IBM Infoprint XT for z/OS , V3.1 provides support to transform Xerox data streams and highlight color resources for printing on AFP printers and enhances DBCS support

At a glance

IBM® Infoprint XT for z/OS® , V3.1:

- Transforms Xerox Metacode and Line Conditioned Data Stream (LCDS) to Advanced Function Presentation (AFP) without changing your existing applications
- Leverages benefits of IBM's open platform and device-dependent AFP for system resource management and error recovery
- Facilitates migration to cut sheet or high-speed continuous forms printers
- Enhances highlight color applications by printing to full-color printers
- Enables single data stream application printing in a multivendor environment, and a single existing IBM System z® server driving multiple printers
- Provides support for Fuji Xerox IBM 3200 control codes, monochrome double-byte character set (DBCS) forms (FRMs), and the LPI Dynamic Job Descriptor Entries (DJDEs)

For ordering, contact your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL (Reference: LE001).

Overview

IBM Infoprint XT for z/OS , V3.1 helps you migrate efficiently from your Xerox print environment to an Advanced Function Presentation (AFP) print environment, allowing you to standardize on a single output architecture. With Infoprint XT, you can easily transform established Xerox application data to AFP format for storing, retrieving, viewing, and printing without changing your existing applications.

Using IBM Xerox Transform (XT) technology, Xerox print resources, such as fonts, forms, images, and logos, are converted into their AFP equivalents, and Xerox Line Conditioned Data Streams (LCDS) or Metacode data streams are converted into AFP Mixed Object Document Content Architecture (MO:DCA) data streams. Once converted, you can print these resources and data streams on high-speed, reliable Intelligent Printer Data Stream (IPDS) devices or you can place them in the IBM Content Manager OnDemand archival and retrieval system. When stored in libraries identified to Print Services Facility™ (PSF), the AFP print resources are automatically made available for printing on all of the printers that support such resources.

You have the option of printing Xerox application data on cut sheet devices to retain control over options such as tray selection, or you can print it on continuous form printers that usually offer a lower total cost of operation (TCO) than cut sheet devices. In either case, Infoprint XT for z/OS , V3.1 is designed to help optimize the productivity of your output operations by automating much of the migration from Xerox resources and data streams to AFP and allowing you to standardize on a single output architecture.

Infoprint XT for z/OS , V3.1 provides the following new capabilities or enhanced functions:

- Adds the ability to transform Xerox Laser Printer Series (LPS) highlight color resources and data streams into an AFP print environment with full color instructions for use with AFP/IPDS color printers and with archiving and viewing solutions. This new capability supports:
  - Color text in Metacode and LCDS data streams
  - Highlight color text and shading in FRM files
  - Color commands in Xerox Print Description Language/Dynamic Job Descriptor Entries (PDL/DJDEs)
  - Highlight color image (IMG) files
- Includes new batch JCL programs for executing newly developed transform commands
- Enhances double-byte character set (DBCS) support by adding support for Fuji Xerox IBM 3200 control codes, monochrome DBCS forms (FRMs), and the LPI DJDEs

Key prerequisites

For details, refer to the Hardware requirements and Software requirements sections.

Planned availability date

October 19, 2012

Description

Host printing systems overview

Applications designed for printing on high-function electronic page printers require print resources, and formatting and processing commands to take advantage of the printers' capabilities. In a typical Xerox printer environment resources used to print a job - electronic forms, fonts, and images - usually reside on the printer itself. If there are multiple printers, then the resources must be distributed to all of the printers and coordinated manually. Formatting and processing controls, such as the specification of portrait or landscape page presentation, inclusion of an electronic form, simplex or duplex printing, stapling selection, and many other options, are included in the application program itself.

In an AFP print environment, print resources are stored in system libraries on the host system and loaded to the printer automatically at print time by the host print software. Print Services Facility (PSF) for z/OS is the host print software for z/OS . This product then manages the processing of the print job using formatting and processing instructions in print resources that are external to the print job. If changes to the formatting or processing are required, those changes are made in the external resources, not in the application program that generated the print job.

New capabilities or enhanced functions

Infoprint XT for z/OS , V3.1, is a new version, replacing IBM Infoprint XT Extender for z/OS , V1.1. This new version:

• Adds the ability to transform Xerox LPS highlight color resources and data streams into AFP with full color instructions for use with AFP/IPDS color printers and with archiving/viewing solutions.

This new capability supports:

– Color text in Metacode and LCDS data streams

– Highlight color text and shading in FRM files

– Color commands in Xerox Print Description Language/Dynamic Job Descriptor Entries (PDL/DJDEs)

– Highlight color IMG files

Infoprint XT emulates the standard Xerox LPS highlight colors and their associated color + black + white shades using a new binary ink correlation table, which associates Xerox LPS color names ("inks") with device-independent color space (CIELAB) or grayscale values. During resource and data stream transformation, Infoprint XT detects ink names in the input resources and data streams, and adds the associated CIELAB or grayscale values to the output AFP resources and data streams.

The Infoprint XT ink correlation table color solution:

– Makes the entire palette of Xerox standard colors and shades immediately available to users

– Allows color changes to occur instantly and automatically during printing, eliminating operator interventions and print cycle interruptions for manually replacing part of the printer hardware Customer Changeable Units (CCUs) in order to change colors

– Reduces color printing costs by eliminating the need for multiple CCUs or multiple printers dedicated to particular solid color toners for users who want to use multiple colors in their environment

A new and powerful Infoprint XT command, pdxtcolor, performs various operations on the ink correlation table. For example, a basic usage of the pdxtcolor command is to copy the shipped ink correlation table into particular user resource groups. The pdxtcolor command goes far beyond the original Xerox LPS color capabilities. It allows users to advance from highlight color to full color and Precision Marketing by customizing their environment with colors that otherwise might be available for Xerox LPS printers only as expensive custom-mixed toner.

The Infoprint XT implementation of color in shaded areas offers a significant visual improvement when compared to Xerox LPS color shading. Instead of producing combinations of color and black pixels with white space, Infoprint XT interprets the shaded Xerox inks as solid areas of color shades with a smooth appearance, devoid of graininess. This also helps to improve output readability when text is printed over highlight color shading.

• Provides new batch JCL programs for executing newly developed transform commands. They are:

– **AIOZPDL**

Helps eliminate the need for users to retain at least one Xerox LPS printer, with its resident PDL compiler, for supporting print environment control resource changes. For environments in which the PDL compiler is no longer available, the Job Source Library (JSL) metrics compiler lets users modify existing JSL source files and process them to extract resource metrics that will control formatting within their Xerox applications.

– **AIOZCLS**

Simplifies operations on the Xerox LPS bin selection database resource clustr.lib and facilitates migrations from more recent Xerox printers that do not use clustr.lib. **AIOZCLS** can also facilitate AFP media types support, in conjunction with the recently added xmediatypes parameter. This parameter associates AFP media types or component IDs with Xerox tray numbers. A related xbinerror parameter lets users control printing when the wrong media is loaded on the printer.

- **AIOZCLR**

  Performs various operations on the new ink correlation table, helping to enable control and customization of how Infoprint XT interprets highlight color commands in Xerox LPS resources and data streams.

- Enhances previously provided DBCS capabilities by adding support for Fuji Xerox IBM 3200 control codes, monochrome DBCS FRMs, and the LPI DJDEs

Benefits of using Infoprint XT for z/OS , V3.1

- Exploit the benefits of AFP without changing existing applications

  Since Xerox first introduced its all-points-addressable electronic printers, users have invested in the development of applications exploiting that technology. Now, there are many vendors offering a variety of electronic printing technologies, and AFP has become a leading standard for high-speed production printing and business-critical distributed printing. Using Infoprint XT for z/OS to convert the output from legacy applications that generate Metacode and LCDS data streams into an AFP data stream, you can take advantage of many of the benefits of AFP without changing your existing Metacode and LCDS applications. By producing an AFP data stream, you can send the same output to AFP cut sheet and continuous form printers, or to archival systems, or make it available for viewing on the web using an AFP web browser plug-in.

- Migrate from Metacode and LCDS to AFP on z/OS while keeping your current printing environment

  You chose to run your information system infrastructure, including your print environment, on IBM's System z platform because of its high availability, scalability, throughput, security, and lowest overall cost of ownership for computing. Infoprint XT for z/OS lets you keep your printing environment on z/OS while migrating to AFP print and presentation solutions. There are no new servers and operating systems to connect and learn while you focus on your z/OS print environment.

- Standardize on a single application data stream in a multivendor output environment

  With the convergence of in-house publishing and traditional production printing, the transition from distribute and print to print and distribute, and the emergence of electronic forms of output distribution such as email and web-based document presentation, your printing needs for black-and-white, highlight color, full process color, cut sheet, continuous forms, multifunction, archival, and softcopy output solutions may require multiple vendors. But that doesn't mean you have to invest your programming resources in developing and maintaining applications in multiple formats. By combining Infoprint XT for z/OS with Infoprint Server and other IBM offerings on z/OS , you can accept input in many data formats within the network or over the Internet, convert data streams to and from AFP, and direct output to a wide variety of printers and softcopy storage and presentation solutions. Infoprint XT for z/OS extends these options to include conversion from Metacode and LCDS.

Resource and data conversion

Infoprint XT for z/OS includes two types of conversion programs:

- Resource Conversion Utility

Xerox resources that are converted into their AFP equivalents by the Infoprint XT resource utility include:

- – Xerox fonts (FNTs), which are converted into AFP code pages character sets and coded fonts
- – Xerox forms (FRMs), which are converted into AFP overlays
- – Xerox images (IMGs), which are converted into AFP page segments
- – Xerox logos (LGOs), which are converted into AFP page segments

Print resources are copied from the Xerox printers onto tape, and then copied from tape into partitioned data sets on the z/OS system. If copies of the Xerox resource are also kept in host libraries, then they can be processed from those libraries, and the tape copy steps may not be needed. Through the Infoprint XT load process, the Xerox resources are converted into their AFP counterparts. Infoprint XT performs the conversions and keeps a copy of the original Xerox resources.

Xerox jobs also use other types of resources, such as Job Descriptor Libraries (JDLs) and Page Descriptor Entries (PDEs), which control the data stream characteristics and the printing environment. Infoprint XT stores the necessary formatting information from these non-print resources and uses it at processing time to format and process the jobs correctly. Because all of the resources for all Xerox printers are stored centrally on z/OS , rather than on each Xerox printer, the correct version of each print resource is coordinated for you. Alternatively, you can maintain discrete resource groups and use them as you would have used Xerox printers dedicated to particular customers or applications.

- • Data stream conversion program

Xerox Metacode and LCDS jobs can contain Dynamic Job Descriptor Entries (DJDEs), which invoke printable and non-printable Xerox resources, and make modifications to the base printing environment. Jobs can also contain a combination of Metacodes and LCDS. The data stream convertor component of Infoprint XT reads and interprets these internal Xerox entries and commands as it converts the job into AFP. This process creates an inline AFP Form Definition resource and print file in the AFP data stream.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Section 508 of the US Rehabilitation Act

IBM Infoprint XT for z/OS , V3.1 is capable as of October 19, 2012, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A US Section 508 Voluntary Accessibility Template (VPAT) can be requested via the IBM website at

http://www.ibm.com/able/product_accessibility/index.html

Hardware and software support services

SmoothStart/installation services

IBM SmoothStart Services and Installation Services are not provided.

Reference information

For additional information on software related to printing solutions on z/OS , refer to the following:

- For IBM Print Services Facility V4.4, for z/OS , refer to Software Announcement 211-282, dated July 12, 2011 .
- For IBM Print Transform from AFP products for IBM z/OS , refer to Software Announcement 211-078, dated March 22, 2011 .
- For IBM Infoprint Server for z/OS , refer to IBM z/OS V1.12 Software Announcement 210-235, dated July 22, 2010 .
- For IBM Content Manager OnDemand for z/OS , V8.5, refer to Software Announcement 211-012, dated January 25, 2011 .
- For IBM Content Manager OnDemand for Multiplatforms, V8.5, refer to Software Announcement 210-263, dated September 07, 2010 .

Program number

```
Program                      Program
number         VRM           name

5655-O15       3.1.0         IBM Infoprint XT for z/OS
```

Ordering z/OS through the Internet

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS . Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the US, Canada, and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries website at

http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

Technical information

Specified operating environment

Hardware requirements

Infoprint XT for z/OS , V3.1 operates on any IBM server that can run z/OS V1.12, or later.

Software requirements

- Infoprint XT for z/OS , V3.1 operates with z/OS V1.12 (5694-A01) or later.
- The following programs can be optionally used with Infoprint XT:
  - PSF for z/OS , V4.3 (5655-M32), or later, is required to print AFP documents on IPDS printers.
  - Infoprint Server for z/OS (an optional feature of z/OS) is required to:
    -- Run Infoprint XT without having to specify it as a JCL step
    -- Use IBM Print Transforms from AFP for Infoprint Server for z/OS (afpxpcl, afpxps, or afpxpdf) to convert AFP output to PCL, PDF, or PostScript™ (5655-TF1, 5655-TF2, or 5655-TF3)

- IBM Content Manager OnDemand for z/OS , V8.4 (5697-N93), or later, or IBM Content Manager OnDemand for Multiplatforms, V8.5 (5724-J33), or later, is required to archive and retrieve AFP documents.

Security, auditability, and control

IBM Infoprint XT for z/OS , V3.1 uses the security and auditability features of the host z/OS operating system. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering information

Ordering z/OS through the Internet

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS . Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the US, Canada, and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries website at

http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

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Orders for new licenses can be placed now.

Registered customers can access IBMLink for ordering information and charges.

Shipment will not occur before the availability date.

Unless a later date is specified, orders entered before the planned availability date will be assigned a schedule date of one week following availability.

Orders entered after the planned availability date will be assigned a schedule date for the week following order entry.

New users of Infoprint XT for z/OS , V3.1 should specify:

```
Type: 5655      Model: O15
```

To order software, specify the program number and the monthly charge feature number from the following table. Also specify the material identifier for the desired distribution medium.

```
Program Name:  Infoprint XT for z/OS, V3.1
Program PID:   5655-O15
```

Entitlement identifier	Description	License option/ Pricing metric
S0173D3	Infoprint XT for z/OS	Basic MLC, Flat WLC

Orderable supply ID	Language	Distribution medium
S0172DS	English	3590 media

Single version charging

To elect single version charging, the customer must notify and identify to IBM the prior program and replacement program and the designated machine the programs are operating on.

Unlicensed documentation

The following publications are supplied automatically with the basic machine-readable material:

```
                                    Order
Title                               number

Program Directory                   GI11-9495
Licensed Program Specifications     GI11-9493
```

The following additional product publication will be available upon general availability:

```
                                    Order
Title                               number

IBM Infoprint XT for z/OS           GI11-9492
```

Refer to the IBM Publications Center website for more information about publication ordering

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the US) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries, free of charge.

Subsequent updates (technical newsletters or revisions between releases) to the publications shipped with the product will be distributed to the user of record for as long as a license for this software remains in effect. A separate publication order or subscription is not needed.

Customized offerings

Product deliverables are shipped only via CBPDO and ServerPac. These customized offerings are offered for Internet delivery in countries where Shopz product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the Shopz help information at

http://www.software.ibm.com/ShopzSeries

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options include:

- 3590
- 3592

Most products can be ordered in ServerPac, the month following their availability in CBPDO. z/OS can be ordered via CBPDO and ServerPac at general availability. Many products will also be orderable in a Product ServerPac without also having to order the z/OS operating system or subsystem.

Shopz and CFSW will determine the eligibility based on product requisite checking. For more details on the Product ServerPac, visit the Help section on the Shopz website at

http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp

For additional information on the Product ServerPac option, refer to Software Announcement 212-272, dated July 31, 2012 .

Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after general availability

Terms and conditions

Agreement
IBM Customer Agreement (ICA)

Designated machine
Not required

Variable charges apply
No

Indexed Monthly License Charge (IMLC) applies
No

Location license applies
No

Use limitation applies
No

Educational allowance available
Yes, a 15% education allowance applies to qualified education institution customers.

Volume orders
Not applicable

```
Replaced     Replaced
program      program
number       name

5655-J65     IBM Infoprint XT Extender for z/OS, V1.1
```

Warranty applies
Yes

Licensed program materials availability

```
Restricted Materials of IBM:      None
Non-Restricted Source Materials:  None
Object Code Only (OCO):           All
```

Program services

```
Support Center applies:           Yes

                                  Access available through the
                                  IBM Support Center
```

```
Available until discontinued:      12 months' written notice

APAR mailing address:              IBM Corporation
                                   APAR Processing
                                   Dept. H6UE/AFP (PSC) Products
                                   6300 Diagonal Highway
                                   Boulder, CO  80301-9191
```

IBM Operational Support Services - SupportLine

Yes

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```
Program name:      Infoprint XT for z/OS
Program number:    5655-O15

Entitlement                        License option/
identifier    Description          Pricing metric

S0173D3       Infoprint XT for z/OS   Basic MLC, Flat WLC
```

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            L3R 2Z1
```

Reference: LE001

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Note: Shipments will begin after the planned availability date.

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