response

Make sure that the palette name is valid. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-403 E	**The resource converter could not find Xerox highlight color ink name *color_name* in the ink correlation table while searching for *resource_name*.**

Explanation

Infoprint XT did not find an entry for the named Xerox highlight color ink in the ink correlation table located in the reformatted Xerox resource path.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink name is valid and that the ink correlation table contains the entry. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-404 E	**The resource converter could not find a solid color name for Xerox highlight color ink name *color_name* in the ink correlation table while searching for *resource_name*.**

Explanation

Infoprint XT did not find an entry for the solid color associated with the named Xerox highlight color ink in the ink correlation table located in the reformatted Xerox resource path. For example, the solid color name associated with XEROX1.CARDINAL.H35K43 in the ink correlation table is SOLID.SIMPLE.CARDINAL. The solid color name associated with DFAULT.PICTORIAL.GRAYISH RED in the ink correlation table is SOLID.SIMPLE.RED.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink name is valid and that the ink correlation table contains the entries for the named ink and for the associated solid color. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-405 E	**The resource converter found an inconsistency in the ink correlation table.**

Explanation

Infoprint XT requires the ink correlation table to process the resource, but the ink correlation table file appears to be corrupted.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink correlation table is properly created by the **pdxtcolor** command. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5017-410 S	**An error occurred while allocating the *partitioned_data_set_name* data set (return code: *return_code*) (error code: *error_code*) (information code: *information_code*).**

Explanation

Infoprint XT could not allocate the required data set. Supervisor Call (SVC) 99 returned the error and information codes.

System action

Infoprint XT cannot process the request.

User response

For more information about error and information codes, see the *Interpreting DYNALLOC Return Codes* section in the *Requesting Dynamic Allocation Functions* chapter of *z/OS MVS Programming: Authorized Assembler Services Guide*.

Appendix D. Resource converter messages: 5018-*nnn*

This appendix lists the messages that Infoprint XT can issue when you load Xerox fonts, images, and logos. Some messages might include an additional error return code. See "Error return code numbers" on page 247 for explanations of these numbers.

5018-801   **Cannot open file *filename* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not open the file identified in the message. The message provides additional information about why the open action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file or the directory that contains the file and correct the problem. Then, enter the original command that resulted in this error message again.

5018-802   **Cannot create file *filename* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not create the file identified in the message. The parent directory might not exist, or might not have the permissions required to create the specified file. The message provides additional information about why the create action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and directory, and correct the problem. Then, enter the command again.

5018-803   **Cannot read from file (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not read the file identified in the message. The message provides additional information about why the read action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, enter the command again.

5018-804   **Cannot write to file (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not write to the file identified in the message. The message provides additional information about why the write action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file and use the additional information that the message provides to correct the problem. Then, enter the command again.

5018-805   **Cannot allocate storage (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT could not allocate the required storage. The message provides additional information about why the storage allocation action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, enter the command again.

5018-806   **Cannot access *file_or_directory* (error *ReturnCode*). ...*msg***

Explanation

The file or directory identified in the message is not accessible. It might not exist or it might not have the permissions that are required to provide access. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file or directory and correct the problem. Then, enter the command again.

5018-817	File *resourcename* is not a valid Xerox resource (error *ReturnCode*).

Explanation

Infoprint XT determined that the file is not a valid Xerox resource.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. Correct the problem and enter the command again.

5018-818	The image converter did not recognize the internal format of resource *resourcename*.

Explanation

The image converter found an unexpected combination of internal data while it tried to determine the format of the resource.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-819	X scale sequenceRational '*XsequenceRational*' does not equal Y scale sequenceRational '*YsequenceRational*' in resource *ResourceName*.

Explanation

The Interpress sequenceRationals for X scale and Y scale are not equal. The image converter cannot determine the resolution of the image.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-820	Scan line length '*lengthvalue*' does not match image width '*widthvalue*' or image height '*heightvalue*' .

Explanation

The scan line length does not match either the width or the height of the image. The scan line length must match either the width or the height for Infoprint XT to determine image orientation.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-821	Unsupported Xerox font type *type* found in *filename*.

Explanation

The resource converter found a font whose format is not single-byte-character-set (SBCS) with ASCII code points. Therefore, the converter cannot create an AFP font from the resource.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox font resource. If it is valid, contact your technical support representative.

5018-822 **Unsupported Xerox logo type *type* found in *filename*.**

Explanation

The resource converter found a logo whose format is not single-byte-character-set (SBCS) with ASCII code points. Therefore, the converter cannot create an AFP page segment from the resource.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox logo resource. If it is valid, contact your technical support representative.

5018-823 **An internal logic error occurred: *FunctionName*.**

Explanation

An incorrect structure pointer was passed to the Infoprint XT application programming interface (API).

System action

Infoprint XT cannot process the request.

User response

Contact your technical support representative.

5018-824 **Specified code point x'*codepoint*' exceeded the font high code point x'*maxcodepoint*'.**

Explanation

The specified code point exceeded the highest code point in the Xerox font that specifies a raster pattern.

System action

Infoprint XT cannot process the request.

User response

Specify a code point that is in the code point range available in the Xerox font. Enter the command again.

5018-825 **Unable to parse a valid Xerox resource name from the input file name of *filename* (error *ReturnCode*).**

Explanation

Infoprint XT cannot determine a valid Xerox resource name from the input file name. Valid Xerox input file names contain a 1-to-6 character resource name before the period. The valid Xerox resource name characters are uppercase alphabetic characters, numeric characters, and the dollar sign ($).

System action

Infoprint XT cannot process the request.

User response

Change the resource name to a valid Xerox resource name and enter the command again.

5018-826 **The image converter did not recognize scan orientation transformation input value *inputvalue* in resource *resourcename*.**

Explanation

The transformation input value specified for the scan orientation is not valid.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-827 **The code page *codepage* does not contain valid AFPDS.**

Explanation

The specified code page is not a valid Advanced Function Presentation code page.

System action

Infoprint XT cannot process the request.

User response

Specify a valid AFP code page and enter the command again.

5018-829 **Xerox font *fontname* contains no valid code points.**

Explanation

Because the Xerox font does not contain any code points that the transform can process, Infoprint XT cannot generate an AFP font.

System action

Infoprint XT cannot process the request.

User response

Do not request any more loads of this resource. Contact your technical support representative.

5018-830   **Error return code from compression algorithm: *ReturnCode*.**

Explanation

The compression algorithms reported an error while compressing the data.

System action

Infoprint XT continues processing.

User response

See the error listing for error messages that identify the problem.

5018-831   **The image converter found unknown Line Control Code x'*linecontrolcode*' (error *ReturnCode*).**

Explanation

While decompressing the Xerox image, Infoprint XT found an incorrect Line Control Code (LCC).

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-832   **Current position in compressed image: *%d*.**

Explanation

Infoprint XT found an error while processing the compressed image data. The message provides the offset for the compressed image data.

System action

Infoprint XT cannot process the request.

User response

See the error listing for error messages that identify the problem.

5018-833   **Current position in uncompressed image: *location*.**

Explanation

Infoprint XT found an error while processing the uncompressed image data. The message provides the offset in the uncompressed image data.

System action

Infoprint XT cannot process the request.

User response

See the error listing for error messages that identify the problem.

5018-834   **End of image not encountered.**

Explanation

Infoprint XT did not find X'71' at the end of the image.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5018-835   **The image converter found an unsupported scan orientation of *scanorientation* in resource *resourcename*.**

Explanation

The scan orientation used to create the image is not portrait. Infoprint XT only supports the portrait scan orientation in Restricted Raster Encoding image resources.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-836   **Resource *resourcename* specifies *samplecount* samples per pixel.**

Explanation

Infoprint XT supports a maximum of two samples per pixel in Restricted Raster Encoding image resources.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-837   **Resource *resourcename* specifies a maximum sample value of *samplevalue*.**

Explanation

Infoprint XT supports a maximum sample value of one in Restricted Raster Encoding image resources.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-838   **Resource *resourcename* specifies an incomplete highlight color ink name.**

Explanation

Infoprint XT expects fully qualified ink names (ink catalog name, palette name, and color name) in Restricted Raster Encoding image resources.

System action

Infoprint XT cannot convert the image.

User response

Verify that the resource is a valid Xerox image resource. If it is valid, contact your technical support representative.

5018-840   **The resource converter could not access the ink correlation table while processing *resourcename*.**

Explanation

Infoprint XT requires the ink correlation table to process the resource, but the table is not accessible in memory.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink correlation table is in the reformatted Xerox resource path and rerun the failing command. If the problem continues, report this message to your technical support representative.

5018-841   **The resource converter could not resolve Xerox highlight color catalog name *catalog_name* in the ink correlation table while processing *resourcename*.**

Explanation

Infoprint XT could not recognize the named Xerox highlight color catalog.

System action

Infoprint XT cannot process the request.

User response

Make sure that the catalog name is DFAULT, XEROX or XEROX1. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5018-842   **The resource converter could not resolve Xerox highlight color palette name *ink_name* in the ink correlation table while processing *resourcename*.**

Explanation

Infoprint XT could not recognize the named Xerox highlight color palette.

System action

Infoprint XT cannot process the request.

User response

Make sure that the palette name is valid. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5018-843 **The resource converter could not find Xerox highlight color ink name *ink_name* in the ink correlation table while processing *resourcename*.**

Explanation

Infoprint XT did not find an entry for the named Xerox highlight color ink in the ink correlation table located in the reformatted Xerox resource path.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink name is valid and that the ink correlation table contains the entry. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5018-844 **The resource converter could not find a solid color name for Xerox highlight color ink name *ink_name* in the ink correlation table while processing *resourcename*.**

Explanation

Infoprint XT did not find an entry for the solid color associated with the named Xerox highlight color ink in the ink correlation table located in the reformatted Xerox resource path. For example, the solid color name associated with `XEROX1.CARDINAL.H35K43` in the ink correlation table is `SOLID.SIMPLE.CARDINAL`. The solid color name associated with `DFAULT.PICTORIAL.GRAYISH RED` in the ink correlation table is `SOLID.SIMPLE.RED`.

System action

Infoprint XT cannot process the request.

User response

Make sure that the ink name is valid and that the ink correlation table contains the entries for the named ink and for the associated solid color. Rerun the failing command. If the problem continues, report this message to your technical support representative.

5018-860 **Cannot copy data to buffer (error *ReturnCode*).**

Explanation

The amount of data that Infoprint XT is copying to a MO:DCA structured field exceeds the internal buffer size. The generated AFP resource is incomplete.

System action

Infoprint XT cannot process the request.

User response

Contact your technical support representative.

5018-861 **Incorrect width: *widthvalue* (error *ReturnCode*).**

Explanation

The Xerox resource specified an incorrect width value.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5018-862 **Incorrect height: *heightvalue* (error *ReturnCode*).**

Explanation

The Xerox resource specified an incorrect height value.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5018-863 **The resource converter shifted an image down by *n* pels. This**

requires an upward shift by the same value.

Explanation

While converting a font code point or a logo to a page segment, Infoprint XT shifted the image down from the media origin by the reported number of pels. The correlation table entry for this code point requires an equivalent upward shift.

System action

Infoprint XT continues processing.

User response

Edit the correlation table entry for this page segment, and enter a negative **y** shift value that is equal to the downward shift reported in this message.

5018-866	**Error occurred while compressing data (error *ReturnCode*).**

Explanation

The Infoprint XT compression algorithms reported an error while compressing the data.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource, and that the resource is not truncated. If it is valid and complete, contact your technical support representative.

5018-867	**Error occurred while accessing memory beyond allocated buffer (error *ReturnCode*).**

Explanation

The Xerox resource references image data that is not in the resource file.

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource, and that the resource is not truncated. If it is valid and complete, contact your technical support representative.

5018-868	**The resource converter shifted an image to the right by *n* pels. This requires a shift to the left by the same value.**

Explanation

While converting a font code point or logo to a page segment, Infoprint XT shifted the image right from the media origin by the reported number of pels. The correlation table entry for this code point requires an equivalent left shift.

System action

Infoprint XT continues processing.

User response

Edit the correlation table entry for this page segment, and enter a negative **x** shift value that is equal to the right shift reported in this message.

5018-900	**Message *nnnn-nnn* does not exist.**

Explanation

Infoprint XT found an error while processing a message.

System action

Infoprint XT processes the request.

User response

Report this message to your technical support representative.

Appendix E. Data stream converter messages: 5019-*nnn X* (*xxx*)

This appendix lists the messages that the Infoprint XT Xerox data stream converter program can issue. The data stream converter program converts Xerox Line Conditioned Data Stream (LCDS) and Metacode jobs to Advanced Function Presentation.

Resource path names used in messages

Some of the messages and message explanations include information about where the program looked for reformatted Xerox resources and AFP resources. The reformatted Xerox resource path is the location of the metrics files that Infoprint XT generates when it loads a Xerox resource. Depending on whether the resources were loaded as common resources, or resources in a specific resource group, or resources in a specific directory, the reformatted Xerox resource path is one of these:

- `/var/pdxt/resources/common/metrics`
- `/var/pdxt/resources/`*resource_group*`/metrics`
- *OtherDirectory*`/metrics`

The AFP resource path is the directory that contains the AFP resources that Infoprint XT generates when it loads Xerox printable resources. The AFP resource path is one of these:

- `/var/pdxt/resources/common`
- `/var/pdxt/resources/`*resource_group*
- *OtherDirectory*

Data stream converter message format and severity

Many of the messages contain variable data, such as *file_name*, which is shown in italics. Infoprint XT replaces the variable-data strings with specific information when it issues the messages. A vertical bar (|) between portions of message text, such as `BLOCK | RECORD`, means that Infoprint XT uses only one of the text strings when it issues the message. The error condition determines the text string that Infoprint XT uses.

The message identifiers use this format: 5019-*nnn X* (*xxx*), where *nnn* is the 3-digit message number. (*xxx*) is the 3-character identifier that identifies the program module that issued the message. If you need to place a service call, the IBM service representative might ask you for the program module identifier. *X* is a letter that indicates the severity of the message:

I

Informational message. Processing continues. This corresponds to return code 0. Infoprint XT generates AFP output for the job.

W

Warning message. Processing continues. This corresponds to return code 4. The data stream converter found a possible problem in the Xerox input data stream; however, Infoprint XT still generates AFP output for the job.

E

Error message. Processing continues. This corresponds to return code 8. The data stream converter found an error that caused Infoprint XT to complete a default action. The error might or might not prevent Infoprint XT from generating AFP output for the job.

S

Severe error message. Infoprint XT processing stops. This corresponds to return code 12. An error prevented Infoprint XT from generating AFP output for the job.

U

Unrecoverable error message. Infoprint XT processing stops. This corresponds to return code 16. An error prevented Infoprint XT from loading the resource or from generating AFP output for the job.

Notes:

1. When converting Xerox jobs, you can use the `xafprc` conversion parameter to control when Infoprint XT generates AFP output, based on the return code.

2. You can use the `xwarnrc` conversion parameter to control the return code associated with warning messages.

Data stream converter message explanations

5019-001 S   **Unknown logic error.**

Explanation

An unexpected error condition occurred in the parameter parser.

System action

Infoprint XT could not process the resource.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-002 S   **Unrecognized keyword:** *keyword*. **Valid keywords are:** *keyword::keyword*

Explanation

The parameter parser found a keyword that it did not recognize.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-003 S   **Specified option for keyword:** *keyword* **is too long. The maximum length is:** *nn*.

Explanation

The parameter parser found a value for a keyword that is too long.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-004 S   **Unrecognized option for the keyword:** *keyword*. **Valid options for this keyword are:** *option:option*

Explanation

The parameter parser found a keyword value that is not valid.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-005 S   **Value for keyword:** *keyword* **is out of range. The valid range is:** *lower_limit:upper_limit*.

Explanation

The parameter parser found a keyword value that is not in the range of valid values.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-006 S   **Extra data:** *data_string* **was found after the file name. Data ignored.**

Explanation

The parameter parser found extraneous data among the keywords.

System action

Infoprint XT cannot process the request.

User response

Make sure that the parameters are valid. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-009 I   **The transform wrote** *nnnn* **bytes to temporary file x2afp.tmpl.*. To avoid I/O to a temporary file, the transform requires a minimum primary xptxsize value of** *primary_size*.

Explanation

While converting the data stream, Infoprint XT required more internal storage than was available and wrote *nnnn* bytes to the temporary disk storage file `x2afp.tmpl.*`, possibly increasing execution time.

System action

Infoprint XT continues processing the job.

User response

To improve performance, specify an initial `xptxsize` value of at least *primary_size*. Then, rerun the job.

5019-010 I   **The transform wrote** *nnnn* **bytes to temporary data set SYSUT1. To avoid I/O to SYSUT1, the transform requires a minimum primary xptxsize value of** *primary_size*, **with a suggested minimum initial HEAP value of** *initial_heap*.

Explanation

While converting the data stream, Infoprint XT required more internal data storage than was available and wrote *nnnn* bytes to the SYSUT1 temporary disk storage file. This might have caused increased execution time.

System action

Infoprint XT continues processing the job.

User response

To improve performance, specify an initial `xptxsize` value of at least *primary_size* and an initial HEAP value of *initial_heap*.

5019-012 I   *utility_program* **reading parameters from the JCL EXEC PARM after finding an empty parameters file. Defaults will take effect if** *utility_program* **finds no parameters.**

Explanation

This is an informational message, and it indicates that *utility_program* uses parameters passed through the PARM parameter of the JCL EXEC statement for the job.

System action

utility_program uses parameter defaults if no parameters are specified in the EXEC PARM.

User response

Make sure that the intended parameters are specified for the job, or that the defaults should be used.

5019-013 S   **Module:** *code_module* **cannot read parameters because of an error. The data set information is not complete.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the input data stream.

User response

Report this message to your technical support representative.

5019-014 S   **Module:** *code_module* **cannot read parameters because of DCB parameter errors. Infoprint XT uses LRECL=80 and RECFM=FB.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the input data stream.

User response

Report this message to your technical support representative.

5019-015 S   **Module: *code_module* cannot read parameters because of an error. The password is missing or not correct.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the input data stream.

User response

Report this message to your technical support representative.

5019-016 S   **Module: *code_module* cannot read parameters because of an error. The ONCODE is: *nn*.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the input data stream.

User response

For ONCODE 92, verify that the Infoprint XT working directory and its subdirectories have the correct ownership and permissions. Then, do the operation again. If the problem continues, or if the message displays an ONCODE other than 92, report this message to your technical support representative.

5019-019 I   **The transform allocated 1 primary and *n* secondary internal data areas. To optimize performance, the transform requires a minimum primary xptxsize value of *primary_size*.**

Explanation

Infoprint XT requires more storage than is available in the primary area and has allocated *n* additional areas, possibly increasing execution time.

System action

Infoprint XT continues processing the job.

User response

Specify a primary **xptxsize** value of *primary_size* or greater and rerun the job.

5019-020 I   **The transform allocated 1 primary and *nnnn* secondary internal data areas. To optimize performance, the transform requires a minimum primary xptxsize value of *primary_size* with a suggested initial HEAP value of at least *initial_heap*.**

Explanation

Infoprint XT required more internal storage than was available in the primary area, and allocated *nnnn* additional areas. This might have caused increased execution time.

System action

Infoprint XT continues processing the job.

User response

Specify a primary **xptxsize** of *primary_size* or greater and an initial HEAP value of *initial_heap* or greater and rerun the job.

5019-021 I   **The primary intermediate format data area will use all of the available storage. The transform will not allocate secondary areas.**

Explanation

Infoprint XT calculated that there is not be enough virtual storage to allocate any secondary internal data areas. Either the requested primary **xptxsize** value is too large, or less than 12 KB is available after allocating the primary area.

System action

Infoprint XT continues processing the job.

User response

Specify a larger REGION size, or REGION=0M, to allow the job to access a larger amount of virtual storage. Then rerun the job.

5019-022 W	**The transform substituted a minimum xptxsize value of *size* for the requested primary amount, which was too small.**

Explanation

An **xptxsize** request was too small (less than 12 KB).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5019-023 W	**The transform substituted a minimum xptxsize value of *size* for the requested secondary amount, which was too small.**

Explanation

An **xptxsize** request was too small (less than 12 KB).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5019-024 W	**The transform substituted a maximum xptxsize value of *size* for the requested primary amount, which was too large.**

Explanation

An **xptxsize** request was too large (greater than the available storage).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5019-025 W	**The transform substituted a maximum xptxsize value of *size***

	for the requested secondary amount, which was too large.

Explanation

An **xptxsize** request was too large (greater than the available storage).

System action

Infoprint XT continues processing the job.

User response

Change the **xptxsize** request and rerun the job.

5019-030 I	**Reading data stream conversion parameters.**

Explanation

This is an informational message that identifies the source of the conversion parameters. It requires no user response.

5019-031 I	**The data stream conversion parameters in effect are: *option1 option2 option3 option4***

Explanation

This is an informational message that reports the runtime options. It requires no user response.

5019-032 E	**Unrecognized parameter: *parameter*.**

Explanation

Infoprint XT did not recognize the input parameter (*parameter*) as a valid parameter.

System action

Infoprint XT ignores the parameter and continues processing.

User response

Correct the parameter and reconvert the job.

5019-033 E	**Incorrect JDE or JDL argument: *argument*.**

Explanation

The JDE or JDL name specified in the conversion parameters is either too long or contains non-alphanumeric characters.

System action

Infoprint XT uses the system default and continues processing.

User response

Correct the JDE or JDL specification and reconvert the job.

5019-034 E   **Incorrect numeric argument:** *argument*.

Explanation

Infoprint XT expected a numeric argument in a parameter, but found a nonnumeric argument instead.

System action

Infoprint XT ignores the parameter and continues processing.

User response

Correct the parameter. Do the operation again.

5019-035 W   **Numeric argument:** *numeric_argument* **is outside the range of permitted values. The transform uses this value:** *nn*.

Explanation

Infoprint XT expects the parameter (*numeric_argument*) for the job to be numeric. It is not numeric, or the numeric value is too large or too small.

System action

Infoprint XT replaces the incorrect value with the system default value.

User response

Correct the parameter and reconvert the job.

5019-036 S   **Incorrect parameter:** *parameter*.

Explanation

Infoprint XT did not recognize the input parameter (*parameter*) as a valid parameter. Processing cannot continue without producing potentially incorrect output or resource conversions in FILE DJDE jobs.

System action

Infoprint XT cannot process the request.

User response

Make sure that you specify the correct parameter. Then, reconvert the job.

5019-040 I   *nn* **pages have completed conversion. Infoprint XT converted** *nn* **pages in** *hh:mm:ss.nnn*.

Explanation

When converting a data stream, Infoprint XT periodically issues this message to show the progress of the conversion process. The message shows the approximate elapsed clock time for each group of pages converted. The format for elapsed time is *hh:mm:ss.nnn*, where *hh* is hours, *mm* is minutes, *ss* is seconds, and *nnn* is milliseconds. The `xpginterval` variable lets you control how often Infoprint XT issues the message.

Infoprint XT also issues this message to show the approximate number of the last page converted.

System action

Infoprint XT continues processing the job.

User response:
This is an informational message and requires no user response.

5019-041 S   **The data stream converter needs Xerox resource:** *resource_name* **for this conversion.**

Explanation

Infoprint XT did not find a required Xerox resource during job conversion.

System action

Infoprint XT cannot complete the conversion.

User response

Make sure that you load the resource on the system and then rerun the job. You might also receive this as an informational message when you scan jobs for required resources.

5019-042 W   **A record in file:** *file_name* **was longer than the maximum record length of:** *nn*. **The transform ignored data in the bytes beyond the expected length.**

Explanation

A logic error occurred while reading from file *file_name*.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Make sure that the **xcc** conversion parameter specifies the correct type of carriage control, and that the data stream conversion parameters are correct. Then, do the operation that caused this error again.

5019 043 S   **Cannot open input file because of an error.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-044 S   **Cannot open file *file_name* (error *ReturnCode*). ...msg.**

Explanation

Infoprint XT cannot open the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and the directory that contains the file and correct the problem. Then, issue the command again.

5019-045 S   **Cannot open input file because of an error.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-046 S   **Cannot read file *file_name* (error *ReturnCode*). ...msg.**

Explanation

Infoprint XT cannot read the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and the directory that contains the file and correct the problem. Then, issue the command again.

5019-047 S   **Cannot parse internal date/time information (error *ReturnCode*). ...msg.**

Explanation

An internal error occurred during date/time processing. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-048 S   **Cannot write to output file because of an error.**

Explanation

An internal Infoprint XT error occurred.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-049 S   **Cannot write to file *file_name* (error *ReturnCode*). ...*msg*.**

Explanation

Infoprint XT cannot write to the file identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file and the directory that contains the file and correct the problem. Then, issue the command again.

5019-051 U   **Data stream converter processing stopped because of unrecoverable errors.**

Explanation

The conversion process ended abnormally. Previous messages give the reason for abnormal end of the process.

System action

Infoprint XT stops processing.

User response

None.

5019-054 I   **Processing ended with return code: *nn*.**

Explanation

This informational message indicates the return code from data stream processing. It requires no user response.

System action

Infoprint XT ends processing.

User response

None.

5019-060 I   **The data stream converter processes the input file using this type of carriage control characters: *cc_type*.**

Explanation

Infoprint XT examined the job data to determine whether ANSI or IBM3211 control characters were in use. The type of controls found was different from the type expected. *cc_type* is either:

- ISO/ANSI/FIPS
- IBM3211

IBM3211 is the same as machine code.

System action

Infoprint XT continues converting the job.

User response

Check the printed output. If the output is not correct, specify the correct type of carriage control for the job. Use the **xcc** conversion parameter. Then, convert the job again.

5019-071 I   **Reading reformatted Xerox resource dump parameters.**

Explanation

This is an informational message that indicates that Infoprint XT has begun to read the reformatted Xerox resource dump parameters. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-080 S   **UNDEFINEDFILE condition raised on file: *file_name*, ONCODE: *nn*. Check the path or file: *name*.**

Explanation

Infoprint XT did not find the input file for the job, or it detected incorrect or conflicting attributes for the file.

System action

The process fails.

User response

If you are submitting a job from disk, check both the path to the file and the spelling of the file name to make sure that the path and file exist. If you are manually converting the job with the **pdxtx2afp** command, also make sure that the **xrecfm** parameter value correctly matches the fixed or variable record format of the input data, and that the **xlrecl** parameter value is in the valid range for the record format. If the problem continues after you have verified the path name, file name, file attributes, and parameter values, report this message to your technical support representative.

5019-081 S	RECORD condition raised on file: *file_name*, ONCODE: *nn*. Check the file attributes for file: *file_name*.

Explanation

The named file (*file_name*) has an incorrect record format (**xrecfm=**) or record length (**xlrecl=**) specified by the conversion parameters for the job.

System action

Infoprint XT produces no output, or produces incomplete output.

User response

Make sure that the **xcc** conversion parameter specifies the correct type of carriage control, and verify that the data stream conversion parameters are correct. Then, convert the job again. If the problem continues, report this message to your technical support representative.

5019-090 W	The data stream converter found a print position indexing byte in an FCB that specifies a right index to this position: *nn*. The converter ignores the PPI byte.

Explanation

Infoprint XT found an FCB that included the print position indexing (PPI) byte. The PPI byte of an FCB causes a shift in the printed output to the right of the position specified in the message. Infoprint XT ignores the PPI and does not shift the printed output.

System action

Infoprint XT continues processing the job, but the printed output might not be correct.

User response

Infoprint XT does not support the PPI shift function. If the job requires a shift in the printed output, use a supported method to cause the shift action. Otherwise, contact your technical support representative.

5019-091 W	The data stream converter found a print position indexing byte in an FCB that specifies a left index to this position: *nn*. The converter ignores the PPI byte.

Explanation

Infoprint XT found an FCB that included the print position indexing (PPI) byte. The PPI byte of an FCB causes a shift in the printed output to the left of the position specified in the message. Infoprint XT ignores the PPI and does not shift the printed output.

System action

Infoprint XT continues processing the job, but the printed output might not be correct.

User response

Infoprint XT does not support the PPI shift function. If the job requires a shift in the printed output, use a supported method to cause the shift action. Otherwise, contact your technical support representative.

5019-100 W	Resource conversion for inline resource: *resource_name* ended with return code: *nn*. The resource is not used.

Explanation

Infoprint XT cannot dynamically load the resource that the message identifies. A FILE DJDE in the job specified the resource.

System action

Infoprint XT continues processing the job.

User response

To get more information about why the resource did not load, set the PDXT_AIOLXDFE_TRACE environment variable to 1. Depending on your operating system platform, restart the system or log out and log back in to pick up the change. Then, rerun the job and review the messages in the x2afp.lst file. Depending on the cause of the problem, you might need to create

the Xerox resource and the job data stream again to correct the problem.

5019-110 W   **Temporary file SYSUT2 is undefined. Absence of SYSUT2 will degrade performance.**

Explanation

The SYSUT2 temporary data set was not defined. The data stream converter might have used SYSUT2 if it had been defined.

System action

Infoprint XT continues processing, but performance is degraded.

User response

Contact your technical support representative.

5019-111 U   **Temporary data set *temp_ds* is undefined. Data stream converter cannot continue.**

Explanation

A temporary data set was not defined.

System action

Infoprint XT ends processing.

User response

Contact your technical support representative.

5019-112 U   **End of file reached unexpectedly for temporary data set *temp_ds*.**

Explanation

Fewer records than expected were found in a temporary data set.

System action

Infoprint XT ends processing.

User response

Contact your technical support representative.

5019-120 E   **The transform cannot find the overlay: *overlay_name* in the AFP resource path and did not process form: *resource_list_name*.**

Explanation

Infoprint XT cannot find overlay *overlay_name*. Without the overlay, it also cannot track the resources that the overlay invoked and that the reformatted form resource list file *resource_list_name* listed.

System action

Infoprint XT continues processing the job.

User response

Make sure that you have loaded or reloaded the overlay correctly.

5019-132 W   **The data stream converter does not support ONEPASS with *param_name*. Conversion will use TWOPASS.**

Explanation

Infoprint XT only supports TWOPASS data stream processing.

System action

Infoprint XT continues processing the job.

User response

To eliminate this message, correct the parameter and reconvert the job.

5019-133 W   **The data stream converter does not support XCSMMNAME=YES with XMEDIATYPES | XBINERROR=STOP | XBINERROR=CONTINUE. Conversion will use XMEDIATYPES=NONE | XBINERROR=IGNORE | XBINERROR=IGNORE.**

Explanation

You specified the `xcsmmname = yes` parameter and another parameter which is incompatible with content-sensitive medium map names processing.

System action

Infoprint XT replaces the incompatible parameter.

User response

Correct the parameter and reconvert the job.

5019-140 E   **The data stream converter cannot create a unique content-sensitive medium map name because of one or more Xerox commands: *command_names* The converter used a medium map name of: *sequential_name* instead of: *content_sensitive_name*.**

Explanation

The data stream converter found one or more Xerox commands *command_names* in the job that generated a request for a medium map subcommand. The data stream converter cannot represent the medium map subcommand in a content-sensitive medium map name. Content-sensitive medium map names can only represent:

- Duplex or simplex
- Offset stack change or no offset stack change
- The format of the E1 keyword of the MMC structured field
- The input bin number

The converter used the sequentially numbered name *sequential_name* instead of the content-sensitive name *content_sensitive_name*.

System action

Infoprint XT continues processing the job.

User response

If the job finishes with no other errors, you might be able to print the output if you also specified the **xafprc** conversion parameter with a value of 8 or greater. If you cannot print the output, run the job again and specify **xcsmmname=no**.

5019-150 E   **The data stream converter cannot find or validate reformatted Xerox FRM resource: *form_name* and cannot use fonts from the form.**

Explanation

The data stream converter could not read the metrics file for form *form_name* in the reformatted Xerox resource path. The file might not exist, or there might be a problem with the file. Infoprint XT cannot use any fonts that the form specifies and the printed output might not be correct.

System action

Infoprint XT continues processing the job.

User response

Reload the form and reconvert the job.

5019-151 E   **The transform cannot identify AFP fonts and page segments from form: *form_name*. Reload the form to verify resource availability.**

Explanation

Infoprint XT found a reformatted form resource list file *resource_list_name* in a format that is not at the current level. The file does not include some of the required information.

System action

Infoprint XT continues processing the job.

User response

Reload the corresponding Xerox form to update the resource list file to the latest format and to create the overlay again.

5019-152 E   **Overlay: *overlay_name* does not match the overlay that was available when the transform converted resource: *resource_list_name*.**

Explanation

Infoprint XT found that overlay *overlay_name* has changed since the last time it was loaded.

System action

Infoprint XT continues processing the job.

User response

Reload the corresponding Xerox form to make sure that the information in the resource list file *resource_list_name* matches the information in overlay *overlay_name*.

5019-153 E   **The data stream converter detected one or more missing overlays or overlay resources. Data stream conversion to AFP might be successful, but the AFP file does not print correctly. Load the missing resources to make sure the output is correct.**

Explanation

The job uses one or more overlays that are missing from the AFP resource library, or one or more reformatted Xerox forms that are missing from the reformatted Xerox resource path.

System action

Infoprint XT continues processing the job.

User response

Make sure that you have loaded all the Xerox forms for this job, and any fonts, images, or logos that the forms use.

5019-154 S	The data stream converter cannot find reformatted cluster database: *clb_name* in the reformatted Xerox resource path.

Explanation

The conversion parameters for the job specified the CLUSTERLIB parameter (**xclb=**), or used the default cluster name, which is `clustr.lib`. However, the cluster database specified in the message does not exist in the reformatted Xerox resource path.

System action

Infoprint XT continues processing the job.

User response

Correct the name of the cluster database or add the **xclb=none** conversion parameter. Then, reconvert the job.

5019-160 E	The transform found a relative move in the dot direction with no preceding absolute move on page: *nn* at logical record: *nn*.

Explanation

Before the print position was established, Infoprint XT found characters to print or relative moves in a metacode print control record.

System action

Infoprint XT ignores the current print control record and continues processing with the next record.

User response

Correct the input data stream and rerun the command.

5019-162 W	The transform detected an attempt to reshape graphic characters by using nongraphic Xerox font: *font_name*, on page: *nn*, at logical record *nn*. Of *nn* active fonts, font: *font_name* is number: *nn* and there are no graphic fonts in the active font list.

Explanation

Infoprint XT found a character-reshaping metacode print control sequence, but a nongraphic font was in effect. The message indicates that no graphic fonts were active.

System action

Processing continues, but graphics might be missing from the output.

User response

Compare the font list in effect to the font list expected at metacode generation. Correct the inconsistency between the font lists and rerun the job.

5019-163 W	The transform detected an attempt to reshape graphic characters by using nongraphic Xerox font: *font_name*, on page: *nn*, at logical record: *nn*. Of *nn* active fonts, font: *font_name* is number: *nn*. Active graphic fonts include *graphic_font1* (number *nn*), *graphic_font2* (number *nn*), and *graphic_font3* (number *nn*).

Explanation

Infoprint XT found a character-shaping metacode print control sequence that specified a nongraphic font. The message lists up to three active graphic fonts and shows the position of each graphic font in the active font list.

System action

Processing continues, but graphics might be missing from the output.

User response

Compare the font list in effect with the font list expected at metacode generation. Correct the inconsistency between the font lists and rerun the job.

5019-164 E	A translation error occurred while processing input character:

**X'*input_hex*' at logical record:
nn. Code page: *code_page* does
not contain EBCDIC character:
X'*EBCDIC_hex*'. The transform
substituted a blank. This is the
original Xerox font: *font_name*.**

Explanation

While processing metacode print controls, Infoprint
XT translated ASCII input character X'*input_hex*' to
EBCDIC character X'*EBCDIC_hex*'. However, because
this character is not available in code page *code_page*,
Infoprint XT uses a blank in its place. This might occur
because of incorrect characters, such as binary zeros,
in the print data stream. It might also occur if you have
manually correlated a Xerox font to an AFP font and
the AFP font does not have characters that correspond
to some of the characters in the Xerox font.

System action

Infoprint XT continues processing the job, but the
output is not correct.

User response

Correct the input data or correlation and rerun the job.

5019-165 E	Infoprint XT found an incorrect repeat sequence on record: *nn*. The transform ignored the repeat command.

Explanation

Infoprint XT found an error during repeat command
processing at the location identified in the message.

System action

Infoprint XT ignores the repeat command.

User response

Correct the repeat command. Then, submit the job and
convert it again.

5019-170 E	The data stream converter did not find font information for this AFP DBCS coded font: *coded_font_name*. Characters print as blanks.

Explanation

Infoprint XT did not process DBCS information for
coded_font_name.

System action

Infoprint XT continues processing the job, but the
output is not correct.

User response

Reload the corresponding Xerox font to make sure that
the information is available.

5019-180 S	While processing graphic image: *image_name*, the data stream converter could not fild the image correlation table in the reformatted Xerox resource path, or the table contains no entries.

Explanation

Infoprint XT requires a Xerox image (IMG) to process
the job, but no image correlation records exist in the
correlation table. Typically, this is because no IMG
resources were loaded, or they were loaded as non-
shared resources for a different resource group.

System action

The process fails.

User response

Load the required resource as a shared resource or
load it in the correct resource group for the job, and
rerun the job. If the problem continues after you
load the image, report this message to your technical
support representative.

5019-181 W	The data stream converter ignored a DJDE identifier on record: *nn:DJDE_record*.

Explanation

Infoprint XT ignored the DJDE record *DJDE_record*,
which it considers to be extraneous.

System action

Infoprint XT continues processing the job.

User response

Check the input data stream for any occurrence
of consecutive DJDE packets (one or more DJDEs
ending with an END;) with no intervening data records.
Correct the problem and rerun the job. You can also
specify the **xconsecutivedjde** parameter to control
whether Infoprint XT ignores or processes the DJDE

identifier, or the `xwarnrc` parameter to control the ending return code associated with warning messages.

5019-182 W	The data stream converter ignored a DJDE identifier on record: *nn:DJDE_record* (downloadable PDE - fonts will not be used).

Explanation

Infoprint XT ignored the DJDE record *DJDE_record*, which it considers to be extraneous. The DJDE record is a downloadable PDE (FORMAT=*) and *DJDE_record* contains a message that indicates that Infoprint XT did not use the fonts listed in the downloadable PDE.

System action

Infoprint XT continues processing the job.

User response

Check the input data stream for any occurrence of consecutive DJDE packets (one or more DJDEs ending with an END;) with no intervening data records. Correct the problem and rerun the job. You can also specify the `xconsecutivedjde` parameter to control whether Infoprint XT ignores or processes the DJDE identifier, or the `xwarnrc` parameter to control the ending return code associated with warning messages.

5019-191 W	The data stream converter found a conflicting **COLLATE** change request.

Explanation

The data stream specified COLLATE=NO, but also specified DUPLEX=YES, which implies COLLATE=YES.

System action

Infoprint XT processes the data stream by using COLLATE=YES.

User response

Correctly place the COLLATE DJDE in the input file and reconvert the job.

5019-192 W	The data stream converter ignored an incorrect **COLLATE** change request.

Explanation

The COLLATE DJDE that Infoprint XT found is not valid after the first data record of the report.

System action

Infoprint XT continues processing the job.

User response

Correctly place the COLLATE DJDE in the input file and reconvert the job.

5019-193 E	*DJDE_name* - The DJDE value: *value* is not valid for the specified conversion units.

Explanation

Infoprint XT cannot process the value *value* correctly. For units such as IN (inches) or CM (centimeters), Infoprint XT expects no more than three decimal places. For DOTS, Infoprint XT expects an integer value.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Round any decimal values to three decimal places, or supply integer values for DOTS.

5019-194 E	*DJDE_name* - The DJDE value: *value* is not valid for a numeric entry field.

Explanation

Infoprint XT cannot process the value *value* correctly. Infoprint XT does not process the DJDE (*DJDE_name*). DJDE naming conventions require a numeric entry with specific rounding values.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the value and reconvert the job.

5019-195 E	*DJDE_name* - The DJDE option: *option_name* is not valid.

Explanation

The *option_name* option of the *DJDE_name* DJDE is not valid.

System action

Infoprint XT ignores the DJDE keyword and continues processing.

User response

Correct the DJDE and reconvert the job.

5019-196 E	The data stream converter found an incorrect copy-sensitive change request.

Explanation

A copy-sensitive MODIFY, FORMS, or BFORM change request was made during the processing of the current report. You can only specify copy-sensitive MODIFY, FORMS, and BFORM commands at the beginning of a report. The program ignores the request. After text has printed on a copy-sensitive report, you can only change a MODIFY, FORMS, or BFORM command to NONE.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the request that was made after the beginning of the report and reconvert the job.

5019-197 E	The data stream converter cannot find graphic image: *resource_name* in the image correlation table and it did not process this DJDE command: *command*.

Explanation

The named resource, *resource_name*, was not found. The resource name might be misspelled. The resource might not be loaded on the Infoprint XT server or it might have been loaded as a resource that belongs to a specific resource group.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Check the spelling of the resource name. Make sure that the resource has been loaded either as a shared resource or as a resource that belongs to a specific resource group. Then, reconvert the job.

5019-198 E	The data stream converter found an incorrect DJDE command: *command*.

Explanation

The listed command (*command*) is not a known DJDE command, or its specification or format is not correct. The program might not process the input.

System action

Infoprint XT might not continue to process the job.

User response

Correct the command and reconvert the job. For SHIFT or XSHIFT DJDEs that are not valid, the previous front or back side SHIFT or XSHIFT value might remain in effect. The DJDE report provides details.

5019-199 W	Graphic image: *image_name* is not active. The data stream converter did not process the command: *command*.

Explanation

The data stream converter did not find graphic image *image_name* before it found the ALTER or CANCEL command for the image.

System action

Infoprint XT might not continue to process the job.

User response

Correct the original Xerox job so that it uses the syntax rules for graphic images. Then, reconvert the job.

5019-200 W	The data stream converter ignored page-oriented keywords in the DJDE packet on record: *nn* because of a prior page-oriented DJDE on this page.

Explanation

The data stream converter found more than one DJDE packet that contained page-oriented DJDEs on a page. You can only apply one packet of page-oriented DJDEs to each page. The converter ignores all packets after the first packet.

System action

Infoprint XT might not continue to process the job.

User response

Correct the original Xerox job so that it uses the syntax rules for page-oriented DJDEs. Then, reconvert the job.

5019-201 W   **The data stream converter found a GRAPHIC= DJDE with no options. There was no preceding IMAGE= DJDE that used the T option. The converter discarded the GRAPHIC data for image:** *image_name***.**

Explanation

The GRAPHIC DJDE can document-interleave because it has no parameters other than the image name. However, two inconsistencies exist. First, document-interleaved GRAPHIC DJDEs must occur at the beginning of the job, but Infoprint XT found this GRAPHIC DJDE after text data. This is where page-interleaved graphics occur. Second, a preceding IMAGE DJDE must reference a page-interleaved GRAPHIC DJDE. Infoprint XT found no prior matching IMAGE DJDE.

System action

Infoprint XT continues processing the job, but the output is not correct.

User response

Correct the application that created the data stream so that all document-interleaved GRAPHICs occur at the beginning of the job, and all page-interleaved GRAPHICS are referenced by a preceding IMAGE DJDE.

5019-202 E   **The number of inline graphics exceeded the maximum of 1,000,000. Inline graphics overlay existing images.**

Explanation

Infoprint XT tracks page segments that correspond to inline graphics by using the naming convention SG*nnnnnn*. *nnnnnn* is a number from 0 through 999999. If more inline graphics are found than can be tracked by using this convention (after SG999999 has been used), Infoprint XT begins using previous names, starting with SG000000. Infoprint XT replaces the page segments associated with the reused names.

System action

Infoprint XT continues processing the job, but the output is not correct.

User response

Reduce the number of inline graphics, or split the job into smaller jobs.

5019-210 E   **FILE - The data stream converter does not support inline files in the 80-byte card-image format (file input format parameter C) and might print their contents as unusable data. The converter only supports the LPS format (file input format parameter L).**

Explanation

The data stream converter found one or more FILE DJDEs that specify the card-image format instead of the required LPS format.

System action

The data stream converter ignores the card-image inline Xerox file or files that follow the FILE DJDE.

User response

Regenerate the FILE DJDE job so that all inline resources are in the LPS format and that all FILE DJDEs specify a file input format parameter of L. Then, rerun the job.

5019-211 E   **The data stream converter found incorrect font enlargement factors: *** *enlargement_vertical* ***** *enlargement_horizontal* **on record:** *nn* **and substituted factors: * 1 * 1. Valid factors are 1, 2, 4, 8, or 16.**

Explanation

The Xerox LPS does not support DBCS font enlargement factors other than 1, 2, 4, 8, or 16.

System action

Infoprint XT ignores the specified enlargement factor.

User response

Correct the font enlargement factor. Then, submit the job and convert it again.

5019-212 E   **The data stream converter cannot find image:** *image_name* **in the reformatted Xerox resource path.**

Explanation

While processing a Xerox data stream, Infoprint XT determined that the data stream referenced a Xerox IMG, *image_name*, which is not loaded on the system.

System action

Infoprint XT continues to process the job, but the AFP output that it produces is not correct.

User response

Load the resource identified in the message and resubmit the job.

5019-220 I   **FEED - The data stream converter interprets FEED=*tray_name* as FEED=MAIN.**

Explanation

While **xclb=none** was in effect, the data stream converter found a FEED DJDE that specified *tray_name*, which is a name other than MAIN, AUX or OPR. The converter interprets the FEED DJDE as FEED=MAIN, and generates AFP that invokes input media source 1.

System action

Infoprint XT continues to process the job.

User response

This is an informational message that requires no user response.

5019-221 E   **The data stream converter cannot find FEED cluster name: *cl_name* in reformatted cluster database: *clb_name*. This occurred while processing the DJDE packet that ends on record: *nn*.**

Explanation

A cluster name in a FEED DJDE has no corresponding entry in cluster database *clb_name*. Infoprint XT ignores the FEED DJDE.

System action

The process fails.

User response

Verify that the job specifies the correct FEED DJDE and the correct cluster database. Then, reconvert the job.

5019-222 E   **The data stream converter cannot find FEED cluster name: *cl_name* in reformatted cluster database: *clb_name*. This occurred while processing JDL and JDE pair: *JDL_name/JDE_name*.**

Explanation

A FEED command in a JDE and JDL pair refers to a cluster, *cl_name*, which has no corresponding entry in cluster database *clb_name*.

System action

Infoprint XT ignores the FEED command.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE. Also, make sure that the **xclb** conversion parameter specifies the correct cluster database. Then, reconvert the job.

5019-223 E   **The data stream converter cannot find FEED stock reference: *STK_reference* in STOCKSET: *STK_name*. This occurred while processing the DJDE packet that ends on record: *nn*.**

Explanation

Stock reference *STK_reference* in a FEED DJDE has no corresponding entry in the STOCKSET identified in the message.

System action

Infoprint XT ignores the FEED DJDE.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-224 E   **The data stream converter cannot find FEED stock reference: *STK_reference* in a STOCKSET internal to a JDL and JDE pair. This occurred while processing the DJDE packet that ends on record: *nn*.**

Explanation

Stock reference *STK_reference* in a FEED DJDE has no corresponding entry in the STOCKSET identified in the message.

System action

Infoprint XT ignores the FEED DJDE.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-225 E	**The data stream converter cannot find FEED stock reference: *STK_reference* in STOCKSET: *STK_name* called by a JDL and JDE pair. This occurred while processing a DJDE packet that ends on record: *nn*.**

Explanation

Stock reference *STK_reference* in a FEED DJDE has no corresponding entry in the STOCKSET identified in the message.

System action

Infoprint XT ignores the FEED DJDE.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-226 E	**The data stream converter cannot find FEED stock reference: *STK_reference* in an internal STOCKSET. This occurred while it processed JDL and JDE pair: *JDL_name/JDE_name*.**

Explanation

A FEED command in a JDL and JDE pair specifies a stock reference, *STK_reference*, which has no corresponding entry in an internal STOCKSET.

System action

Infoprint XT ignores the FEED command.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-227 E	**The data stream converter cannot find FEED stock reference: *STK_reference* in external STOCKSET: *STK_name*. This occurred while it processed JDL and JDE pair: *JDL_name/ JDE_name*.**

Explanation

A FEED command in a JDL and JDE pair specifies a stock reference, *STK_reference*, which has no corresponding entry in an external STOCKSET.

System action

Infoprint XT ignores the FEED command.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-228 E	**FEED command in DJDE packet that ends on record: *nn* specified stock reference: *STK_reference*, but no STOCKSET is in use. The data stream converter cannot resolve the stock reference.**

Explanation

A FEED DJDE specifies a stock reference, *STK_reference*, but no STOCKSET is in effect. Infoprint XT ignores the FEED DJDE command.

System action

Infoprint XT ignores the FEED DJDE and pulls paper from the main bin.

User response

Verify that the job specifies the correct FEED DJDE and the correct STOCKSET. Then, reconvert the job.

5019-229 E	**FEED command in JDL and JDE pair: *JDL_name/JDE_name* specified stock reference: *STK_reference*, but no STOCKSET is in use. The data stream**

converter cannot resolve the stock reference.

Explanation

A FEED command in a JDL and JDE pair specifies a stock reference, *STK_reference,* but no STOCKSET is in effect.

System action

Infoprint XT ignores the FEED command.

User response

Verify that the **xjdl** and **xjde** conversion parameters for the job specify the correct JDL and JDE, and that the STOCKSET is correct. Then, reconvert the job.

5019-240 E	A translation error occurred while processing input character: X'*input_hex*' (ASCII X'*ASCII_hex*') at logical record: *nn*. Code page: *code_page* does not contain EBCDIC character: X'*EBCDIC_hex*'. The data stream converter substituted a blank. This is the original Xerox font: *font_name*.

Explanation

While processing line data input, Infoprint XT found that EBCDIC character X'*EBCDIC_hex*' was not available in code page *code_page*. Infoprint XT uses a blank in its place. This might occur because of incorrect characters, such as binary zeros, in the print data stream. It might also occur if you have manually correlated a Xerox font to an AFP font and the AFP font does not have characters corresponding to some of the characters in the Xerox font. Or, a character translation table was altered so that a character in the Xerox input does not map to the correct character in the AFP font.

System action

Infoprint XT continues the process, but the output might not be correct.

User response

Correct the input data correlation table or translation record, and reconvert the job.

5019-241 S	The input data stream file is empty. The data stream converter cannot produce printable AFP output.

Explanation

Infoprint XT did not find any input data in the Xerox job file.

System action

Although Infoprint XT might produce a small AFP output file to prevent errors, it contains no printable data.

User response

Make sure the job contains data and transfer it to the Infoprint XT system again.

5019-242 E	The data stream converter found a shift-in function code before a shift-out function code on record *nn*.

Explanation

While processing the input data stream, Infoprint XT found a shift-in function code but did not find a preceding shift-out function code. There are errors in the input data stream.

System action

Infoprint XT cannot process the input data stream.

User response

Correct the input data stream and convert the job again.

5019-243 E	The data stream converter did not find a shift-in function code that corresponded to a preceding shift-out function code on record *nn*.

Explanation

While processing the input data stream, Infoprint XT did not find a shift-in function code that corresponded to a preceding shift-out function code. There are errors in the input data stream.

System action

Infoprint XT cannot process the input data stream.

User response

Correct the input data stream and convert the job again.

5019-244 E The data stream converter found a duplicate shift-out function code on record *nn*.

Explanation

While processing the input data stream, Infoprint XT found more than one shift-out function code in succession. There are errors in the input data stream.

System action

Infoprint XT cannot process the input data stream.

User response

Correct the input data stream and convert the job again.

5019-245 E The data stream converter did not find a DBCS font labeled 'K1' in the active font list while processing record *nn*.

Explanation

While processing the input data stream, Infoprint XT found a shift-out function code but did not find a DBCS font labeled 'K1' in the active font list.

System action

Infoprint XT cannot process the input data stream.

User response

Make sure that the DJDEs in the input data stream or the JDEs used to process the data stream contain a DBCS font with a 'K1' label. Then, reconvert the job.

5019-246 E The data stream converter did not find a DBCS font labeled *'kanji_label'* in the active font list while processing record *nn*.

Explanation

While processing the input data stream, Infoprint XT found a function code that specified font label *kanji_label*, but did not find a DBCS font with that label in the active font list.

System action

Infoprint XT cannot process the input data stream.

User response

Make sure that the DJDEs in the input data stream or the JDEs used to process the data stream contain a DBCS font with the specified Kanji label. Then, reconvert the job.

5019-250 E The data stream converter cannot find the tiff2afp transform in the current search path.

Explanation

The job contains an inline graphic image that is in the TIFF format, but the data stream converter cannot locate the **tiff2afp** transform.

System action

Infoprint XT cannot process the inline graphic image.

User response

Either add the path to the **tiff2afp** transform to the current path, or regenerate the Xerox job so that the inline graphics that it contains are in the Xerox Interpress IMG format.

5019-251 E The tiff2afp transform returned error code: *nn* while processing inline graphic number: *graphic_nn*.

Explanation

Conversion of an inline TIFF graphic failed. *nn* is the return code from the **tiff2afp** transform program. *graphic_nn* uses the naming convention SG*nnnnnn*. *nnnnnn* is a number from 0 through 999999. Numbering begins with SG000000 for the first inline graphic found in the data stream, SG000001 for the next, and so on.

System action

Infoprint XT cannot process the inline graphic image.

User response

Verify that the inline graphic is correct. If it is, report this message to your technical support representative.

5019-260 E An internal error: *error* occurred while the converter processed inline graphic number: *nn*.

Explanation

The data stream converter found an error during inline graphic processing. The error occurred while opening

a TIFF image for input, opening a file for **tiff2afp** transform output, or while verifying the header record for the graphic.

System action

Infoprint XT cannot process the inline graphic image.

User response

Verify that the inline graphic is correct. If it is, report this message to your technical support representative.

5019-261 E	**The image converter returned error code: *error_code* from processing inline graphic number: *graphic_number* that ended near record: *record_number*.**

Explanation

Conversion of an inline image graphic failed. *error_code* is the return code from the image transform program. *graphic_number* uses the naming convention SG*nnnnnn*. *nnnnnn* is a number from 0 through 999999. Numbering begins with SG000000 for the first inline graphic found in the data stream, SG000001 for the next, and so on. *record_number* is the approximate record number of the end of the inline graphic image in the input file.

System action

Infoprint XT continues to process the job, but the output is not correct.

User response

Verify that the inline graphic is correct. If it is, report this message to your technical support representative.

5019-262 U	**A memory allocation error occurred in the image and logo converter while it processed inline graphic number: *nn*.**

Explanation

Conversion on an inline image graphic failed because of insufficient memory. The image graphic uses the naming convention SG*nnnnnn*. *nnnnnn* is a number from 0 through 999999. Numbering begins with SG000000 for the first inline graphic found in the data stream, SG000001 for the next, and so on.

System action

Infoprint XT continues to process the job, but the output is not correct.

User response

Verify that the inline graphic is correct. If it is, report this message to your technical support representative.

5019-263 I	**Infoprint XT found *total_images* inline graphic images. Of these, *unique_images* were unique and *duplicate_images* were duplicates.**

Explanation

While converting a data stream with the **xckdupnlimg=yes** parameter, Infoprint XT found one or more duplicate inline graphic images. This informational message indicates the total number of inline graphic images in the input data stream, the number of unique inline graphic images, and the number of duplicate inline graphic images. Infoprint XT converted each of the unique inline graphic images only once, rather than converting the duplicate inline graphic images again.

System action

Infoprint XT continues to process the job.

User response

This informational message requires no user response.

5019-270 W	**The data stream converter found an incorrect or unsupported Xerox file type in the downloadable file: *file_name.file_type* (internal name X'*hex_name*') on record: *nn*. The file prints as data.**

Explanation

The Infoprint XT data stream converter expected to find a valid Xerox resource file name and extension, but found a string that it did not recognize instead.

System action

Infoprint XT ignores the record and continues processing.

User response

This message might indicate that a job that downloads resources through FILE DJDEs is corrupted. Verify that all resources that were copied from the job to the Xerox resource directory were processed successfully. If the input file is corrupt, correct the error or errors, regenerate the file, and rerun the job.

5019-271 E   **The data stream converter did not find the expected end of an inline graphic on record: *nn*. Inline graphic number: *nn* might be corrupted. The graphic and the data that follows it might not print correctly.**

Explanation

While processing an inline graphic in an offline job, Infoprint XT did not find the end of the graphic where it was expected. The graphic might have been created incorrectly, it might have data missing, or it might be otherwise corrupted. While searching for the end of the graphic, Infoprint XT might have read through some of the data that immediately follows the graphic, causing incorrect output.

System action

Infoprint XT continues to process the job, but the output is not correct.

User response

Correct the problem with the format of the graphic and reconvert the job.

5019-280 E   **FONTS - Font: *font_name* does not meet naming requirements.**

Explanation

The name of the Xerox font, *font_name*, is not in the correct format. Xerox font names must not exceed 6 characters and can include only uppercase alphabetic characters, numeric characters, and the dollar sign ($).

System action

Infoprint XT cannot process the font.

User response

Correct the name of the font identified in the message and do the action again.

5019-281 E   **FORMAT - Font: *font_name* does not meet naming requirements.**

Explanation

The name of the Xerox font, *font_name*, is not in the correct format. Xerox font names must not exceed 6 characters and can include only uppercase alphabetic characters, numeric characters, and the dollar sign ($).

System action

Infoprint XT cannot process the font.

User response

Correct the name of the font identified in the message and do the action again.

5019-282 W   **The data stream converter found no 'END;' DJDE command before the end of the report.**

Explanation

Infoprint XT found the end of a report before it found a DJDE record that contained the END; command. Infoprint XT does not process DJDEs that it finds after the end of the report.

System action

Infoprint XT continues to process the job.

User response

Add an END; command at the correct location in the input data stream and reconvert the job.

5019-290 E   **The data stream converter cannot print an accounting page because of a font processing error.**

Explanation

The data stream converter uses Xerox font `p0612c.fnt` to print accounting pages. It did not find the font.

System action

No accounting page prints.

User response

Load the `p0612c.fnt` font from your Xerox printer so that Infoprint XT can access it.

5019-300 W   **The data stream converter collected: *nn* sheets for stapling. This total might be outside the range of supported values for the target printer.**

Explanation

Although Xerox LPS printers support an NTO1 value of 1 through 32767 for stapling, data stream conversion

might not produce the results that you want if the target printer does not support the value.

System action

The data stream converter processes the data stream as it is, regardless of whether the target printer is capable of stapling the output as specified.

User response

Verify that the job output is correct. If the target printer cannot staple as many sheets as requested, consider overriding the JDL NTO1 value by specifying the **xstaplemax** conversion parameter. Specify a value for the parameter that is consistent with the hardware stapling capabilities of the printer. For more information about limitations, see the printer documentation.

5019-301 W	The data stream converter collected: *nn* sheets for stapling, but the NTO1 maximum is: *NTO1_value*. The converter disabled stapling for the current report.

Explanation

The number of report sheets collected for stapling either exceeds the limit that the NTO1 command in the current JDL and JDE pair specifies, or the limit that the **xstaplemax** conversion parameter specifies.

System action

The data stream converter processes the data stream, but the AFP generated for the report does not include stapling commands.

User response

Verify that the job output is correct. Then, specify the **xstaplemax** conversion parameter with a value that is large enough to include all the sheets in the report and reconvert the job.

5019-302 W	XHONORSTAPLE is in effect, but the reformatted JDL: *JDL_name* and JDE: *JDE_name* pair does not include stapling information. The converter disabled stapling for the current report.

Explanation

Although you requested that Infoprint XT process Xerox stapling commands, you did not reload the JDL and JDE pair in effect after stapling support became available in Infoprint XT. Because Infoprint XT cannot determine whether the original JDL and JDE pair specified STAPLE=YES, NTO1=YES or NTO1=n, or FACEUP=YES, it uses STAPLE=NO. Infoprint XT does not include stapling commands in the AFP that it generates for this report.

System action

Infoprint XT continues to process the job, but the printer does not staple the pages in the current report.

User response

Reload the JDL that the job uses for Infoprint XT to process stapling commands. Then, reconvert the job.

5019-310 E	A text placement item specified font number: *nn*, but the maximum number of fonts per page is 128.

Explanation

One page specified more than 128 fonts.

System action

Infoprint XT cannot process the request.

User response

Check the font list in effect at the time to make sure that no more than 128 fonts requests are present. Then, reconvert the job.

5019-311 S	A text placement item specified font number: *nn*, but the number in the active font list is: *nn*.

Explanation

Infoprint XT tried to process AFP text placement items by using the wrong font list.

System action

Infoprint XT cannot process the request.

User response

Contact your technical support representative.

5019-320 E	The font processor cannot find font: *font_name* in the font correlation table.

Explanation

Infoprint XT did not find entries for the named font in the correlation tables located in the reformatted Xerox resource path. The font correlation tables are `tab.aft` and `tab.sft`.

System action

Infoprint XT cannot process the request.

User response

Use the **pdxtloadres** command to load the font identified in the message.

5019-321 S	No fonts are available to print the text.

Explanation

The data stream converter did not find one or more fonts in the font correlation table, so no default text font was available for printing text.

System action

Infoprint XT cannot process the request.

User response

Make sure that the DJDEs in the Xerox data stream or the JDEs used to process the data stream contain valid font lists. Make sure that you load all fonts specified by the font lists. Then, reconvert the job, or load a default text font and reconvert the job.

5019-322 E	The font processor cannot find reformatted font: *font_name* in the reformatted Xerox resource path.

Explanation

Infoprint XT did not find the metrics file for the named font in the reformatted Xerox resource path. It was looking for *font_name*.afn.

System action

Infoprint XT cannot process the request.

User response

Use the **pdxtloadres** command to load the font identified in the message.

5019-323 E	The font processor cannot find font resource: *resource_name* in the AFP resource path.

Explanation

While loading a form, Infoprint XT did not find the AFP font listed in the message.

System action

Infoprint XT continues to process the job and tries to use the first correctly defined font as a replacement.

User response

If you manually updated the resource correlation table, make sure the correlation record is correct, the font exists, and the font is accessible to Infoprint XT. If the AFP font is a font that Infoprint XT created from a Xerox font, reload the Xerox font. If the problem continues or if IBM supplied the font, report this message to your technical support representative.

5019-324 E	Font resource: *resource_name* has an incorrect format.

Explanation

The AFP font resource identified in the message has an internal structure that is not valid.

System action

Infoprint XT continues to process the job, and tries to use the first correctly defined font as a replacement.

User response

If the font is a custom AFP font, a problem might have occurred during its transfer to the system. Make sure that you download or copy the resource in binary format. If IBM supplied the font or if Infoprint XT created the font from a Xerox font, report this message to your technical support representative.

5019-325 S	The font processor cannot find character translation table: *table_name* in the reformatted Xerox resource path.

Explanation

Infoprint XT did not locate the character translation table identified in the message in the reformatted Xerox resource path.

System action

The process fails.

User response

If you manually updated the resource correlation table, this message can indicate a syntax error in the correlation record. Make sure that the correlation record is correct and rebuild the correlation table. Otherwise, this message indicates an internal error in Infoprint XT. Report this message to your technical support representative.

5019-326 E	**Font resource: *resource_name* does not contain a required character rotation.**

Explanation

An AFP font resource is incomplete.

System action

Infoprint XT cannot process the resource.

User response

Reload the corresponding Xerox resource.

5019-327 S	**The font processor cannot find the font correlation table in the reformatted Xerox resource path, or the table contains no entries.**

Explanation

Infoprint XT did not locate any font correlation in the reformatted Xerox resource path.

System action

The process fails.

User response

Make sure that you load at least one font. Then, enter the command or do the task again.

5019-328 E	**Character ID: *character_id* (EBCDIC code point X'*EBCDIC_hex*') in code page: *code_page* is not in character set: *character_set*. The original Xerox font: *font_name*, is correlated to coded font: *coded_font*.**

Explanation

Code page *code_page* and character set *character_set* do not match for character ID *character_id*.

System action

The process fails.

User response

If you manually updated the resource correlation table, you have specified an incompatible code page and character set. Correct the correlation record and rebuild the correlation table. Then, reconvert the job. Otherwise, if IBM supplied the font or if Infoprint XT created the font from a Xerox font, report this message to your technical support representative.

5019-329 E	**Character ID: *character_id* (EBCDIC code point X'*EBCDIC_hex*') in code page: *code_page* is not in character set: *character_set*. This is the original Xerox font: *font_name*.**

Explanation

Code page *code_page* and character set *character_set* do not match for character ID *character_id*.

System action

The process fails.

User response

If you manually updated the resource correlation table, you have specified an incompatible code page and character set. Correct the correlation record and rebuild the correlation table. Then, reconvert the job. Otherwise, if IBM supplied the font or if Infoprint XT created the font from a Xerox font, report this message to your technical support representative.

5019-340 S	**A resource processor cannot find reformatted JDL: *JDL_name* in the reformatted Xerox resource path.**

Explanation

Infoprint XT cannot locate the JDL specified in the message.

System action

The process fails.

User response

Make sure that you specify the correct location for the JDL resource when you submit the job. Also make sure that you have loaded the JDL on the system. Make sure that you have spelled the name of the JDL

correctly. The name is case-sensitive. After correcting the problem, submit the job again.

5019-341 S	**A resource processor cannot find JDE:** *JDE_name* **in the reformatted JDL:** *JDL_name.*

Explanation

The program did not find JDE *JDE_name* in JDL *JDL_name.*

System action

The process fails.

User response

Make sure that the JDE and JDL names are correct and spelled correctly. Make sure that the correct version of the JDL was loaded on the Infoprint XT system in the common resource library or in a resource group available to the job. Then, reconvert the job.

5019-342 E	**A resource processor cannot find type:** *cl_type* **cluster name:** *cl_name* **in reformatted cluster database:** *clb_name.* **This occurred while processing a STOCKSET that is internal to the JDL and JDE pair:** *JDL_name/JDE_name.*

Explanation

The STOCKSET that Infoprint XT was processing refers to a cluster entry, *cl_name,* which does not exist in cluster database *clb_name. cl_type* can be INIFEED, SYSPAGE, or ASSIGN.

System action

The process fails.

User response

Verify that the job specifies the correct STOCKSET and that the **xclb** conversion parameter specifies the correct cluster database. Then, reconvert the job.

5019-343 E	**A resource processor could not find type:** *cl_type* **cluster name:** *cl_name* **in reformatted cluster database:** *clb_name.* **This occurred while processing external STOCKSET:** *STK_name* **in the JDL and JDE pair:** *JDL_name/ JDE_name.*

Explanation

The STOCKSET that Infoprint XT was processing refers to a cluster entry, *cl_name,* which does not exist in cluster database *clb_name. cl_type* can be INIFEED, SYSPAGE, or ASSIGN.

System action

The process fails.

User response

Verify that the job specifies the correct STOCKSET and that the **xclb** conversion parameter specifies the correct cluster database. Then, reconvert the job.

5019-344 E	**A resource processor cannot find type:** *cl_type* **cluster name:** *cl_name* **in reformatted cluster database:** *clb_name.* **This occurred while processing STOCKSET:** *STK_name* **in the DJDE packet that ends on record:** *nn.*

Explanation

A stock reference in a FEED DJDE or in external STOCKSET *STK_name* is correlated to a cluster entry, *cl_name,* which does not exist in cluster database *clb_name. cl_type* can be FEED for the FEED DJDE, or INIFEED, SYSPAGE, or ASSIGN for the STOCKS DJDE.

System action

The process fails.

User response

Verify that the job correctly specifies the STOCKSET, FEED DJDE, and cluster database. Then, reconvert the job.

5019-350 E	**Processing stopped because one or more unsupported** *function* **command function were found in JDL or JDE:** *JDL_name* **|** *JDE_name:*

Explanation

Infoprint XT cannot process the job because it uses the unsupported function FORMAT≠BIN or LMULT≠1.

System action

The process fails.

User response

If the JDL and JDE pair is essential to printing operations, report this message to your technical support representative.

5019-351 E   **Processing stopped because unsupported *function* command functions were found in JDL or JDE: *JDL_name* | *JDE_name*:**

Explanation

Infoprint XT cannot process the job because it uses the unsupported function FORMAT≠BIN or LMULT≠1.

System action

The process fails.

User response

If the JDL and JDE pair is essential to printing operations, report this message to your technical support representative.

5019-360 E   **A resource processor cannot find reformatted type: *resource_type* for resource: *resource_name* in the reformatted Xerox resource path.**

Explanation

resource_type can be CME, PDE, STK, or TST. Infoprint XT did not find the named resource *resource_name* in the reformatted Xerox resource directory.

System action

Infoprint XT ignores the reformatted resource and continues processing the job.

User response

Verify that the spelling of the resource name is correct, and that you have loaded the resource as a common resource or as a resource that belongs to a specific group. Then, make sure that the path to the resource is available to Infoprint XT and reconvert the job.

5019-370 W   **XHONORFCB2 is in effect, but reformatted JDL: *JDL_name* | JDE: *JDE_name* does not include FCB information. The data stream converter ignores FCBs found in the data stream.**

Explanation

Although you requested that Infoprint XT process FCBs, you did not reformat the JDL and JDE pair in effect after FCB support became available. Because Infoprint XT cannot determine whether the original Xerox JDL and JDE specified FCB=PROCESS or FCB=IGNORE, it uses FCB=IGNORE and does not process any FCBs in the data stream.

System action

Infoprint XT continues processing the job, but the printed output is not correct.

User response

Reload the JDL that the job uses. Infoprint XT creates a new metrics file for the JDL, which includes information that enables it to process FCBs. After you reload the JDL, reconvert the job.

5019-380 E   **Correlation of Xerox DBCS font: *font_name* to non-DBCS AFP font resource: *resource_name* is not valid.**

Explanation

During AFP font processing, Infoprint XT found a correlation between a Xerox DBCS font and an AFP single-byte font. Infoprint XT does not support this type of correlation.

System action

Infoprint XT cannot process the font.

User response

Correct the entry in the font correlation table so that the correlation is between a Xerox DBCS font and an AFP DBCS outline font. Then, rerun the **pdxtloadres** command to rebuild the font correlation table.

5019-381 E   **Reformatted font information for Xerox font: *font_name* is not complete. Reload the resource to extract and store DBCS information.**

Explanation

During AFP font processing, Infoprint XT determined that the reformatted Xerox font metrics file for *font_name* does not contain DBCS information.

System action

Infoprint XT cannot process the font.

User response

Reload the Xerox DBCS font. Then, reconvert the job.

5019-382 E	**Font processing found a reference to Xerox DBCS font: *font_name*, but option: *option* is in effect. DBCS mode requires xresolution=300.**

Explanation

During AFP font processing, Infoprint XT found a reference to Xerox DBCS font *font_name*, but it also found an **xresolution** value other than 300.

System action

Infoprint XT cannot process the font.

User response

Correct the resolution specification so that it specifies 300-pel resolution.

5019-400 U	**A file access error with return code: *nn* occurred during the action: INIT. The error occurred for DDNAME: *dd_name* and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-401 U	**A file access error with return code: *nn* occurred during the action: INIT. The error occurred for DDNAME: UNKNOWN and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-402 U	**A file access error with return code: *nn* occurred during the action: INIT. The error occurred for DDNAME: *dd_name* and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-403 U	**A file access error with return code: *nn* occurred during the action: INIT. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-404 U	**A file access error with return code: *nn* occurred during the action: OPEN. The error occurred for DDNAME: *dd_name* and file: *file_name...msg*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-405 U **A file access error with return code: *nn* occurred during the action: OPEN. The error occurred for DDNAME: UNKNOWN and file: *file_name...msg*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-406 U **A file access error with return code: *nn* occurred during the action: OPEN. The error occurred for DDNAME: *dd_name* and file: UNKNOWN...*msg*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-407 U **A file access error with return code: *nn* occurred during the action: OPEN. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN...*msg*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-408 U **A file access error with return code: *nn* occurred during the action: READ. The error occurred for DDNAME: *dd_name* and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-409 U **A file access error with return code: *nn* occurred during the action: READ. The error occurred for DDNAME: UNKNOWN and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-410 U **A file access error with return code: *nn* occurred during the action: READ. The error occurred for DDNAME: *dd_name* and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-411 U | A file access error with return code: *nn* occurred during the action: READ. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-412 U | A file access error with return code: *nn* occurred during the action: WRITE. The error occurred for DDNAME: *dd_name* and file: *file_name*. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-413 U | A file access error with return code: *nn* occurred during the action: WRITE. The error occurred for DDNAME: UNKNOWN and file: *file_name*. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-414 U | A file access error with return code: *nn* occurred during the action: WRITE. The error occurred for DDNAME: *dd_name* and file: UNKNOWN. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-415 U | A file access error with return code: *nn* occurred during the action: WRITE. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

| 5019-416 U | A file access error with return code: *nn* occurred during the action: CLOSE. The error occurred for DDNAME: *dd_name* and file: *file_name*. |

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-417 U   **A file access error with return code: *nn* occurred during the action: CLOSE. The error occurred for DDNAME: UNKNOWN and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-418 U   **A file access error with return code: *nn* occurred during the action: CLOSE. The error occurred for DDNAME: *dd_name* and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-419 U   **A file access error with return code: *nn* occurred during the action: CLOSE. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-420 U   **A file access error with return code: *nn* occurred during the action: TERM. The error occurred for DDNAME: *dd_name* and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-421 U   **A file access error with return code: *nn* occurred during the action: TERM. The error occurred for DDNAME: UNKNOWN and file: *file_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-422 U   **A file access error with return code: *nn* occurred during the action: TERM. The error occurred for DDNAME: *dd_name* and file: UNKNOWN.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-423 U	A file access error with return code: *nn* occurred during the action: TERM. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN.

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-424 U	A file access error with return code: *nn* occurred during the action: TRACK. The error occurred for DDNAME: *dd_name* and file: *file_name*.

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-425 U	A file access error with return code: *nn* occurred during the action: TRACK. The error occurred for DDNAME: UNKNOWN and file: *file_name*.

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-426 U	A file access error with return code: *nn* occurred during the action: TRACK. The error occurred for DDNAME: *dd_name* and file: UNKNOWN.

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-427 U	A file access error with return code: *nn* occurred during the action: TRACK. The error occurred for DDNAME: UNKNOWN and file: UNKNOWN.

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-430 U	A program or operating system error has occurred. The internal diagnostic information is: ON-ERROR: ONCODE *nn*

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-431 U   **A program or operating system error has occurred. The internal diagnostic information is: The routing text address is not correct: Program area:** *program_area***.**

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5019-432 U   **A program or operating system error has occurred. The internal diagnostic information is: The Medium Map Descriptor Item address is not correct. Program area:** *program_area***.**

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process failed.

User response

Report this message to your technical support representative.

5019-433 U   **A program or operating system error has occurred. The internal diagnostic information is: The SIDE code is not correct. SIDE code:** *code***.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-434 U   **A program or operating system error has occurred. The internal diagnostic information is: The parsing token number is not correct. Number:** *DJDE_nn***.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-435 U   **A program or operating system error has occurred. The internal diagnostic information is: The print control value: X'***hex_value***' was not recognized on page:** *page_nn* **for logical record:** *record_nn***.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-436 U   **A program or operating system error has occurred. The internal diagnostic information is: The absolute print position is not set on page: *page_nn* for logical record: *record_nn*.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-437 U   **A program or operating system error has occurred. The internal diagnostic information is: The font orientation value: *orientation* was not recognized on page: *page_nn* for logical record: *record_nn* of Xerox font: *font_name*.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-438 U   **A program or operating system error has occurred. The internal diagnostic information is: The intermediate text item address is not correct. Program area: *program_area*.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-439 U   **A program or operating system error has occurred. The internal diagnostic information is: The report item address is not correct. Program area: *program_area*.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-440 U   **A program or operating system error has occurred. The internal diagnostic information is: The value for the text placement identifier is not correct. Value: *value*. Program area: *program_area*.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-441 U **A program or operating system error has occurred. The internal diagnostic information is: The font orientation value:** *orientation* **is not correct for Xerox font:** *font_name***. Program area:** *program_area***.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-442 U **A program or operating system error has occurred. The internal diagnostic information is: The number of referenced page segments is not correct. Number of referenced page segments:** *nn***.**

Explanation

A logic error occurred in the resource utility program. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-443 U **A program or operating system error has occurred. The internal diagnostic information is: The RPAGE side indicator is not correct. RPAGE side indicator code:** *side_code***.**

Explanation

A logic error occurred. Infoprint XT supplies a phase name, diagnostic information, or both, to help identify the problem.

System action

The process fails.

User response

Report this message to your technical support representative.

5019-450 I **Usage: aiocifd [-f** *path/font_name***] | -h | -?**

Explanation

This is an informational message that indicates the correct parameters for the font analyzer.

System action

Infoprint XT continues processing.

User response

None.

5019-451 S **Missing or incorrect arguments.**

Explanation

The font analyzer found a parameter that it did not recognize.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-452 S **The font analyzer cannot find or open font:** *font_name***.**

Explanation

The font analyzer did not find the *font_name* font. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the font resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-453 S   **Font: *font_name* is not a valid Xerox font.**

Explanation

The font analyzer found an error in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5019-454 S   **Font: *font_name* contains this unknown extension value: X'*extension_value*'.**

Explanation

The font analyzer did not recognize the extension value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5019-455   **Font: *font_name* contains this unknown orientation value: X'*orientation_value*'.**

Explanation

The font analyzer did not recognize the orientation value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5019-456 S   **Font: *font_name* contains this unknown font type value: X'*font_type_value*'.**

Explanation

The font analyzer did not recognize the font type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5019-457 S   **The font analyzer ended with this internal code: *error_code*.**

Explanation

The font analyzer found an internal error during font processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-458 I   **Font: *font_name* is a Xerox SBCS font.**

Explanation

This is an informational message that indicates that Infoprint XT found a Xerox single-byte character set font. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-459 S   **Font: *font_name* contains this unsupported font type value: X'00'.**

Explanation

Infoprint XT does not support this type of font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5019-460 I	**Font: *font_name* contains this unsupported font type value: X'01'.**

Explanation

Infoprint XT does not support this type of font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5019-461 I	**Font: *font_name* is a Xerox DBCS font that uses this type of encoding: *encoding_type*.**

Explanation

This is an informational message that indicates that Infoprint XT found a Xerox double-byte character set font. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-462 S	**Font: *font_name* contains this unknown DBCS font type value: X'*font_type_value*'.**

Explanation

The font analyzer did not recognize the DBCS font type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again.

5019-463 S	**Font: *font_name* contains this unknown encoding type value: X'*encoding_type_value*'.**

Explanation

The font analyzer did not recognize the encoding type value in the *font_name* font.

System action

Infoprint XT cannot process the request.

User response

Examine the file and make sure that it is not corrupted. Then, do the operation again. If the problem continues, report this message to your technical support representative.

5019-470 I	**Usage: xrhdr	-i	-t	-? [*path/ resource_name*]**

Explanation

This is an informational message that indicates the correct parameters for the resource header utility.

System action

Infoprint XT continues processing.

User response

None.

5019-471 S	**Missing or incorrect arguments.**

Explanation

The resource header utility found a parameter that it did not recognize.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-472 I   **The resource header utility modified resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility modified a resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-473 I   **The resource header utility added a header to resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility created a resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-474 S   **The resource header utility cannot find resource: *resource_name*.**

Explanation

The resource header utility did not find the *resource_name* resource. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-475 S   **The resource header utility cannot access resource: *resource_name*.**

Explanation

The permissions for resource *resource_name* do not let the resource header utility access the resource.

System action

Infoprint XT cannot process the request.

User response

Verify that the permissions for the resource are correct. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-476 S   **A memory allocation error occurred in the resource header utility while it processed resource: *resource_name*.**

Explanation

Header processing for *resource_name* resource failed because of insufficient memory.

System action

Infoprint XT cannot process the request.

User response

Verify that sufficient memory is available on the system. Then, rerun the command.

5019-477 S   **The resource header utility cannot open resource: *resource_name*.**

Explanation

The resource header utility did not open the *resource_name* resource. The resource name might be incorrect, or it might not be available on the system.

System action

Infoprint XT cannot process the request.

User response

Verify that the entry is correct and that the resource exists. Then, rerun the command. Otherwise, report this message to your technical support representative.

5019-478 S   **Resource: *resource_name* does not contain a multiple of 128 bytes.**

Explanation

Valid Xerox resources must contain a multiple of 128 bytes.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5019-479 S	**Resource: *resource_name* does not have a valid Xerox resource name or extension.**

Explanation

Valid Xerox resource names contain a 1-to-6 character resource name before the period, and a 3-character extension after the period. The valid Xerox resource name characters are uppercase alphabetic characters, numeric characters, and the dollar sign ($).

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5019-480 S	**Resource: *resource_name* contains an unknown extension.**

Explanation

The resource header utility did not recognize the extension of the *resource_name* resource

System action

Infoprint XT cannot process the request.

User response

Verify that the resource is a valid Xerox resource. If it is valid, contact your technical support representative.

5019-481 S	**Resource: *resource_name* contains an unknown block size value.**

Explanation

The resource header utility did not recognize the block size value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5019-482 S	**Resource: *resource_name* contains an unknown extension value.**

Explanation

The resource header utility did not recognize the extension value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5019-483 S	**Resource: *resource_name* contains an unknown blocking factor value.**

Explanation

The resource header utility did not recognize the blocking factor value of the *resource_name* resource.

System action

Infoprint XT cannot process the request.

User response

Examine the resource and make sure that it is not corrupted. Then, do the operation again.

5019-484 S	**The resource header utility cannot write to resource: *resource_name*.**

Explanation

An unidentifiable or unexpected I/O condition occurred during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-485 S	**The resource header utility ended with this internal code: *nn* while processing resource: *resource_name*.**

Explanation

The resource header utility found an error during processing.

System action

Infoprint XT cannot process the request.

User response

Report this message to your technical support representative.

5019-486 E	Infoprint XT found an incorrect color reference format in *command* DJDE at position *position*.

Explanation

Ink names can have one of these forms:

- *catalogname.palettename.colorname*
- *catalogname..colorname*
- *palettename.colorname*
- *colorname.*

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the ink name in the DJDE and reconvert the job.

5019-487 E	The *command* DJDE exceeded the maximum number of inks in a list, which is 64.

Explanation

The specified DJDE exceeded the maximum number of inks in a list, which is 64.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the ink list in the specified DJDE and reconvert the job.

5019-488 E	Infoprint XT found an incorrect color reference format in *command* DJDE.

Explanation

Ink names can have one of these forms:

- *catalogname.palettename.colorname*
- *catalogname..colorname*
- *palettename.colorname*
- *colorname.*

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the ink list in the specified DJDE and reconvert the job.

5019-489 E	Infoprint XT found one or more incorrect characters in *command* DJDE.

Explanation

Infoprint XT found incorrect characters in the specified DJDE.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the DJDE syntax and reconvert the job.

5019-490 E	Incorrect numeric input found in *command* DJDE.

Explanation

Infoprint XT found incorrect numeric input in the specified DJDE. The syntax for the specified DJDE requires one or more numeric fields, which are incorrect.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the DJDE syntax and reconvert the job.

5019-491 E   **Line spacing value *spacing_value* in the LPI DJDE is not valid for the specified conversion units.**

Explanation

Infoprint XT cannot process the LPI DJDE line spacing value correctly. Either the value is nonnumeric, or the value is out of range for the specific units. Permitted units are LPI, DOTS or XDOTS. The maximum value for line spacing is 30 LPI, and the minimum value is 10 dots.

System action

Infoprint XT continues processing the job, but the output might not be correct.

User response

Correct the line spacing value in the data stream and convert the job again.

5019-492 E   **The data stream converter found an incorrect line range *line_range* in an LPI DJDE.**

Explanation

Infoprint XT found an LPI DJDE with a line range that does not meet the correct format. This range can have one of these forms:

n
> Number representing the line to which the specified line spacing is applied.

n–
> Number of the line from which the specified line spacing is applied through (bottom of form).

n–m
> The specified line spacing is applied from line *n* through line *m*.

The line numbers have to be between 1 and 255.

System action

Infoprint XT continues processing the stream, ignoring the range, but the output might not be correct.

User response

Correct the input data stream and convert the job again.

5019-493 E   **The data stream converter found an LPI DJDE with overlapping line spacing ranges.**

Explanation

Infoprint XT found an LPI DJDE with multiple overlapping line ranges.

System action

Infoprint XT continues processing the stream, ignoring the overlapping ranges, but the output might not be correct.

User response

Correct the input data stream and convert the job again.

5019-494 E   **The data stream converter found a *djde_name* DJDE with too many entries. The number of entries for this DJDE must not exceed *entries_number*.**

Explanation

Infoprint XT found a DJDE with more than allowed entries.

System action

Infoprint XT continues processing the stream, ignoring the extra entries, but the output might not be correct.

User response

Correct the input data stream and convert the job again.

5019-495 I   **The resource header utility padded resource: *resource_name*.**

Explanation

This is an informational message that indicates that the resource header utility padded a resource to ensure that it contains one or more complete 512-byte blocks. It requires no user response.

5019-496 S   **The resource header utility did not process *resource_name*, which only contains text.**

Explanation

The resource name has an extension for a binary resource, but the file only contains text.

System action

Infoprint XT cannot process the request.

User response

Examine the file to determine its contents. The file might contain Xerox source data. For example, if the file contains JSL data, you can rename it to *file_name*.jsl and process it with the **pdxtpdl** command.

5019-497 S	**The resource header utility cannot read *resource_name*.**

Explanation

Infoprint XT cannot read the file identified in the message.

System action

Infoprint XT cannot process the request.

User response

Examine the file and correct the problem. Then, issue the command again.

5019-498 I	**The resource header utility removed padding from the header in resource: *resource_name***

Explanation

This is an informational message that indicates that the resource header utility removed extraneous padding from an existing resource header. It requires no user response.

System action

Infoprint XT continues processing.

User response

None.

5019-510 S	**An error occurred while allocating the *partitioned_data_set_name* data set (return code: *return_code*) (error code: *error_code*) (information code: *information_code*).**

Explanation

Infoprint XT could not allocate the required data set. Supervisor Call (SVC) 99 returned the error and information codes.

System action

Infoprint XT cannot process the request.

User response

For more information about error and information codes, see the *Interpreting DYNALLOC Return Codes* section in the *Requesting Dynamic Allocation Functions* chapter of *z/OS MVS Programming: Authorized Assembler Services Guide*.

Appendix F. JSL Metrics Compiler messages (5031-*nnn*)

This appendix lists the 5031 series of messages that Infoprint XT can issue for the JSL metrics compiler. Depending on the message, the message might include an additional error return code. See "Error return code numbers" on page 247 for explanations of these numbers.

5031-001　　　　**The command option *-option* is not valid.**

Explanation

You entered a command and included an option that is not valid. The message text identifies the option.

System action

Infoprint XT cannot process the command.

User response

Review the syntax for the command and enter the command again.

5031-002　　　　**Cannot process command option *-option*. The value for the option is missing.**

Explanation

You entered a command with an option that requires a value. The value for the option was missing. The message text identifies the option that requires a value.

System action

Infoprint XT cannot process the request.

User response

Enter the command again and specify a value for the option.

5031-003　　　　**The command did not expect the value *"value"*.**

Explanation

You entered a command and included an option or other argument that is not valid. The message text identifies the unexpected value.

System action

Infoprint XT cannot process the request.

User response

Enter the command again and specify a valid value.

5031-004　　　　**Command options *-option* and *-option* are mutually exclusive.**

Explanation

You entered a command and included two options that the command cannot process together.

System action

Infoprint XT cannot process the request.

User response

Enter the command again and specify only one of the options.

5031-005　　　　**Value *"value"* is not valid for command option *-option*.**

Explanation

You entered a command and included a value for an option that is not one of the allowed values. Or, the value is not in the correct format. For example, you entered an alphanumeric value instead of a numeric value. The message text identifies the incorrect value and the name of the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax and enter the command again.

5031-006　　　　**There are too many instances of the *-option* command option.**

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You may specify up to *number* instances.

Explanation

You entered a command and included more than one instance of a command option. You specified the command option more times than Infoprint XT allows. The message text indicates the maximum number of times that you can specify the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax and enter the command again.

5031-007	Value *value* is out of range for command option *-option*. Valid range is *lower_limit* to *upper_limit*.

Explanation

The **pdxtpdl** command found a value that is not in the range of valid values for the specified command option.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-008	Cannot parse *variable* (error *ReturnCode*). ...*msg*

Explanation

You entered a command that reads an environment variable to obtain default command options. An error occurred when Infoprint XT tried to parse the value of that environment variable. The most likely cause is a problem with the content of the variable. For example, it might require quotation marks because the command contains special characters, or the command might contain an unbalanced set of quotation marks.

System action

Infoprint XT cannot process the request.

User response

Correct the value of the environment variable and enter the command again.

5031-010	One or more required command options are missing.

Explanation

You entered a command that has required command options. You did not specify one or more of the required command options.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax and enter the command again.

5031-100	The resource *resourcename* is already loaded. Use the **-r** command option to replace it.

Explanation

You entered the **pdxtpdl** command to load the resource specified in the message. That resource is already loaded on the system. If this is a new version of the resource and you want to load it again, you must specify the **-r** option.

System action

Infoprint XT cannot process the request.

User response

Enter the command again and specify the **-r** option.

5031-102	The input list file did not contain any valid resources.

Explanation

You entered the **pdxtpdl** command and included the **-l** option, which specified a file that contains a list of resources. The entries in the file might not be in a valid format. Each entry in the file must be on a separate line. Or, the resources might not exist in the path explicitly specified in the file. You must specify a full path or a relative path in the file. Infoprint XT also issues this message if the file is empty.

System action

Infoprint XT cannot process the request.

User response

Correct the problem with the input list file and enter the command again.

5031-103	The input pattern-matching string used for the search did not match any valid resources.

Explanation

You entered the **pdxtpdl** command and included the **-n** option, which specified a pattern-matching string to use to locate specific Xerox resources. Infoprint XT did not locate any valid resources when it used the pattern-matching string.

System action

Infoprint XT cannot process the request.

User response

Correct the problem with the pattern-matching string and enter the command again.

5031-200	Unable to access *file_or_directory* (error *ReturnCode*). *...msg*

Explanation

The file or directory identified in the message is not accessible. It might not exist or it might not have the correct access permissions. The message provides additional information about why the access action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified file, or the directory that contains the file, and correct the problem. Then, enter the command again.

5031-201	Cannot open file *filename* (error *ReturnCode*). *...msg*

Explanation

The **pdxtpdl** command cannot open the file identified in the message. The message provides additional information about why the open action failed.

System action

Infoprint XT could not process the request.

User response

Examine the specified file, or the directory that contains the file, and correct the problem. Then, enter the command that resulted in this error message.

5031-202	Cannot read file *filename* (error *ReturnCode*). *...msg*

Explanation

The **pdxtpdl** command cannot read the file identified in the message. The message provides additional information about why the open action failed.

System action

Infoprint XT could not process the request.

User response

Examine the specified file, or the directory that contains the file, and correct the problem. Then, enter the command that resulted in this error message.

5031-203	Cannot write file *filename* (error *ReturnCode*). *...msg*

Explanation

The **pdxtpdl** command cannot write to the file identified in the message. The message provides additional information about why the open action failed.

System action

Infoprint XT could not process the request.

User response

Examine the specified file, or the directory that contains the file, and correct the problem. Then, enter the command that resulted in this error message.

5031-204	Cannot copy *source_file_name* to *target_file_name* (error *ReturnCode*). *...msg*

Explanation

Infoprint XT cannot copy from or to the files identified in the message. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, issue the command again.

5031-205   **The JSL metrics compiler did not generate any resources from source file** *filename***.**

Explanation

The **pdxtpdl** command cannot create any reformatted resources from the file identified in the message.

System action

Infoprint XT could not process the request.

User response

Examine the specified file and correct any errors. Then, enter the command that resulted in this error message.

5031-209   **Cannot lock file** *filename* **(error** *ReturnCode***).** *...msg*

Explanation

You entered a command, but Infoprint XT cannot lock the file identified in the message. The message provides additional information about why the file-lock action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file identified in the message and correct the problem. Then, enter the command again.

5031-230   **Cannot create directory** *directoryname* **(error** *ReturnCode)***.** *...msg*

Explanation

Infoprint XT cannot create the directory identified in the message. The parent directory might not exist or might not have the permissions required to create the specified directory. The message provides additional information about why the create action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified directory or directories and correct the problem. Then, enter the command again.

5031-231   **Cannot change to directory** *directoryname* **(error** *ReturnCode***).** *...msg*

Explanation

Infoprint XT cannot change to the directory identified in the message. The message provides additional information about why the change action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the specified directory and correct the problem. Then, enter the command again.

5031-234   **Cannot resolve directory** *directoryname* **(error** *ReturnCode***).** *...msg*

Explanation

Infoprint XT cannot resolve the directory identified in the message. The directory might not exist or might not have the correct permissions. The message provides additional information about why the resolve action failed.

System action

Infoprint XT cannot process the request.

User response

Verify that the specified directory exists and that it has the correct permissions. Then, enter the **pdxtpdl** command again.

5031-240   **Cannot search** *directoryname* **(error** *ReturnCode***).** *...msg*

Explanation

You entered a command that required Infoprint XT to scan a directory by using a pattern-matching string. The scan operation failed. The message provides

additional information about why the scan action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, enter the command again.

5031-250   **Unable to allocate storage (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT cannot allocate the required storage. The message provides additional information about why the storage allocation action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, enter the command again.

5031-290   **Cannot set the effective group to *groupname* (error *ReturnCode*). ...*msg***

Explanation

Infoprint XT cannot set the effective group to the value specified in the message. The message provides additional information about why the set action failed.

System action

Infoprint XT cannot process the request.

User response

Use the information that the message provides to correct the problem. Then, enter the command again.

5031-292   **You must be in the *groupname* group to issue this command.**

Explanation

You entered the command while logged in with a user name that is not in the required group.

System action

Infoprint XT cannot process the request.

User response

Either add the user name to the group, or log in with a user name that is already in the group. Then, enter the command again.

5031-300   **Starting compilation of *filename*...**

Explanation

The **pdxtpdl** command has begun compiling a JSL source file.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-301   **Compilation completed with return code *return_code*.**

Explanation

The **pdxtpdl** command has completed compiling a JSL source file.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-302   **Input source file *filename* contains one or more errors.**

Explanation

The **pdxtpdl** command found syntax errors in *filename*. Other messages explain the errors.

System action

Infoprint XT continues processing the request, but output from data stream conversions that use the reformatted resources that the request creates might not be correct.

User response

If any accompanying messages indicate syntax errors in the JSL, correct the errors. Then, compile the JSL again. If there are no syntax errors, no action is necessary.

5031-303	The JSL metrics compiler created resource *resource* from source file *filename*.

Explanation

The **pdxtpdl** command has compiled *resource* from a JSL source file.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-400	At line *line_number*, column *column_number*:

Explanation

This message that indicates the location of one or more syntax errors that the **pdxtpdl** command found in a JSL. Other messages explain the errors.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-500	Command keyword *keyword* is incorrect.

Explanation

The **pdxtpdl** command found an incorrect keyword in a command.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-501	Parameter keyword *keyword* is incorrect.

Explanation

The **pdxtpdl** command found an incorrect keyword in a parameter.

System action

Infoprint XT cannot process the request.

User response

Specify the correct parameter for the command options. Then, compile the JSL again.

5031-502	Unable to determine the correct parameter for the option or option group *option* in command *command*.

Explanation

You specified a command with one or more options that imply parameters that you did not specify. The options can apply to more than one possible parameter. The **pdxtpdl** command cannot determine which parameter is correct.

System action

Infoprint XT cannot process the request.

User response

Specify the correct parameter for the command options. Then, compile the JSL again.

5031-503	Option *option* is incorrect for parameter *parameter*.

Explanation

The **pdxtpdl** command found an incorrect option in a parameter.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-505	Expanding short form command specification to *long_command_form*...

Explanation

The **pdxtpdl** command expanded the short form of a command to its long form.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-506   **Null parameter option is incorrect.**

Explanation

The **pdxtpdl** command found an incorrect null option in a parameter.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-507   **Command *command* has no parameter that accepts the specified option.**

Explanation

You specified a command with an option that implies parameters that you did not specify. None of the parameters for the command can use the options that you specified.

System action

Infoprint XT cannot process the request.

User response

Specify the correct options for the command. Then, compile the JSL again.

5031-508   **Closing quote is missing.**

Explanation

Each opening quote (' or ") must have a closing quote.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-509   **Comment close is missing.**

Explanation

Each comment opening (/*) must have a comment close (*/).

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-510   **The command did not expect end of file.**

Explanation

The **pdxtpdl** command found end of file in an unexpected location or context.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-600   **Unit of measure *unit* is incorrect.**

Explanation

The **pdxtpdl** command found an incorrect unit of measure.

System action

Infoprint XT ignores the unit of measure.

User response

Correct the error. Then, compile the JSL again.

5031-601   **Command *command* is unsupported.**

Explanation

The **pdxtpdl** command found a command that is unsupported.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-602	Parameter *parameter* for command *command* is unsupported.

Explanation

The **pdxtpdl** command found a parameter that is unsupported.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-603	Label *label* is a duplicate.

Explanation

The **pdxtpdl** command found a label that is used in another location in the JSL

System action

Infoprint XT cannot process the request.

User response

Change the label. Then, compile the JSL again.

5031-604	Criteria for command *command* is missing.

Explanation

The **pdxtpdl** command cannot find the criteria that it expected for the command.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-605	Parameter *parameter* for command *command* is missing.

Explanation

The **pdxtpdl** command cannot find the parameter that it expected for the command.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-606	Value *value* is out of range. Valid range is *lower_limit* to *upper_limit*.

Explanation

The **pdxtpdl** command found a value that is not in the range of valid values.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

5031-607	Parameter *parameter* contains too many options. Extraneous options ignored.

Explanation

The **pdxtpdl** command found extraneous parameter options

System action

Infoprint XT ignores the extraneous options and continues processing.

User response

Examine the parameter and correct the problem. Then, compile the JSL again.

5031-608	Referenced label *label* is missing.

Explanation

The **pdxtpdl** command could not find the label identified in the message.

System action

Infoprint XT cannot process the request.

User response

Specify the correct label. Then, compile the JSL again.

5031-609 **A JDL declaration is missing for command** *command***.**

Explanation

The **pdxtpdl** command found a command that should be part of a JDL, but could not find a declaration for the JDL.

System action

Infoprint XT skipped the command.

User response

Specify the correct JDL declaration for the command. Then, compile the JSL again.

5031-610 **One or more options for parameter** *parameter* **are missing.**

Explanation

You specified a parameter without some of the required options.

System action

Infoprint XT cannot process the request.

User response

Specify all of the required options for the parameter. Then, compile the JSL again.

5031-611 **The JSL metrics compiler ignored option** *option* **for parameter** *parameter***.**

Explanation

The **pdxtpdl** command found a valid Xerox parameter option that is currently unsupported.

System action

Infoprint XT ignored the parameter option.

User response

This is an informational message and requires no user response.

5031-612 **A user table declaration is missing for command** *command***.**

Explanation

You specified command with a reference to a user-defined table, but the **pdxtpdl** command cannot find a declaration for the table.

System action

Infoprint XT cannot process the request.

User response

Specify a declaration for the user-defined table. Then, compile the JSL again.

5031-613 **An unlabeled user table declaration is already declared in** *command***. Unlabeled user table declaration ignored.**

Explanation

You specified more than one unlabeled user table declaration in the command and parameter identified in the message.

System action

The **pdxtpdl** command ignored the extraneous user table declaration.

User response

Specify only one user table declaration for the command and parameter. Then, compile the JSL again.

5031-614 **A string size exceeded the maximum of** *maximum_size* **bytes.**

Explanation

You specified a character string that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify a character string of the correct length. Then, compile the JSL again.

5031-615 **The command did not expect end of JDL.**

Explanation

The **pdxtpdl** command found the end of the JDL in an unexpected location or context.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

| 5031-616 | A required label for command *command* is missing. |

Explanation

The **pdxtpdl** command cannot find the label that it expected for the command.

System action

Infoprint XT cannot process the request.

User response

Correct the error. Then, compile the JSL again.

| 5031-618 | The last successfully parsed command was *command* on line *line_number*. |

Explanation

This message that indicates the last command that the **pdxtpdl** command was able to process successfully. Other messages explain the errors that caused processing to end.

System action

Infoprint XT cannot continue.

User response

This is an informational message and requires no user response.

| 5031-619 | STOCK reference *stock_name* is already assigned. |

Explanation

You specified a STOCK name that is already in use.

System action

Infoprint XT cannot process the request.

User response

Specify the correct STOCK name. Then, compile the JSL again.

| 5031-620 | STOCK *stock_name* is undefined. |

Explanation

You specified a STOCK name that is not declared in the JSL.

System action

Infoprint XT cannot process the request.

User response

Specify the correct STOCK name, or specify a declaration for the STOCK name. Then, compile the JSL again.

| 5031-621 | Two or more string constants must have the same length. |

Explanation

You specified string constants that do not have the same length.

System action

Infoprint XT cannot process the request.

User response

Specify the correct string constants. Then, compile the JSL again.

| 5031-622 | Label *label* identifies a system table. |

Explanation

You specified a label identifier that is already being used to identify a system table.

System action

Infoprint XT cannot process the request.

User response

Specify the correct label identifier. Then, compile the JSL again.

| 5031-623 | The command expected integer value *integer* but found *fractional_value*. |

Explanation

You specified a fractional value, but the compiler expected an integer value.

System action

Infoprint XT continues processing.

User response

Specify the correct integer value. Then, compile the JSL again.

5031-626   **The length of TABLE CONSTANT** *constant* **does not match the length value in CRITERIA** *criteria*.

Explanation

You specified a TABLE CONSTANT whose length is not equal to the length value in the corresponding CRITERIA.

System action

Infoprint XT cannot process the request.

User response

Specify the correct TABLE CONSTANT or the correct CRITERIA length value. Then, compile the JSL again.

5031-700   **JDE** *JDE_name* **contains one or more errors.**

Explanation

This message that indicates that the **pdxtpdl** command found syntax errors in the JDE identified in the message. Other messages explain the errors that caused processing to end.

System action

Infoprint XT cannot continue.

User response

This is an informational message and requires no user response.

5031-701   **BLOCK length is not a multiple of fixed RECORD LENGTH value.**

Explanation

You specified RECORD STRUCTURE=F or FB with a BLOCK length value that is not a multiple of the RECORD length.

System action

Infoprint XT cannot process the request.

User response

Specify the correct BLOCK length. Then, compile the JSL again.

5031-702   **ZERO=YES requires a RECORD LTHFLD value greater than zero.**

Explanation

You specified BLOCK ZERO=YES, but the **pdxtpdl** command did not find RECORD LTHFLD, or found RECORD LTHFLD=0.

System action

Infoprint XT cannot process the request.

User response

Remove BLOCK ZERO=YES, or specify a RECORD LTHFLD value greater than zero. Then, compile the JSL again.

5031-703   **IDEN SKIP value is greater than RECORD LENGTH value.**

Explanation

You specified an IDEN SKIP value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct IDEN SKIP value. Then, compile the JSL again.

5031-704   **MINLAB value is greater than MAXLAB value.**

Explanation

You specified a MINLAB value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct MINLAB value. Then, compile the JSL again.

5031-705   **Length of IDEN DJDE identifier fields is greater than RECORD LENGTH value.**

Explanation

The sum of the IDEN OFFSET value and the length of the IDEN PREFIX string is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct IDEN OFFSET value and an IDEN PREFIX string with the correct length. Then, compile the JSL again.

5031-706	HOST type *host_type* is not valid with LABEL type *label_type*.

Explanation

You specified an unsupported combination of HOST type and LABEL type.

System action

Infoprint XT replaces the incorrect label type with a label that is valid for the host type.

User response

Specify the correct HOST type and LABEL type. Then, compile the JSL again.

5031-707	BLOCK ADJUST value is greater than BLOCK LENGTH value.

Explanation

You specified a BLOCK ADJUST value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct BLOCK ADJUST value. Then, compile the JSL again.

5031-708	RECORD ADJUST value is greater than RECORD LENGTH value.

Explanation

You specified a RECORD ADJUST value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct RECORD ADJUST value. Then, compile the JSL again.

5031-709	RECORD LENGTH value is greater than BLOCK LENGTH value.

Explanation

You specified a RECORD LENGTH value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct RECORD LENGTH value. Then, compile the JSL again.

5031-710	Sum of BLOCK PREAMBLE and BLOCK POSTAMBLE values is greater than BLOCK LENGTH value.

Explanation

You specified a combined BLOCK PREAMBLE and BLOCK POSTAMBLE value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct BLOCK PREAMBLE and BLOCK POSTAMBLE values. Then, compile the JSL again.

5031-711	Sum of RECORD PREAMBLE and RECORD POSTAMBLE values is greater than RECORD LENGTH value.

Explanation

You specified a combined RECORD PREAMBLE and RECORD POSTAMBLE value that is too large.

System action

Infoprint XTcannot process the request.

User response

Specify the correct RECORD PREAMBLE and RECORD POSTAMBLE values. Then, compile the JSL again.

5031-712   **Variable RECORD STRUCTURE requires a RECORD LTHFLD value greater than zero.**

Explanation

You specified RECORD STRUCTURE=V or VB, but the **pdxtpdl** command did not find RECORD LTHFLD, or found RECORD LTHFLD=0.

System action

Infoprint XT cannot process the request.

User response

Specify the correct RECORD STRUCTURE value, or specify a RECORD LTHFLD value greater than zero. Then, compile the JSL again.

5031-713   **Undefined blocked RECORD STRUCTURE requires a RECORD CONSTANT value.**

Explanation

You specified RECORD STRUCTURE=UB, but the **pdxtpdl** command did not find RECORD CONSTANT.

System action

Infoprint XT cannot process the request.

User response

Specify the correct RECORD STRUCTURE, or specify a RECORD CONSTANT value. Then, compile the JSL again.

5031-714   **MINLAB value is greater than BLOCK LENGTH value.**

Explanation

You specified a MINLAB value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct MINLAB value. Then, compile the JSL again.

5031-715   **MAXLAB value is greater than BLOCK LENGTH value.**

Explanation

You specified a MAXLAB value that is too large.

System action

Infoprint XT cannot process the request.

User response

Specify the correct MAXLAB value. Then, compile the JSL again.

5031-800   **Infoprint XT for z/OS 3.3.0.0 Level *code_level compile_date compile_time*.**

Explanation

This message displays the Infoprint XT version and code level.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-801   **JSL compilation process started. Number of resources to compile: *number*.**

Explanation

Infoprint XT has begun compiling the JSLs that you specified in the **pdxtpdl** command

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-802   **Replacing resource *resource*.**

Explanation

You specified the **-r pdxtpdl** parameter. The **pdxtpdl** command has replaced the reformatted resource identified in the message.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-803   **The JSL metrics compiler generated *number* resources.**

Explanation

This message specifies the total number of reformatted resources that the **pdxtpdl** command created.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-804   **The JSL metrics compiler replaced previously compiled resource *resource*.**

Explanation

The **pdxtpdl** command replaced an existing reformatted resource that was already compiled.

System action

IInfoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-805   **The JSL metrics compiler skipped resource *resource*, which did not match the input pattern-matching string.**

Explanation

The **pdxtpdl** command skipped a JSL file that did not match the pattern-matching string that you specified with the **–j** parameter.

System action

Infoprint XT continues processing.

User response

This is an informational message and requires no user response.

5031-806   **The JSL metrics compiler skipped previously compiled resource *resource*.**

Explanation

The **pdxtpdl** command skipped an existing reformatted resource that was already compiled.

System action

Infoprint XTT continues processing.

User response

This is an informational message and requires no user response.

5031-807   **The resource *resource* is already compiled. Use the –r command option to replace it or the –s command option to skip it.**

Explanation

You entered the **pdxtpdl** command to compile the resource specified in the message. That resource is already compiled on the system. If this is a new version of the resource and you want to compile it again, you must specify the **-r** option. If you want to skip the resource, you must specify the **-s** option.

System action

Infoprint XT cannot continue.

User response

Specify the **–r** command option or the **–s** command option. Then, compile the JSL again.

5031-808   **The JCL Metrics Compiler did not process *resource_name*, which is a binary file.**

Explanation

The resource file, *resource_name*, contains binary data and has an extension for a binary resource.

System action

Infoprint XT cannot process the request.

User response

Examine the file to determine its contents. The file might not be a JSL source file.

Appendix G. Infoprint XT color messages: 5032-*nnn*

This appendix lists the 5032 series of messages that Infoprint XT can issue for the **pdxtcolor** command. Depending on the message, the message might include an additional error return code. See "Return codes from the pdxtcolor command" on page 148 for explanations of these numbers.

5032-001 **Ink catalog name '*Catalog name*' is not valid for the manual ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.**

Explanation

You issued a command and included a catalog name that is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid catalog name (SOLID, DFAULT, XEROX1). Then, issue the command again.

5032-002 **Ink palette name '*Palette _name*' is not valid for the manual ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.**

Explanation

You issued a command and included a palette name that is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid palette name. Then, issue the command again.

5032-003 **Ink color name '*Ink_name*' is not valid for the manual ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.**

Explanation

You issued a command and included an ink name that is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid ink name. Then, issue the command again.

5032-004 **Entry '*Catalog_name.Palette_name.Ink_name*' is not valid for the ink correlation table.**

Explanation

You issued a command and included an entry from the manual ink correlation table that is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid entry from the manual ink correlation table. Then, issue the command again.

5032-005 **Cannot process the ink correlation table (error *Internal_error_number*).**

Explanation

This message indicates that an internal error exists in the processing of the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-006 **Cannot open ink correlation table file *File_name* (error *Error_number*). ...*msg***

Explanation

Infoprint XT cannot open the ink correlation table file. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the file or the directory that contains the file and correct the problem. Then, issue the command again.

5032-008	**Interpretation character '*Interpretation_character*' is not valid for the ink correlation table entry '*Catalog_name.Palette_name.Ink_ name*'.**

Explanation

Infoprint XT loads the entry from the ink correlation table, but the interpretation character is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the ink correlation table file. Then, issue the command again.

5032-009	**Color type character '*Type_character*' is not valid for the ink correlation table entry '*Catalog_name.Palette_name.Ink_ name*'.**

Explanation

Infoprint XT loads the entry from the ink correlation table, but the type character is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the ink correlation table file. Then, issue the command again.

5032-010	**CIELAB L* value '*L*_value*' is not valid for ink correlation table entry**

'*Catalog_name.Palette_name.Ink_ name*'.

Explanation

Infoprint XT loads the entry from the ink correlation table, but the CIELAB L* value is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid CIELAB L* value. Then, issue the command again.

5032-011	**Grayscale value '*Grayscale_value*' is not valid for ink correlation table entry '*Catalog_name.Palette_name.Ink_ name*'.**

Explanation

Infoprint XT loads the entry from the ink correlation table, but the grayscale value is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid grayscale value. Then, issue the command again.

5032-012	**CIELAB a* value '*a*_value*" is not valid for ink correlation table entry '*Catalog_name.Palette_name.Ink_ name*'.**

Explanation

Infoprint XT loads the entry from the ink correlation table, but the CIELAB a* value is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid CIELAB a* value. Then, issue the command again.

5032-013	**CIELAB b* value '*b*_value*' is not valid for ink correlation table entry**

'Catalog_name.Palette_name.Ink_name'.

Explanation

Infoprint XT loads the entry from the ink correlation table, but the CIELAB b* value is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid CIELAB b* value. Then, issue the command again.

5032-014	Entry type '*Entry_type*' is not valid for loading the ink correlation table.

Explanation

Infoprint XT loads the entry from the ink correlation table, but the entry type is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid entry type. Then, issue the command again.

5032-015	Incorrect ink interpretation control for ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.

Explanation

Infoprint XT writes the ink correlation file, but the ink interpretation is not valid.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-016	Cannot write ink correlation file in step '*Write_step_number*' for ink correlation table entry '*Catalog_name.Palette_name.Ink_*

name' (error *System_error_code*). *...msg*

Explanation

Infoprint XT cannot write the ink correlation file. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-017	Ink type '*Ink_type*' is not valid for ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.

Explanation

Infoprint XT writes the ink correlation table file for the entry, but the ink type is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid ink type. Then, issue the command again

5032-018	Option '-k *option_string*' contains too few parameters for loading a solid color into the ink correlation table.

Explanation

You issued a command to load a solid color into the ink correlation table and included too few parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-019	Incorrect -k '*option_string*' option type control parameter '-

k_option_string' for loading a solid color into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table, but the type control is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-020	The first numeric value '*First_numeric_value_of_the_-k_option*' of the '-k *option_string*' option is not valid for loading a solid color name into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table and included an incorrect value for the first numeric '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-021	The second numeric value '*Second_numeric_value_of_the_-k_option*' of the '-k *option_string*' option is not valid for loading a solid color name into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table and included an incorrect value for the second numeric '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-022	The third numeric value '*Third_numeric_value_of_the_-k_option*' of the '-k *option_string*' option is not valid for loading a solid color name into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table and included an incorrect value for the third numeric '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-023	The fourth numeric value '*Fourth_numeric_value_of_the_-k_option*' for '-k *option_string*' option is not valid for loading a solid color name into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table and included an incorrect value for the fourth numeric **-k** option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-024	Option '-k *option_string*' contains too many parameters for loading a solid color name with sRGB color type into the ink correlation table.

Explanation

You issued a command to load a solid color name with sRGB color type into the ink correlation table and included too many parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-025   **Option '-k** *option_string***' contains too many parameters for loading a solid color name with CIELAB color type into the ink correlation table.**

Explanation

You issued a command to load a solid color name with CIELAB color type into the ink correlation table and included too many parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-026   **Option '-k** *option_string***' contains too many parameters for loading a solid color name with grayscale color type into the ink correlation table.**

Explanation

You issued a command to load a solid color name with grayscale color type into the ink correlation table and included too many parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-027   **The ink color type is not valid for converting from sRGB to CIELAB.**

Explanation

You issued a command to convert from sRGB to CIELAB, but the ink color type is not valid.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-028   **Option '-e** *option_string***' contains too few parameters for editing an ink name in the ink correlation table.**

Explanation

You issued a command to edit an ink name in the ink correlation table and included too few parameters for the '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-029   **Incorrect '-e** *interpretation_control***' option interpretation control parameter '-***e_option_string***' for editing an ink name in the ink correlation table.**

Explanation

You issued a command to edit an ink name in the ink correlation table and included an interpretation control that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-030   **Type control '***The_type_control***' of the '-e** *option_string***' option is not valid for editing an ink name in the ink correlation table.**

Explanation

You issued a command to edit an ink name in the ink correlation table and included an type control that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-031	The first numeric value '*First_numeric_value_of_the_-e_option*' of the '-e *option_string*' option is not valid for editing an ink name in the ink correlation table.

Explanation

You issued a command to edit an ink name in the ink correlation table and included an incorrect value for the first numeric '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-032	The second numeric value '*Second_numeric_value_of_the_-e_option*' of the '-e *option_string*' option is not valid for editing an ink name in the ink correlation table.

Explanation

You issued a command to edit an ink name in the ink correlation table and included an incorrect value for the second numeric '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-033	The third numeric value '*Third_numeric_value_of_the_-e_option*' of the '-e *option_string*' option is not valid for editing an ink name in the ink correlation table.

Explanation

You issued a command to edit an ink name in the ink correlation table and included an incorrect value for the third numeric '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-034	The fourth numeric value '*Fourth_numeric_value_of_the_-e_option*' of the '-e *option_string*' option is not valid for editing an ink name in the ink correlation table.

Explanation

You issued a command to edit an ink name in the ink correlation table and included an incorrect value for the fourth numeric '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-035	Option '-e *option_string*' contains too many parameters for editing an ink name with **CIELAB** color type in the ink correlation table.

Explanation

You issued a command to edit an ink name with CIELAB color type in the ink correlation table and included too many parameters for the '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-036	**Option '-e** *option_string*' **contains too many parameters for editing an ink name with sRGB color type in the ink correlation table.**

Explanation

You issued a command to edit an ink name with sRGB color type in the ink correlation table and included too many parameters for the '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-037	**Option '-e** *option_string*' **contains too many parameters for editing an ink name with grayscale color type in the ink correlation table.**

Explanation

You issued a command to edit an ink name with grayscale color type in the ink correlation table and included too many parameters for the '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-038	**Option '-e** *option_string*' **contains too many parameters for editing an ink name in the ink correlation table.**

Explanation

You issued a command to edit an ink name in the ink correlation table and included too many parameters for the '**-e**' option

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-039	**Option '-k** *option_string*' **contains too many parameters for loading a solid color name into the ink correlation table.**

Explanation

You issued a command to load a solid color name into the ink correlation table and included too many parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-040	**Option '-r** *option_string*' **contains too many parameters for renaming a solid color in the ink correlation table.**

Explanation

You issued a command to rename a solid color in the ink correlation table and included too many parameters for the '**-r**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-041	**Option '-n** *option_string*' **contains too many parameters for selecting a solid color name in the ink correlation table.**

Explanation

You issued a command to select a solid color name in the ink correlation table and included too many parameters for the '**-n**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-042	Option '-t *option_string*' contains too many parameters for specifying shading in an ink correlation table entry.

Explanation

You issued a command to set the shading for an entry in the ink correlation table and included too many parameters for the '**-t**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-044	Option '-l *option_string*' contains too many parameters for specifying color spectrum limits in the ink correlation table.

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table and included too many parameters for the '**-l**' option

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-045	Cannot find -e option parameters for editing an ink name in the ink correlation table.

Explanation

You issued a command to edit an ink name in the ink correlation table, but Infoprint XT could not find parameters for the '**-e**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-046	Cannot find -k option parameters for loading a solid color name into the ink correlation table.

Explanation

You issued a command to load a solid color name into the ink correlation table, but Infoprint XT could not find parameters for the '**-k**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-047	Cannot find -r option parameters for renaming a solid color in the ink correlation table.

Explanation

You issued a command to rename a solid color in the ink correlation table, but Infoprint XT could not find parameters for the '**-r**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-048	Cannot find -n option parameters for selecting a solid color name in the ink correlation table.

Explanation

You issued a command to select a solid color name in the ink correlation table, but Infoprint XT could not find parameters for the '**-n**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-049   **Cannot find -t option parameters for specifying shading for an entry in the ink correlation table.**

Explanation

You issued a command to set the shading for an entry in the ink correlation table, but Infoprint XT could not find parameters for the '**-t**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-051   **Cannot find -l option parameters for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table, but Infoprint XT could not find parameters for the '**-l**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-052   **Cannot find entry '*Catalog_name.Palette_name.Ink_name*' in the ink correlation table.**

Explanation

This message indicates that the entry is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

Specify a valid combination of catalog, palette, and ink name. Then, issue the command again.

5032-053   **Cannot load solid color name '*Color_name*' into the ink correlation table (error *Internal_error_number*).**

Explanation

This message indicates that loading a solid color name into the ink correlation table resulted in an error.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-054   **Solid color type is not CIELAB when loading the CIELAB palette for solid color '*Color_name*' into the ink correlation table.**

Explanation

Infoprint XT loads a CIELAB palette for a solid color, but the type of the solid color is not CIELAB.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-055   **Ink name '*Ink_name*' is not valid (error *Internal_error_number*).**

Explanation

Infoprint XT processes an ink name for internal use, but the ink name is not valid.

System action

Infoprint XT cannot process the request.

User response

Specify a valid ink name. Then, issue the command again.

5032-056   **Length of option string '*option_string*' is outside the valid range of *minimum_length* through *maximum_length* characters.**

Explanation

You issued a command, but the length of the option string is not valid. The message text specifies the limits.

System action

Infoprint XT cannot process the request.

User response

Specify a valid length for the option string. Then, issue the command again.

5032-057	Option string '*Option_string*' contains characters that are not alphanumeric.

Explanation

You issued a command, but the option string contains characters that are not alphanumeric.

System action

Infoprint XT cannot process the request.

User response

Specify a valid option string. Then, issue the command again.

5032-058	Cannot find an integer value in the option string.

Explanation

You issued a command, but Infoprint XT could not find an integer value in the option string.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-059	Integer value '*Integer_value*' contains characters that are not valid.

Explanation

You issued a command, but the integer value contains characters that are not valid. The integer value should contain only numerical and sign characters.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-060	Integer value '*integer_value*' is outside the valid range of *minimum_value* through *maximum_value*.

Explanation

You issued a command, but the integer value exceeds the permitted limits. The message text specifies the limits.

System action

Infoprint XT cannot process the request.

User response

Specify valid values. Then, issue the command again.

5032-061	Cannot find a hexadecimal value in the option string.

Explanation

You issued a command, but Infoprint XT cannot find the hexadecimal value for the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-062	Hexadecimal value X'*hex_value*' contains characters that are not valid.

Explanation

You issued a command, but the hexadecimal value contains characters that are not valid. You must specify the value using hexadecimal characters.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-063   **Hexadecimal value X'*hex_value*' must be less than or equal to *maximum_value.***

Explanation

You issued a command, but the hexadecimal value exceeds the maximum limit. The message text specifies the limit.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-064   **Hexadecimal value X'*hex_value*' is outside the valid range of X'*minimum_value*' through X'*maximum_value*'.**

Explanation

You issued a command, but the hexadecimal value exceeds the permitted limits. The message text specifies the limits.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-065   **Cannot find a floating point value in the option string.**

Explanation

You issued a command, but Infoprint XT could not find the floating point value for the option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-066   **Floating point value '*Floating_point_value*' contains characters that are not valid.**

Explanation

You issued a command, but the floating point value contains characters that are not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-067   **Floating point value '*Floating_point_value*' contains too many digits after the decimal point.**

Explanation

You issued a command, but the floating point value contains more than 2 digits after the decimal point.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-068   **Floating point value '*floating_point_value*' is outside the valid range of *minimum_value* through *maximum_value.***

Explanation

You issued a command, but the floating point value exceeds the permitted limits. The message text specifies the limits.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-069   **Cannot find the color name for sampling the ink correlation table colors.**

Explanation

You issued a command to sample the ink correlation table colors, but Infoprint XT could not find the color name.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-070   **Cannot find ink catalog name '*Catalog_name*' for ink correlation table entry *Catalog_name.Palette_name.Ink_name*.**

Explanation

Infoprint XT processes a command, but the catalog name for the entry is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

Specify a valid catalog name (SOLID, DFAULT, XEROX1). Then, issue the command again.

5032-071   **Cannot find ink palette name '*Palette_name*' for ink correlation table entry *Catalog_name.Palette_name.Ink_name*.**

Explanation

Infoprint XT processes a command, but the ink name for the entry is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

Specify a valid palette name. Then, issue the command again.

5032-072   **Cannot find ink color name '*Ink_name*' for ink correlation table entry *Catalog_name.Palette_name.Ink_name*.**

Explanation

Infoprint XT process a command, but the ink name for the entry in the ink correlation table is not found.

System action

Infoprint XT cannot process the request.

User response

Specify a valid ink name. Then, issue the command again.

5032-073   **Cannot create sample AFP file *Sample_AFP_file* (error *Internal_error_number*).**

Explanation

Infoprint XT cannot create the sample AFP file. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Review the user write permissions for the metrics subdirectory in the destination directory. Then, issue the command again. If you cannot determine the problem, report this message to your technical support representative.

5032-075   **Cannot write to sample AFP file *Sample_AFP_file* at step *Write_step_index* (error *Internal_error_number*). ...msg**

Explanation

Infoprint XT cannot write to the sample AFP file. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

Examine the available disk space. Then, issue the command again. If you cannot determine the problem, report this message to your technical support representative.

5032-076   **An array index exceeds the array boundary (error *Internal_error_number*).**

Explanation

Infoprint XT processes a command, but an internal error signals that the array index exceeds the array boundary.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-077   **Cannot find ink color name '*Ink_name*' for solid color name '*Color_name*' in the ink correlation table (error *Internal_error_number*).**

Explanation

Infoprint XT processes a command, but the ink name for the solid color is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem report this message to your technical support representative.

5032-078   **Ink catalog name '*Catalog_name*' is not valid for adding the ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.**

Explanation

Infoprint XT processes a command, but the catalog name is not valid for adding the entry to the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

Specify a valid catalog name (SOLID, DFAULT, XEROX1) for the entry. Then, issue the command again. If you cannot determine the problem, report this message to your technical support representative.

5032-079   **Cannot find ink catalog name '*Catalog_name*' for adding the ink correlation table entry '*Catalog_name.Palette_name.Ink_name*'.**

Explanation

Infoprint XT processes a command, but the catalog name is not found in the ink correlation table for adding the entry.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-080   **The number of parameters for the '-r *Rename_option_string*' option is not correct for renaming a solid color in the ink correlation table.**

Explanation

You issued a command to rename a solid color in the ink correlation table, but the number of parameters for the '**-r**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-081   **The length of the color names for the '-r *Rename_option_string*' option is not valid for renaming a solid color in the ink correlation table.**

Explanation

You issued a command to rename a solid color in the ink correlation table, but the length of the color names for the '**-r**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-082	Cannot rename standard solid color '*Color_name*'.

Explanation

Infoprint XT cannot rename the Xerox standard color names.

System action

Infoprint XT cannot process the request.

User response

Specify a custom color. Then, issue the command again.

5032-083	Cannot find ink catalog name '*Catalog_name*' for ink palette '*Catalog_name.Palette_name*' in the ink correlation table.

Explanation

Infoprint XT processes a command, but the catalog name for the palette is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to technical support representative.

5032-084	Cannot find ink palette name '*Palette_name*' for ink palette '*Catalog_name.Palette_name*' in the ink correlation table.

Explanation

Infoprint XT processes a command, but the palette name for the palette is not found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-085	The number of parameters for the '-n *color_select_option_value*' option is not correct for selecting a solid color in the ink correlation table.

Explanation

You issued a command to select a solid color in the ink correlation table, but the number of parameters for the '**-n**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-086	The length of the color names for the '-n *color_select_option_value*' option is not valid for selecting a solid color in the ink correlation table.

Explanation

You issued a command to select a solid color in the ink correlation table, but the length of the color names for the '**-n**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-087	The number of parameters for the '-t *color_shading_option_value*'

option is not correct for specifying shading for an entry in the ink correlation table.

Explanation

You issued a command to set the shading for an entry in the ink correlation table, but the number of parameters for the '**-t**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-088	**The length of the parameter for the '-t** *color_shading_option_value*' **option exceeds the limit for specifying shading for an entry in the ink correlation table.**

Explanation

You issued a command to set the shading for an entry in the ink correlation table, but the length of the parameter for the '**-t**' option exceeds the limit.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-089	**Incorrect '-t** *color_shading_option_value*' **option parameter for specifying shading for an entry in the ink correlation table.**

Explanation

You issued a command to set the shading for an entry in the ink correlation table, but the parameter for the '**-t**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-090	**Cannot find a short ink name for the long ink name** '*Catalog_name.Palette_name.Ink_name*' **in the ink correlation table.**

Explanation

Infoprint XT processes a command, but the short ink name is not found in the ink correlation table for an entry that has a standard long ink name.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-091	**Incorrect number of '-l** *color_select_option_value*' **option parameters for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table, but the number of parameters for the '**-l**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-092	**The first numeric value of the '-l** *color_spectrum_limits_option_value*' **option parameter is not valid for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table and included a value for the first numeric '**-l**' option that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-093	**The second numeric value of the '-l** *color_spectrum_limits_option_value*' **option parameter is not valid for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table and included a value for the second numeric '**-l**' option that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-094	**The third numeric value of the '-l** *color_spectrum_limits_option_value*' **option parameter is not valid for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table and included a value for the third numeric '**-l**' option that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-095	**The fourth numeric value of the '-l** *color_spectrum_limits_option_value*' **option parameter is not valid for specifying color spectrum limits in the ink correlation table.**

Explanation

You issued a command to set the limits for the color spectrum in the ink correlation table and included a value for the fourth numeric '**-l**' option that is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-096	**Cannot delete palette name** '*Palette_name*'**: palette not found in the ink correlation table.**

Explanation

Infoprint XT processes a command, but the palette name is not found in the ink correlation table for deleting it.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-097	**Cannot seek in the file** *File_name* **(error** *System_error_number*). ...*msg*

Explanation

Infoprint XT cannot seek in a file. The message provides additional information about why the action failed.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-101	**Solid color and palette types do not match for updating palette** '**XEROX1.***Palette_name*' **shading control.**

Explanation

Infoprint XT updates the shading control for a palette of a solid color, but the solid color type and the palette type do not match.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-102   **Shading interpretation control '*Shading_interpretation_control*' is not not valid for updating shading in the 'XEROX1.*Palette_name*' palette.**

Explanation

Infoprint XT updates the shading for the palette, but the shading interpretation control is not valid.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-103   **Cannot change color type for the MONO solid color.**

Explanation

Infoprint XT cannot change the type for standard solid color MONO.

System action

Infoprint XT cannot process the request.

User response

The type for standard solid color MONO must be grayscale.

5032-104   **Solid color '*Color_name*' type is not valid for loading into the ink correlation table.**

Explanation

Infoprint XT loads the solid color into the ink correlation table, but the type of the solid color is not valid.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-105   **Solid color '*Color_name*' grayscale palette type is not valid for loading into the ink correlation table.**

Explanation

Infoprint XT loads a grayscale palette, but a type other than grayscale is found in the ink correlation table.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-106   **Solid color '*Color_name*' and palette 'XEROX1.*Color_name*' types do not match for loading the solid color into the ink correlation table.**

Explanation

Infoprint XT loads a solid color into the ink correlation table, but the types of the solid color and the palette do not match.

System action

Infoprint XT cannot process the request.

User response

If you cannot determine the problem, report this message to your technical support representative.

5032-107   **Cannot rename a solid color to an existing solid color ('*Color_name*').**

Explanation

Infoprint XT cannot rename a solid color to an existing solid color.

System action

Infoprint XT cannot process the request.

User response

Specify a solid color name that is not one of the Xerox standard solid colors. Then, issue the command again.

5032-108	**Cannot load solid color '*Color_name*' for palette 'XEROX1.*Palette_name*' into the ink correlation table. Solid color type is CIELAB, but associated palette type is grayscale.**

Explanation

Infoprint XT loads a solid color into the ink correlation table, but the type of the solid color is CIELAB and the type of the palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

Specify '**-p yes**' option for loading the solid color of type CIELAB in order to overwrite the grayscale palette with a CIELAB palette or specify the grayscale type for loading the solid color. Then, issue the command again.

5032-109	**Cannot load solid color '*Color_name*' for palette 'XEROX1.*Palette_name*', into the ink correlation table. Solid color type is sRGB, but associated palette type is grayscale.**

Explanation

Infoprint XT loads a solid color into the ink correlation table, but the type of the solid color is sRGB and the type of the associated palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

Specify '**-p yes**' option for loading the solid color of type sRGB in order to overwrite the grayscale palette with a CIELAB palette (converted from sRGB) or specify the grayscale type for loading the solid color. Then, issue the command again.

5032-110	**Cannot load solid color '*solid_color_name*' for palette 'XEROX1.*Palette_name*', into the ink correlation table. Solid color type is grayscale, but associated palette type is CIELAB.**

Explanation

Infoprint XT loads a solid color into the ink correlation table, but the type of the solid color is grayscale and the type of the palette is CIELAB.

System action

Infoprint XT cannot process the request.

User response

Specify '**-p yes**' option for loading the solid color of type grayscale in order to overwrite the CIELAB palette with a grayscale palette or specify the CIELAB type for loading the solid color. Then, issue the command again.

5032-111	**Cannot edit color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*', in the ink correlation table. Color type is CIELAB, but associated palette type is grayscale.**

Explanation

Infoprint XT edits a color in the ink correlation table, but the type of the color is CIELAB and the type of the associated palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for editing the solid color of type CIELAB in order to overwrite the grayscale palette with a CIELAB palette or specify the grayscale type for editing the solid color. For the other cases, specify the grayscale

type for editing the color. Then, issue the command again.

5032-112 **Cannot edit color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*' in the ink correlation table. Color type is sRGB, but associated palette type is grayscale.**

Explanation

Infoprint XT edits a color in the ink correlation table, but the type of the color is sRGB and the type of the associated palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for editing the solid color of type sRGB in order to overwrite the grayscale palette with a CIELAB palette (converted from sRGB) or specify the grayscale type for editing the solid color. For the other cases, specify the grayscale type for editing the color. Then, issue the command again.

5032-113 **Cannot edit color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*' in the ink correlation table. Color type is grayscale, but associated palette type is CIELAB.**

Explanation

Infoprint XT edits a color in the ink correlation table, but the type of the color is grayscale and the type of the associated palette is CIELAB.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for editing the solid color of type grayscale in order to overwrite the CIELAB palette with a grayscale palette or specify the CIELAB type for editing the solid color. For the other cases, specify the CIELAB type for editing the color. Then, issue the command again.

5032-114 **Cannot find -t option parameters for selecting a color in the ink correlation table.**

Explanation

You issued a command to select a color in the ink correlation table, but Infoprint XT could not find parameters for the '**-t**' option.

System action

Infoprint XT cannot process the request.

User response

Specify both the '**-n** (color name)' and '**-t** (shading control)' parameters. Then, issue the command again.

5032-115 **Cannot find '-e *option_string*' parameter shading or color values for editing an ink in the ink correlation table.**

Explanation

You issued a command to edit an ink in the ink correlation table, but Infoprint XT could not find shading control or color values.

System action

Infoprint XT cannot process the request.

User response

Specify the shading control or the color values for the specified color. Then, issue the command again.

5032-116 **Cannot load color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*' from the manual ink correlation table. Color type is CIELAB, but associated palette type is grayscale.**

Explanation

Infoprint XT loads a color from the manual ink correlation table, but the type of the color is CIELAB and the type of the associated palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for loading the solid color of type CIELAB in order to overwrite the grayscale palette with a CIELAB palette or specify the grayscale type for loading the solid color. For the other cases, specify the grayscale type for loading the color. Then, issue the command again.

5032-117	**Cannot load color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*' from the manual ink correlation table. Color type is sRGB, but associated palette type is grayscale.**

Explanation

Infoprint XT loads a color from the manual ink correlation table, but the type of the color is sRGB and the type of the associated palette is grayscale.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for loading the solid color of type sRGB in order to overwrite the grayscale palette with a sRGB palette or specify the grayscale type for loading the solid color. For the other cases, specify the grayscale type for loading the color. Then, issue the command again.

5032-118	**Cannot load color '*Catalog_name.Palette_name.Ink_name*' for palette 'XEROX1.*Palette_name*' from the manual ink correlation table. Color type is grayscale, but associated palette type is CIELAB.**

Explanation

Infoprint XT loads a color from the manual ink correlation table, but the type of the color is grayscale and the type of the associated palette is CIELAB.

System action

Infoprint XT cannot process the request.

User response

For the case of the solid colors, specify '**-p yes**' option for loading the solid color of type grayscale in

order to overwrite the CIELAB palette with a grayscale palette or specify the CIELAB type for loading the solid color. For the other cases, specify the CIELAB type for loading the color. Then, issue the command again.

5032-119	**Option '-r *option_string*' contains too many parameters for copying a solid color in the ink correlation table.**

Explanation

You issued a command to copy a solid color in the ink correlation table and included too many parameters for the '**-r**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-120	**Option '-u *option_string*' contains too many parameters for deleting a solid color from the ink correlation table.**

Explanation

You issued a command to delete a solid color from the ink correlation table and included too many parameters for the '**-u**' option

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-121	**Cannot find -r option parameters for copying a solid color in the ink correlation table.**

Explanation

You issued a command to copy a solid color in the ink correlation table, but Infoprint XT could not find parameters for the '**-r**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-122   Cannot find -u option parameters for deleting a solid color from the ink correlation table.

Explanation

You issued a command to delete a solid color from the ink correlation table, but Infoprint XT could not find parameters for the '**-u**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-123   Incorrect number '-r *Copy_option_string*' option parameters for copying a solid color in the ink correlation table.

Explanation

You issued a command to copy a solid color in the ink correlation table, but the number of parameters for the '**-r**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-124   Incorrect '-r *color_copy_option_value*' parameter color name length for copying a solid color in the ink correlation table.

Explanation

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-125   Incorrect number of '-u *Delete_option_string*' option parameters for deleting a solid color from the ink correlation table.

Explanation

You issued a command to delete a solid color from the ink correlation table, but the number of parameters for the '**-u**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-126   Incorrect '-u *color_delete_option _value*' parameter color name length for deleting a solid color from the ink correlation table.

Explanation

You issued a command to delete a solid color from the ink correlation table, but the length of the color names for the '**-u**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-127   Incorrect '-u *Delete_option_string*' option parameter '*Delete_option_parameter*' for deleting a solid color from the ink correlation table.

Explanation

You issued a command to delete a solid color from the ink correlation table, but the parameter of the '**-u**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-128	**Cannot delete standard solid color '*Standard solid color name*'.**

Explanation

Infoprint XT cannot delete a standard solid color.

System action

Infoprint XT cannot process the request.

User response

Specify a solid color name that is not one of the Xerox standard solid colors. Then, issue the command again.

5032-129	**Cannot use the '*pdxtcolor -f copy*' function for overwriting standard solid color '*Standard_solid_color_name*'.**

Explanation

The '*pdxtcolor -f copy*' function cannot overwrite a standard solid color.

System action

Infoprint XT cannot process the request.

User response

Specify a solid color name that is not one of the Xerox standard solid colors. Then, issue the command again.

5032-130	**Option '-c *option_string*' contains too many parameters for generating color collections in the ink correlation table.**

Explanation

You issued a command to generate color collections in the ink correlation table and included too many parameters for the '**-c**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-131	**Cannot find the '-c' option parameters for generating color collections in the ink correlation table.**

Explanation

You issued a command to generate color collections in the ink correlation table, but Infoprint XT could not find parameters for the '**-c**' option.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-132	**Incorrect number of '-c *Generate_option_string*' option parameters for generating color collections in the ink correlation table.**

Explanation

You issued a command to generate color collections in the ink correlation table, but the number of parameters for the '**-c**' option is not correct.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-133	**Incorrect '-c *Collections_option_string*' option parameter '*Collections_option_parameter*' for generating color collections in the ink correlation table.**

Explanation

You issued a command to generate color collections in the ink correlation table, but the parameter of the '**-c**' option is not valid.

System action

Infoprint XT cannot process the request.

User response

Review the command syntax. Then, issue the command again.

5032-134   **Cannot find predefined collection colors for sampling with '-s *collection_colors*'.**

Explanation

You issued a command, to sample the predefined colors, but Infoprint XT cannot find the predefined solid colors created by using the '**-f color_collections**' option.

System action

Infoprint XT cannot process the request.

User response

Create the predefined collection colors in the ink correlation table, or use a different option for the sampling '**–s**' parameter.

Appendix H. DJDE report messages: ALTER through XMP

This appendix lists the possible messages that you might see in the Dynamic Job Descriptor Entry report generated by Infoprint XT, and includes a short explanation of each message. These messages can occur in any order in the DJDE report; they are listed in alphabetic order by DJDE name here. If the DJDE report contains a data stream converter message, you can find its explanation in Appendix E, "Data stream converter messages: 5019-nnn X (xxx)," on page 311.

Many of the messages in the DJDE report contain variable data, shown in italics, which Infoprint XT replaces with specific information when it issues the messages. A vertical bar (|) between portions of variable data means that Infoprint XT uses only one of the variable-data strings when it issues the message.

Notes:

1. Any value that specifies inches as a unit of measure can have up to three decimal places.

2. The default is that Infoprint XT does not produce a DJDE report when it converts Xerox data streams. To generate a DJDE report, you must include the **xrptfile** conversion parameter when you submit the job. For more information, see xrptfile transform conversion parameter on page "xrptfile = . | fullpath" on page 215.

3. For a list of supported and unsupported DJDE commands, see "Supported and unsupported Xerox DJDE and PDL commands" on page 15.

| ALTER | New position for *img_name* IMG (page segment *pseg_name*) is (*x,y*) inches or (*x,y*) pels. The requested graphic scaling factor was *number*. |

Specifies the new imaging parameters for a previously defined reference image. *img_name* identifies the Xerox IMG file. *pseg_name* identifies the Advanced Function Presentation page segment. *x* and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate. Infoprint XT only includes the last sentence of the message when the scaling factor is a number other than 1.

| ASSIGN | The data stream converter made these channel to line assignments: *ch_number* to line(s) *line_num1 ... line_numN*. |

Specifies the VFU channel-to-line-number assignments. *ch_number* is the channel number. *line_num1* through *line_numN* specify the line numbers assigned to this channel.

| BATCH | The data stream converter does not support batch mode graphics. Parameter was *START | END*. |

The job specified processing for online banner pages and batch-mode graphics. Infoprint XT does not support BATCH=START or BATCH=END.

| BEGIN | The new page position is (*x,y*) inches or (*x,y*) pels. |

Specifies the starting position of one or more logical pages. *x* and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate.

| BFORM | Overlay *overlay_name* will appear on the back of subsequent sheets. |

When used with **DUPLEX=YES**, this message specifies that a form prints on the back side of the page. *overlay_name* identifies the AFP overlay that prints.

| BFORM | No overlay appears on the back of subsequent sheets. |

Specifies that no overlay prints on the back of subsequent pages. This might be an informational message, or it might indicate that an internal error exists in the job, such as two DJDE packets set to take effect at the same time.

| BFORM | These overlays print on the back of subsequent sheets. |

The job specifies copy-sensitive forms. The message text includes:

Overlay:	Copy ply:
overlay1	*x* to *y*
⋮	
overlayN	*x* to *y*

overlay1 through *overlayN* identify the AFP overlays. The Copy ply column lists the report copies on which the associated overlay prints. *x* and *y* are numeric values.

BOF	The new bottom of form line number is *number*.

Specifies that *number* is the line number of the bottom of the form.

C	The data stream converter found a comment DJDE.

A comment DJDE is present.

CANCEL	The data stream converter no longer prints these graphics on each page automatically:

Specifies cancellation of automatic graphic imaging. The message text includes:

.img name:	Page segment name:
img_name	*pseg_name*

img_name identifies the Xerox IMG file. *pseg_name* identifies the corresponding AFP page segment.

COLLATE	The data stream converter collates multi-copy reports.

Specifies that Infoprint XT collates the reports.

COLLATE	The data stream converter does not collate multi-copy reports.

Specifies that Infoprint XT does not collate the reports.

COPIES	The number of *report* copies is *number*.

Specifies that the copies are *report* copies and the total number of copies is *nn*.

COPIES	The number of *sheet* copies is *number*.

Specifies that the copies are *sheet* copies and the total number of copies is *nn*

DATA	Printable data now begins at byte *x* and continues for up to *y* bytes.

Specifies the beginning location of the printable data in the input record and the length of the printable information. *x* and *y* are integer values.

DEPT	The department name for account billing is *dept_name*.

Specifies the *dept_name* to associate with accounting information.

DJDE	The data stream converter found a DJDE identifier on record *line_number:djde_record*.

Specifies that *line_number* contains one or more DJDEs (*djde_record*).

Note: There is no DJDE with the name DJDE. The message title is for explanation retrievability only.

DJDE	The data stream converter found a DJDE identifier on record *line_number:djde_record* (downloadable PDE - fonts will not be used).

Specifies that *line_number* contains one or more DJDEs (*djde_record*).

Note: There is no DJDE with the name DJDE. The message title is for explanation retrievability only.

DJDE	The data stream converter found a DJDE identifier on record *line_number:djde_record* (downloadable PDE - fonts listed in FORMAT message).

Specifies that *line_number* contains one or more DJDEs (*djde_record*).

Note: There is no DJDE with the name DJDE. The message title is for explanation retrievability only.

DUPLEX	The print mode is *mode*.

Specifies whether the print mode, *mode*, is DUPLEX or SIMPLEX.

END	The data stream converter found an END; DJDE.

An END; DJDE is present in the job data.

FCB	The data stream converter found an FCB on record: *nn*. The current environment specifies: *FCB_process	FCB_ignore*.

Infoprint XT found a LOAD FCB (forms control buffer; channel command X'63') in the input data stream. If the current environment is FCB=PROCESS, the FCB becomes effective immediately. Infoprint XT lists the new channel assignments and BOF after this message. If the current environment is FCB=IGNORE, Infoprint XT saves the FCB for possible use if the environment changes to FCB=PROCESS later in the job.

```
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
.
.
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
FCB bottom of form (BOF) line number is nn.
```

FCB	JDL: *JDL_name* | JDE: *JDE_name* specified no VFU channel assignments. The data stream converter uses the FCB found on record:*nn* instead.

The environment is FCB=PROCESS and the invoked JDL/JDE specifies no channel assignments. The data stream converter uses the VFU channel assignments of the most recently found FCB. Infoprint XT lists the FCB channel assignments and BOF after this message.

```
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
⋮
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
FCB bottom of form (BOF) line number is nn.
```

FCB	The data stream converter uses the FCB on record: *nn* instead of the VFU of the starting JDL / JDE environment restored by an RSTACK.

The environment is FCB=PROCESS and Infoprint XT found an RSTACK. Although the RSTACK has restored the environment of the starting JDL / JDE, the data stream converter uses the VFU channel assignments of the most recently found FCB. Infoprint XT lists the FCB channel assignments and BOF after this message.

```
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
⋮
The data stream converter assigned FCB channel:
channel_num to line number:line_num.
FCB bottom of form (BOF) line number is nn.
```

FEED	The input tray is *tray*.

Specifies whether the tray that contains the medium on which the job prints,*tray*, is AUXILIARY or MAIN.

FEED	The data stream converter does not support the *tray_name* option.

When you specify **xclb=none**, Infoprint XT issues this message when it finds FEED DJDE values (*tray_name*) other than MAIN, AUX or OPR. It uses the MAIN input tray in the generated AFP. Verify that you specified the correct value for the **xclb** conversion parameter. Also, make sure that the value of the FEED command in the job is correct.

FEED	The input media source is tray *mmc_tray*.

You specified a valid cluster database. Infoprint XT indicates the number of the input tray with *mmc_tray*.

FEED	The input media source is INIFEED tray *mmc_tray*.

You specified a valid cluster database. Infoprint XT indicates the number of the input tray with *mmc_tray*. If Infoprint XT finds a STOCKS DJDE, but the DJDE packet does not specify FEED, it uses the INIFEED tray.

FONTINDEX	The data stream converter no longer uses table reference characters.

Specifies that the job contains a FONTINDEX= NONE DJDE, and that the data stream converter no longer uses table reference characters to select fonts.

FONTINDEX	The data stream converter interprets input data bytes at offset: *offset* as table reference characters. The table reference characters number the fonts from: *number* and contain font references in the low-order: *bits* bits.

Specifies that the job contains a FONTINDEX DJDE, and identifies the location and the numbering of the font indexes that the data stream converter uses.

FONTS	Font *font_name* does not meet naming requirements.

The name of the Xerox font, *font_name*, is not in the correct format. Xerox font names must not exceed 6 characters and can include only uppercase alphabetic characters, numeric characters, and the dollar sign ($).

FONTS	The number of fonts listed is: *number*.

Specifies the fonts that the job lists. The message text includes:

.fnt name:	AFP name:	Line spacing value:
fnt_name	*afp_name*	*x* inches or *y* pels
fnt_name	*afp_name*	*x* inches or *y* pels
⋮		

fnt_name identifies the Xerox font name. *afp_name* identifies the corresponding AFP font name, which is either a coded font name or a character set and code page pair. *x* and *y* are numeric values.

FORMAT	font *font_name* does not meet naming requirements.

The name of the Xerox font, *font_name*, is not in the correct format. Xerox font names must not exceed 6 characters and can include only uppercase alphabetic characters, numeric characters, and the dollar sign ($).

FORMAT	The new page positions are:(*x*,*y*) inches or (*x*,*y*) pels

A new PDE has changed the page positions at a specific offset in the job. The message lists the new positions.

FORMAT	The number of fonts listed is: *number*.

Specifies the fonts that the job lists.

The message text includes:

.fnt name:	AFP name:	Line spacing value:
fnt_name	*afp_name*	*x* inches or *y* pels
fnt_name	*afp_name*	*x* inches or *y* pels
⋮		

fnt_name identifies the Xerox font name. *afp_name* identifies the corresponding AFP font name, which is either a coded font name or a character set and code page pair. *x* and *y* are numeric values.

FORMAT	A DJDE referenced PDE *pde_name*. The PDE contains this information: The print mode is *mode*. The number of fonts listed was *x*.

The job invoked a PDE. The message text includes:

.fnt name	AFP name(s)	line spacing value
fnt_name	*afp_name*	*x* inches or *y* pels
fnt_name	*afp_name*	*x* inches or *y* pels
⋮		

```
The new page position is (x,y) inches or
(x,y) pels.
```

pde_name identifies the name of the PDE. Infoprint XT indicates whether print mode, *mode*, for this PDE is LANDSCAPE or PORTRAIT. *fnt_name* identifies the name of the Xerox font. *afp_name* identifies the corresponding AFP font name, which is either a coded font name or a character set and code page pair. *x* and *y* are numeric values.

FORMS	Overlay *overlay_name* prints on the front of subsequent sheets.

This message occurs when the job specifies FORMS. *overlay_name* identifies the AFP overlay that prints on the front of subsequent sheets.

FORMS	No overlay appears on the front of subsequent sheets.

Specifies that no overlay prints on the front of subsequent pages. This might be an informational message, or it might indicate that an internal error exists in the job, such as two DJDE packets set to take effect at the same time.

FORMS	These overlays print on the front of subsequent sheets.

The job specifies copy-sensitive forms and either SIMPLEX or FORM. The message text includes:

Overlay:	Copy ply:
overlay_name1	*x* to *y*
⋮	
overlay_nameN	*x* to *y*

overlay_name1 through *overlay_nameN* identify the names of the AFP overlays. The Copy ply column lists the report copies on which the associated overlay prints. *x* and *y* are numeric values.

FORMS	Overlay *overlay_name* prints on both sides of subsequent sheets.

The FORMS DJDE only specifies one form. *overlay_name* identifies the AFP overlay that prints on both sides of the sheet.

GRAPHIC	The data stream converter found graphic image *img_name* (page segment *pseg_name*) imbedded in data stream. The image position is (*x,y*) inches or (*x,y*) pels. The converter automatically prints the graphic on each page. The requested graphic scaling factor was *number*.

img_name identifies the Xerox IMG file. *pseg_name* identifies the AFP page segment. *x* and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate. Infoprint XT indicates whether it automatically prints the graphic on each page. Infoprint XT only includes the last sentence of the message when the scaling factor is a number other than 1.

IMAGE	A DJDE referenced graphic image *img_name* (page segment *pseg_name*). The image position is (*x,y*) inches or (*x,y*) pels. The converter automatically prints the graphic on each page. The requested graphic scaling factor was *number*.

img_name identifies the Xerox IMG file. *pseg_name* identifies the AFP page segment. *x* and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate. Infoprint XT indicates whether it automatically prints the graphic on each page. Infoprint XT only includes the last sentence if the scaling factor is a number other than 1.

IMAGE	A DJDE referenced graphic image *img_name* (page segment *pseg_name*). The image position is (*x,y*) inches or (*x,y*) pels. The converter does not automatically print the graphic on each page. The requested graphic scaling factor was *number*.

img_name identifies the Xerox IMG file. *pseg_name* identifies the AFP page segment. *x* and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate. Infoprint XT indicates whether it automatically prints the graphic on each page. Infoprint XT only includes the last sentence if the scaling factor is a number other than 1.

IMAGE	A DJDE referenced one or more BATCH mode graphic images. The converter automatically prints each graphic on a separate page at image position (*x,y*) inches or (*x,y*) pels. The requested graphic scaling factor was *number*.

x and *y* are numeric values. *x* represents the horizontal coordinate. *y* represents the vertical coordinate. Infoprint XT only includes the last sentence of the message when the scaling factor is a number other than 1.

INVERT	The data stream converter ignores INVERT DJDEs because of conversion parameters in effect.

The data stream converter found an INVERT DJDE, but the conversion parameters include **xhonorinvert=no**, which is the default. Infoprint XT does not invert the output.

INVERT	The data stream converter inverts output on the front sides of subsequent sheets.

Specifies that front-side printing is inverted. Back-side printing is not inverted.

INVERT	The data stream converter inverts output on the back sides of subsequent sheets.

Specifies that back-side printing is inverted. Front-side printing is not inverted.

INVERT	The data stream converter inverts output on both sides of subsequent sheets.

Specifies that front-side and back-side printing is inverted.

INVERT	The data stream converter does not invert output on subsequent sheets.

Specifies that front-side and back-side printing is not inverted.

ITEXT	The data stream converter does not support the ITEXT DJDE.

An ITEXT DJDE, which Infoprint XT does not support, is present.

JDE	A DJDE referenced Job Descriptor Entry *jde_name*.

The name of the JDE in use, which is *jde_name*.

JDL	A DJDE referenced Job Descriptor Library *jdl_name*.

The name of the JDL file, which is *jdl_name*.

MARGIN	The left margin is *position_count* positions.

Infoprint XT calculates the left margin by multiplying *position_count* by the average character width of the font in effect.

MARGIN	The left margin is *x* inches or *y* pels.

This message occurs when the job specifies a left margin in terms of inches or centimeters, rather than positions.. *x* and *y* are numeric values. Infoprint XT uses pels as the unit of measure.

MODIFY	The data stream converter does not apply a CME to the input data.

No copy modifications are in effect, starting at the point in the job where Infoprint XT found this DJDE.

MODIFY	The data stream converter applies CME *cme_name* to the input data.

The input data invoked a CME that is not copy-sensitive to do copy modifications. *cme_name* identifies the name of the CME in effect.

MODIFY	The data stream converter applies these CMEs:

The input data invoked one or more copy-sensitive CMEs to do copy modifications. The message text includes:

CME name	**copy ply:**
cme_name	*x* to *y*
⋮	
cme_name	*x* to *y*

cme_name identifies the CME file. *x* and *y* are integer values.

NUMBER	The data stream converter does not number output pages.

The job contains a NUMBER=NO DJDE. Infoprint XT does not number pages.

NUMBER	The data stream converter numbers output pages by using font: *font_name*. The first page number is: *nn*.

The job contains a NUMBER DJDE that defines the numbering of the output pages. Infoprint XT report the location of the page number as line *nn* and column *nn*. *nn* is an integer value.

OVERPRINT	The data stream converter prints overprint lines.

Specifies whether the OVERPRINT option is PRINT.

OVERPRINT	The data stream converter ignores overprint lines.

Specifies whether the OVERPRINT option is IGNORE.

OVERPRINT	The data stream converter merges overprint lines.

Specifies whether the OVERPRINT option is MERGE.

OVERPRINT	The data stream converter prints only the first line in each group of overprint lines.

Specifies that the OVERPRINT option is PRINT2.

PMODE	The print mode is landscape.

Specifies whether the print mode is landscape.

PMODE	The print mode is portrait.

Specifies whether the print mode is portrait.

RAUX	The data stream converter selected the alternate paper source.

Specifies that Infoprint XT pulls one sheet from the alternate paper tray.

RFORM	Overlay *overlay_name* prints on the front of routing text pages.

Specifies that the AFP overlay *overlay_name* prints on all RTEXT pages.

ROFFSET	The data stream converter offsets the current sheet.

An ROFFSET statement is present. Infoprint XT offsets the current sheet.

ROFFSET	The data stream converter offsets the current report.

An ROFFSET statement is present. Infoprint XT offsets the current report.

RPAGE	The current logical page moves to the *side* of a new sheet.

This message occurs when the job specifies RPAGE WHEN=TOP and the SIDE= parameter forces the start of a new sheet. *side* is the FRONT or BACK of a new sheet that the logical page moves to.

RPAGE	The current logical page moves to the back of the current sheet.

This message occurs when a specification of SIDE=NEXT or SIDE=BACK forces output to the back of the current sheet.

RPAGE	The next logical page begins on the *side* of a new sheet.

This message occurs when the job specifies RPAGE WHEN=BOTTOM and the SIDE= parameter forces the start of a new sheet. *side* is the FRONT or BACK of the sheet that the logical page begins on.

RPAGE	The next logical page begins on the back of the current sheet.

This message occurs when a specification of SIDE=NEXT or SIDE=BACK does not force a new sheet.

RPAGE	The remaining text for the logical page moves to the *side* of a new sheet.

This message occurs when the job specifies RPAGE WHEN=NOW and the SIDE= parameter forces the start of a new sheet. *side* is the FRONT or BACK of the new sheet that the remaining text moves to.

RPAGE	The remaining text for the logical page moves to the back of the current sheet.

This message occurs when the job specifies RPAGE WHEN=NOW and the SIDE= parameter forces the start of a new sheet. The remaining text moves to the back of the new sheet.

RRESUME	Printing resumes. The RRESUME record prints.

Specifies whether the current record prints when printing resumes.

RRESUME	Printing resumes. The RRESUME record does not print.

Specifies whether the current record does not print when printing resumes.

| **RSTACK** | **The data stream converter found the end of the current report. The RSTACK record prints.** |

The starting print environment is now in effect. The RSTACK record prints.

| **RSTACK** | **The data stream converter found the end of the current report. The RSTACK record does not print.** |

The starting print environment is now in effect. The RSTACK record does not print.

| **RSUSPEND** | **The data stream converter suspends printing until it finds the end of report or an RRESUME record. The RSUSPEND record prints.** |

Specifies whether print retention starts with the current record.

| **RSUSPEND** | **The data stream converter suspends printing until it finds the end of report or an RRESUME record. The RSUSPEND record does not print.** |

Specifies that print retention does not start with the current record.

| **RTEXT** | **A DJDE provided this routing text information:** |

copy_num identifies the report copy. The message text includes:

Report copy	line no.	column no.	Xerox font name	AFP name(s)
copy_num	*line_num*	*column_num*	*xrx_name*	*afp_name*
copy_num	*line_num*	*column_num*	*xrx_name*	*afp_name*
⋮				
text				

line_num identifies the line number of the report. *column_num* identifies the column number of the report. *xrx_name* identifies the name of the Xerox font. *afp_name* identifies either a coded font name or a code page and character set pair.

| **RTEXT** | **The report does not include routing text.** |

The data stream converter found an RTEXT=NONE DJDE.

| **SAVE** | **The data stream converter does not support the SAVE DJDE.** |

A SAVE DJDE, which Infoprint XT does not support, is present.

| **SEFFNT** | **The data stream converter does not support the SEFFNT DJDE.** |

A SEFFNT DJDE, which Infoprint XT does not support, is present.

| **SEFMAP** | **The data stream converter does not support the SEFMAP DJDE.** |

A SEFMAP DJDE, which Infoprint XT does not support, is present.

| **SHIFT** | **The data stream converter ignores SHIFT DJDEs because of conversion parameters in effect.** |

The data stream converter found a SHIFT or XSHIFT DJDE, but the conversion parameters include **xhonorshift=no**, which is the default. Infoprint XT does not shift the output.

| **SHIFT** | **Printing on subsequent sheets does not shift to the left or right.** |

The data stream converter found a SHIFT=NO DJDE, which prevents the output from shifting in the directions specified.

| **SHIFT** | **Printing on subsequent sheets does not shift up or down.** |

The data stream converter found a SHIFT=NO DJDE, which prevents the output from shifting in the directions specified.

| **SHIFT** | **Printing on subsequent sheets does not shift on front sides, but shifts *bk_inches* inches (*bk_pels* pels) *direction* on back sides.** |

A SHIFT DJDE specified that front-side printing does not shift, while back-side printing shifts *bk_inches* inches in the direction specified. The *direction* is:

> to the left
> to the right
> up
> down

| **SHIFT** | **Printing on subsequent sheets shifts *fr_inches* inches (*ft_pels* pels) *direction* on front sides, but does not shift on back sides.** |

A SHIFT DJDE specified that back-side printing does not shift, while front-side printing shifts *fr_inches* inches in the direction specified. The *direction* is:

> to the left
> to the right
> up
> down

SHIFT	Printing on subsequent sheets shifts *fr_inches* inches (*ft_pels* pels) *direction* on front sides, and *bk_inches* inches (*bk_pels* pels) *direction* on back sides.

A SHIFT DJDE specified that front-side printing shifts *fr_inches* inches and *bk_inches* inches on back sides, in the directions specified. The *direction* is:

> to the left
> to the right
> up
> down

SIDE	The current logical page begins on the *side* of a new sheet.

The SIDE= specification forces the start of a new sheet. *side* is the FRONT or BACK of the sheet that the logical page begins on.

STOCKS	A DJDE specified STOCKSET *stk_name*.

The message text includes:

Command	Stock Reference	Cluster Name	Media Source
INIFEED	*stk_ref*	*cl_name*	*mmc_tray*
SYSPAGE	*stk_ref*	*cl_name*	*mmc_tray*
ASSIGN	*stk_ref*	*cl_name*	*mmc_tray*

STOCKSET correlates each stock reference, *stk_name*, to a cluster name, *cl_name*. The reformatted cluster database in effect then correlates each cluster, *cl_name*, to an input media source tray, *mmc_tray*. INIFEED identifies the stock that Infoprint XT uses if no OUTPUT FEED or OUTPUT DJDE commands are in effect. SYSPAGE identifies the stock that Infoprint XT uses for Xerox system-generated pages, such as the accounting pages at the ends of reports. ASSIGN associates stock references with cluster names.

STOCKS	The data stream converter ignores the STOCKS DJDE.

A STOCKS DJDE is present. However, the value of the **xclb** conversion parameter is **none**. Or, **xclb** is not present and Infoprint XT did not find the default `clustr.alb` in the reformatted Xerox resource directory. Verify that the **xclb** parameter has the correct value.

TOF	The new top of form (TOF) line number is *number*.

Specifies the line number for the top of the form.

XMP	The data stream converter does not support the XMP DJDE.

An XMP DJDE, which Infoprint XT does not support, is present.

XSHIFT	The data stream converter ignores XSHIFT DJDEs because of conversion parameters in effect.

The data stream converter found a SHIFT or XSHIFT DJDE, but the conversion parameters include **xhonorshift=no**, which is the default. Infoprint XT does not shift the output.

XSHIFT	Printing on subsequent sheets does not shift to the left or right.

Specifies that the data stream converter found an XSHIFT=NO DJDE, which prevents the output from shifting in the directions specified.

XSHIFT	Printing on subsequent sheets does not shift up or down.

Specifies that the data stream converter found an XSHIFT=NO DJDE, which prevents the output from shifting in the directions specified.

XSHIFT	Printing on subsequent sheets does not shift on front sides, but shifts *bk_inches* inches (*bk_pels* pels) *direction* on back sides.

An XSHIFT DJDE specified that front-side printing does not shift, while back-side printing shifts *bk_inches* inches in the direction specified. The *direction* is:

> to the left
> to the right
> up
> down

XSHIFT	Printing on subsequent sheets shifts *fr_inches* inches (*ft_pels* pels) *direction* on front sides, but does not shift on back sides.

An XSHIFT DJDE specified that back-side printing does not shift, while front-side printing shifts *fr_inches* inches in the direction specified. The *direction* is:

> to the left
> to the right
> up
> down

XSHIFT	Printing on subsequent sheets shifts *fr_inches* inches (*ft_pels* pels) *direction* on front sides, and *bk_inches* inches (*bk_pels* pels) *direction* on back sides.

An XSHIFT DJDE specified that front-side printing shifts *fr_inches* inches and *bk_inches* inches on back sides, in the directions specified. The *direction* is:

to the left

to the right

up

down

Appendix I. InfoPrint XT Custom Color Collections

The next two sections describe the InfoPrint XT color collections organized by hue and category. In each table, **L***, **a*** and **b*** represent CIELAB color space values, and **sRGB** represents **sRGB** color space values.

InfoPrint XT color collection organized by hue

The next 7 tables describe the InfoPrint XT color codes and names, organized by hue:

Table 22. Purple color samples

Color sample	Color name	L*	a*	b*	sRGB
	AMETHYST	34.97	39.96	-43.44	733799
	MOUNTAIN	30.92	16.62	-33.66	4B417E
	EGGPLANT	32.96	16.22	-3.76	644454
	GRAPE	41.98	23.34	-17.81	7E5581
	LAVENDER	62.53	38.30	-38.11	C07EDC
	LILAC	71.05	19.31	-14.00	C8A2C8
	PUCE	64.29	28.85	2.36	CD8899
	CARNATION	77.95	37.13	-3.58	FFA6C9
	FUSCHIA	73.52	57.87	-39.56	FF88FF
	HELIOTROPE	66.01	72.79	-51.35	F860FF
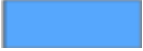
Table 23. Blue color samples

Color sample	Color name	L*	a*	b*	sRGB
	BLUEBERRY	20.42	3.85	-15.50	2D3048
	SAPPHIRE	17.17	14.96	-42.69	142569
	MIDNIGHT	24.11	5.92	-42.98	00397B
	COBALT	31.77	14.43	-59.89	0047AB
	PEACOCK	45.29	-9.13	-41.15	0872B0
	CORNFLOWER	66.31	-5.07	-50.98	56A7FD

Table 23. Blue color samples (continued)

Color sample	Color name	L*	a*	b*	sRGB
	SKY	82.25	-17.86	-27.24	88D8FF
	STEEL	78.26	-2.90	-15.43	B0C4DE
	SILVER	82.44	-4.42	-5.93	C0D0D8
	PRUSSIAN	25.45	-5.25	-26.19	104064
	INDIGO	27.67	-7.03	-29.09	00466E
	TEAL	41.73	-18.24	-23.15	0C6C88
	LAKE	54.80	-23.85	-26.34	1090B0
	TURQUOISE	64.85	-34.50	-18.93	00AFBE
	CAPRI	71.83	-24.07	-43.56	00BFFF

Table 24. Green color samples

Color sample	Color name	L*	a*	b*	sRGB
	FOREST	30.37	-26.05	2.31	005243
	PINE	37.38	-32.29	10.86	086545
	MALACHITE	44.53	-38.38	18.66	0F7948
	EMERALD	60.62	-47.57	20.14	18A76C
	JADE	72.45	-48.47	29.63	50C878
	MOSS	84.34	-23.93	19.12	ADDFAD
	CELADON	76.22	-9.30	6.78	AEC1AF
	LIME	61.32	-29.08	59.33	76A113
	OLIVE	52.43	-6.10	55.62	867F05

Table 25. Brown color samples

Color sample	Color name	L*	a*	b*	sRGB
	TAUPE	33.31	3.85	7.92	584C42

Table 25. Brown color samples (continued)

Color sample	Color name	L*	a*	b*	sRGB
	SEPIA	33.03	17.65	35.00	704214
	AUTUMN	39.00	35.75	49.91	984000
	BRONZE	60.77	26.60	52.84	CD7F32
	OAK	73.52	14.32	40.00	DEAA6B
	KHAKI	69.63	2.25	18.82	B8A888
	SAND	80.70	2.32	21.03	D8C6A1
	BEIGE	90.39	-2.53	25.67	EDE4B2
	MAUVE	58.35	31.41	10.85	C3767B
	ROSEWOOD	34.98	31.92	13.24	833B3F
	MAHOGANY	20.40	31.09	30.62	5D1800

Table 26. Yellow color samples
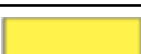
Color sample	Color name	L*	a*	b*	sRGB
	CHARTREUSE	94.59	-31.99	89.61	D6FF00
	BANANA	80.14	-5.45	68.84	D8C838
	LEMON	84.27	-3.28	80.11	EAD21C
	SUNSHINE	90.54	-3.27	58.15	F8E470
	ASPEN	94.45	-8.64	77.37	FFF24A
	GOLD	87.47	2.92	86.47	FFD701
	CITRINE	83.86	-0.23	81.13	EECF15
	SAFFRON	81.77	8.09	73.98	F4C430
	AMBER	81.62	14.62	82.79	FFBF00
	GOLDENROD	71.32	12.21	68.68	DAA520

Table 27. Orange color samples

Color sample	Color name	L*	a*	b*	sRGB
	TOPAZ	84.42	13.80	45.61	FFC87C
	APRICOT	78.19	26.05	40.02	FEAE78
	SUNRISE	72.60	32.09	39.67	F69A6B
	SALMON	70.81	42.32	38.87	FF8C69
	CORAL	66.03	52.70	42.27	FF7458
	CARROT	70.60	36.94	56.80	FA9044
	ORANGE	63.17	57.10	71.31	FF6608
	OCHRE	60.91	33.85	67.68	D97900
	COPPER	60.35	42.19	46.91	E07040
	RUST	44.73	47.17	52.28	B7410E

Table 28. Red color samples

Color sample	Color name	L*	a*	b*	sRGB
	TOMATO	55.49	57.09	45.76	E45139
	GARNET	50.83	72.57	57.36	E91E1A
	CHERRY	39.38	63.84	40.58	B90020
	CARNELIAN	35.72	58.10	37.86	A7091C
	BURGUNDY	30.14	53.28	27.92	900020
	JASPER	30.69	50.58	31.52	8F0F1B
	MAROON	23.58	45.83	18.44	740020
	ROSE	48.88	68.97	25.09	DB244F
	CRIMSON	48.43	71.37	36.82	DE173B
	BRICK	48.37	46.71	18.44	AE3F4B

InfoPrint XT color collection organized by category

The next 7 tables describe the InfoPrint XT color codes and names, organized by category:

Table 29. Nature color samples

Color sample	Color name	L*	a*	b*	sRGB
	MOUNTAIN	30.92	16.62	-33.66	4B417E
	MIDNIGHT	24.11	5.92	-42.98	00397B
	PEACOCK	45.29	-9.13	-41.15	0872B0
	LAKE	54.80	-23.85	-26.34	1090B0
	SKY	82.25	-17.86	-27.24	88D8FF
	FOREST	30.37	-26.05	2.31	005243
	SUNSHINE	90.54	-3.27	58.15	F8E470
	SAND	80.70	2.32	21.03	D8C6A1
	SUNRISE	72.60	32.09	39.67	F69A6B
	CORAL	66.03	52.70	42.27	FF7458

Table 30. Gemstones color samples

Color sample	Color name	L*	a*	b*	sRGB
	AMETHYST	34.97	39.96	-43.44	733799
	SAPPHIRE	17.17	14.96	-42.69	142569
	TURQUOISE	64.85	-34.50	-18.93	00AFBE
	MALACHITE	44.53	-38.38	18.66	0F7948
	EMERALD	60.62	-47.57	20.14	18A76C
	JADE	72.45	-48.47	29.63	50C878
	CITRINE	83.86	-0.23	81.13	EECF15
	AMBER	81.62	14.62	82.79	FFBF00
	TOPAZ	84.42	13.80	45.61	FFC87C

Table 30. Gemstones color samples (continued)					
Color sample	**Color name**	**L***	**a***	**b***	**sRGB**
	GARNET	50.83	72.57	57.36	E91E1A
	CARNELIAN	35.72	58.10	37.86	A7091C
	JASPER	30.69	50.58	31.52	8F0F1B

Table 31. Foods color samples					
Color sample	**Color name**	**L***	**a***	**b***	**sRGB**
	EGGPLANT	32.96	16.22	-3.76	644454
	GRAPE	41.98	23.34	-17.81	7E5581
	BLUEBERRY	20.42	3.85	-15.50	2D3048
	LIME	61.32	-29.08	59.33	76A113
	OLIVE	52.43	-6.10	55.62	867F05
	BANANA	80.14	-5.45	68.84	D8C838
	LEMON	84.27	-3.28	80.11	EAD21C
	ORANGE	63.17	57.10	71.31	FF6608
	CARROT	70.60	36.94	56.80	FA9044
	APRICOT	78.19	26.05	40.02	FEAE78
	SALMON	70.81	42.32	38.87	FF8C69
	TOMATO	55.49	57.09	45.76	E45139
	CHERRY	39.38	63.84	40.58	B90020
	BURGUNDY	30.14	53.28	27.92	900020

Table 32. Shades color samples					
Color sample	**Color name**	**L***	**a***	**b***	**sRGB**
	PRUSSIAN	25.45	-5.25	-26.19	104064
	INDIGO	27.67	-7.03	-29.09	00466E

Table 32. Shades color samples (continued)

Color sample	Color name	L*	a*	b*	sRGB
	TEAL	41.73	-18.24	-23.15	0C6C88
	CAPRI	71.83	-24.07	-43.56	00BFFF
	CHARTREUSE	94.59	-31.99	89.61	D6FF00
	CRIMSON	48.43	71.37	36.82	DE173B
	MAROON	23.58	45.83	18.44	740020

Table 33. Neutral color samples
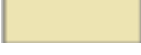
Color sample	Color name	L*	a*	b*	sRGB
	TAUPE	33.31	3.85	7.92	584C42
	SEPIA	33.03	17.65	35.00	704214
	AUTUMN	39.00	35.75	49.91	984000
	OCHRE	60.91	33.85	67.68	D97900
	KHAKI	69.63	2.25	18.82	B8A888
	BEIGE	90.39	-2.53	25.67	EDE4B2
	PUCE	64.29	28.85	2.36	CD8899
	MAUVE	58.35	31.41	10.85	C3767B

Table 34. Flora color samples

Color sample	Color name	L*	a*	b*	sRGB
	LAVENDER	62.53	38.30	-38.11	C07EDC
	LILAC	71.05	19.31	-14.00	C8A2C8
	CARNATION	77.95	37.13	-3.58	FFA6C9
	FUSCHIA	73.52	57.87	-39.56	FF88FF
	HELIOTROPE	66.01	72.79	-51.35	F860FF
	CORNFLOWER	66.31	-5.07	-50.98	56A7FD

Table 34. Flora color samples (continued)					
Color sample	**Color name**	**L***	**a***	**b***	**sRGB**
	PINE	37.38	-32.29	10.86	086545
	MOSS	84.34	-23.93	19.12	ADDFAD
	ASPEN	94.45	-8.64	77.37	FFF24A
	SAFFRON	81.77	8.09	73.98	F4C430
	GOLDENROD	71.32	12.21	68.68	DAA520
	ROSE	48.88	68.97	25.09	DB244F

Table 35. Materials color samples					
Color sample	**Color name**	**L***	**a***	**b***	**sRGB**
	COBALT	31.77	14.43	-59.89	0047AB
	STEEL	78.26	-2.90	-15.43	B0C4DE
	SILVER	82.44	-4.42	-5.93	C0D0D8
	CELADON	76.22	-9.30	6.78	AEC1AF
	GOLD	87.47	2.92	86.47	FFD701
	OAK	73.52	14.32	40.00	DEAA6B
	BRONZE	60.77	26.60	52.84	CD7F32
	COPPER	60.35	42.19	46.91	E07040
	RUST	44.73	47.17	52.28	B7410E
	BRICK	43.37	46.71	18.44	AE3F4B
	ROSEWOOD	34.98	31.92	13.24	833B3F
	MAHOGANY	20.40	31.09	30.62	5D1800

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A

additive primary colors
Red, green, and blue light that is transmitted in video monitors and televisions. When used in various degrees of intensity and variation, these colors create all other colors of light; when superimposed equally, they create white. Contrast with *subtractive primary colors*.

Advanced Function Presentation (AFP)
A set of licensed programs, together with user applications, that use the all-points-addressability concept. AFP lets you print data on a wide variety of printers, or to view data on a variety of display devices. AFP includes creating, formatting, archiving, retrieving, view and distributing information.

AFP
Advanced Function Presentation.

All-points-addressability (APA)
The capability to address, reference, and position text, overlays, and images at any defined point on the printable area of the paper.

APA
All-points-addressability.

APAR
Authorized program analysis report.

authorized program analysis report (APAR)
A report of a problem caused by a suspected defect in a current, unaltered release of a program.

C

carriage control
An optional character in an input record that specifies a write, space, or skip operation.

case-sensitive
The ability to distinguish between uppercase and lowercase letters.

character set

1. A defined set of characters with no coded representation assumed that can be recognized by a configured hardware or software system. A character set might be defined by alphabet, language, script, or any combination of these items.

2. An AFP font file that contains the raster patterns or outlines, identifiers, and descriptions of characters.

CIELAB
Internationally accepted color space model used as a standard to define color within the graphic arts industry and other industries. L*, a* and b* are plotted at right angles to one another. Equal distances in the space represent approximately equal color difference. L* values represent a progression from black to white, a* values represent a progression from green to red, and b* values represent a progression from blue to yellow.

coded font
A unique bit pattern that can serve as an element of a code page or a site in a code table, to which a character can be assigned. The element is associated with a binary value. The assignment of a character to an element of a code page determines the binary value that is used to represent each occurrence of the character in a character string. Code points are one or more bytes long. See also *code page*.

code page
A resource object containing descriptive information, graphic character identifiers, and code points corresponding to a coded graphic character set. A set of assignments, each of which assigns a code

point to a character. Each code page has a unique name or identifier. Within a given code page, a code point is assigned to one character. More than one character set can be assigned code points from the same code page. See also *code point*.

code point
A unique bit pattern that represents a character in a code page. See also *code page*.

color space
The method that specifies how color information is represented. For example, the RGB color space specifies color in terms of three intensities for red (R), green (G), and blue (B). Synonymous to *color model*.

D

data check
A synchronous or asynchronous indication of a condition that either invalid data or incorrect positioning of data can cause. You can suppress some data checks.

data control block (DCB)
Through the use of subparameters, the DCB parameter describes the characteristics of a data set.

data definition (DD)
A JCL statement that describes a data set this is associated with a specific job step. DD statements also describe input resources and output resources that the data set needs.

data stream

1. The commands, control codes, data, or structured fields that are transmitted between an application program and a device such as printer or nonprogrammable display station.

2. All data sent through a data channel in a single read or a single write operation.

3. A continuous stream of data elements in transmission, or intended for transmission, in character or binary-digit form that use a defined format.

4. Records sent to the printer driver from the print data sets and the resource libraries.

DBCS
Double-byte character set.

DCB
Data control block.

DD
Data definition.

default
An attribute, value, or command option that a program assumes when you do not specify one.

DLL
Dynamic link library.

double-byte character set (DBCS)
A set of characters in which each character is represented by two bytes. Languages such as Japanese, Chinese, and Korean, which contain more symbols than 256 code points can represent, require double-byte character sets. Because each character requires two bytes, the typing, display, and printing of DBCS characters require hardware and programs that support DBCS. Contrast with *single-byte character set*.

duplex printing
Printing on both sides of a sheet of paper, with the placement of the output images in a head-to-head format on the page. This places the top of one image at the same edge as the top of the next image. Synonymous with *normal duplex printing*. See also *tumble duplex printing*. Contrast with *simplex printing*.

dynamic link library
A file that contains executable code and data bound to a program at load time or run time, rather than during linking. Several applications can share the code and data in a dynamic link library simultaneously.

E

effective user identifier (effective UID)
When a user becomes a z/OS UNIX user, the UID from the RACF user profile for the user becomes the additive UID of the process for the user. The system uses the effective UID to determine if the user is a file owner.

electronic overlay
An overlay that is in a library and that you or an application can request for a printing job. See also *overlay*.

F

FCB
Forms Control Buffer

File Transfer Protocol (FTP)

1. In TCP/IP, the application protocol that makes it possible to transfer data to and from host computers, and to use foreign hosts indirectly.

2. In the Internet suite of protocols, an application layer protocol that uses TCP and Telnet services to transfer bulk-data files between machines or hosts.

font

1. A collection of characters of a given typeface and size.

2. Used generically to mean the collection of coded fonts, character sets, and code pages.

form
In AFP, a physical sheet of paper on which data prints. Synonymous with *physical page* and *sheet*.

form definition
An AFP resource that defines the characteristics of the form, which include:

- Overlays required, if any

- Paper source (for cut-sheet printers)

- Duplex printing

- Text suppression

- Position of composed-text data on the form

Forms Control Buffer (FCB)

1. An area of virtual storage in a printer control unit that contains the binary image of an IBM 3211 printer carriage control tape, the binary image itself, or a member of the z/OS system PDS SYS1.IMAGELIB, which contains such an image in the form of an assembled and linkedited CSECT. FCBs control vertical and horizontal placement of data on the page by assigning carriage control channels to line numbers, and designating a line number as the bottom of the form.

2. A buffer for controlling the vertical format of printed output. The FCB is a line-printer control that is similar to the punched-paper, carriage-control tape. For Advanced Function Presentation printers, the forms control buffer is replaced by the page definition.

FSA
Functional subsystem application.

FSS
Functional subsystem.

FTP
File Transfer Protocol.

Functional subsystem (FSS)
An address space uniquely identified as performing a specific function related to the Job Entry Subsystem (JES). For JES2, and example of an FSS is the Print Services Facility program.

Functional subsystem application (FSA)
The functional application program that the functional subsystem manages.

G

GID
> z/OS UNIX group identifier.

I

image
> 1. An electronic representation of an original document or picture produced by a scanning device or created from software.
> 2. A pattern of toned and untoned pels that form a picture.

installation verification procedure (IVP)
> A program provided with a product that verifies the success of the installation and processes a test job.

Interactive System Productivity Facility (ISPF)
> An IBM licensed program that serves as a full-screen editor and dialogue manager. When you write application programs, ISPF provides a means of generating standard screen panels and interactive dialogues between the application programmer and the terminal user.

Internet
> A wide area network that connects thousands of disparate networks in industry, education, government, and research. The Internet network uses TCP/IP to transmit information.

IP PrintWay
> A component of Infoprint Server that transmits output data sets from the JES spool to remote printers or a remote print server, and to email destinations. When you use IP PrintWay with Infoprint XT, you use the LPR protocol, which is a TCP/IP protocol.

ISPF
> Interactive System Productivity Facility.

IVP
> Installation verification procedure.

J

JCL
> Job control language.

JES
> Job entry subsystem.

JES2
> A z/OS subsystem that receives jobs into the system, converts them to internal formats, selects them for execution, processes their output, and purges them from the system. In an installation with more than one processor, each JES2 processor independently controls its job input, scheduling, and output processing. See also *JES3*.

JES3
> A z/OS subsystem that receives jobs into the system, converts them to internal formats, selects them for execution, processes their output, and purges them from the system. In complexes that have several loosely coupled processing units, the JES3 program manages processors so that the global processor exercises centralized control over the local processors, and distributes jobs to them through a common job queue. See also *JES2*.

job control language (JCL)
> A language of control statements used to identify a computer job or describe its requirements to an operating system.

job entry subsystem (JES)
> 1. An IBM licensed program that receives jobs into the system and processes all output data that is produced by jobs.
> 2. A z/OS subsystem that receives jobs into the system, converts them to an internal format, selects them for execution, processes their output, and purges them from the system.

L

landscape orientation
> The position of a printed page on a sheet of paper, so that the longer edges of the paper are the top and bottom of the page, and the shorter edges of the paper are the sides of the page. Contrast with *portrait orientation*.

line printer
> A device that prints individual characters in sequence from left to right, and top to bottom. Contrast with *page printer*.

logical page
> Synonymous with *page*.

M

multiple-up printing
> Arrangement of more than one page of data on a single sheet of paper. The term N_UP refers to multiple-up printing

N

non-process runout (NPRO)
> 1. An operation that moves paper or forms through the paper path of a printer without printing.
> 2. The process of removing the last few sheets of a job that has finished printing on a continuous-forms printer. Typically, the last sheets of a job remain in the printer, and the next job forces the last sheets of the previous job out of the printer. This procedure saves time when printing is continuous, but when a delay exists between jobs, it is necessary to remove the end of the last job. After a period of time, as specified by an NPRO parameter, the printer clears out the last sheets of the job.

normal duplex printing
> Duplex printing for sheets that are bound on the long edge of the paper, regardless of whether the printing is in portrait orientation or landscape orientation. Contrast with *tumble duplex printing*.

NPRO
> Non-process runout.

O

orientation
> 1. In printing, the number of degrees an object is rotated relative to a reference; for example, the orientation of an overlay relative to the logical page origin, or the orientation of printing on a page relative to the page coordinates. Orientation usually applies to blocks of information. Character rotation applies to individual characters.
> 2. The angle between the top or bottom edge of the page and the baselines of text, as measured in a clockwise direction.
> 3. The rotation of an element relative to a fixed reference.

output writer
> A part of the job scheduler that transcribes specified output data sets onto a system output device that is independent of the program that produced the data sets.

overlay
> 1. A resource object that can contain text, image, graphics, and bar code data. Overlays define their own environment and are often used as electronic forms.
> 2. A collection of predefined fixed data, such as lines, shading, text, boxes, or logos that can merge with variable data on a sheet while printing.

P

page

1. In AFP, a data stream object delimited by a Begin Page structured field and an End Page structured field. A page can contain presentation data such as text, image, graphics, and bar code data.

2. A collection of data that can print on a physical sheet of paper. Synonymous with *logical page*.

page definition

1. An AFP resource that defines the rules for transforming line data and XML data into MO:DCA-P data and text controls.

2. An AFP resource that contains a set of formatting controls for printing logical pages of data. It includes controls for the number of lines per sheet, font selection, print direction, and mappings for individual data fields to positions on the printed sheet.

page printer

Any of a class of printers that accepts composed pages, constructed of composed text and images, among other things, and that prints any sequence of pels in any order on the page. Contrast with *line printer*.

page segment

1. An AFP resource object that contains text, image, graphics, or bar code data that can be positioned on any addressable point on a page or an electronic overlay.

2. An AFP resource prepared before formatting and included during printing. Synonymous with segment. Compare with *electronic overlay*.

partitioned data set (PDS)

A data set in direct access storage that is divided into partitions, called members, each of which can contain a program, part of a program, or data.

partitioned data set extended (PDSE)

The partitioned data set extended is a storage management subsystem formatted data set. Externally, the PDSE is very similar to a PDS. Internally, the PDSE contains a different directory structure, member format, and record format. A PDSE is indistinguishable from a PDS through most interfaces used to access a PDS directory or member. You can concatenate a PDSE library with a PDS library if they have consistent record formats and logical record lengths.

PDS

Partitioned data set.

PDSE

Partitioned data set extended.

physical page

Synonymous with *form*. Contrast with *logical page*.

portrait orientation

The position of a printed page on a sheet of paper. The shorter edges of the paper are the top and bottom of the page, and the longer edges are the sides of the page. Contrast with *landscape orientation*.

print data stream

The data stream that PSF creates and transmits to the printer. PSF uses the print job that the user submits, and resources from the libraries to create the print data stream.

print job

The data to print, along with the specifications for how it should print, that you submit to Infoprint XT for processing. A print job is similar to a report, the Xerox term used for the job.

printer device

The actual printer hardware, such as an InfoPrint 4100.

printer driver

The IBM program product that provides the transform programs that convert a job into the device-specific data stream required by the printer device.

Print Services Facility (PSF)

    1. An IBM licensed program that produces printer commands from the data sent to it.

    2. A program that manages and controls the input data stream and output data stream required by supported printers.

program temporary fix (PTF)

A temporary solution or bypass of a problem diagnosed by IBM in a current, unaltered release of the program.

PSF

Print Services Facility.

PTF

Program temporary fix.

R

RACF

Resource Access Control Facility.

resource

In the AFP architecture, a collection of printing instructions and sometimes data that consists entirely of AFP structured fields. You store a resource as a member of a library. Coded fonts, font character sets, code pages, page segments, overlays, form definitions, and page definitions are all AFP resources.

Resource Access Control Facility (RACF)

An IBM licensed program that provides access control by identifying users to the system; authorizing access to protected resources; logging detected, unauthorized attempts to enter the system; and logging detected accesses to protected resources.

S

SBCS

Single-byte character set.

SDSF

System Display and Search Facility.

section

A portion of a double-byte code page that consists of 256 consecutive entries. The first byte of a two-byte code point is the section identifier. A code-page section is also called a code-page ward in some environments. See also *code page* and *code point*.

section identifier

A value that identifies a section. Synonymous with *section number*.

section number

A value that identifies a section. Synonymous with *section identifier*.

server

    1. On a network, the computer that contains the data or provides the facilities that other computers on the network can access.

    2. A program that handles protocol, queuing, routing, and other tasks that are necessary for data transfer between devices in a computer system.

simplex printing

To print on only one side of the paper. Contrast with *duplex printing*.

single-byte character set (SBCS)

A character set in which a one-byte code represents each character. Contrast with *double-byte character set*.

SPOOL (simultaneous peripheral operations online)

Auxiliary storage used as a buffer storage to reduce processing delays when transferring data between peripheral equipment and the processors of a computer.

sRGB
A standard additive color model used for color video displays, printers, and web pages. sRGB is defined in International Electrotechnical Commission (IEC) standard 61966-2-1.

standard error (STDERR)
In the UNIX System Services environment, the primary destination of the error messages that a command, or a program generates. Standard error corresponds to file descriptor two; **fd2**

standard input (STDIN)
In the UNIX System Services environment, the primary source of data that enters into a command. Standard input comes from the keyboard unless you use redirection or piping, in which case the input can be from a file, or from the output of another command. Standard input corresponds to file descriptor zero; **fd0**

standard output (STDOUT)
In the UNIX System Services environment, the primary destination of data that comes from a command. Standard output goes to the display unless you use redirection or piping, in which case the output can go to a file, or to another command. Standard error corresponds to file descriptor one; **fd1**.

starting environment
As used in this document, the starting environment is the JDL and JDE names that a printer operator enters with the Xerox START command at the printer console before processing jobs. The starting environment establishes things such as an initial list of fonts and forms that are available to every job that the printer processes. The job might temporarily modify the starting environment, to provide additional information and resources that the job requires.

STDERR
Standard error.

STDIN
Standard input.

STDOUT
Standard output.

streams
In the UNIX System Services environment, preconnected input and output channels between a computer program and its environment (typically a keyboard) when it begins execution. The three I/O connections are called standard input (stdin), standard output (stdout) and standard error (stderr).

structured field
A self-identifying string of bytes and either its data or parameters; the basic building blocks of AFP resources and formatted AFP output.

subtractive primary colors
Cyan, magenta, and yellow colorants used to subtract a portion of the white light that is illuminating an object. Subtractive colors are reflective on paper and printed media. When used together with different degrees of coverage and variation, they have the ability to create billions of other colors. Contrast with *additive primary colors*.

superuser
Synonym for *root user*.

System Display and Search Facility (SDSF)
An IBM-licensed program that provides a menu-driven, full screen interface to obtain detailed information about the jobs and resources in a JES2 system.

T

TCP/IP
Transmission Control Protocol/Internet Protocol.

Time Sharing Option (TSO)
An option of the z/OS operating system that provides interactive time sharing from remote terminals.

Transmission Control Protocol/Internet Protocol (TCP/IP)
A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

TSO
Time Sharing Option.

tumble duplex printing
Duplex printing for sheets that are to be bound on the short edge of the paper, regardless of whether the printing is portrait or landscape. Contrast with *normal duplex printing*.

U

UID
z/OS UNIX user ID.

user ID

1. A unique string of characters that identifies an operator to the system. This string of characters limits the functions and information that the operator can use.

2. The identification associated with a user or job. The two types of user IDs are:

   TSO/E user ID
   A string of characters that uniquely identifies a TSO/E user or a batch job owner to the security program for the system. The USER parameter on the JOB statement identifies the job batch owner, or it is inherited from the submitter of the job. This user ID identifies a RACF user profile.

   z/OS UNIX user ID
   A fullword integer that the security administrator assigns to each MVS user ID. This integer, referred to as the UID, is the sole authority checking against such POSIX-defined resources as hierarchical files.

   A user ID is equivalent to an account on a UNIX-type system.

W

ward
A deprecated term for *section*.

Z

z/OS UNIX group identifier (GID)
A number between 0 and 2 147 483 647 that identifies a group of users to z/OS UNIX. The GID is associated with a RACF group name when it is specified in the OMVS segment of the group profile.

z/OS UNIX user ID (UID)
A number between 0 and 2 147 483 647 that identifies a user to z/OS UNIX. The UID is associated with a RACF user ID when it is specified in the OMVS segment of the user profile. It can be contained in an object of type uid_t, that is used to identify a system user. When the identity of the user is associated with a process, a UID value is referred to as a real UID, and effective UID, or an (optional) saved set UID.

Glossary of selected Xerox terms

C

CMD

The file type, or extension, of a Xerox command file. These text files contain command-language statements for groups of related commands. The commands can perform tasks, such as setting up a printing environment and running a specific job. Then, the operator can run all of the commands in the CMD file by entering its name as a single command, rather than having to enter all of the commands individually.

CME

See *Copy Modification Entry*.

Copy Modification Entry (CME)

The file type, or extension, of a Xerox copy modification entry. A CME contains text changes or font changes to make at a specific location on the page. The change can occur on all copies of a job, or only on specific copies. For example, you can use a CME to replace or highlight text on line eight of page three on copy two.

copy-sensitive

A report that has multiple, collated copies, with CMEs, FORMS, or BFORMs that are applied to specific copies. For example, you can request three copies of a particular report and specify that copy one of the report use CME1, and that copies two and three use CME2. Likewise, in a report with six copies, you can request that FORM1 appear on copies one through four, and that BFORM2 be printed on the backs of copies three through six. The Xerox LPS processes copy-sensitive CMEs only in the offline environment. In online jobs, copy-sensitive specifications for CMEs are ignored, and the CMEs apply to all of the copies. You can specify copy-sensitive FORMS and BFORMS for both online and offline jobs.

D

DJDE

Dynamic Job Descriptor Entry.

Dynamic Job Descriptor Entry (DJDE)

Commands within an input file for a Xerox LPS printer. The Xerox printer uses these commands to dynamically modify the printing environment. DJDEs can be *page-oriented* or *record-oriented*, which determines when they take effect. For example, DUPLEX, COPIES, COLLATE, FORMS, and SHIFT are representative of page-oriented commands.

downloadable PDE

A DJDE that begins with 'FORMAT=*' and that contains a list of fonts in a binary format. Xerox developed the downloadable PDE for use with early versions of Xerox printer software. Although the FONTS DJDE currently replaces it, later Xerox printer software versions still support it. XICS and HFDL programs can optionally generate downloadable PDEs when producing metacode output. The FORMAT=* DJDE might also be found in metacode that programs written by Xerox customers produce.

E

Electronic Printer Image Construction (EPIC)

A Xerox host-resident software product (MVS/VM) that transforms graphics files into Xerox compressed raster image format for printing on an LPS printer that has the graphics handling option (GHO) installed. Interfaces are provided to Dassault System of America's CADAM, ISSCO's DISSPLA/ TELL-A-GRAF, SAS Institute's SAS/Graph, GDDM, and DCF.

EPIC

Electronic Printer Image Construction.

F

FDL

Forms Description Language.

FNT
> The file type, or extension, of a Xerox font file. Infoprint XT converts Xerox FNTs into AFP fonts.

form
> A Xerox form is a collection of predefined data, stored on the printer hard disk, such as lines, shading, graphics, and text, that can be merged with variable data on a sheet while printing.

Forms Description Language (FDL)
> A command-oriented language that enables the user to create forms by specifying such things as page orientation, font selection, and rules. Customers use FDL commands by inputting them through the Xerox LPS printer console. FDL is also the Xerox LPS compiler task that creates FRMs from FSLs. Infoprint XT does not use FDL commands in data-stream conversion. It uses the actual form, as specified in an FRM file.

Forms Source Library (FSL)
> A file that contains FDL source statements that define one or more electronic forms. Infoprint XT does not use FSLs during data-stream conversion.

FRM
> The file type, or extension, of a Xerox form file. Infoprint XT converts Xerox FRMs into AFP overlays.

FSL
> See *Forms Source Library*.

G

GHO
> Graphics Handling Option.

Graphics Handling Option (GHO)
> A collection of hardware and software that enables Xerox LPS printers to print graphic images, in addition to text and forms.

H

HFDL
> Host Forms Description Language.

Host Forms Description Language (HFDL)
> A Xerox host-resident software product (on MVS and VM) that customers use to create electronic forms for Xerox LPS printers. The printer software (microcode) shipped with the Xerox LPS printer includes a printer-resident version of the software.

I

ICT
> Ink Catalog.

IDR
> Ink Description Entry.

IMG
> The file type, or extension, of a Xerox image file. Infoprint XT converts Xerox IMGs into AFP page segments.

Ink Catalog (ICT)
> The object file that contains descriptions of Xerox highlight color palettes and inks.

Ink Descriptor Entry (IDR)
> A Xerox LPS printer file that specifies default highlight color ink catalogs, palettes, and inks.

Ink Source Library (ISL)
> A Xerox LPS printer source file that contains statements that define highlight color palettes and inks.

inline resources
> In a Xerox printing environment, all resources, such as fonts and graphics, reside on the Xerox printer. Xerox printers can accept jobs that specify FILE or GRAPHICS DJDEs, which cause new resources to load on the printer. In some cases, the incoming job contains no print data, but rather contains resources that load on the printer when the job runs.

inverse landscape orientation
The position of printed data on a sheet of paper, 180° from standard landscape orientation for a device.

inverse portrait orientation
The position of printed data on a sheet of paper, 180° from standard portrait orientation for a device.

ISL
Ink Source Library.

J

JDE
Job Descriptor Entry.

JDL
Job Descriptor Library.

Job Descriptor Entry (JDE)
A set of print-job characteristics grouped together to represent the processing requirements for a specific print job. These are also known as job command sets. You can define one of the JDEs as the default job descriptor entry. You can use the default JDE to establish a default print environment, which the actual print job can dynamically altered through embedded DJDE statements.

Job Descriptor Library (JDL)
The object file created by compiling the JSL, which contains one or more JDEs to use on a Xerox LPS printer.

Job Source Library (JSL)
A Xerox LPS printer source file that contains statements that define the characteristics of one or more print jobs (JDEs). The characteristics can include tape formats for tape to print, logical processing requirements, and output formats, such as COPIES, OFFSET, DUPLEX, SHIFT, and FORMS. In order to run Xerox print jobs, the JSL must first be translated into object form, a compiled JDL, by the printer control unit. JSLs can also define other print environment control resources, such as CMEs, PDEs, and STKs.

L

Laser Printing System
A class of Xerox cut-sheet production printers that accept LCDS jobs and metacode jobs. Most of the LPS printers, such as the 4635, are in the DocuPrint series of printers.

LCDS
Line Conditioned Data Stream.

LGO
The file type, or extension, of a Xerox logo file. Infoprint XT converts Xerox LGOs into AFP page segments.

LIB
The file type of a Xerox 80-byte text file, or a cluster library file (not in 80-byte text format). Infoprint XT processes and uses information in the CLUSTR.LIB file. This file correlates clusters, which are individual paper drawers or groups of paper drawers, with names of paper drawers or paper drawer groups. STK files contain the name definitions.

Line Conditioned Data Stream (LCDS)
Line data with imbedded DJDEs that specify formatting instructions for the data.

line data
A data stream format that contains standard text and impact printer controls, such as channels and carriage controls. Line data contains no metacodes or DJDEs.

logical page
An imaginary rectangular section of a physical side of a sheet. By using the BEGIN command, a Xerox print job can specify that several logical pages exist on each physical page. Xerox data streams typically use skip-to-channel-1 carriage controls to jump from one logical page to the next. When data for all of the logical pages on one side has been processed, the next skip-to-channel-1 carriage control causes the printer to jump to the first logical page on the next side.

logical processor commands

Special Xerox commands that look for predefined character strings or character-string changes in the input data, and take various kinds of action when one of the strings is found. The logical processor commands include:

BANNER

Detects banner pages. It might pick off some of the information on the banner pages for accounting purposes, or it might delimit reports within a print job.

BDELETE

Deletes specified blocks from offline data, to prevent them from printing.

BSELECT

Selects specified blocks from offline data, to cause them to print.

RAUX

Pulls a single sheet of paper from the auxiliary paper tray.

RDELETE

Deletes specified records from offline data, to prevent them from printing.

RFEED

Dynamically specifies a cluster of input paper drawers.

ROFFSET

Causes the paper to jog in the output tray.

RPAGE

Moves the next or current logical page to the back of the current sheet, or to the front or back of the next sheet.

RRESUME

Resumes printing after a group of records when the contents of the first and last records are known, but the contents of the records between them are not.

RSELECT

Selects specified records from offline data, to cause them to print.

RSTACK

Delimits reports within a print job, and restores the starting JDL / JDE environment.

RSUSPEND

Prevents printing of a group of records when the contents of the first and last records are known, but the contents of the records between them are not.

LPS

Laser Printing System.

M

metacode data stream

A data stream containing imbedded metacodes. It might or might not also include DJDEs. Some Xerox host system software products, such as XICS, produce output with imbedded metacodes. Additionally, some Xerox customers have written applications that embed metacodes in the print file.

metacodes

Metacodes are a specific set of reserved, single-byte character codes. These codes convey formatting instructions to the printer. You can think of the metacode format as the native language of the Xerox LPS printer.

N

non-printable resources

In Infoprint XT, Xerox resources for which Infoprint XT creates only metrics data sets during the resource loading process. Xerox PDE and JDL resources are examples of non-printable resources. Contrast with *printable resources*.

O

offline environment

In an offline printing environment, the Xerox printer receives the incoming data from a tape drive attached to the printer, rather than from a channel-attached host. This environment requires operator intervention to send the data to the printer.

online environment

In an online environment, the printer receives the incoming data directly from a channel-attached host. This environment requires no operator intervention to send the data to the printer.

OTEXT

A type of job that contains messages for the operator. The messages display on the console of the printer. For example, the message might specify the type of paper to load.

P

Page Description Entry

A set of statements that define formatting information for each page of a print job, including page orientation, starting print line, and fonts.

page-oriented DJDE

A DJDE that takes effect on the next skip-to-channel-1 in the input file.

PDE

Page Description Entry.

PDL

Print Description Language.

PDL compiler

A printer, workstation, or host-based program used to translate PDL source commands into objects that the Xerox LPS can use.

Print Description Language

Statements that define the characteristics of print jobs, such as tape formats for tape to print, logical processing requirements, and output formats. You use these statements to create CMEs, PDEs, JDLs, and so on.

printable resources

In Infoprint XT, Xerox resources for which Infoprint XT creates both metrics data sets and AFP data sets during the resource loading process. Xerox fonts, images, logos, and forms are printable resources. Contrast with *non-printable resources*.

R

record-oriented DJDE

A DJDE that takes effect on the next input file record.

report

In Xerox terminology, a logical subset of the data in a Xerox print job. Each print job might consist of a single report, or might contain several reports. Delimiter pages might separate reports in the printed output. Each report might also end with an accounting information page. Within the input data stream, character strings defined by the RSTACK or BANNER command serve to separate the reports.

resource (Xerox definition)

A collection of printing instructions, and sometimes print data such as fonts, forms, images, and logos that can be divided into the categories public, private, and restricted. In the Xerox environment, these resources reside on the printer hardware. See *non-printable resources* and *printable resources*. For the AFP definition of this term, see "Glossary of selected IBM terms" on page 415.

S

signature font

A font containing one or more images, logos, or signatures that are *tiled* into multiple characters. Printing the correct sequence of characters from the font can reproduce the image.

START

The START command that a Xerox printer operator uses to start a print job from the console of a Xerox LPS printer. The command has two arguments, separated by a comma. The first argument is the JDE

for the job, and the second argument is the JDL. Each job must specify the appropriate starting JDE and JDL, otherwise the job either does not print or prints with errors.

STK
The file type, or extension, of a Xerox stockset file. A stockset file defines paper drawers, such as which are the main and auxiliary drawers, and which is the default drawer. You use STK files in conjunction with the cluster database (CLUSTR.LIB), which contains cluster information in a binary format. The stockset and the CLUSTR.LIB represent a printing environment when the operator has loaded specific types of paper in the drawers of the printer. For example, when printing checks, the customer might have monthly-statement forms in one drawer, and the actual checks in another drawer.

T

TST
The file type, or extension, of a Xerox routing text file. These precompiled files contain text strings that print on separate pages that precede individual reports. These text strings are also called routing text, and they might optionally print with an overlay. You compile TST files from ROUTE commands in JSL files. The RTEXT JDL command, or the RTEXT DJDE in the data stream invokes them. The RFORM JDL command or RFORM DJDE specifies whether an overlay prints on the routing text page.

X

Xerox Escape Sequence (XES) data stream
A data stream format supported by certain Xerox distributed mode printers. The escape sequence is a print control character or "key" which is user-defined for each print job. Synonymous with UDK (User Defined Key). Infoprint XT does not support this data stream format.

Xerox Integrated Composition System (XICS)
A host-resident software product for composing text documents (MVS/VSE/VM) that print on a Xerox centralized printer or phototypesetter. Support is provided to merge Xerox format graphic images inline or to reserve white space for merging at the printer. Commands are of the control word variety, rather than generalized markup.

Xerox Job Control Facility (XJCF)
A host-resident software product developed by Xerox Computer Systems as an extension to MVS/JES2 for the Xerox LPS printers. It builds and inserts DJDE records into the output file based on user job control statements, Xerox-extended JES2 parameters, initialization parameters, and JES2 system defaults. In addition to 3800-1 compatibility support, it provides a mechanism for accessing other features of the Xerox centralized printers (such as duplex, two-up, and electronic forms merge) without user awareness of DJDEs.

Xerox Production Print Mode (XPPM)
To print to Xerox LPS printers by using LCDS or metacode data streams.

Bibliography

This bibliography lists the titles of selected publications that contain information about Infoprint XT for z/OS, AFP, the z/OS operating systems, and related products. The list for each category does not include all of the publications that are available for that category. The lists contain the more commonly referenced publications.

The titles and order numbers might change from time to time. To verify the current title or order number, consult your IBM marketing representative.

You can obtain many of the publications listed in this bibliography from the AFP Consortium at `http://www.afpcinc.org`, and the z/OS printing software web page at `http://www.ibm.com/ systems/z/zos/printsoftware/supportmanuals_ww.html`.

You can obtain InfoPrint printer publications and information about printers not listed here from the Ricoh Production Print Information Center at `http://rpp.ricoh-usa.com/help/index.jsp`.

Advanced Function Presentation

- *Advanced Function Presentation: Programming Guide and Line Data Reference*, S544-3884
- *Bar Code Object Content Architecture Reference*, S544-3766
- *Font Object Content Architecture Reference*, S544-3285
- *Graphics Object Content Architecture for Advanced Function Presentation Reference*, S544-5498
- *Image Object Content Architecture Reference*, SC31-6805
- *Intelligent Printer Data Stream Reference*, S544-3417
- *Mixed Object Document Content Architecture Reference*, SC31-6802
- *Presentation Text Object Content Architecture Reference*, SC31-6803

Infoprint XT for z/OS

- *Program Directory for IBM Infoprint XT for z/OS* , GI11-9495
- *IBM Infoprint XT for z/OS: Licensed Program Specifications*, GI11-9493

Print Services Facility for z/OS

- *AFP Conversion and Indexing Facility User's Guide*, S550-0436
- *PSF for z/OS: Customization*, S550-0427
- *PSF for z/OS: Messages and Codes*, G550-0432

Resource Access Control Facility

If you are using RACF to provide security, see the RACF publications that are applicable to your installation for more information:

- *z/OS Security Server RACF Command Language Reference*, SA23-2292
- *z/OS Security Server RACF Security Administrator's Guide*, SA23-2289

Ricoh Production Print Solutions Printers

- *InfoPrint 75 and InfoPrint 100: User's Guide*, S550-1103
- *InfoPrint 4100 Models with the InfoPrint Controller Operator Console Planning and Configuration Guide* , G550-0990

- *Pro C900 Printer Family: Planning Guide*, G550-1148

z/OS Infoprint Server

- *z/OS Infoprint Server Customization*, SA38-0691
- *z/OS Infoprint Server Introduction*, SA38-0692
- *z/OS Infoprint Server Messages and Diagnosis*, GA32-0927
- *z/OS Infoprint Server Operation and Administration*, SA38-0693
- *z/OS Infoprint Server User's Guide*, SA38-0695

z/OS

- *z/OS DFSMS Using Data Sets, SC23-6855*
- *z/OS ISPF User's Guide Vol I, SC19-3627*
- *z/OS JES2 Initialization and Tuning Reference, SA32-0992*
- *z/OS MVS JCL Reference, SA23-1385*
- *z/OS MVS Programming: Authorized Assembler Services Guide, SA23-1371*
- *z/OS TSO/E Primer, SA32-0984*
- *z/OS TSO/E User's Guide, SA32-0971*
- *z/OS UNIX System Services User's Guide, SA23-2279*
- *z/OS UNIX System Services Planning, GA32-0884*
- *z/OS XL C/C++ Programming Guide, SC14-7315*

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