ORACLE
INSURANCE

Oracle® Documaker

Documaker Installation Guide

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Chapter 1

Introduction

This manual provides instructions for installing Oracle Documaker products on computers running z/OS (OS/390), UNIX/Linux, and 32-bit Windows, such as Windows XP and Windows Vista.

This table will help you find the information you need:

To install Documaker on	See
z/OS (MVS)	Installing Documaker Server on z/OS on page 27
UNIX/Linux	Installing Documaker on UNIX/Linux on page 95
Windows	Installing Documaker on Windows on page 107

A summary of the system requirements follows.

System Requirements

The following Oracle Documaker and Oracle Documaker Desktop applications run on a variety of operating systems and hardware platforms. Make sure you have these components before you install the following applications.

Operating systems

The following applications run on a variety of operating systems, principally Windows 32-bit operating systems such as Windows 2000, Windows 2003, Windows Vista, and Windows XP, UNIX/Linux 32-bit operating systems such as AIX, Solaris, and Linux x86, and z/OS (OS/390). This table shows the various product offerings and the operating systems under which they run.

NOTE: To store a Documaker version 11.x resource library in Documanage, you must have Documanage version 6.3 SR 2 or version 6.4 SR 1 or higher.

	Windows+	z/OS	AIX	Linux	Solaris
Documaker					
Docucreate	Yes	No	No	No	No
Documaker Studio	Yes	No	No	No	No
Docupresentment	Yes	No	Yes	Yes	Yes
iDocumaker ++	Yes	No	Yes	Yes	Yes
iPPS +++	Yes	No	No	No	No
EWPS ++	Yes	No	Yes	Yes	Yes
Documanage	Yes	No	No	Yes	No
GenTrn	Yes	Yes	Yes	Yes	Yes
GenData	Yes	Yes	Yes	Yes	Yes
GenPrint	Yes	Yes	Yes	Yes	Yes
GenWIP	Yes	Yes	Yes	Yes	Yes
GenArc	Yes	Yes	Yes	Yes	Yes
Documaker Desktop					
Documaker Workstation	Yes	No	No	No	No

+ Includes Windows 2000, Windows 2003, Windows XP, Windows Vista, Windows 2000 Server, and Windows 2003 Server. Be sure to have the latest service packs installed.

++ Runs under any operating system that supports the Java Virtual Machine.

+++ Runs under Microsoft Windows 2000 Server and Windows 2003 Server.

	Windows+	z/OS	AIX	Linux	Solaris
Printers**					
AFP	Yes	Yes	Yes	Yes	Yes
GDI	Yes	No	No	No	No
HTML	Yes	No	Yes	Yes	Yes
Metacode	Yes	Yes	Yes	Yes	Yes
PCL	Yes	No	Yes	Yes	Yes
PCL 6*	Yes	No	Yes	Yes	Yes
PDF	Yes	Yes	Yes	Yes	Yes
PostScript	Yes	Yes	Yes	Yes	Yes
RTF	Yes	No	Yes	Yes	Yes
VIPP	Yes	Yes	Yes	Yes	Yes
XML**	Yes	Yes	Yes	Yes	Yes

+ Includes Windows 2000, Windows 2003, Windows XP, Windows Vista, Windows 2000 Server, and Windows 2003 Server.

* You must have PCL 6 or higher for Unicode support on PCL-compatible printers. PCL 6 support became available in version 10.2.

** Printer support depends on licensing. For example, PDF and HTML are licensed separately for the PPS market and PDF is licensed separately for the z/OS market.

Networks

The system does not use any specific network calls and is expected to work on any network compatible with Microsoft programs.

NOTE: The network file server you use with Documaker Studio or Documaker Desktop must be a 100% Windows network compatible. Some UNIX systems that offer NFS support are not 100% Windows compatible and some UNIX systems do not honor Windows file locking calls and may not be suitable for use as a file server in a true multi-user environment.

DOCUMAKER AND DOCUMAKER DESKTOP REQUIREMENTS

Your computer must have certain software and hardware components to run the programs that comprise the Documaker and Documaker Desktop systems. Depending on your software license, operating environment, and your processing needs, these requirements vary.

The following tables outline the minimum hardware we use to test Documaker and Documaker Desktop and are included for informational reasons only. You should run the system on a computer configured appropriately for the version of Windows you use and with the processing power to meet your needs

NOTE: For more specific information on the GenArc program and the additional archive and retrieval capabilities available, refer to the Documaker Administration Guide.

Should your company have special needs, contact your sales representative and keep in mind that, by using upload and download programs, additional functionality is available.

On Windows

Documaker and Documaker Desktop run on Windows. This table outlines the minimum hardware we use to test the system on a single user Windows XP workstation.

For Windows XP	Our minimum test configuration is
CPU	Intel® Core™ 2 CPU.2.13GHz
Memory*	1.99GB RAM
Hard disk**	148GB
Printer	HP-compatible printers supporting PCL5
Printer memory***	8mb RAM

* Additional memory improves system performance.
** Depends on the volume of data you must process
*** Additional memory may be required if printing complicated graphics or using a lot of fonts.

This table outlines the minimum hardware we use to test the system on a single user Windows Vista workstation.

For Windows Vista	Our minimum test configuration is
CPU	Intel® Core™ 2 CPU.1.86GHz
Memory*	1022MB RAM
Hard disk**	75GB

* Additional memory improves system performance.
** Depends on the volume of data you must process
*** Additional memory may be required if printing complicated graphics or using a lot of fonts.

Printer	HP-compatible printers supporting PCL5
Printer memory***	8mb RAM

* Additional memory improves system performance.
** Depends on the volume of data you must process
*** Additional memory may be required if printing complicated graphics or using a lot of fonts.

On z/OS (OS/390)

The DAP and Oracle Documaker products run on the following versions/releases of IBM's operating systems:

- OS/390 version 1.1 to version 2.10
- z/OS version 1.6 and higher

NOTE: Following OS/390 version 2.10, new versions were named z/OS. Documaker runs on OS/390 and z/OS. In this manual, OS/390 and z/OS are referred to as *z/OS* unless otherwise noted.

No product upgrades are required and no incompatibility problems have been reported when running Documaker on any of these operating system releases.

	Requirements
Hard disk	150mb
Printer	Any printer which supports IBM AFP, Xerox Metacode, or Adobe PostScript
Runtime library	IBM Language Environment for OS/390 version 2.10 or higher
Compiler	(Only necessary if adding custom code to the system) IBM C/C++ Compiler for OS/390 version 2.10 or higher

NOTE: Regardless of the type of computer you run the system on, to print charts on Xerox Metacode printers, you must have a GVG card. To print charts on IBM AFP printers, you must have a GOCA card.

The amount of hard disk space you will need depends mainly on the volume of data you must process. Keep in mind too, that the C/C++ compiler is only required if you plan to write your own custom rules and recompile the source modules provided in the Software Developer's Kit (SDK).

On UNIX Systems

Oracle Documaker products run on the following UNIX systems.

For all UNIX systems, you can use any printer that supports IBM AFP, PCL, PostScript level 2, or Xerox Metacode. For HP printers, you need at least 8mb of memory, more if you are printing complicated graphics or using a lot of fonts. The amount of hard disk space you need depends on the volume of data you process. Keep in mind too, that a compiler is only required if you plan to recompile the system, such as if you customize the source code or use a runtime library other than the one shown for your operating system.

NOTE: For any UNIX installation, first make sure you have the uudecode, uncompress, and awk utilities installed.

On AIX systems

	Requirements
Operating system	AIX version 5.2 or higher
Model*	pSeries - Power RISC
Compiler	(Only necessary if adding custom code to the system) IBM Visual Age C/C+ version 6 IBM C/C++ Enterprise Edition for AIX v7
Runtime library	C Set ++ Runtime for AIX 5.0 or higher

	Tested on
Model*	pSeries p650
CPU	6 x 1.45GHz Power4+ processors
Memory*	12GB
Hard disk**	Two 36.4GB 10, 000RPM Ultra3 SCSI drives

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

On Linux systems

	Requirements
Operating system	GNU/Linux distributions RedHat Enterprise Linux (RHEL) version 5.1 or higher SuSE Linux Enterprise Server (SLES) version 9.3 or higher
Model	Intel/AMD based systems
Compiler	(Only necessary if you are adding custom code to the system) GNU C/C++ compiler: gcc-3.3.5-5 v3.3.5 or higher, gcc-c++-3.3.5-5 v3.3.5 or higher
Runtime library	libgcc-3.3.5-5 v3.3.5 or higher or compatibility module libstdc++-3.3.5-5 v3.3.5 or higher or compatibility module
Additional requirements	– The installer requires the sharutil package for the uudecode applet. – RedHat Enterprise Linux version 5.1 or higher needs these compatibility modules for the C++ runtimes: compat-libstdc++-33 compat-libstdc++-296 (required for the current ORA native DBHandler for Oracle 10g in Documaker) – Any other utilized third-party software required packages, such as Oracle, DB2, MySQL, and so on.

	Tested on
CPU*	Pentium 4, 1.80 GHz
Operating system	RedHat Enterprise Linux (RHEL) version 5.1 VMWare guest SuSE Linux Enterprise Server (SLES) version 9.4 VMWare guest
Memory*	768MB
Hard disk**	75GB

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

On Solaris systems

	Requirements
Operating system	Sun Solaris 9/SunOS 5.9 (SPARC based) or higher
Model*	UltraSPARC based
Compiler	(Only necessary if adding custom code to the system) Sun ONE Studio 8
Runtime library	Core Solaris 9

	Tested on
Model*	Sun Fire v240 Server
Operating system	Solaris v9 SPARC
CPU	2 x 1.28GHz UltraSPARC IIIi Cu
Memory*	2GB
Hard disk**	Four 36GB SCSI drives

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

DOCUPRESENTMENT REQUIREMENTS

Your computer must have certain software and hardware components to run Docupresentment. Depending on your software license and operating environment, these requirements vary.

Docupresentment Client

For a Docupresentment client, you must have a personal computer equipped with the following:

- Microsoft Internet Explorer version 6.0 or later for Windows 2000 or Windows XP or higher
- Adobe ® Acrobat Reader version 7.0 or higher

Docupresentment Server

You can run Docupresentment on the following operating systems:

- Windows
- AIX
- Linux
- Solaris

NOTE: For Docupresentment Client and Server, you must have Java 1.5 or higher.

These tables provide more detailed information on our minimum platform requirements for testing Docupresentment implementations.

On Windows systems

	Tested on
Operating system*	Windows XP
CPU	Intel® Core™ 2 CPU.2.13GHz
Memory	2 GB
Hard disk (RTE)	80 GB
Hard disk (MRL)**	80 GB

* Also tested on Windows 2000 Server and Windows 2003 Server.
** Additional space required for your customized forms

On AIX systems

	Requirements
Operating system	AIX version 5.2 or higher
Model*	pSeries - Power RISC
Compiler	(Only necessary if adding custom code to the system) IBM Visual Age C/C+ version 6 IBM C/C++ Enterprise Edition for AIX v7
Runtime library	C Set ++ Runtime for AIX 5.0 or higher

	Tested on
Model*	pSeries p650
CPU	6 x 1.45GHz Power4+ processors
Memory*	12GB
Hard disk**	Two 36.4GB 10, 000RPM Ultra3 SCSI drives

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

On Solaris systems

	Requirements
Operating system	Sun Solaris 9/SunOS 5.9 (SPARC based) or higher
Model*	UltraSPARC based
Compiler	(Only necessary if adding custom code to the system) Sun ONE Studio 8
Runtime library	Core Solaris 9

	Tested on
Model*	Sun Fire v240 Server
Operating system	Solaris v9 SPARC
CPU	2 x 1.28GHz UltraSPARC IIIi Cu
Memory*	2GB
Hard disk**	Four 36GB SCSI drives

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

On Linux systems

	Requirements
Operating system	GNU/Linux distributions RedHat Enterprise Linux (RHEL) version 5.1 or higher SuSE Linux Enterprise Server (SLES) version 9.3 or higher
Model	Intel/AMD based systems
Compiler	(Only necessary if you are adding custom code to the system) GNU C/C++ compiler: gcc-3.3.5-5 v3.3.5 or higher, gcc-c++-3.3.5-5 v3.3.5 or higher
Runtime library	libgcc-3.3.5-5 v3.3.5 or higher or compatibility module libstdc++-3.3.5-5 v3.3.5 or higher or compatibility module
Additional requirements	– The installer requires the sharutil package for the uudecode applet. – RedHat Enterprise Linux version 5.1 or higher needs these compatibility modules for the C++ runtimes: compat-libstdc++-33 compat-libstdc++-296 (required or the current ORA native DBHandler for Oracle 10g in Documaker) – Any other utilized third-party software required packages, such as Oracle, DB2, MySQL, and so on.

	Tested on
Model*	Dell PWS450
Operating system	RedHat Enterprise Linux (RHEL) v5.1 VMWare guest SuSE Linux Enterprise Server (SLES) v9.4 VMWare guest
CPU	2 x 2.40GHz Xeon processors
Memory*	3GB
Hard disk**	70GB SCSI drive

*Additional memory and a faster CPU is not required, but will improve performance.
** Additional space required for your customized forms

Web Server

This table outlines the web server requirements for each operating system:

Operating system	Web server
Windows	2000 Server or 2003 Server (or higher), such as Microsoft Internet Information Server 4.0 (or higher).
AIX	Web server for AIX 5.2, such as IBM's HTTP Server for AIX version 1.3.3.1 or higher with the Java Runtime Environment and/or JDK for AIX, version 1.4.0 or higher.
Linux	Web server for Linux, such as Apache 1.3.12 or higher or IBM HTTP Server 1.3.9 or higher.
Solaris	Web server for Sun Solaris 7 or higher on SPARC, such as Java Web Server 2.0 or Apache 1.3.9 with the Java Runtime Environment and/or JDK for Solaris, version JRE 1.4.0 or higher. IBM HTTP Server 1.3.9 or higher can also be used.

NOTE: We test Docupresentment version 2.2 and iDocumaker version 3.2 implementations on WebSphere Application Server (WAS) version 6.1.x and Tomcat 6.x Application Server.

iDocumaker Requirements

Your computer must have certain software and hardware components to run iDocumaker. This table outlines those requirements:

Basic requirements

	Requirements
Operating system	Windows XP, Windows 2003 Server, Linux, AIX, and Sun Solaris
Java Runtime Environment (JRE)	version 1.5 or higher
Physical memory/JVM heap memory*	2 GB RAM/512 MB
Hard disk**	100 MB free
Other components	Keyboard and mouse or compatible pointing device
Monitor	Color SVGA monitor

* Additional memory will improve system performance.
** The amount of hard disk space you will need depends mainly on the volume of data you must process.

Client requirements

In addition to the basic requirements, each client should have the following:

- WIP Edit plug-in, version 11.3, patch 05 or higher
- Microsoft Windows XP Professional or later
- Adobe Acrobat Reader 7.0 or higher
- Microsoft Internet Explorer 7.0 or higher with these Internet security options enabled:
  - Run ActiveX controls and plug-ins
  - Script ActiveX controls safe for scripting
  - Allow cookies that are stored on your computer
  - Allow per-session cookies (not stored)
  - Active scripting

Server requirements

In addition to the basic and client requirements, the computer you will use as a server should be configured with the following:

- Apache Tomcat or IBM WebSphere MQ
- A database such as Oracle version 8i or higher, Microsoft SQL 2000 or higher, IBM DB2 version 8.1 or higher, Sun MySQL version 4.3 or higher, or other JDBC version 2.0-supported databases
- Application servers that support the J2EE 1.4 specification. We test on Tomcat version 5.5 and WebSphere MQ version 6.1.

Application server requirements

In addition to the basic requirements, for the application server, you should have:

- Windows Server (Tomcat plug-in), Tomcat version 5.5 or higher, or WebSphere MQ (formerly MQSeries) version 6.1
- One of these message busses:
  - WebSphere MQ
  - JMS
  - ActiveMQ
  - MSMQ
  - HTTP
- A database such as Oracle version 8i or higher, Microsoft SQL Server 2000 or higher, IBM DB2 version 8.1 or higher, Sun MySQL version 4.3 or higher, or other JDBC version 2.0-supported databases
- Docupresentment version 10.2 (IDS version 1.8) or higher

NOTE: We test iDocumaker version 3.2 implementations on WebSphere Application Server (WAS) version 6.1.x and Tomcat 6.x Application Server.

Using the right Java environment

This table shows various application servers we have tested with and the Java version you should use with those web servers and with iDocumaker.

For	Use
Tomcat 5.5 (or higher)	Tomcat using Java 1.5 (iDocumaker using the Servlet Specification 2.4 or higher)
WebSphere Application Server 6.1.x	WebSphere Application Server using Java 1.5 (iDocumaker using the J2EE standard 1.4)

Additional recommendations

We also recommend these additional products for your iDocumaker implementation:

Product	Description
Documaker	Use for rules publishing.

iPPS Requirements

Your computer must have certain software and hardware components to run iPPS. This table outlines those requirements:

Basic requirements

	Requirements
CPU	Pentium III or higher
Operating systems	Windows 2000, Windows XP, or Windows 2003 Server
Memory*	256MB RAM
Hard disk**	400 MB free
Other components	Keyboard and mouse or compatible pointing device
Monitor	Color SVGA monitor

* Additional memory, while not required, will improve system performance.
** The amount of hard disk space you will need depends mainly on the volume of data you must process.

Client requirements

In addition to the basic requirements, each client should have the following:

- WIP Edit plug-in, version 11.3, patch 05 or higher
- Windows 2000 Professional or XP Professional or later
- Adobe Acrobat Reader 7.0 or higher
- Microsoft Internet Explorer 6.0 or higher with these Internet security options enabled:
  - Run ActiveX controls and plug-ins
  - Script ActiveX controls safe for scripting
  - Allow cookies that are stored on your computer
  - Allow per-session cookies (not stored)
  - Active Scripting

Server requirements

In addition to the basic and client requirements, the computer you will use as a server should be configured with the following:

- Internet Information Services (IIS) with World Wide Web Server and File Transfer Protocol (FTP) Server
- A database such as Microsoft Access (Access 97 or higher), xBase, or SQL
- Visual Basic runtimes
- Microsoft XML Core Services 4.0 SP2 (msxml4) for iPPS 3.11 and below
- Microsoft XML Core Services 6.0 (msxml6) for iPPS 3.12 and higher
- ADO 2.6 or later
- A static IP address

Web server

For the web server, you should have:

- Minimum Pentium III with 512MB of RAM
- Windows 2003 Server
- Component Services or Microsoft Transaction Server
- Microsoft Visual Basic 6 Runtimes (included/installed with iPPS version 3.1 or higher)
- Microsoft Active Data Objects 2.6 or higher (included/installed with iPPS version 3.1 or higher)
- IBM WebSphere MQ (formerly MQSeries) or Microsoft Message Queue client
- ODBC-compliant database (Oracle, SQL Server, or DB2 recommended for production)
- Microsoft's XML parser:
  - MSXML 4.0 sp2 for iPPS version 3.11 and below
  - MSXML 6.0 for iPPS version 3.12 and higher
- Docupresentment version 10.2 (IDS version 1.8) or higher

Additional recommendations

We also recommend these additional products for your iPPS implementation:

Product	Description
Documaker	Use for rules publishing.

EWPS Requirements

The EWPS Java web application deployment supports Java Runtime Environment (JRE) version 1.5 or higher. For best results, use JRE version 1.6. This table shows you the version of Java you need for each supported platform:

For this platform	You need this version of Java
Microsoft Windows (x86-32 and x86-64)	
XP (SP 2) Server 2003 (SP2)	Sun Java 5 or higher
Linux (x86-32 and x86-64) 32- and 64-bit kernels	
SuSE Linux Enterprise Server (SLES) version 9.4 or higher RedHat Enterprise Linux (RHEL) version 5.1 or higher	Sun Java 5 or higher or IBM Java 5 or higher
Sun Solaris (SPARC) 32-and 64-bit kernels	
Solaris 9/SunOS 5.9 or higher)	Sun Java 5 or higher
IBM AIX 5L pSeries (RISC) 32- and 64-bit kernels	
version 5.2 TL 5200-09	IBM Java 5 or higher
version 5.3 TL 5300-07	IBM Java 6 or higher

Web application server

Whether running on Windows, Linux, Solaris, or AIX, you can use either of the following Java Web Application Servers:

- IBM WebSphere AS, version 6.1 or higher
- Tomcat version 5.5 or higher

NOTE: We test with both WebSphere and Tomcat. Other Java application servers should also work.

An EWPS Java web application deployment requires the following version of Docupresentment to process web services requests:

- Docupresentment version 2.2, patch 04 or higher

Message bus systems

EWPS communicates to Docupresentment using a message bus provider such as JMS, WebSphere MQ, or MSMQ. This table shows the possible message bus systems. Tested systems are indicated with a single asterisk (*).

For this platform	You can use one of these message busses
Microsoft Windows (x86-32 and x86-64) — XP (SP 2 — Server 2003 (SP2)	HTTP/SOAP(*) (**) MSMQ (*) IBM WebSphere MQ, version 5.3 or higher (*) ActiveMQ JMS (*) (***) Other JMS providers
Linux (x86-32 and x86-64) **** — SuSE Linux Enterprise Server (SLES) version 9.4 or higher — RedHat Enterprise Linux (RHEL) version 5.1 or higher	HTTP/SOAP(*) (**) IBM WebSphere MQ, version 5.3 or higher (*) ActiveMQ JMS (*) (***) Other JMS providers
Sun Solaris (SPARC) — Solaris 9/SunOS 5.9 or higher	HTTP/SOAP(*) (**) IBM WebSphere MQ, version 5.3 or higher (*) ActiveMQ JMS (*) (***) Other JMS providers
IBM AIX 5L pSeries (RISC) 32-bit and 64-bit — version 5.2 TL 5200-09 — version 5.3 TL 5300-07	HTTP/SOAP(*) (**) IBM WebSphere MQ, version 5.3 or higher (*) ActiveMQ JMS (*) (***) Other JMS providers

(*) Tested providers
(**) This provider has not been tested under heavy concurrency and load.
(***) At the time of publication, we noticed problems with the ActiveMQ JMS during heavy load testing, We expect Apache to address these issues in the future. Contact Apache for more information.
(****) Other Linux distributions should work at kernel v2.6.11.4-21 or higher but have not been tested.

Docupresentment, JRE, and Documaker versions

This table shows, for each supported and tested platform, the version of Docupresentment, the corresponding Java Runtime Environment (JRE) for Docupresentment, and the version of Documaker necessary to support EWPS.

For this platform	Docupresentment	JRE	Documaker
Microsoft Windows (x86-32 and x86-64) – XP (SP 2) – Vista (SP 1) – Server 2003 (SP2)	Version 2.2, patch 04* or higher	Sun JRE v1.5** Sun JRE v1.6	Version 11.3, patch 05 or higher
Linux (x86-32 and x86-64)**** – SuSE Linux Enterprise Server (SLES) version 9.4 or higher – RedHat Enterprise Linux (RHEL) version 5.1 or higher	Version 2.2, patch 04* or higher	Sun JRE v1.5** Sun JRE v1.6 IBM JRE v1.5** IBM JRE v1.6***	Version 11.3, patch 05 or higher
Sun Solaris (SPARC) – Solaris 9/SunOS 5.9 or higher	Version 2.2, patch 04* or higher	Sun JRE v1.5** Sun JRE v1.6	Version 11.3, patch 05 or higher
IBM AIX 5L pSeries (RISC) 32-bit and 64-bit – version 5.2 TL 5200-09 – version 5.3 TL 5300-07	Version 2.2, patch 04* or higher	IBM JRE v1.5** IBM JRE v1.6***	Version 11.3, patch 05 or higher

* A Docupresentment Windows installation includes a bundled Sun J2SE JRE version 1.6 which is used by default by the Docupresentment server.
** Running the Docupresentment web services interface under JRE version 1.5 requires JAXB 2. See Downloading JAXB on page 20 for more information.
*** IBM's J2SE JRE version 1.6 is only supported in Docupresentment version 2.2, patch 05 or higher and Documaker Shared Objects version 11.3, patch 06 or higher.
**** Other Linux distributions should work at kernel version 2.6.11.4-21 or higher but have not been tested.

NOTE: To find the latest version of Documaker, Docupresentment, iDocumaker, iPPS, or EWPS, log onto the following web site:

https://support.oracle.com

Downloading JAXB

JAXB provides a way to map XML and Java code and extend applications with XML and Web Services technologies. You must install and implement JAXB 2 to run the Docupresentment web services interface under JRE version 1.5.

Follow these steps to download the latest version of JAXB:

1. Go to the JAXB web site:

   https://jaxb.dev.java.net/

2. Click Download Now for the latest version of JAXB.
3. On the new page, click the Download the Binary link and save the ZIP file to your local machine.
4. Unzip the downloaded ZIP file into directories. There will be a \jaxb-ri directory with a \lib subdirectory.
5. From the \lib subdirectory, copy the jaxb-api.jar and jaxb-impl.jar files to the \lib directory of your Docupresentment installation.

DOCUMANAGE REQUIREMENTS

The hardware and software described here only includes what is required by the Documanage applications. These hardware recommendations are cumulative. Running multiple software applications on a single system requires that the system support the sum of all of the hardware recommended by all of the software vendors. For example, if each of two software applications require 50MB of free disk space and 256MB of available memory, then the required hardware should have 100MB of free disk space and 512MB of available memory.

For server products, the required minimum amount of hardware varies depending on the client load it supports, including the type and size of documents being processed. For instance, rendering Metacode documents with a 24-bit color depth on the server requires more server memory for fewer workstation connections.

NOTE: These recommendations are not intended as guidelines for high-volume production systems. They are for installing and running a workgroup with fewer than ten users, and they assume that the systems are not running other applications. Larger systems should be set up while working with Consulting Services. The number of users, the amount of data, along with usage profiles and their impact on system operation should be considered.

Workstation and Administrative Applications

The Workstation and Administrative Applications can run on Microsoft Windows operating systems with Intel-compatible hardware.

Normally, the Workstation component is installed on end-user workstations by itself. You can, however, install the Workstation and Services applications on the same machine to test an installation and to perform trouble shooting.

On Windows systems

	Requirements
Operating systems*	Windows 2000 Professional (NT5) or XP Professional Be sure to install all available service packs. No additional software is required. All support libraries are installed or updated by the Documanage installers.
CPU	Intel-compatible; 256-MHz or faster Pentium III-or-better processor required; 512-MHz Intel Pentium/Celeron family, AMD K6/Athlon/Duron family, or compatible processor recommended
Memory	128MB available RAM or more recommended (64MB minimum supported; may limit performance and some features)

* Windows XP Professional does not support Workstation scanning functions until Documanage release 6.4.

	Requirements
Hard Disk	40MB of available hard-disk space required for installation (disk usage will vary based on configuration)
Monitor	Recommend 19" monitor or better at 1024 x 768 resolution or better for viewing and working with documents using Workstation software
Networking	Network adapter for the type of network to which you want to connect, and access to an appropriate network

* Windows XP Professional does not support Workstation scanning functions until Documanage release 6.4.

Server and Router Applications

The Server and Router Applications can run on Microsoft Windows, Linux, AIX, and Solaris operating systems and Intel-compatible hardware.

On Windows systems

	Requirements
Operating systems	Windows 2000 Professional (NT5), XP Professional Be sure to install all available service packs. No additional software is required. All support libraries are installed or updated by the Documanage installers.
CPU	Intel-compatible; 512-MHz or faster Pentium III-or-better processor required; 1-GHz Intel Pentium/Celeron family, AMD K6/Athlon/Duron family, or compatible processor recommended; multi-processor systems are fully supported by a multi-threaded server
Memory	Router: 50MB available RAM or more. Server: 38 MB available RAM or more (256MB minimum supported; this may limit performance and the availability of some features)
Hard disk*	Router: 80MB of available hard-disk space is required for installation Server: 100MB of available hard-disk space is required for installation
Peripheral	Additional peripheral storage (hard disk or other mass storage or networked storage) is required for all document storage.
Networking	Network adapter appropriate for the type of network to which you want to connect, and access to an appropriate network

* Disk usage will vary based on configuration.

On Linux systems

	Requirements
Operating systems	Red Hat Advanced Enterprise Server, versions 2.1, 3 and 4. All current fixes are required for each kernel release. The latest Linux kernel build announcements are available at: http://www.spinics.net/lists/announce-kernel/ No additional software is required. Free DCE/RPC for Linux is supplied in the libdcerpc.so.0.0.1 file packaged with your installation. It incorporates modifications that allow Documanage to run with the latest versions of Linux. ODBC and DCE libraries are included in your installation.
CPU	Intel-compatible only; 512-MHz or faster Pentium Pro-or-better processor required; 1-GHz Intel Pentium/Celeron family, AMD K6/Athlon/Duron family, or compatible processor recommended
Memory	Router: 50MB available RAM or more recommended Server: 384MB available RAM or more recommended (128MB minimum supported; may limit performance and some features)
Hard disk*	Router: 80MB of available hard-disk space required for installation Server: 100MB of available hard-disk space required for installation
Peripheral	Additional peripheral storage (hard disk or other mass storage or networked storage) is required for document storage.
Networking	Network adapter appropriate for the type of network to which you want to connect, and access to an appropriate network

* Disk usage will vary based on configuration.

On AIX systems

	Requirements
Operating systems	AIX 4.3 or later (for pSeries processors). We recommend that you install all available fixes. Encryption Support: /usr/lib/libcrypt.a (Encryption library) POSIX Thread Support (see http://www-306.ibm.com/software/awdtools/caix/) - libpthreads.a (POSIX thread library) - libpthreads_compat.a (POSIX thread additional compatibility layer) Note: Both libraries are included in the bos.rte.libpthreads fileset, which is installed by default. IBM DCE/RPC for AIX (see http://www-306.ibm.com/software/network/dce/) - libdce.a (IBM DCE main library) - libdcepthreads.a (IBM DCE support library) - libdcelibc_r.a (IBM DCE support library)
CPU	IBM pSeries supporting required AIX versions
Memory	Router: 50MB available RAM or more recommended Server: 384MB available RAM or more recommended (128MB minimum supported; may limit performance)
Hard disk*	Router: 80MB of available hard-disk space required for installation Server: 100MB of available hard-disk space required for installation
Peripheral	Additional peripheral storage (hard disk or other mass storage or networked storage) is required to store documents.
Networking	Network adapter for the type of network to which you want to connect, and access to an appropriate network

* Disk usage will vary based on configuration.

On Solaris Systems

	Requirements
Operating systems	The Documanage Server and Router run on SunOS 5.7 (Solaris 7) or later. We recommend that you install all available fixes. For recent announcements, see: http://www.spinics.net/lists/announce-kernel/ IBM DCE/RPC for Solaris; not compatible with Sun's ONC/RPC (see http://www-306.ibm.com/software/network/dce/)
CPU	Sun SPARC Server platform only, supporting required SunOS versions.
Memory	Router: 50MB available RAM or more recommended Server: 384MB available RAM or more recommended (128MB minimum supported; may limit performance)

* Disk usage will vary based on configuration.

	Requirements
Hard disk*	Router: 80MB of available hard-disk space required for installation Server: 100MB of available hard-disk space required for installation
Peripheral	Additional peripheral storage (hard disk or other mass storage or networked storage) is required for document storage.
Networking	Network adapter for the type of network to which you want to connect, and access to an appropriate network

* Disk usage will vary based on configuration.

Databases Supported

The Documanage Server supports several database management systems, including Oracle, Microsoft Sybase Adaptive Server, DB2, and Adaptive Server Anywhere.

Database/version	Driver/version
Oracle 9i, 10g	Latest Oracle drivers (ODBC version 9.00.01.08 or later)
MSSQL Server 2000	Microsoft Data Access Components (MDAC) 2.8
DB2 7.2, 8.2	IBM DB2 Connect 7.2 or 8.2
Sybase Adaptive Server 12.5	Sybase Adaptive Server Enterprise (ASE) ODBC driver 4.20.00.67 or later
MySQL 4.1	Latest MySQL drivers

Document Retention Management Requirements

Optional Nearstor Network Attached Storage (NAS) with Snaplock compliance from Network Appliance, Inc., securely stores documents that Documanage has under Retention Management. Nearstor NAS is currently available with capacities between one terabyte and 96 terabytes.

Third-Party Storage Solutions

Documanage interfaces to third-party storage systems, which augment Documanage's enforcement of retention policies and provide other managed storage-system benefits. Contact your sales representative for the latest listing of storage system versions which have been certified for use with Documanage. Documanage interfaces to the storage systems listed here at this time:

Vendor	Product	Supported Versions*
Network Appliance, Inc.	NearStor/SnapLock	Data ONTAP 7.1 or newer
EMC, Inc.	Centera	3.0.1 or newer with Compliance (Governance) Edition or CE Plus

* Oracle Insurance applications support newer product versions only if they are backward compatible with the versions listed here.

Plug-in modules interface these storage systems to the Documanage Server. These modules have been developed by Oracle Insurance, which is solely responsible for their performance.

Chapter 2

Installing Documaker Server on z/OS

This chapter provides information on how to install and configure Documaker on a z/OS system.

NOTE: Following MVS version 5.2.2, new versions of this operating system were named OS/390. Following OS/390 version 2.10, new versions were named z/OS. Documaker Server runs on MVS, OS/390, and z/OS. In this manual, MVS, OS/390, and z/OS are referred to as *z/OS* unless otherwise noted.

You will find information on these topics:

In addition, you'll also find information about...

OVERVIEW

This chapter provides you with steps to install and configure Documaker Server on your z/OS system. This overview discusses the contents of this chapter.

NOTE: See System Requirements on page 2 for information about system requirements.

DOWNLOADING THE SOFTWARE

You can download Documaker Server for z/OS by downloading the Oracle Documaker media pack from the Oracle Software Delivery Cloud web site. A media pack is an electronic version of the software products available to Oracle customers. The media pack contains .zip files for a suite of related products on a single operating system so you can build a complete solution for your business needs.

For more information, see Downloading the Software on page 31.

INSTALLING THE SYSTEM

Installing Documaker for z/OS from the Oracle Software Delivery Cloud involves these steps:

1. Unzip the zip file on Windows and upload the unzipped file to z/OS.
2. Run the LOADDAPW Job to perform a RECEIVE of the contents of the file that was uploaded.
3. Run the BINDDB2 Job to BIND the DB2 Plan to the DB2 subsystem.

Once you have installed the Documaker software, perform the steps discussed in Binding the Documaker DB2 Plan to Your DB2 Subsystem on page 33.

Configuring Your Printer Types

The system produces output for Xerox Metacode, IBM AFP, PostScript, PDF, or compatible printers. The steps differ, depending on the printer you will use.

Configuring your system for Xerox Metacode

Here is an overview of the steps required to configure the system for Xerox Metacode or compatible printers. For detailed instructions, see Creating Xerox Metacode Print Streams on page 39.

1. Change the Xerox JSL.
2. Change the FSISYS file.
3. Pre-compile your FAP files.
4. Make your printer resources available. This can include uploading Xerox fonts, loading the fonts onto your printer, and converting logos.
5. Change the JCL for the DAP procedure (or the GenPrtX job) and the GENERXER job.

Configuring your system for AFP printers

Here is an overview of the steps required to configure the system for AFP or compatible printers. For detailed instructions, see Creating AFP Print Streams on page 45.

1. Allocate AFP-related datasets.
2. Make your printer resources available. This can include uploading AFP fonts, loading page segments, setting up FormDefs, and creating overlays.
3. Pre-compile your FAP files into AFP overlays.
4. Modify the FSISYS file.
5. Modify the JCL for the DAP procedure (or the GenPrtX job) and the GENERAFP job.

Configuring your system for PostScript printers

Here is an overview of the steps required to configure the system for PostScript printers. For detailed instructions, see Creating PostScript Print Streams on page 48.

1. Change the FSISYS INI file.
2. Modify the JCL.

Configuring your system to produce PDF files

Here is an overview of the steps required to configure the system to produce PDF files. For detailed instructions, see Creating PDF Files on page 50.

1. Change the FSISYS INI file.
2. Modify the JCL.

Configuring Host Archive

Here is an overview of the steps required to configure host archive. This is an optional step. For detailed instructions, see Configuring Host Archive on page 54.

Checking Your Installation

Here is an overview of the steps required to configure host archive. This is an optional step. For detailed instructions, see Checking Your Installation on page 62.

1. Check your FSIUSER and FSISYS settings.
2. Check your JCL.
3. Run the DAPRUN procedure (or GenTrnX, GenDataX, and GenPrtX).
4. Run GenArcDX (or GenArcX).
5. Print the output.

Additional Information

At the end of this guide you will also find information about the LOADDAP job, z/OS libraries, and z/OS programs and utilities.

Downloading the Software

Oracle Insurance applications are available for download at the Oracle Software Delivery Cloud web site. The process includes:

- Logging in and agreeing to the terms and restrictions
- Searching for the applications you want to download
- Downloading those applications

Go to the Oracle Software Delivery Cloud web site to download Oracle Insurance applications:

https://edelivery.oracle.com

INSTALLING THE SYSTEM

Once you download and unzip the files, you will see a file named *DAP115Pxx.xmit*. This file contains several z/OS PDSs and sequential datasets and is in a TRANSMIT (XMIT) format.

NOTE: The object and executable modules were built using IBM's C/C++ for z/OS version 1.7 compiler and corresponding Language Environment (LE) product.

To perform the Documaker z/OS installation, you must transfer this file to z/OS in binary mode, then unzip (RECEIVE) it. The RECEIVE creates and populates the PDSs and sequential datasets that comprise the Documaker installation. Follow these steps to transfer this file to z/OS and perform the RECEIVE.

1. Allocate a dataset on z/OS to which you can upload the DAP115Pxx.xmit file. Allocate this dataset using attributes similar to these:

```
Data Set Name . . . : FSI.DAP.XMIT   <= whichever name you choose
Organization  . . . : PS
Record format . . . : FB
Record length . . . : 80
Block size  . . . . : 3120
1st extent cylinders: 200            <= primary space needed
Secondary cylinders : 10             <= secondary space needed
```

2. Upload the DAP115Pxx.xmit file from Windows to the file on z/OS you allocated in the previous step. Be sure to upload this file to z/OS in binary mode.

3. Upload the LOADDAPW.JCL file (in text mode) to your JCL library on z/OS. Read the comments in the JCL and make the necessary modifications so it will run on your system.

NOTE: If you have previously installed Documaker z/OS, you may already have the LOADDAPW job in your JCLLIB PDS on z/OS.

4. Submit the LOADDAPW job. The LOADDAPW job consists of two steps. Each step executes the IKJEFT01 (batch TSO) program and invokes the RECEIVE command.

   The first step receives the FSI.DAP.XMIT file into a PDS named *FSI.V115.DAP.XMIT.PDS* (or the name you chose). This PDS contains a member for each PDS or sequential dataset that needs to be installed.

   The second step receives each of the members of this PDS and creates a PDS or sequential dataset for each of these members.

Once the LOADDAPW job finishes, it will have created and populated 38 or so Documaker installation datasets.

Now go to Binding the Documaker DB2 Plan to Your DB2 Subsystem on page 33.

Binding the Documaker DB2 Plan to Your DB2 Subsystem

Perform the steps in this topic after you have installed Oracle Documaker for z/OS.

If you are running Documaker on z/OS, in most cases your resources (BDF, GRP, FOR, DAL resources, and so on) are stored in a library. On z/OS, this library is comprised of four DB2 tables. You must perform a DB2 BIND to run Documaker on z/OS and access these tables.

The BIND process creates a DB2 PLAN which the Documaker batch processes, such as GenTrn, GenData, and GenPrint use to access the library tables. Note that the GenArc and GenWIP batch processes also require the use of the DB2 PLAN if you use DB2 to store the archive or WIP data.

The job to perform the DB2 BIND is called *BINDDB2* and is provided in the JCLLIB. This job uses the DBRMLIB dataset created during the installation of Documaker for z/OS. The BINDDB2 job performs these tasks:

- BINDs the DB2LIB member of the DBRMLIB into a COLLECTION named DAPxxx_COL.
- BINDs the DB2LIB2 member of the DBRMLIB into a COLLECTION named DAPxxx_COL.
- BINDs the DAPxxx PLAN, consisting of the PACKAGE List of all PACKAGEs that are in the COLLECTION named DAPxxx_COL.

You can assign any name that meets your DB2 requirements to the COLLECTION and the PLAN. The PLAN name must match the PLAN name used when DB2 is invoked in the SYSTSIN DD statement in the GenTrn, GenData, GenPrint, GenArc, and GenWIP batch processes.

For example, the sample job DMRUNLM (Documaker Run using Library Manager) in JCLLIB invokes the DMLM Proc in PROCLIB. The DMRUNLM job contains a JCL override for the SYSTSIN DD statement. The content of this overriding SYSTSIN DD statement invokes the DB2 subsystem named DB8G, then runs the Documaker batch program named *GenTrn* and specifies that the DB2 PLAN named *DAP113* is to be used. The GenTrn program is stored in the library named *FSI.V113.LINKLIB*.

```
//DMRUNLM  EXEC DMLM
//GENTRN.SYSTSIN  DD  *
DSN SYSTEM(DB8G)
RUN PROGRAM(GENTRN) PLAN(DAP113) -
    LIB('FSI.V113.LINKLIB')
END
/*
```

Modify the BINDDB2 job to conform to your system requirements, then submit this job.

DB2 Bind Considerations

When you migrate to a new version or patch level of Documaker, you typically need to run both the old and new versions for a period of time. Because of the connection between the Documaker executables (such as GenTrn, GenData, and GenPrint) and the DB2 PLAN they use, you may not be able to simply change the batch job to use the appropriate LINKLIB executable (the new or old version). Instead, you may need to generate a new DB2 PLAN for the new version of the Documaker executables to use.

For example, assume you have Documaker version 12.0, patch 03 installed. When you installed this version of Documaker, you ran the BINDDB2 job and created a PACKAGE LIST named DAP120_COL and a PLAN named DAP120. You now need to install Documaker version 12.0, patch 05.

Using the names from the example above, here are several ways to set up two versions of Documaker on z/OS:

Scenario 1 - Using DBRM versioning

In Documaker 12.0, patch 02 and higher, the DB2LIB and DB2LIB2 DBRMs are versioned. In this case, you can simply run the BINDDB2 job to BIND the new DB2LIB and DB2LIB2 DBRMLIB members (from version 12.0, patch 05) into the same PACKAGE LIST named DAP120_COL.

The PLAN named DAP120 will then use the updated PACKAGE LIST. You should still point the LIB parameter in the SYSTSIN DD statement to the LINKLIB of the Documaker version that you want to run with. You can use this *versioning* method if either your current Documaker installation (such as 12.0 P03) or the new Documaker installation (such as 12.0, patch 05) has package versioning.

Scenario 2 - Creating a new PACKAGE and binding the PLAN with the PACKAGE

In the BINDDB2 job, BIND the new DB2LIB and DB2LIB2 DBRMLIB members (from version 12.0, patch 05) into a new PACKAGE LIST named *DAP120P05_COL*. For instance...

```
//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PACKAGE(DAP120P05_COL) MEMBER(DB2LIB) ACT(REP) -
ISOLATION(CS)
END
/*
```

```
//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PACKAGE(DAP120P05_COL) MEMBER(DB2LIB2) ACT(REP) -
ISOLATION(CS)
END
/*
```

BIND the current PLAN (DAP120) and include both the old PACKAGE LIST (DAP120_COL) and the new PACKAGE LIST (DAP120P05_COL).

```
//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PLAN(DAP120) ACT(REP) -
ISOLATION(CS) RETAIN -
PKLIST(DAP120_COL.*,DAP120P05_COL.*)
END
/*
```

If you choose this approach, be sure to include this INI option when running the new version (12.0, patch 05):

```
< DBHandler:DB2 >
    CurrentPackageSet = DAP120P05_COL
```

The CurrentPackageSet option tells DB2 to use only the PACKAGEs in the DAP120 PLAN that are associated with the PACKAGE LIST named DAP120P05_COL. These PACKAGEs are the new ones you bound in step 1.

Scenario 3 - Creating a new PACKAGE and a new PLAN

As in scenario 2, in the BINDDB2 job, BIND the new DB2LIB and DB2LIB2 DBRMLIB members (from version 12.0, patch 05) into a new PACKAGE LIST named DAP120P05_COL. For instance...

```
//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PACKAGE(DAP120P05_COL) MEMBER(DB2LIB) ACT(REP) -
ISOLATION(CS)
END
/*

//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PACKAGE(DAP120P05_COL) MEMBER(DB2LIB2) ACT(REP) -
ISOLATION(CS)
END
/*

BIND a new PLAN (D120P05) and include only the new PACKAGE LIST
(DAP120P05_COL).

//SYSTSIN DD *
DSN SYSTEM(DB8G)
BIND PLAN(D120P05) ACT(REP) -
ISOLATION(CS) RETAIN -
PKLIST(DAP120P05_COL.*)
END
/*
```

If you choose this approach, you must also change the SYSTSIN DD statement input to point to the new PLAN name, D120P05. Here is an example:

```
//GENTRN.SYSTSIN DD *
DSN SYSTEM(DB8G)
RUN PROGRAM(GENTRN) PLAN(D120P05) -
LIB('FSI.V120.P05.LINKLIB')
END
/*
```

NOTE: Regardless of which approach you choose, you must point the LIB parameter in the SYSTSIN DD statement to the new LINKLIB that contains the new version of Documaker (GenData, GenPrint, GenArc, and so on).

Upgrading Your System

Upgrading to a new version of Documaker or applying patches to your Documaker system requires that you perform a standard Documaker installation.

Determining your System's Patch Level

You can determine the patch level of your Documaker system by running a Job provided in the FSIVERX member of JCLLIB. This Job (see below) runs the FSIVER utility which examines the contents of a *LINKLIB* dataset and looks for patch identifiers contained in the Documaker program modules in the LINKLIB dataset.

The FSIVER utility then produces a report listing the patches it found. Unless instructed otherwise, FSIVER produces both a detailed patch report and a summary patch report. See the Docutoolbox Reference for more information on the FSIVER utility.

```
//ZDA      JOB   (33005),'FSIVER - 110  ',CLASS=T,MSGCLASS=X,
//         NOTIFY=&SYSUID
//*
//         SET HLQ='FSI.V110'   <== SET HIGH LEVEL QUALIFIER
//        SET RES='RPEX1'      <== SET RESOURCE (E.G. RPEX1, UTEX1)
//*
//         JCLLIB  ORDER=&HLQ..PROCLIB
//*
//
*********************************************************************
//*  PROGRAM  : FSIVER
//*  PURPOSE  : CREATES A REPORT THAT LISTS WHICH PATCHES HAVE BEEN
//*             APPLIED TO THE PROGRAMS IN THE LINKLIB REFERENCED BY
//*              THE LINKLIB DD STATEMENT.
//*
//*  PARMS    : /I=PROGRAM (NAME OF MEMBER IN DD:LINKLIB)
//*                 OR '*' TO LIST PATCH LEVEL OF ALL PROGRAMS IN
//*                  DD:LINKLIB.
//*
//
*********************************************************************
//FSIVER EXEC PGM=FSIVER,PARM='/ /I=*'
//*
//STEPLIB  DD DSN=&HLQ..LINKLIB,DISP=SHR
//         DD DSN=SYS1.SCEERUN,DISP=SHR
//LINKLIB  DD DSN=&HLQ..LINKLIB,DISP=SHR
//SYSPRINT DD SYSOUT=*
```

CUSTOMIZING YOUR SYSTEM

This step is optional.

Documaker is designed as a rules-based engine. Many rules are provided in the base product. These rules are located in the various source modules that make up a segment of the product called RULLIB. The Documaker architecture also lets you add your own rules, called *custom* rules. Some custom rules are provided, as examples, in a segment of the product called CUSLIB. If you want to modify these custom rules or add custom rules of your own, you should make your changes or additions to the CUSxxxxx modules that are provided in the Documaker Software Developer's Kit (SDK).

After making changes to any source modules in the SDK, you will need to compile these source modules into object modules and then link a new GenData program. The GenData program is also known as the Rules Processor.

Running the COMPSDK Job

To compile the modules provided in the Documaker SDK, modify and submit the job in COMPSDK. The COMPSDK job invokes the CBC compile proc for approximately 56 source modules. Each source module is compiled into an object module, and the object modules are written to the OBJLIB. The COMPSDK job should receive a return code of *04* or less in each step. A portion of the COMPSDK job is shown below.

```
//*** COPY JOBCARD HERE...
//*
//* COMPSDK - COMPILE JCL FOR THE DOCUMAKER SOFTWARE DEVELOPER KIT
//*          (SDK), WHICH IS A SUBSET OF THE COMPLETE DOCUMAKER
//*           SOURCE.
//*
//CUSARC   EXEC CBC,MEM=CUSARC
//CUSBANNR EXEC CBC,MEM=CUSBANNR
//CUSBAT   EXEC CBC,MEM=CUSBAT
//CUSBITMP EXEC CBC,MEM=CUSBITMP
//CUSCALLB EXEC CBC,MEM=CUSCALLB
...
```

Running the GENDATAL Job

You can link-edit a new GenData program to incorporate any changes or additions you have made to the CUSxxxxx source modules. Run the job in JCLLIB member GENDATAL to link-edit GenData. The GENDATAL job first invokes the OBJUTIL proc to rebuild the object library directory, then it invokes the LINK proc to link-edit GenData. GENDATAL should receive a return code of *04* or less in each step. The GENDATAL job is shown below.

```
//*  COPY JOBCARD HERE
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//*        LINK-EDIT GENDATA
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//ALIAS    EXEC OBJUTIL
//*
//GENDATA  EXEC LINK,MEM='GENDATA'
```

Running the GENPRTL Job

You can link-edit a new GenPrint program to incorporate any changes or additions you have made to the CUSxxxxx source modules. Run the job in JCLLIB member GENPRTL to link-edit GenPrint. The GENPRTL job first invokes the OBJUTIL proc to rebuild the object library directory, then it invokes the LINK proc to link-edit GenPrint. GENPRTL should receive a return code of 04 or less in each step. The GENPRTL job is shown below.

```
//*  COPY JOBCARD HERE
//
*********************************************************************
//*
//*        LINK-EDIT GENPRINT
//*
//
*********************************************************************
//*
//ALIAS    EXEC OBJUTIL
//*
//GENPRINT EXEC LINK,MEM=GENPRINT
```

NOTE: If you purchased a license for PDF or PDF417 or both, the object modules you received include these features and will enable the resulting GenData and GenPrint to have the capabilities you licensed.

Configuring Your Printer Type

On z/OS, you can use the system to create print streams for these printing environments:

- Xerox Metacode (see Creating Xerox Metacode Print Streams below)
- AFP (see Creating AFP Print Streams on page 45)
- PostScript (see Creating PostScript Print Streams on page 48)
- PDF (see Creating PDF Files on page 50)

The following topics tell you how to configure your system for these environments.

Creating Xerox Metacode Print Streams

Configuring your system to produce Xerox Metacode print streams involves these tasks:

- Making changes to the Xerox JSL
- Making changes to the FSISYS INI file
- Pre-compiling your FAP files into MET files (this task is optional)
- Making printer resources available
- Making modifications to the JCL

Changing the Xerox JSL

Configuring the system to print to a Metacode printer involves setting various initialization file settings, specifically those in the PrtType:XER control group in the FSISYS initialization file, which is usually a member of the DEFLIB PDS.

To know what values need to be used for each setting, look at the Xerox printer's configuration file. Xerox configuration settings are kept on the printer in a JSL file. The JSL file contains the initial settings under which the printer operates.

You can have multiple JSL files resident on a single printer, with the desired JSL file specified when you start the printer. It is not necessary to start the printer with a specific JDE,JSL combination to print Metacode streams. You must, however, have a JDE,JSL combination which can be dynamically switched to for the duration of that print stream that satisfies the requirements explained below.

Specific values from the JDE,JSL combination must be available to the GenPrint program. You make these values available by placing them in the FSISYS file.

Viewing the JSL

Before you look at any JSL files, first determine which JSL file will be active when print files are sent to the printer. The JSL file name can contain up to six characters and always has a JSL extension. Most Xerox Metacode printers (except the 4235) contain a built-in console editor for creating, viewing, modifying, and printing JSL files.

NOTE: You may want to print your Xerox printer's current JSL file before you continue.

JSL requirements

To print a Metacode stream on your Xerox printer, you must have a Job Description Entry (JDE) with the parameter *VOLUME CODE=NONE*. If your JSL's default JDE entry or any other JDE entry in the JSL contains this parameter, you do not need to add another JDE entry. If the parameter is missing, you must add it. Follow your accepted procedures for making such JSL additions and modifications.

Once there is a JDE entry (or the default entry) that satisfies the VOLUME CODE requirement, enter values in the table below that correspond either to this JDE entry specifically or to the JSL file in general.

Use the table below to note the values in the Xerox JSL you will use. You will enter these values when you modify the FSISYS file.

JSL entry	Description	Values
DJDEIden	Corresponds to the IDEN statement's PREFIX= keyword (or PRE=). Indicates E for EBCDIC, A for ASCII, X for hexadecimal and a string value. If there is no E,A or X before the string value, an *E* is assumed by default.	
DJDEOffset	Corresponds to the IDEN statement's OFF= keyword.	
DJDESkip	Corresponds to the IDEN statement's SKIP= keyword.	
ImageOpt	If the JSL contains a "GRAPHICS = YES" statement, set ImageOpt to Yes. Otherwise, set it to No. You must set this option to Yes if you need the system to dynamically draw charts.	
JDEName	If you had to create a new JDE entry to specify *VOLUME CODE = NONE*, use the name of the new JDE entry. If a JDE entry already existed that contained *VOLUME CODE = NONE,* specify the name of that JDE (if it's the default, it's probably called *DFLT*).	
JDLName	The name of the JSL file.	
JDLHost	Corresponds to the VOLUME parameter's HOST= keyword. This value will be either IBMONL or IBMOS. If not specified, the default is *IBMOS*.	
JDLCode	Corresponds to the VOLUME statement's CODE= keyword for the initial JSL setting (at the top of the JSL file). This value will be either EBCDIC, ASCII, or NONE.	

JSL entry	Description	Values
JDLData	Corresponds to the LINE statement's DATA= keyword. Should be two numbers separated by a comma (omit the parentheses).	
PrinterInk	If the printer supports a highlight color, specify that color here. Otherwise, leave blank.	
JDLRStack	To find this value, find the RSTACK command (if there is one) and work backwards. The RSTACK command refers to a TEST label, which sets up a string test and refers to a CONSTANT, string, or value. For example... RSTACK: TEST=RST,DELIMITER=YES; RST: CRITERIA CONSTANT =(0,10,EQ,RSTK); RSTK: TABLE CONSTANT =X'13131313131313131313'; ...the value you would use would be: JDLRStack=0,10,EQ,X'13131313131313131313'	
JDLROffset	Locate the ROFFSET command (if there is one) and work backwards. See JDLRStack above.	
JDLRPage	Locate the RPAGE command (if there is one) and work backwards. See JDLRStack above.	

Changing the FSISYS INI File

NOTE: Two sets of resources are included in the installation. The RPEX1 set of resources is designed for the insurance market. The UTEX1 resources are designed for the utility market. You can verify your installation by running the system using one or both of these sets of resources.

The following instructions may ask you to modify the FSISYS initialization member of DEFLIB, so the DEFLIB you must modify is the one for the set of resources you plan to use, such as *hlq.v103.RPEX1.DEFLIB* or *hlq.v103.UTEX1.DEFLIB*, or both if you plan to use both.

Metacode data sets on z/OS should be created with a Variable Blocked Machine character (VBM) Record Format (RECFM) and should have a Logical Record Length (LRECL) that is four bytes longer than the length of the longest Metacode record you plan to write.

z/OS uses four bytes of each record in a Variable Blocked data set to store data about that record. For example, in your INI file you may have the JDLData option set to

```
0,250
```

which indicates the longest Metacode record will be 250 bytes long. If this is the case, your Metacode data set should be allocated with an LRECL of 254.

PrtType:XER control group

You must place the values you gathered from or added to the Xerox printer's JSL file into the PrtType:XER control group in the FSISYS INI file. This file is generally stored as a member called *FSISYS* within the sample DEFLIB PDS.

Below are the options in the PrtType:XER control group relevant to z/OS environments. Using the table you completed earlier, make changes as necessary to the following values. The example below shows the default FSISYS values.

NOTE: You can comment out an INI control group or option by placing a semicolon (;) before the control group or option.

```
< PrtType:XER >
    ColorCharts         = Yes
    CompileInstream     = No
    DownloadFonts       = No,Disabled
    InitFunc            = XERInit
    Module              = XERW32
    OutputFunc          = XEROutput
    OutMetFunc          = XEROutMet
    PageNumbers         = Yes
    PrintFunc           = XERPrint
    PrinterInk          = Blue
    TermFunc            = XERTerm
    SendColor           = Yes
    DJDEIden            = A'@@@DJDE'
    DJDEOffset          = 0
    DJDESkip            = 8
    Environment         = MVS
    OutMode             = JES2
    ImageOpt            = Yes
    JDEName             = DFLT
    JDLData             = 0,255
    JDLHost             = IBMONL
    JDLName             = DFAULT
    JDLCode             = NONE
    JDLRStack           = 0,10,EQ,X'13131313131313131313'
    JDLRPage            = 0,5,EQ,X'FFFF26FFFF'Printer control group
```

The Printer control group tells the GenPrint program what type of output to produce. For the RPEX1 sample resources, the PrtType option is set to *XER*. For the UTEX1 sample resources, the PrtType option is set to *AFP*. Make sure the option is set correctly for your environment. For example, this setting tells the GenPrint program to produce Xerox Metacode print streams:

```
< Printer >
    ;PrtType = AFP
    PrtType = XER
```

Printer1 control group

The Printer1 control group contains PORT options which specify a DD name to which the system writes output for that recipient batch.

```
< Printer1 >
    PORT = DD:PRTBAT1
```

There may be other options present but they will be commented out with a semi-colon. Make sure the PORT option is set appropriately for your environment.

Pre-compiling FAP Files into Metacode Files

During the GenPrint process, FAP files (images) are compiled into Metacode files and arranged into the print stream. To speed execution, you can pre-compile—compile before running GenPrint—these FAP files.

NOTE: The FSISYS file included with the sample resources assumes you will be using pre-compiled Metacode files, or *PMETs*, since the use of PMETs increases performance. If, however, you *do not* want to run with PMETs, change the CompileInStream option in the PrtType:XER control group and DownloadFAP INI option in the RunMode control group to *Yes* and skip to the topic Making Printer Resources Available on page 44.

You can use the FAP2MET utility to compile FAP files into Metacode files. To run the system using pre-compiled Metacode files you must run the FAP2MET utility for every FAP file in FORMLIB. Here's how:

1. Run the FAP2METS job in JCLLIB. This job deletes or re-allocates the PMETLIB PDS and runs the FAP2MET utility for every FAP file in FORMLIB or FAPLIB. This creates a corresponding *PMET* and stores it in the PMETLIB PDS. The FAP2MET job should receive a return code of 00 for each step.
2. Make sure the CompileInstream option in the PrtType:XER control group is set to *No* and that the DownloadFAP option in the RunMode control group is set to *No*.
3. Modify the JCL for the DAP procedure or the GenPrtX job (please first read the topic Changing the JCL on page 45) so the PMETLIB DD statement is uncommented (it is included in the JCL but is commented out). This lets the GenPrint program open and read the PMETs you created.

Making Printer Resources Available

The resources your Xerox Metacode printer needs fall into two categories:

- Fonts
- Logos

The following topics tell you how to make these resources available to your printer.

Fonts

By default, the verification test (see Checking Your Installation on page 62) uses the Monotype (formerly known as Agfa) fonts included with the system. These fonts were loaded into datasets called &HLQ..AGFA.XEROX.FONTLIB and &HLQ..AGFA.XEROX.ROTATED.FONTLIB when you ran the LOADDAP job. If that is the case, go to the topic, Loading fonts onto your printer on page 44.

Loading fonts onto your printer

To load the Monotype fonts onto a Xerox printer, follow these steps:

NOTE: The names of the Xerox fonts begin with the characters *FX*. You may want to list the existing fonts on the printer to see whether any of your existing fonts have the same names as the fonts you are about to send to the printer.

1. Run the XERDNLDS member in JCLLIB. This job uses the FSISYS file you customized earlier. It converts the fonts into a format your Xerox printer can store. XERDNLDS should complete all steps with a return code of *00*.
2. Run the GENDNLDS member in JCLLIB. This job runs the IBM utility IEBGENER to copy each font to the Xerox printer. Modify GENDNLDS as necessary to fit your standards. Be sure to set the SYSOUT output class to the JES2 output class for the Xerox printer. GENDNLDS should complete all steps with a return code of *00*.

Logos

The verification test references FAP files which contain logos (bitmap-type graphics). You must place these logos on the Xerox printer either as FNT files or as IMG files.

If your Xerox printer has a graphics card, it can print IMG files and you should place the LOGOs on the printer as IMG files. If your printer does not have a graphics card, it cannot print IMG files—place the logos on the printer as FNT files.

When you installed the system, two PDSs were created called *&HLQ..LOG2IMG* and *&HLQ..LOG2XFNT*. These PDSs contain logos which have been converted into IMG and FNT files, respectively. You should download the contents of one of these PDSs to your Xerox printer.

For steps 1 and 2, choose either to load the IMG files (choose DD statement for LOG2IMG) or the FNT files (choose DD statement LOG2XFNT) to your Xerox printer:

1. Run the XERLOGOS job in JCLLIB. Edit the job to read from and write to the appropriate type of file (LOG2IMG or LOG2XFNT). This job should complete with return codes of *00* in all steps.

2 Run the GENLOGOS job in JCLLIB. Edit the job so it will read from the dataset you created in step 1 and so it will send the output to the correct JES sysout class. This makes sure the Xerox resources are sent to the Xerox printer. This job should complete with a completion code of *00* in all steps.

Changing the JCL

DAP procedure (or the GenPrtX job)

In the next topic you will run the system with the sample resources to make sure it has been installed and configured correctly. You must modify the jobs you will run to conform to your local JCL and environment standards. The last job, GenPrint, will reference the DD names you set up in the topic, Printer1 control group on page 43.

When you run the system with the sample resources, you can run each step as a separate job (GenTrnX, GenDataX, and GenPrintX) or in sequence together by running a job called DAPRUN. The DAPRUN job invokes the DAP procedure which executes GenTrn, GenData, and GenPrint in this order.

For the verification test, you should use the DAPRUN job and edit the DAP procedure in PROCLIB. If, however, you want to run each step separately, edit the GenPrtX member in JCLLIB.

GENERXER job

You use the GENERXER job in JCLLIB to send the print streams created by the GenPrint program to the JES spool to be printed by your Xerox printer. Modify this job as necessary to match the file names you have used.

Creating AFP Print Streams

Configuring your system to produce AFP print streams involves these tasks:

- Allocating AFP-related datasets
- Making printer resources available.
- Pre-compiling FAP files into overlays (this task is optional)
- Making changes to the FSISYS initialization file
- Making changes to the JCL

Allocating AFP-related Datasets

To allocate the datasets required to perform AFP printing, use the ALLOCAFP job in the JCLLIB member. This job allocates the Form Definition Library (FDEFLIB), the Page Segment Library (PSEGLIB), and the Overlay Library (OVERLIB). The job should complete with a return code of 00.

Making Printer Resources Available

The resources your IBM AFP printer needs fall into these categories:

- Fonts
- Page segments

- FormDefs
- Overlays

The following topics tell you how to make these resources available to your printer.

Fonts

By default, the verification test (see Checking Your Installation on page 62) uses the Monotype fonts included with the system. If you will print using IBM's Advanced Function Presentation (AFP), provided by the IBM Print Services Facility (PSF), you need to use these Monotype fonts. The installation includes the Monotype 240-dpi and 300-dpi fonts.

Page segments

Logo Manager generates bitmap-type graphics into *logo* files which, on the PC, have an extension of *.LOG. The verification test uses images that contain these logos. For these images to print correctly, you must convert these logos into AFP Page Segments (PSEGs). You can run the LOG2PSEG utility on either the workstation or the z/OS system to perform this task.

To convert logos for the verification test, run the LOG2PSGS job in JCLLIB. This job converts several logos from the sample FORMLIB or FAPLIB into page segments and places them into a PSEGLIB. The job should complete all steps with a return code of *00*.

FormDefs

Next, submit the AFPFMDFX job in JCLLIB to compile a *source* Form Definition File into an AFP-ready FormDef. This job should complete with a return code of *00*.

Overlays

To speed performance in the GenPrint process, you can pre-compile FAP files (images) into AFP overlays before you run the GenPrint program. Follow the directions in the next topic, Pre-compiling FAP Files into AFP Overlays, to create the AFP overlays.

NOTE: The FSISYS file included with the sample resources assumes you will be using AFP overlays, since the use of overlays increases performance. If, however, you do not want to run with overlays, change the SendOverlays option to *No* and the DownloadFAP option to *Yes* and skip to the topic Changing the FSISYS INI File on page 46.

Pre-compiling FAP Files into AFP Overlays

The FAP2OVL utility pre-compiles FAP files into AFP overlays, which can improve performance. To pre-compile FAP files into AFP overlays, run the FAP2OVLS job in JCLLIB. This job converts the FAP files in the sample FAPLIB PDS into overlays and places them into the OVERLIB PDS.

Changing the FSISYS INI File

PrtType:AFP control group

Here are the options in the PrtType:AFP control group in the FSISYS file which apply to z/OS environments. The FSISYS INI file should have been supplied with the value below:

```
< PrtType:AFP >
    SendOverlays=Yes
```

If you chose not to create AFP overlays (in the prior topic above), set the SendOverlays option to *No*. If you created overlays, make sure the option is set to *Yes*.

Printer control group

The Printer control group tells the GenPrint program what type of output to produce. For the RPEX1 sample resources, the PrtType option is set to *XER*. For the UTEX1 sample resources, the PrtType option is set to *AFP*. Make sure the option is set correctly for your environment. For example, this setting tells the GenPrint program to produce AFP print streams:

```
< Printer >
    PrtType = AFP
    ;PrtType = XER
```

Printer1 control group

The Printer1 control group contains PORT options which specify a DD name to which the system writes output for that recipient batch.

```
< Printer1 >
    PORT = DD:PRTBAT1
```

There may be other options present but they will be commented out with a semi-colon. Make sure the PORT option is set appropriately for your environment.

Changing the JCL

Using the DAP procedure (or the GenPrtX job)

In the topic, Checking Your Installation on page 62, you will run the system using the sample resources. This will help you make sure your system is installed and configured correctly. Before you run the test, you must modify the jobs you will use during the test to match your local JCL and environment standards. The last job, GenPrint, references the DD names you may have added or uncommented (see PrtType:AFP control group on page 46).

When you run the system with the sample resources, you can run each step as a separate job (GenTrnX, GenDataX, and GenPrintX) or in sequence together by running the DAPRUN job. The DAPRUN job invokes the DAP procedure which executes GenTrn, GenData, and GenPrint in this order.

For the verification test, we recommend you use the DAPRUN job. If you choose to use the DAPRUN job, edit the DAP procedure in PROCLIB. If, however, you want to run each step separately, edit the GenPrtX member in JCLLIB.

NOTE: The DAP procedure included in PROCLIB (or the GenPrtX member of JCLLIB) for the UTEX1 resources is set up to produce AFP output file names such as AFPBAT1, AFPBAT2, and so on. You may want to inspect the procedure to make sure these names are correct, but you should not have to change the names.

GENERAFP job

You will use the GENERAFP job in JCLLIB to send the print streams created by the GenPrint program to the JES spool to be printed by your AFP printer. Modify this job as necessary to match the file names you have used.

Creating PostScript Print Streams

Configuring the system to produce PostScript print streams involves these tasks:

- Making changes to the FSISYS INI file
- Making changes to the JCL
- Printing the PostScript print stream

Changing the FSISYS INI File

Here are the options in the PrtType:PST control group in the FSISYS INI file that are relevant to z/OS environments:

```
< PrtType:PST >
    Module          = PSTW32
    PageNumbers     = Yes
    PrintFunc       = PSTPrint
;   PrinterModel    = (PPD file)
    SendOverlays    = Yes
    SendColor       = Yes
    DownloadFonts   = Yes
```

If you are using a PostScript Printer Description (PPD) file, upload your PPD file (as text) to DEFLIB, uncomment the PrinterModel option by removing the semicolon (;), and set it to your PPD file in DEFLIB. For example, if your PPD file in DEFLIB is HP8000, set your option as shown here:

```
PrinterModel = HP8000
```

Setting the SendOverlays option to Yes tells the GenPrint program to use PostScript overlays to speed its process. To create PostScript overlays, first run the OVLCOMP utility to convert your FAP files into PostScript overlays (the OVLCOMP utility only runs on Windows). You then upload (as binary) the PostScript overlays to the dataset referred to by OVERLIB DD in your JCL.

The Printer control group tells the GenPrint program what type of output to produce. For the RPEX1 sample resources, the PrtType option is set to XER. For the UTEX1 sample resources, the PrtType option is set to AFP. Make sure the option is set correctly for your environment. For example, this setting tells the GenPrint program to produce PostScript print streams:

```
< Printer >
;   PrtType                = AFP
    PrtType                = PST
;   PrtType                = XER
;   PrtType                = PDF
;   EnableTransBanner      = Yes
;   EnableBatchBanner      = Yes
;   BatchBannerBeginScript= PreBatch
;   TransBannerBeginScript= PreTrans
;   BatchBannerEndScript   = PstBatch
;   TransBannerEndScript   = PstTrans
```

The Printer1 control group contains PORT options which specify a DD name to which the system writes output for that recipient batch.

```
< Printer1 >
    Port = DD:PRTBAT1
```

There may be other options commented out with semicolons (;). Make sure the PORT option is set appropriately for your environment.

Changing the JCL

In the next topic, Checking Your Installation on page 62, you run the system with sample resources to make sure it has been installed and configured correctly. You must modify the jobs you will run to conform to your local JCL and environment standards. The last job, GenPrint, references the DD names you set up in the Printer1 control group.

When you run the system with the sample resources, you can run each step as a separate job (GenTrnX, GenDataX, and GenPrtX) or in sequence together by running a job called DAPRUN. The DAPRUN job invokes the DAP procedure which executes GenTrn, GenData, and GenPrint in this order.

For the verification test, use the DAPRUN job and edit the DAP procedure in PROCLIB. If, however, you want to run each step separately, edit the GenPrtX member in JCLLIB.

Printing PostScript Print Streams

To print PostScript print streams to a PostScript-capable printer, download (as binary) the print streams created by the GenPrint program to your Windows environment and do a binary copy (see the command below) of the downloaded file to your PostScript printer.

```
>copy /b your_file your_printer
```

Creating PDF Files

Configuring the system to produce PDF files involves these tasks:

- Making changes to the FSISYS INI file
- Making changes to the JCL
- Creating the PDF file

Changing the FSISYS INI File

In the FSISYS INI file, below are the options in the PrtType:PDF control group relevant to z/OS environments. The FSISYS INI file includes the values shown here:

```
< PrtType:PDF >
;   Device          = E:\TEST.PDF
    Bookmark        = Yes,Page
    DownloadFonts   = Yes
    LanguageLevel   = Level1
    Module          = PDFW32
    PageNumbers     = Yes
    PrintFunc       = PDFPrint
    SendOverlays    = No
    SendColor       = Yes
    Encrypt         = No
    SecurityGroup   = PDFEncryption
;   PrintViewOnly   = No
;   SplitText       = No
;   SplitPercent    = 50
;   Class           = PDF
;   PrePrintedPaper= (not supported)
;   PaperSize       = 0
    Compression     = 0
    FontCompression= 0
< PDFEncryption >
    KeyLength       = 128
    User            = M
    Owner           = Oracle
    AllowModify     = FALSE
```

To produce secured PDF print streams, set the Encrypt option to Yes. Under the PDFEncryption control group, set the KeyLength, User, and Owner options as appropriate for your implementation.

The Printer control group tells the GenPrint program what type of output to produce. For the RPEX1 sample resources, the PrtType option is set to XER. For the UTEX1 sample resources, the PrtType option is set to AFP. Make sure the option is set correctly for your environment.

Generating PDF files using DAL scripts

For example, these options and settings tell the GenPrint program to produce a PDF file for each transaction in your print stream:

```
< Printer >
;   PrtType                = AFP
;   PrtType                = PST
;   PrtType                = XER
    PrtType                = PDF
    EnableTransBanner      = Yes
    EnableBatchBanner      = Yes
    BatchBannerBeginScript= PreBatch
    TransBannerBeginScript= PreTrans
    BatchBannerEndScript   = PstBatch
    TransBannerEndScript   = PstTrans
```

Note that these INI settings require the use of a BANNER DAL library and a WRITE DAL script. The BANNER DAL library contains the PreBatch, PreTrans, PstBatch, and PstTrans DAL scripts specified in the INI file. The WRITE DAL script is called from PreTrans.

These DAL scripts split a recipient batch PDF file into separate PDF files for each transaction in the batch. You can see examples of the BANNER DAL library and the WRITE DAL script in the DEFLIB of RPEX1 sample resources.

You also need to add this option:

```
< DALLibraries >
    LIB = Banner
```

Generating PDF files using the MultiFilePrint rule

These options and settings show another way to produce a PDF file for each transaction in your print stream:

```
< Printer >
;   PrtType                = AFP
;   PrtType                = PST
;   PrtType                = XER
    PrtType                = PDF
;   EnableTransBanner      = Yes
;   EnableBatchBanner      = Yes
;   BatchBannerBeginScript= PreBatch
;   TransBannerBeginScript= PreTrans
;   BatchBannerEndScript   = PstBatch
;   TransBannerEndScript   = PstTrans
< Print >
    CallbackFunc           = MultiFilePrint
    MultiFileLog           = DD:PDFLOG
```

These INI settings tell the system to use the MultiFilePrint rule to split a recipient batch PDF file into separate PDF files, one for each transaction in the batch. For more information about the MultiFilePrint rule, see the Rules Reference.

NOTE: The MultiFileLog option is optional. Include it if you want the system to create a log of the PDF file names written to the PDFLOG DD statement in the JCL. You can see an example of the PDFLOG DD statement in the DAP member of PROCLIB.

The Printer1 control group contains Port options which specify the DD name to which the system writes output for that recipient batch. The first transaction in the batch is written to member BAT10000 (or BAT10001 if you are using the MultiFilePrint rule) of PDFLIB PDS. The next transaction is written to member BAT10001 (or BAT10002 if you are using the MultiFilePrint rule), and so on.

The member name can consist of any four characters followed by 0000 (or 0001 if you are using the MultiFilePrint rule) for the first transaction of each batch. You only need to specify this first member name for each recipient batch in the INI file. The BANNER DAL library and the WRITE DAL script generate the subsequent member names and increment the numbers for that particular batch.

```
< Printer1 >
    Port = DD:PDFLIB(BAT10000)
< Printer2 >
    Port = DD:PDFLIB(BAT20000)
```

If there are other options present, comment out those options with semicolons (;). Make sure the Port option is set appropriately for your environment.

Including PostScript and TrueType fonts

To include PostScript fonts or TrueType fonts or both in PDF print streams, include these INI options and settings:

```
< PrtType:PDF >
    DownloadFonts  = Yes
< MasterResource >
    FontLib        = DD:FONTLIB()
```

Add a FONTLIB DD statement into your JCL (for the GenPrint step) and point to the FONTLIB PDS that has PostScript fonts and the PDS that has TrueType fonts. The FONTLIB for both PostScript and TrueType can have a record format (RECFM) of FB and logical record length (LRECL) of 128. You can see an example of a FONTLIB DD statement in the DAP member of PROCLIB.

PostScript and TrueType fonts can be uploaded as binary into the FONTLIB PDS. Keep in mind that you should change underscores (_) in the font name to @ symbols when uploading. For example, *ALBB____.PFB* is uploaded as *ALBB@@@@* since z/OS can not have underscore in the member name.The PDF Print Driver produces linearized PDF files. Linearized PDF files support page-at-a-time downloading which makes it faster to view a PDF file over the Internet. The nature of PDF files requires each transaction be in a separate PDF file.

The RunMode control group in the FSISYS.INI file includes these options and values:

```
< RunMode >
    NAUnload          = Yes
    DownloadFAP       = No
    CompiledFAP       = Yes
    ChkDstLenExceeded = No
    LoadCordFAP       = No
;   MergedDDTs        = No
```

Be sure to set the DownloadFAP option to Yes when you are producing PDF files.

Understanding how PDF Files are Created

In PDF files, information is added at the beginning of the PDF file that tells Acrobat where every object (file offsets for page, text, bitmap, fonts, and so on) is located inside the PDF file. The only way to gather this information is to have the entire file stored in memory before writing it out.

In Documaker, because of the volume of transactions that may be processed in a batch, only a single transaction is loaded into memory at a time. The print driver is then called. That transaction is processed and then the next transaction is loaded into memory. The PDF Print Driver only has information about the current transaction in memory, not all of the transactions that comprise a batch.

Typically, you use the PDF Print Driver to create a separate PDF file for each transaction in the batch. You can, however, use the SpoolBatches option to generate a single PDF file that includes all of the transactions in a batch. See Using the PDF Print Driver for more information on generating separate PDF files or generating a single PDF file.

NOTE: If you do not generate separate PDF files and you do not set the SpoolBatches option, you can end up with multiple PDF files concatenated into a single file, but the beginning of the file only contains information (file offsets for page, text, bitmap, font, and so on) about the last transaction. Since the last transaction can look a lot like the first transaction, Acrobat may be fooled into displaying the first transaction. It will not, however, display the other transactions in the file.

Changing the JCL

In the topic, Checking Your Installation on page 62, you will run the system with sample resources to make sure it has been installed and configured correctly. You must modify the jobs you will run to conform to your local JCL and environment standards. The last job, GenPrint, references the DD names you set up in the Printer1 control group.

When you run the system with the sample resources, you can run each step as a separate job (GenTrnX, GenDataX, and GenPrtX) or in sequence together by running a job called DAPRUN. The DAPRUN job invokes the DAP procedure which executes GenTrn, GenData, and GenPrint in this order.

For the verification test, use the DAPRUN job and edit the DAP procedure in PROCLIB. If, however, you want to run each step separately, edit the GenPrtX member in JCLLIB.

Creating the PDF Print Stream

To print PDF print streams to the printer, download (as binary) the print streams created by the GenPrint program to your Windows environment. Then use Adobe Reader to open the downloaded file and send it to your printer.

Configuring Host Archive

The system lets you archive form sets that have been created by the GenData program. Archiving is performed by running the GenArc program and can be configured to archive the form sets in one of several ways:

- To the standard DAP archive. For more information, see Configuring Host Archive Using DB2 on page 55.
- To Documanage. For more information, see Archiving to Documanage on page 59.
- To Stacked DPA files. For more information, see Archiving Using Stacked DPA on page 61.

Configuring Host Archive Using DB2

In addition to (or instead of) simply printing form sets, you can optionally archive your form sets and data using the GenArc program. The GenArc program on z/OS systems supports archival to IBM's DB2 database management system.

Configuring a host archive system involves performing these tasks:

- Creating DB2 objects
- Running BINDDB2 or the ALLOCDB2 and COMPDB2 jobs
- Modifying the FSISYS file
- Making JCL changes

Creating DB2 Objects

The GenArc program, as configured for the sample library, uses these DB2 tables:

Table	Description
APPIDX	An application index table which contains a row for every archived form set.
ARCHIVE	An archive table which contains the actual NAFILE and POLFILE data for each archived form set.
CATALOG	A table which stores unique catalog IDs which the system uses as it builds the ARCKEY used in the APPIDX and ARCHIVE tables.
RESTART	A table in which GenArc restart information is stored.

You should create these tables using the ARCSQLR Job for the RPEX1 resources and the ARCSQLU Job for the UTEX1 resources. Modify the Jobs to suit your site's DB2 naming conventions and submit. The job should receive a return code of *00*.

Running the BINDDB2 (or COMPDB2) Jobs

If you have a standard license, run the BINDDB2 job in JCLLIB as described below. If you have a source code license, skip to the following topic, Running ALLOCDB2 and COMPDB2 on page 56.

The BINDDB2 Job performs DB2 binds for the DB2LIB and DB2LIB2 packages and the DAP110 plan. In the BINDDB2 job, change the DB2 subsystem, package names, and plan name to fit your standards. The BINDDB2 job should finish with return codes of *00* in all steps. Proceed to Modifying the FSISYS INI File for Host Archive on page 56.

Running ALLOCDB2 and COMPDB2

The COMPDB2 job invokes the DB2 pre-compiler to pre-compile source files and place the resulting DBRMs into a PDS called DBRMLIB. This DBRMLIB dataset should exist, but if it is not available, you can allocate it by running the job ALLOCDB2. The ALLOCDB2 job should finish with a return code of *00*.

The GenArc program uses programs called DB2LIB and DB2LIB2 to make all SQL calls. These SQL calls are prepared dynamically and are not static SQL calls.

To prepare the GenArc program for execution, run the job in member COMPDB2 of JCLLIB. The COMPDB2 member uses the DSNHC procedure in PROCLIB. Essentially, the COMPDB2 job will...

- DB2- pre-compile the DB2LIB and DB2LIB2 programs
- Compile the DB2LIB, DB2LIB2, and the GenArc programs
- Bind DB2LIB and DB2LIB2 into packages
- Bind the DB2LIB and DB2LIB2 packages into a plan
- Link-edit GenArc into an executable program, placing it in LINKLIB.

Depending on your DB2 system file names and C compiler file names, you will probably have to modify these procedures to meet your needs. The COMPDB2 job should finish with return codes of *00* or *04* in all steps.

Modifying the FSISYS INI File for Host Archive

Just as the FSIUSER and FSISYS initialization files provide the GenTrn, GenData, and GenPrint programs with configuration information, they also provide configuration information to the GenArc program.

The following control group and option settings must exist in either the FSIUSER or FSISYS members of DEFLIB. The FSISYS file shipped with the base product contains the values shown below. You only need to change these options if you have modified the names of the DB2 objects, such as the database name, table name, and so on.

ArcRet control group

The ArcRet control group contains information about the file (or table) names used for archiving information. The values for table names in this group cannot exceed eight characters. To specify a table name with more than eight characters use the DB2_FileConvert control group to map the eight character name you enter here to a longer (up to 18 characters) name.

```
< ArcRet >
    AppIdxDfd   = APPIDX
    AppIdx      = APPIDX
    CARFile     = ARCHIVE
    CATALOG     = CATALOG
    RestartTable= RESTART
```

Archival control group

The Archival control group indicates whether archived information is stored via a DBMS. For DAP archive to DB2, specify:

```
< Archival >
    ArchiveMem = Yes
```

DBHandler:DB2 control group

The DBHandler:DB2 control group tells the GenArc program that DB2 will be used to access the tables used during the GenArc process.

The Database option identifies the name of the DB2 database that contains the tables used by the GenArc program. Database names can consist of up to eight characters.

The CreateTable option indicates whether the GenArc program can create the tables it needs or if the tables must exist before it begins.

Enter	Description
No	Do not allow the GenArc program to create the DB2 tables.
Yes	Allow the GenArc program to create the DB2 tables.

The CreateIndex option indicates whether indexes are to be created for the APPIDX DB2 table if the APPIDX (DFD) member of DEFLIB contains keys information.

Enter	Description
No	Do not allow the GenArc program to create the DB2 indexes.
Yes	Allow the GenArc program to create the DB2 indexes.

```
< DBHandler:DB2 >
    CreateTable = No
    CreateIndex = No
```

DB2_FileConvert control group

The DB2_FileConvert control group lets you use DB2 table names that are longer than eight characters. The option on the left (APPIDX) is the value associated with the corresponding option in the ArcRet control group on page 56. The value on the right (DAP110_APP_R1) is the name of the DB2 table as it exists in the DB2 subsystem. If your table names are not longer than eight characters, you do not need to make any entries in the DB2_FileConvert control group.

```
< DB2_FileConvert >
    APPIDX      = DAP110_APP_R1
    Archive     = DAP110_ARC_R1
    Catalog     = DAP110_CAT_R1
    Restart     = DAP110_RES_R1
```

DBTable control group

Use the DefaultTag option to specify the default tag for ODBC and DB2. This tag is used by the ORDER BY clause in the SQL database to sort records.

```
< DBTable:MYTABLE >
    DefaultTag =
```

For the DefaultTag option, enter the name of the key from the DFD file. Keep in mind this only works with ODBC and DB2. It does not work with xBase files.

Trigger2Archive control group

The Trigger2Archive control group designates the fields in the NEWTRN DAT file (right side) that are copied to the columns in the APPIDX table (left side) during the GenArc process. Remember that the APPIDX table columns are defined by the APPIDX member of DEFLIB and that this APPIDX member is in a DFD format. For the sample resources, the Trigger2Archive control group might be set up as follows:

```
< Trigger2Archive >
    Company     = Company
    LOB         = Lob
    PolicyNum   = PolicyNum
    RunDate     = RunDate
```

Changing the JCL for Host Archive

Examine the GenArcDX member of JCLLIB. Make sure the JCL is appropriate for your site and that the dataset names correspond to the names you have used for your files. Additionally, make sure the DB2 subsystem name and other DB2 object names, such as the plan names, are correct.

ARCHIVING TO DOCUMANAGE

Configuring the system to archive to Documanage involves performing these tasks:

- Setting up Documanage (see the Documanage manuals for more information)
- Modifying the FSISYS file (FSISYSM member in DEFLIB)
- Adding IP addresses and system/domain names of the Documanage machine to the TCPIP host data sets
- Making JCL changes

Modifying the FSISYS File

NOTE: All references of the FSISYS file in this topic refer to FSISYSM member in DEFLIB.

In the ArcRet control group, the FSISYS file includes the values shown here:

```
< ArcRet >
    AppIdxDfd      = AppIdx
    AppIdx         = APPIDX
    CARFile        = ARCHIVE
    CARFileDFD     = CARFILE
    CARPath        =
;   Catalog        = CATALOG
;   RestartTable   = RESTART
```

For archiving to Documanage, you need to set the CARFileDFD option to *CARFILE* (which resides in DEFLIB) and comment out both the Catalog and RestartTable options.

The Archival control group in the FSISYS file should have these values:

```
< Archival >
    ArchiveMem     = Yes
    UseRestartTable= No
```

For archiving to Documanage, set the UseRestartTable option to No.

In the following DBTable control groups, the FSISYS file should have these values:

```
< DBTable:APPIDX >
     DBHandler = DMIA
< DBTable:ARCHIVE >
     DBHandler = DMIA
```

NOTE: You must use *DMIA* as a DBHandler for archiving to Documanage.

The DBHandler:DMIA control group tells the GenArc program that DMIA is used to access Documanage during the GenArc process. Your FSISYS file includes these values:

```
< DBHandler:DMIA >
    RPCHost     = (IP address of the Documanage machine)
    Cabinet     = RPEX1OS390
    Domain      = (system/domain name)
    UserID      = (Documanage user ID)
    Password    = (Documanage password)
;   Debug       = Max
```

You must add the IP address, system/domain name, user ID, and password to the appropriate INI options.

NOTE: For whichever cabinet name is being set in the DBHandler:DMIA control group, you must include that name in the DMIA control group name. RPEX1OS390 is the cabinet name in this case. So, the DMIA control group name would be *DMIA:RPEX1OS390*.

For the DMIA:RPEX1OS390 control group, the FSISYS file includes these values:

```
< DMIA:RPEX1OS390 >
    FileType    = DPA
    FolderBy    = company,lob,policynum
    NameDocBy   = arckey
    StackedDPA  = Yes
```

Set the StackedDPA option to No when archiving to Documanage.

Adding IP Addresses and System/Domain Names

You will need to add the IP address and system/domain name of your Documanage machine to the local TCPIP host data sets on your z/OS. The steps below are examples you could follow to accomplish this task.

NOTE: You first may need to consult your z/OS system programmer on how to get this task done as the steps you need to do may differ from below.

1. Add an entry with your IP and system/domain name to hlq.HOSTS.LOCAL.
2. Execute a TSO MAKESITE command to generate hlq.HOSTS.SITEINFO and hlq.HOSTS.ADDRINFO datasets from your hlq.HOSTS.LOCAL.

Changing the JCL

Examine the GenArcX member of JCLLIB. Make sure the JCL is appropriate for your site and that the dataset names correspond to the names you have used for your files.

ARCHIVING USING STACKED DPA

Configuring the system to use stacked DPA to archive to a CARDATA file involves performing these tasks:

- Checking the FSISYS file (FSISYSM member of DEFLIB)
- Making JCL changes

For the DBHandler:DMIA control group below, you do not need to add IP address, system/domain name, user ID, or password to run GenArc with stacked DPA.

```
< DBHandler:DMIA >
    RPCHost     = (IP address of the Documanage machine)
    Cabinet     = RPEX1OS390
    Domain      = (system/domain name)
    UserID      = (Documanage user ID)
    Password    = (Documanage password)
;   Debug       = Max
```

In the DMIA:RPEX1OS390 control group, make sure the StackedDPA option is set to Yes.

```
< DMIA:RPEX1OS390 >
    FileType    = DPA
    FolderBy    = company,lob,policynum
    NameDocBy   = arckey
    StackedDPA  = Yes
```

NOTE: All other INI options for archiving to Documanage are the same for stacked DPA.

Changing the JCL

Examine the GenArcX member of JCLLIB. Make sure the JCL is appropriate for your site and that the data set names correspond to the names you have used for your files.

Checking Your Installation

To make sure the base system has been installed correctly you should:

- Install DMS1 test resources.
- Check the INI files (FSIUSER, FSISYS, and FSIUSERL).
- Check the JCL for the DAPRUN and DAP procedure (or GentrnX, GenDataX, GenPrtX), and the DMRUNLM and DMLM procedure.
- Run DAPRUN (or GenTrnX, GenDataX, GenPrtX) and DMRUNLM.

NOTE: You can verify your installation by running the system using the DMS1 resources. When you run the DAPRUN job later in this guide, you will need to specify as part of the jobcard, which set of resources the DAPRUN job is using.

You indicate the resource set by specifying this statement:

```
"//     SET RES=xxxxx"
```

where *xxxxx* is *DMS1*. By default, the JOBCARD is set up to use DMS1 resources.

The DMS1 resources are in Documaker Studio format. These resources are stored in the DB2 library. Use the DMRUNLM job to run with DMS1 resources. Set the JOBCARD to use DMS1 resources.

Checking Your FSIUSER and FSISYS Settings

During installation, you loaded the FSIUSER and FSISYS members into the DEFLIB PDS during installation. These two files have similar control groups and options but different purposes. Generally, the FSIUSER member contains customer-specific initialization options while the FSISYS member contains general system-wide options.

Among other things, the FSIUSER and FSISYS members contain the names of various input and output files. On the PC, these file names include the path and file name. On z/OS, these names consist of DD statement names or PDS member names or both.

The FSIUSER and FSISYS you uploaded as part of the sample resources are in a format you can run on z/OS. To verify these values, consider the following but note that this list of options is not complete.

The relevant value in the FSIUSER INI file is...

```
< Environment >
   FSISYSINI  = DD:FSISYS
```

The relevant values in FSISYS that indicate the DD names of various libraries, the PDS members, or are required for the system to run are:

```
< BATCH1 >
    Printer = Printer1
< BATCH2 >
    Printer = Printer2
< BATCH3 >
    Printer = Printer3
< Manual >
```

```
    Printer = Pmanual
< Error >
    Printer = Perror
< CONFIG:Batch Processing >
    CompLib    = DD:COMPLIB()
   DDTLib     = DD:DDTLIB()
    DefLib     = DD:DEFLIB()
    FormDef    = FORM
    FormLib    = DD:FAPLIB()
    XRFFile    = REL95SM
< Control >
    ImageExt   = .FAP
    LogoExt    = .LOG
    XrfExt     = .FXR
< Data >
    DataPath        =
    ExtrFile        = DD:EXTRACT
    DbLogFile       = DD:DBLOGFLE
    ErrFile         = DD:ERRFILE
    LogFile         = DD:LOGFILE
    MsgFile         = DD:MSGFILE
    NAFile          = DD:NAFILE
    NewTrn          = DD:NEWTRN
    PolFile         = DD:POLFILE
    TrnFile         = DD:TRNFILE
    WIPBatch        = DD:MANUAL
    Manual          = DD:MANUAL
    TrnDfdFile      = TrnDfdFl
    AfgJobFile      = DD:AFGJOB
    RcbDfdFile      = RcbDfdFl
    SetRcpTb        = SetRcpTb
    TextTbl         = TextTbl
    TblFile         = TblFile
< Print_Batches >
    Batch1 = DD:BATCH1
    Batch2 = DD:BATCH2
    Batch3 = DD:BATCH3
    Manual = DD:MANUAL
    Error  = DD:ERROR
< Printer >
    PrtType = AFP
    ;PrtType = XER
< Printer1 >
    PORT = DD:PRTBAT1
< Printer2 >
    PORT = DD:PRTBAT2
< Printer3 >
    PORT = DD:PRTBAT3
< PManual >
    PORT = DD:PMANUAL
< PError >
    PORT = DD:PERROR
< PrinterInfo >
    Printer = Printer1
    Printer = Printer2
```

```
    Printer = Printer3
    Printer = PManual
    Printer        = PError
< PrtType:XER >
    ColorCharts        = Yes
    CompileInstream    = No
    DownloadFonts      = No,Disabled
    InitFunc           = XERInit
    Module             = XERW32
    OutputFunc         = XEROutput
    OutMetFunc         = XEROutMet
    PageNumbers        = Yes
    PrintFunc          = XERPrint
    PrinterInk         = Blue
    TermFunc           = XERTerm
    SendColor          = Yes
    DJDEIden           = A'@@@DJDE'
    DJDEOffset         = 0
    DJDESkip           = 8
    Environment        = MVS
    OutMode            = JES2
    ImageOpt           = Yes
    JDEName            = DFLT
    JDLData            = 0,255
    JDLHost            = IBMONL
    JDLName            = DFAULT
    JDLCode            = NONE
    JDLRStack          = 0,10,EQ,X'13131313131313131313'
    JDLRPage           = 0,5,EQ,X'FFFF26FFFF'Printer control group
< PrtType:AFP >
    SendOverlays       =  Yes
< TRN_File >
    MaxExtRecLen     = 119(for RPEX1 only)
    MaxExtRecLen       = 450  (for UTEX1 only)
    BinaryExt          = N
```

CHECKING THE JCL

As stated in the topic, Configuring Your Printer Type on page 39, when you run the system with the RPEX1 and UTEX1 sample resources you can run each step as a separate job (GenTrnX, GenDataX, GenPrintX) or together in sequence using the DAPRUN job which invokes the DAP procedure in PROCLIB.

For the verification test, we recommend you use the DAPRUN job. If you want to use the DAPRUN job and DAP procedure, inspect and modify those files. If you want to run GenTrnX, GenDataX, and GenPrtX separately, inspect and modify those files.

If you plan to use the DAPPRUN job...

1. Check the DAPRUN job in JCLLIB. This job invokes the DAP procedure. Make sure DAPRUN has a valid jobcard and that the PROCLIB name is correct.
2. Check the DAP procedure in PROCLIB. This procedure contains these steps:

	Description
GENTRND	Deletes files in preparation for the GenTrn program
GENTRN	Runs the GenTrn program
GENDATAD	Deletes files in preparation for the GenData program
GENDATA	Runs the GenData program
GENPRTD	Deletes files in preparation for the GenPrint program
GENPRT	Runs the GenPrint program

3. Check the JCL statements in the DAP procedure and change the dataset names to match the names you chose during installation. Also, change any UNIT names to conform to your site's standards.

   Remember that the DD names for various input files (DEFLIB, FAPLIB, TRNFILE, and so on) and output files (BATCH1, NAFILE, and so on) need to correspond to the values that point to these files in the FSISYS file.

   You should not need to modify the actual DD names for these files either in the DAP procedure nor in the FSISYS member because these files have been set up to run the verification test as is.

Running GenTrnX, GenDataX, and GenPrtX separately

Look at the GenTrnX, GenDataX and GenPrtX jobs in JCLLIB and modify any jobcards, dataset names, unit names, and so on, so these jobs will run on your system.

Remember that the DD names for various input files (DEFLIB, FAPLIB, TRNFILE, and so on) and output files (BATCH1, NAFILE, and so on) should correspond to the values that point to these files in the FSISYS member. You should not need to modify the actual DD names for these files either in the JCL jobs or in the FSISYS member because these files are set up to run the verification test as is.

Running DAPRUN (or GenTrnX, GenDataX, and GenPrtX) and DMRUNLM

Submit the job DAPRUN (or DMRUNLM). DAPRUN (or DMRUNLM) should receive return codes of *00* or *04* in each step. The output for DAPRUN (or DMRUNLM) should include logging messages, which are sent to SYSPRINT. Depending on whether you are using the RPEX1 or UTEX1 sample resources, the messages will differ. The messages for DMS1 are similar to those for RPEX1. Examples are shown below and on the following pages.

NOTE: If you are running GenTrnX, GenDataX, and GenPrtX separately you should submit each job in sequence and check the return codes.

Running DAPRUNC to Improve Performance

The DAPRUNC job invokes the DAPC procedure in PROCLIB. The DAPC procedure contains JCL that assumes the GenTrn and GenPrint steps have been combined into the GenData step. The GenTrn and GenPrint steps are run as rules within the GenData step. This is called *single-step processing* and can improve system performance. To use single-step processing, submit DAPRUNC. It should receive a return code of *00* or *04* in both steps.

NOTE: When using single-step processing, only the SYSOUT messages for GenData are displayed.

Logging messages when running RPEX1

```
--- GenTrn ---
Filtering extract file...
Building transaction file...
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1
==> Warning count:    0
==> Error   count:    0
Elapsed Time: 3 seconds
--- GenTrn Completed ---

--- GenData ---
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
```

```
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1
==> Warning count:    0
==> Error   count:    0
Elapsed Time: 44 seconds
--- GenData Completed ---

--- GenPrint ---
Processing Batch:<BATCH1> File:<DD:BATCH1> Port:<DD:XERBAT1>
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1
9 records processed in BATCH1 batch.
Processing Batch:<BATCH2> File:<DD:BATCH2> Port:<DD:XERBAT2>
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1
9 records processed in BATCH2 batch.
Processing Batch:<BATCH3> File:<DD:BATCH3> Port:<DD:XERBAT3>
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
7 records processed in BATCH3 batch.
Processing Batch:<ERROR> File:<DD:ERROR> Port:<DD:PERROR>
Processing Batch:<MANUAL> File:<DD:MANUAL> Port:<DD:PMANUAL>
==> Warning count:    3
==> Error   count:    0
Elapsed Time: 49 seconds
--- GenPrint Completed ---
```

Logging messages when running UTEX1

```
--- GenTrn ---
Filtering extract file...
Building transaction file...
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 2222-3445-UTIL-BILL--
==> Processing: 1234-5555-UTIL-BILL--
==> Processing: 3456-7777-UTIL-BILL--
==> Processing: 3999-9999-UTIL-BILL--
==> Processing: 4444-1234-UTIL-BILL--
==> Processing: 4999-R777-UTIL-BILL--
==> Processing: 5111-8888-UTIL-BILL--
==> Processing: 5555-7010-UTIL-BILL--
==> Processing: 6750-R758-UTIL-BILL--
==> Processing: 7000-7000-UTIL-BILL--
==> Processing: 2428-1927-UTIL-BILL--
==> Processing: 8234-5555-UTIL-BILL--
==> Warning count:    0
==> Error   count:    0
Elapsed Time: 3 seconds
--- GenTrn Completed ---

--- GenData ---
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 2222-3445-UTIL-BILL--
==> Processing: 1234-5555-UTIL-BILL--
==> Processing: 3456-7777-UTIL-BILL--
==> Processing: 3999-9999-UTIL-BILL--
==> Processing: 4444-1234-UTIL-BILL--
==> Processing: 4999-R777-UTIL-BILL--
==> Processing: 5111-8888-UTIL-BILL--
==> Processing: 5555-7010-UTIL-BILL--
==> Processing: 6750-R758-UTIL-BILL--
==> Processing: 7000-7000-UTIL-BILL--
==> Processing: 2428-1927-UTIL-BILL--
==> Processing: 8234-5555-UTIL-BILL--
==> Warning count:    0
==> Error   count:    0
Elapsed Time: 148 seconds
--- GenData Completed ---

--- GenPrint ---
Processing Batch:<BATCH1> File:<DD:BATCH1> Port:<DD:AFPBAT1>
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 2222-3445-UTIL-BILL--
==> Processing: 1234-5555-UTIL-BILL--
==> Processing: 3456-7777-UTIL-BILL--
==> Processing: 3999-9999-UTIL-BILL--
==> Processing: 4444-1234-UTIL-BILL--
==> Processing: 4999-R777-UTIL-BILL--
==> Processing: 5111-8888-UTIL-BILL--
==> Processing: 5555-7010-UTIL-BILL--
==> Processing: 6750-R758-UTIL-BILL--
==> Processing: 7000-7000-UTIL-BILL--
```

```
==> Processing: 2428-1927-UTIL-BILL--
==> Processing: 8234-5555-UTIL-BILL--
12 records processed in BATCH1 batch.
Processing Batch:<BATCH2> File:<DD:BATCH2> Port:<DD:AFPBAT2>
Processing Batch:<BATCH3> File:<DD:BATCH3> Port:<DD:AFPBAT3>
Processing Batch:<ERROR> File:<DD:ERROR> Port:<DD:PERROR>
Processing Batch:<MANUAL> File:<DD:MANUAL> Port:<DD:PMANUAL>
==> Warning count:    5
==> Error   count:    0
Elapsed Time: 75 seconds
--- GenPrint Completed ---
```

USING THE DMS1 RESOURCES

After you download and install the Oracle Documaker media pack, you will have these files on your workstation:

- install.txt
- loaddms1.jcl
- loaddb2.jcl
- DMS1.zip

NOTE: The install.txt file contains much of the same information included in this topic.

Follow these instructions to install DMS1 resources for z/OS.

1. Unzip the DMS1.zip file. It contains a file named *DMS1.xmit*. This file contains several z/OS datasets and is in a TRANSMIT (XMIT) format.

   To install the DMS1 resources, you must transfer this file to z/OS in binary mode and then unzip (RECEIVE) it. The RECEIVE creates and populates the datasets that comprise the DMS1 test resources. Follow the remaining steps to transfer this file to z/OS and perform the RECEIVE.

2. Allocate a dataset on z/OS into which you can upload the DMS1.xmit file. Allocate this dataset using attributes similar to these:

```
Data Set Name . . . : FSI.DMS1.XMIT <= any name you choose

Organization  . . . : PS
Record format . . . : FB
Record length . . . : 80
Block size  . . . . : 3120
1st extent cylinders: 10     <= primary space needed
Secondary cylinders : 2      <= secondary space needed
```

3. Upload the DMS1.xmit file from Windows to z/OS. Be sure to upload this file in binary mode.

4. Upload LOADDMS1.JCL as text to your JCL library on z/OS. Read the comments in the JCL and make the necessary modifications for your system. Submit the LOADDMS1 job. It should create several datasets that contain the DMS1 sample resources.

NOTE: Make sure you have completed the steps in Binding the Documaker DB2 Plan to Your DB2 Subsystem on page 33 before you continue to the next step.

5. Use LBYSQLR member in the JCLLIB to create DB2 tables for the Documaker library. Make the necessary modifications, including changing table names for your system, before submitting.

NOTE: You can have all of the tables in one tablespace or you can place each table in a different tablespace.

6 Edit the FSI.LBYD.SYSPUNCH and FSI.LBYI.SYSPUNCH datasets, replacing the user ID *ZD* and the table names with the user ID and table names you used in the LBYSQLR member. Do not change anything else in this file. This file loads the DMS1 sample resources into your DB2 tables.

```
INTO TABLE "ZD"."DMS1_LBYD"  <= this line is in FSI.LBYD.SYSPUNCH
INTO TABLE "ZD"."DMS1_LBYI"  <= this line is in FSI.LBYI.SYSPUNCH
```

7 Upload the LOADDB2.JCL to your JCLLIB. Make the necessary modifications, including changing the name of the SYSPUNCH and SYSREC datasets for your system.

Submit LOADDB2 to load the tables. You will need to run this job twice – once with the SYSIN DD statement set to FSI.LBYD.SYSPUNCH and once with the SYSIN DD set to FSI.LBYI.SYSPUNCH.

NOTE: A certain level of DB2 authority may be needed to run this job.

Checking Your FSIUSERL Settings

The FSIUSERL is a member of the DEFLIB PDS in the DMS1 installation. Besides those options as described in FSIUSER and FSISYS, the FSIUSERL member contains initialization options to retrieve resources from DB2 library.

The following partial list of options is from the FSIUSERL member. The DB2 database is set with the Database INI option. The DB2 tables are set in the DB2_FileConvert control group.

Be sure to make the necessary changes for your implementation.

```
< CONFIG:DMS1 >
    ArcPath         =
    BaseDef         = DMS1
    BDFFile         = LBYI
    BDFLib          =
    CARPath         =
    DalFile         = LBYI
    DDTFile         = LBYI
    DefLib          = DD:DEFLIB()
    DictionaryFile  = xdb.dbf
    FieldBaseFile   = fdb.dbf
    FNTFile         = rel103sm
    FontLib         = DD:FONTLIB()
    FORFile         = LBYI
    FORLib          =
    FormDef         = FORM
    FormFile        = LBYI
    FormLib         =
    GRPFile         = LBYI
```

```
    GRPLib          =
    HelpLib         =
    LbyLib          = DD:DEFLIB()
    LogoFile        = LBYI
    TableLib        = DD:DEFLIB()
    WIPPath         =
    XDDFile         = LBYI
    XRFFile         = rel103sm
< CONFIGURATIONS >
    Config          = DMS1
< DBHANDLER:DB2 >
    Database    = LBYDB
    CreateTable = No
    CreateIndex = No
    Debug       = No
< DBTable:LBYI >
    DBHandler   = DB2
< DBTable:LBYD >
    DBHandler   = DB2
    UniqueTag   = ARCKEY+SEQ_NUM
< DBTable:LBYLog >
    DBHandler   = DB2
    UniqueTag   = DATE+TIME
< DBTable:Catalog >
    DBHandler   = DB2
    UniqueTag   = CatalogID
< DB2_FileConvert >
    LBYI        = ZD.DMS1_LBYI
    LBYD        = ZD.DMS1_LBYD
    LBYLOG      = ZD.DMS1_LBYLOG
    Catalog     = ZD.DMS1_CAT
< Library:LBYI >
    DBTable    = LBYD
    LBYLogFile = LBYLOG
< LibraryManager >
    Class           = GA;Georgia resource
    Class           = TX;Texas resource
    Class           = MD;Maryland resource
    Library         = LBYI
    Mode            = DEV;Development
    Mode            = TEST;Test
    Mode            = PROD;Production
    Project         = P001;Project 001
    Project         = P002;Project 002
    Project         = P003;Project 003
    Status          = TEST;Needs to be tested
    Status          = FAILED;Failed testing
    Status          = PASSED;Passed testing
    Status          = PROMOTED;Has been promoted
< MasterResource >
    BaseDef         = <CONFIG:DMS1> BaseDef =
    BDFFile         = <CONFIG:DMS1> BDFFile =
    BDFLib          = <CONFIG:DMS1> BDFLib =
    COMPLIB         = <CONFIG:DMS1> CompLib =
    DALFile         = <CONFIG:DMS1> DalFile =
```

```
DDTFile         = <CONFIG:DMS1> DDTFile =
DDTLib          = <CONFIG:DMS1> DDTLib =
DefLib          = <CONFIG:DMS1> DefLib =
DictionaryFile  = <CONFIG:DMS1> DictionaryFile =
FieldBaseFile   = <CONFIG:DMS1> FieldBaseFile =
FNTFile         = <CONFIG:DMS1> FntFile =
FontLib         = <CONFIG:DMS1> FontLib =
FORFile         = <CONFIG:DMS1> FORFile =
FORLib          = <CONFIG:DMS1> FORLib =
Form7x          = <CONFIG:DMS1> Form7x =
FormDef         = <CONFIG:DMS1> FormDef =
FormFile        = <CONFIG:DMS1> FormFile =
FormLib         = <CONFIG:DMS1> FormLib =
GRPFile         = <CONFIG:DMS1> GRPFile =
GRPLib          = <CONFIG:DMS1> GRPLib =
HelpLib         = <CONFIG:DMS1> HelpLib =
LbyLib          = <CONFIG:DMS1> LbyLib =
LogoFile        = <CONFIG:DMS1> LogoFile =
LogoLib         = <CONFIG:DMS1> LogoLib =
TableLib        = <CONFIG:DMS1> TableLib =
TablePath       = <MASTERRESOURCE> TableLib =
XDDFile         = <CONFIG:DMS1> XDDFile =
XRFFile         = <CONFIG:DMS1> XrfFile =
```

Checking the JCL

When you run the system with the DMS1 sample resources, use the DMRUNLM job which invokes the DMLM procedure in PROCLIB. Make sure DMRUNLM has a valid jobcard and that the PROCLIB name is correct.

Also in DMRUNLM job, check the override statement for GenTrn, GenData, and GenPrint to make sure you have the correct DB2 SUBSYSTEM, PLAN, and LINKLIB from your system installation.

See Binding the Documaker DB2 Plan to Your DB2 Subsystem on page 33 for more information on the DB2 SUBSYSTEM and PLAN. For a description of the DMLM procedure, see the description of the DAP procedure above.

Here is an example of the DMRUNLM job:

```
//*  COPY JOBCARD HERE
//*****************************************************************
//*                          - DMRUNLM -
//*
//*****************************************************************
//*
//DMRUNLM  EXEC DMLM
//GENTRN.SYSTSIN  DD  *
 DSN SYSTEM(DB8G)
 RUN  PROGRAM(GENTRN) PLAN(DAP113) -
      LIB('FSI.V113.LINKLIB')
 END
//*
//GENDATA.SYSTSIN  DD  *
 DSN SYSTEM(DB8G)
 RUN  PROGRAM(GENDATA) PLAN(DAP113) -
```

```
      LIB('FSI.V113.LINKLIB')
 END
//*
//GENPRT.SYSTSIN  DD  *
 DSN SYSTEM(DB8G)
 RUN  PROGRAM(GENPRINT) PLAN(DAP113) -
      LIB('FSI.V113.LINKLIB')
 END
//*
```

RUNNING GENARCDX

This task is optional.

The JCLLIB member GenArcDX (GenArcX prior to version 10.3) executes the GenArc program in two steps. The first step, called *GenArcD*, executes the IEFBR14 program and contains DD statements that delete various files which will be created in the following GenArc step. The second step, called *GenArc*, executes the TSO Terminal Monitor Program and starts the DB2 Command Processor program (DSN) which runs the GenArc program and DB2 plan.

At the bottom of the GenArcDX job, the SYSTSIN DD statement has some in-stream control cards, one of which indicates the LINKLIB you loaded during the installation. Change &HLQ..LINKLIB to match the name you gave the LINKLIB you during the installation. Also, you will need to change the subsystem name from *TDB1* to match your DB2 subsystem name.

```
//SYSTSIN   DD  *
 DSN SYSTEM(TDB1)
 RUN  PROGRAM(GENARC) PLAN(DAP110) -
      LIB('&HLQ..LINKLIB')
 END
```

To test, submit the GenArcDX job. The GenArcDX job should receive a return code of *00* or *04*. The output for the GenArcDX job should include logging messages (sent to SYSPRINT) similar to the following messages.

RPEX1 messages

```
--- GenArc ---
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1

==> Transactions Read       :      9
==> Transactions Archived   :      9
==> Transactions In Error   :      0
==> Transactions Rolled Back:      0

==> Warning count:    1
==> Error   count:    0

Elapsed Time: 44 seconds
--- GenArc Completed ---
```

UTEX1 messages

```
--- GenArc ---

==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 2222-3445-UTIL-BILL--
==> Processing: 1234-5555-UTIL-BILL--
==> Processing: 3456-7777-UTIL-BILL--
==> Processing: 3999-9999-UTIL-BILL--
==> Processing: 4444-1234-UTIL-BILL--
==> Processing: 4999-R777-UTIL-BILL--
==> Processing: 5111-8888-UTIL-BILL--
==> Processing: 5555-7010-UTIL-BILL--
==> Processing: 6750-R758-UTIL-BILL--
==> Processing: 7000-7000-UTIL-BILL--
==> Processing: 2428-1927-UTIL-BILL--
==> Processing: 8234-5555-UTIL-BILL--

==> Transactions Read       :     12
==> Transactions Archived   :     12
==> Transactions In Error   :      0
==> Transactions Rolled Back:      0

==> Warning count:    0
==> Error   count:    0

Elapsed Time: 34 seconds
--- GenArc Completed ---
```

RUNNING GENARCX

This task is optional. The JCLLIB member GenArcX executes the GenArc program in two steps. The first step, called GenArcD, executes the IEFBR14 program and contains DD statements that delete various files which will be created in the following GenArc step. The second step, called GenArc, executes the GenArc program to archive to Documanage or to a CARDATA file if you are using stacked DPA.

To test, submit the GenArcX job. The GenArcX job should receive a return code of *00* or *04*. The output for the GenArcX job should include logging messages (sent to SYSPRINT) similar to the following messages if you are using stacked DPA.

RPEX1 messages

```
--- GenArc ---
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: 1234567-SAMPCO-LB1--T1
==> Processing: 2234567-SAMPCO-LB1--T1
==> Processing: 5SAMPCO-SAMPCO-LB2--T1
==> Processing: 6SAMPCO-SAMPCO-LB2--T1
==> Processing: 7SAMPCO-SAMPCO-LB2--T1
==> Processing: 8SAMPCO-SAMPCO-LB2--T1
==> Processing: 9SAMPCO-SAMPCO-LB2--T1
==> Processing: 4234567-FSI-CPP--T1
==> Processing: 5234567-FSI-GL--T1
==> Transactions Read       :      9
==> Transactions Archived   :      7
==> Transactions In Error   :      0
==> Transactions Rolled Back:      0
==> Warning count:    1
==> Error   count:    0
Elapsed Time: 27 seconds
--- GenArc Completed ---
```

UTEX1 messages

```
--- GenArc ---
==> Processing: TransactionId-GroupName1-GroupName2-GroupName3-
TransactionType
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Processing: -UTIL-BILL--
==> Transactions Read       :     12
==> Transactions Archived   :     12
==> Transactions In Error   :      0
==> Transactions Rolled Back:      0
==> Warning count:    1
==> Error   count:    0
Elapsed Time: 66 seconds
--- GenArc Completed ---
```

PRINTING THE OUTPUT

When you performed the tasks discussed in the topic, Running DAPRUN (or GenTrnX, GenDataX, and GenPrtX) and DMRUNLM on page 66, DAPRUN should have produced three print-ready files. These files would be referenced as shown in the following table:

If you configured your system for...	You will see these default DD names...
Xerox Metacode	PRTBAT1, PRTBAT2, and PRTBAT3
IBM AFP	PRTBAT1, PRTBAT2, and PRTBAT3
PostScript	PRTBAT1, PRTBAT2, and PRTBAT3
PDF	PDFLIB(BAT10000), PDFLIB(BAT20000), and PDFLIB(BAT30000)

Consult the appropriate topic below to send the output to the type of printer you are configured for.

Xerox Metacode printer

If you configured the system to create Xerox Metacode, use the GENERXER member of JCLLIB to *IEBGENER* the print files to JES. Make any changes necessary in this member to match your z/OS environment.

BARR-attached Metacode printer

If you have a Metacode printer attached to your local area network (LAN) and you are using the BARR interface, you must first *BARRWRAP* the output print stream, then send this print stream to the printer's spool area.

To BARRWRAP the output print stream, run the BARRWRPX utility. You'll find an example of this utility in JCLLIB. Then download the resulting file to your LAN. Be sure to download without carriage returns or line feeds (CRLF) and without ASCII translation. Once the file is downloaded, copy it to the BARR SPOOL area.

IBM AFP printer

If you have configured the system to create an IBM AFP data stream, use the GENERAFP member of JCLLIB to *IEBGENER* the print files to JES. Make any changes necessary in this member to match your z/OS environment.

The LOADDAP Job

The LOADDAP job in JCLLIB is listed below. This job creates the...

- System datasets
- DMS1 sample datasets (for the verification test)
- Font datasets

In addition, the LOADDAP job reads from the installation and populates these datasets.

```
//*  COPY JOBCARD HERE ...
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*       LOADDAP -
//*
//*       COPY THE DAP BATCH SYSTEM FILES, RPEX1 AND UTEX1 RESOURCES
//*       FROM A 3480 CARTRIDGE TO AN MVS SYSTEM.  FILES LOADED ARE :
//*
//*        1.  JCLLIB
//*        2.  PROCLIB
//*        3.  SOURCE
//*        4.  INCLIB
//*        5.  OBJLIB
//*        6.  LINKLIB
//*        7.  DBRMLIB (DB2)
//*        8.  DEFLIB  (DMS1)
//*        9.  DDTLIB  (DMS1)
//*       10.  FAPLIB  (DMS1)
//*       11.  COMPLIB (DMS1)
//*       12.  EXTRACT (DMS1)
//*       13.  LOG2IMG (DMS1 XEROX LOGO IMAGES)
//*       14.  LOG2FNT (DMS1 XEROX LOGO FONTS)
//*       15.  PFRMLIB (DMS1 XEROX FRM'S)
//*       16.  AFP240  (AFP 240-DPI FONTS)
//*       17.  AFP300  (AFP 300-DPI FONTS)
//*       18.  XEROX   (XEROX FONTS)
//*       19.  XEROXR  (XEROX ROTATED FONTS)
//*
//*
//*      =>  GO TO BOTTOM OF JOB AND CHANGE VOLSER & CUSTHLQ TO MATCH
//*       =>  SITE REQUIREMENTS.
//*
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//*       IN-STREAM PROC FOLLOWS ...
//*
//LOAD    PROC  TUNIT=,
//          TVOLSER=,
//          CUSTHLQ=,
//          DUNIT=,
//          PDSTYPE=
//*
//JCLLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..JCLLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(1,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..JCLLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,1,10)),DSNTYPE=&PDSTYPE
```

```
//SYSIN    DD DUMMY
//*
//PROCLIB EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..PROCLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(2,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..PROCLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,1,10)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//SOURCE  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..SOURCE,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(3,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..SOURCE,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(8,10,100)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//INCLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..INCLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(4,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..INCLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(4,1,50)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//OBJLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..OBJLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(5,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..OBJLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(35,5,75)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//*  DEFINE LINKLIB AS PDS (NOT PDSE) BY DEFAULT
//*
//LINKLIB EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..LINKLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(6,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..LINKLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(30,5,10)),DSNTYPE=PDS
//SYSIN    DD DUMMY
//*
//*  DON'T GET SYSCPRT FROM TAPE - JUST ALLOCATE SPACE FOR IT
//*    FOR LATER COMPILES.
//*
//SYSCPRT EXEC PGM=IEFBR14
//SYSPRINT DD  SYSOUT=*
//DD1      DD  DSN=&CUSTHLQ..SYSCPRT,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(25,25,100)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//DBRMLIB EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
```

```
//SYSUT1   DD  DSN=&HLQ..DBRMLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(7,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..DBRMLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//DEFLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.DEFLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(8,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..RPEX1.DEFLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(3,1,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//DDTLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.DDTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(9,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..RPEX1.DDTLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//FAPLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.FAPLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(10,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..RPEX1.FAPLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//COMPLIB EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.COMPLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(11,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..RPEX1.COMPLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//*       NOTE THAT IEBGENER IS USED TO COPY THE EXTRACT FILE, WHICH
//*         IS A SEQUENTIAL FILE, NOT A PDS.
//*
//EXTRACT EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.EXTRACT,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(12,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..RPEX1.EXTRACT,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1))
//SYSIN    DD  DUMMY
//*
//LOG2IMG EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.LOG2IMG,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(13,SL)
```

```
//SYSUT2   DD
DSN=&CUSTHLQ..RPEX1.LOG2IMG,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//LOG2XFNT EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.LOG2XFNT,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(14,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..RPEX1.LOG2XFNT,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//PFRMLIB  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..RPEX1.PFRMLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(15,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..RPEX1.PFRMLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//DEFLIBU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.DEFLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(16,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..UTEX1.DEFLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(3,1,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//DDTLIBU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.DDTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(17,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..UTEX1.DDTLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//FAPLIBU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.FAPLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(18,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..UTEX1.FAPLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//COMPLIBU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.COMPLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(19,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..UTEX1.COMPLIB,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(2,2,15)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
```

```
//*       NOTE THAT IEBGENER IS USED TO COPY THE EXTRACT FILE, WHICH
//*         IS A SEQUENTIAL FILE, NOT A PDS.
//*
//EXTRACTU EXEC PGM=IEBGENER
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.EXTRACT,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(20,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..UTEX1.EXTRACT,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1))
//SYSIN    DD  DUMMY
//*
//LOG2IMGU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.LOG2IMG,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(21,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..UTEX1.LOG2IMG,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//LOG2XFTU EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=&HLQ..UTEX1.LOG2XFNT,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(22,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..UTEX1.LOG2XFNT,DISP=(,CATLG),UNIT=&DUNIT,
//         SPACE=(CYL,(1,1,5)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//*       FORCE AFP FONTLIB TO BE PDS - PDSE HAS PROBLEMS
//*
//AFP240  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=FSI.AGFA.AFP240.FONTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(23,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..AGFA.AFP240.FONTLIB,DISP=(,CATLG),
//         UNIT=&DUNIT,
//         SPACE=(CYL,(35,10,150)),DSNTYPE=PDS
//SYSIN    DD DUMMY
//*
//*       FORCE AFP FONTLIB TO BE PDS - PDSE HAS PROBLEMS
//*
//AFP300  EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=FSI.AGFA.AFP300.FONTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(24,SL)
//SYSUT2   DD  DSN=&CUSTHLQ..AGFA.AFP300.FONTLIB,DISP=(,CATLG),
//         UNIT=&DUNIT,
//         SPACE=(CYL,(40,10,150)),DSNTYPE=PDS
//SYSIN    DD DUMMY
//*
//XEROX   EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD  DSN=FSI.AGFA.XEROX.FONTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(25,SL)
```

```
//SYSUT2   DD  DSN=&CUSTHLQ..AGFA.XEROX.FONTLIB,DISP=(,CATLG),
//         UNIT=&DUNIT,
//         SPACE=(CYL,(25,5,75)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//XEROXR   EXEC PGM=IEBCOPY
//SYSPRINT DD  SYSOUT=*
//SYSUT1   DD
DSN=FSI.AGFA.XEROX.ROTATED.FONTLIB,DISP=SHR,UNIT=&TUNIT,
//         VOL=(,RETAIN,,,SER=&TVOLSER),LABEL=(26,SL)
//SYSUT2   DD
DSN=&CUSTHLQ..AGFA.XEROX.ROTATED.FONTLIB,DISP=(,CATLG),
//         UNIT=&DUNIT,
//         SPACE=(CYL,(115,10,500)),DSNTYPE=&PDSTYPE
//SYSIN    DD DUMMY
//*
//        PEND
//* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
//*
//STEP1 EXEC LOAD,TUNIT=CART,
//         TVOLSER=D10301,           <= CHANGE
//         CUSTHLQ='FSI.v103',       <= CHANGE
//         DUNIT=SYSDA,
//         PDSTYPE=LIBRARY
//*
```

z/OS Libraries

The system begins as many source code modules which are separated into directories or libraries. Each library performs a specific task. For instance, INILIB handles Initialization file tasks and GVMLIB performs global variable manager functions.

Some of these libraries perform functions that are relevant only on the PC platform. You do not need to upload these libraries to your z/OS system. The libraries you must upload to your z/OS system are listed in the table below, along with the various print drivers.

An asterisk (*) indicates the library is needed only to perform a particular function. For instance FAP2MET is required only if you are converting FAPs to PMETs and running with the CompileInstream INI option set to *No*.

Library	Required for the system?	Required for Xerox?	Required for AFP?	Required for Postscript?	Required for PCL?
AFP2MVS			Y		
AFPCOPY			Y		
AFPFMDEF			Y		
AFPLIB			Y		
AFPPRT			Y		
ARCLIB	Y*				
ASCLIB	Y				
BARR2MVS					
BARRWRAP		Y*			
CARLIB	Y				
CFA2FAP	Y				
CPCNV	Y				
CUSLIB	Y				
CUSLIB	Y				
DALLIB	Y				
DB2LIB	Y*				
DBLIB	Y				
DSLIB	Y				
ERRLIB	Y				
FAP2CFA					
FAP2MET		Y*			

Library	Required for the system?	Required for Xerox?	Required for AFP?	Required for Postscript?	Required for PCL?
FAP2OVL			Y*		
FAPLIB	Y				
FDT2CFA	Y				
FIXOFFS					
FNTLIB	Y				
FSILIB	Y				
FSIVER	Y				
GenArc	Y*				
GenData	Y				
GENLIB	Y				
GenPrint	Y				
GenTrn	Y				
GLBLIB	Y				
GRFLIB	Y				
GVMLIB	Y				
INILIB	Y				
LBYLIB	Y				
LOG2PSEG			Y*		
LOGLIB	Y				
METOPT		Y			
PCLLIB					Y
PDS2VSAM	Y*				
PRTLIB	Y				
PSTLIB				Y	
RCBLIB	Y				
RCP2VSAM	Y*				
RPLIB	Y				

Library	Required for the system?	Required for Xerox?	Required for AFP?	Required for Postscript?	Required for PCL?
RULLIB	Y				
SAMPAFP			Y		
TIFLIB	Y				
TRANSLAT	Y				
UTILLIB	Y				
UTLLIB	Y				
VMMLIB	Y				
XDBLIB	Y				
XERDNLD		Y*			
XERLIB		Y			
XMCLIB		Y			

z/OS Programs and Utilities

The following is a list and a short description of the programs and utilities you can run on a z/OS system. For more information about these utilities, see the Docutoolbox Reference.

AFPCOPY utility

This utility takes an AFP print stream which may contain multiple BEGINDOC and ENDDOC statements and generates an AFP print stream with only one BEGINDOC and one ENDDOC statement—in other words, it converts the print stream from *cut-sheet* to *continuous-form*. No parameters are required. The input AFP print stream is read from the INFILE DD statement and the output AFP print stream is written to the OUTFILE DD statement. Look in member AFPCOPYX of JCLLIB to find an example of this utility.

AFPOPT utility

This utility optimizes an AFP print stream. The AFPOPT utility reads an AFP print stream produced by Documaker and outputs a smaller, optimized AFP print stream. The input AFP print stream is read from the INFILE DD statement. The output AFP print stream is written to the OUTFILE DD statement. Look in member AFPOPTX of JCLLIB to find an example of this utility.

AFPFMDEF utility

This utility accepts as input a source form definition file and generates an AFP FormDef. Look in member AFPFMDFX of JCLLIB to find an example of this utility.

AFP2MVS utility

This utility accepts as input an AFP resource, such as a font, page segment, or print-ready file, that's been uploaded to the z/OS system from the PC with no ASCII and no CRLF. It also generates that resource to another file such that the record-oriented format of the resource will be restored. Look in the AFP2MVSX member of JCLLIB to find an example of this utility.

BARR2MVS utility

This utility program accepts as input a print-ready Metacode file produced by Documaker Server running on the PC (using these INI options: Environment=OS22, OutMode=BARR, or BARRWORD), strips that file of the BARR-encoded information and produces a Metacode print-ready file acceptable in a z/OS environment. Look in the BARR2MVX member of JCLLIB to find an example of this utility.

BARRWRAP utility

This utility accepts as input a print-ready Metacode file produced by Documaker Server on z/OS and produces a Metacode print-ready file *wrapped* with control information the BARR printer-attachment system understands. Look in the BARRWRPX member of JCLLIB to find an example of this utility.

CPCNV utility

This utility converts a source file from one code page to another. The utility reads an input source file, such as an extract file, a FAP file, and so on, which corresponds to a specific code page. You can convert either a single member in the PDS (use /I=member) or all members of the PDS (use /I=*). The utility then generates a target file which corresponds to a different code page. Look in member CPCNVX of JCLLIB to find an example of this utility.

FAP2AFP utility

This utility generates an AFP print-ready file from a FAP file. You can convert a single FAP file in the PDS (/I=FAPNAME) or all FAP files in the PDS (/I=*). Look in the FAP2AFPX member of JCLLIB to find an example of this utility.

You can also convert a FAP file in the library (use /LIB=LIBNAME). You can specify the optional parameter /VER and /REV parameters to specify the version and/or revision of a FAP file in the library you want to convert. Keep in mind that you cannot use wildcards (/I=*) when you include the /LIB parameter.

Look in the FAP2AFPL member of JCLLIB to find an example of this utility.

FAP2CFA utility This utility accepts as input a FAP file and generates a compiled FAP file. Look in member FAP2CFAX of JCLLIB to find an example of this utility.

FAP2MET utility This utility accepts as input a FAP file and generates a pre-compiled Metacode member, usually placing the *PMET* into the PMETLIB dataset. You can convert a single FAP in the PDS (use /I=fapname) or all FAPs in the PDS (use /I=*). There are several options you can select when you run the FAP2MET utility. For example, you can save the PMET in the PMETLIB dataset so it is ready to be included by the GenPrint program into a print stream or you can generate the PMET so it can be sent directly to the Metacode printer. You can also select the HMI, Short Edge Bind, or Long Edge Bind options. Look in member FAP2METX of JCLLIB to find an example of this utility.

FAP2OVL utility This utility generates an AFP overlay from a FAP file, usually placing it into an overlay library PDS, which is generally referred to as *OVERLIB*. You can convert a single FAP in the PDS (use /I=fapname) or all FAPs in the PDS (use /I=*). Look in the FAP2OVLX member of JCLLIB to find an example of this utility.

FDT2CFA utility This utility accepts as input a FSISYS INI file (member of DEFLIB), a FORM file (member of DEFLIB) and the FAPLIB PDS (Partitioned Data Set) and produces a COMPLIB PDS containing compiled FAP files.

This utility is similar to the FAP2CFA utility, except the FAP2CFA utility reads a single FAP and compiles it into a compiled FAP, while the FDT2CFA utility reads the FSISYS INI file, gets the name of the FORM member, opens the FORM member of DEFLIB to get a list of all of the FAP files that might be used, compiles all of these FAP files into compiled FAPs, and places them into the COMPLIB. Look in member FDT2CFAX of JCLLIB to find an example of this utility.

FIXOFFS utility Use the FIXOFFS utility to correct field offsets after you have uploaded or downloaded a file from an environment where physical offset values differ. For example, you must use this utility if you are running the GenArc program in a z/OS environment using a local area network (LAN) archive of z/OS-generated data.

The utility uses the offsets in the NA and POL files to determine how to update other output files, such as recipient batch files and the NEWTRN file.

FSIVER utility This utility accepts as input a LINKLIB PDS and generates a report that lists which patches have been applied to the programs in that LINKLIB. You can generate the report for either a single program (use /I=program name) or for all programs in the PDS (use /I=*). Look in member FSIVERX of JCLLIB to find an example of this utility.

SEQ2KSDS utility Use the SEQ2KSDS utility to convert a non-VSAM NAFILE or POLFILE dataset into a VSAM copy of that dataset. A 4-byte key is prefixed to each record of the VSAM dataset as it is created. You can find sample JCL for running the SEQ2KSDS utility in the SEQ2KSDX member of JCLLIB.

GenArc program The GenArc program is an optional part of the system which you run after the GenData program. The GenArc program reads the NEWTRN, the NAFILE, and POLFILE and writes (or archives) this information to a repository (DB2). You can retrieve and print these archived form sets. The GenArcDX member of JCLLIB runs GenArc.

GenData program The GenData program uses a processing engine referred to as the *Rules Processor* to step through the transaction trigger file (TRNFILE) created by the GenTrn program. This creates an NAFILE which contains image and variable data information, a POLFILE which contains recipient information, and recipient batch files (BATCH1, BATCH2, and so on) which contain trigger records for the different recipient groups. These files are sent to the GenPrint (or GenArc) program. The GenData program is part of the DAP procedure in PROCLIB. There is also an example of GenData in the GenDataX member of JCLLIB.

GenPrint program The GenPrint program reads the recipient batch files, NAFILEs, and POLFILEs produced by the GenData program and produces print-ready streams for specific printer platforms such as Xerox Metacode or IBM AFP. The print streams can be sent to datasets which you can copy to the JES print SPOOL or directly to JES SPOOL as SYSOUT files. The GenPrint program is part of the DAP procedure in PROCLIB. There is also an example of GenPrint in the GenPrtX member of JCLLIB.

GenTrn program The GenTrn program performs the first step of the processing cycle. The GenTrn program accepts as input an extract file and produces a transaction trigger file or *TRNFILE*. Each record in the TRNFILE represents a single transaction. The TRNFILE is then passed to the GenData program. The GenTrn program is part of the DAP procedure in PROCLIB. There is also an example of GenTrn in the GenTrnX member of JCLLIB.

LOG2PSEG utility This utility accepts as input a logo file, which is similar to a bitmap file, and produces an AFP page segment. The page segment is generally placed into a page segment library PDS referred to as PSEGLIB. This PSEGLIB must be available to your AFP printer when you print. You can convert a single logo in the PDS (use /I=logoname) or all logos in the PDS (use /I=*). Look in member LOG2PSGX of JCLLIB to find an example of this utility.

PDFKEY utility Use the PDFKEY utility to generate the encrypted passwords used in the PDF security control group.

PDS2VSAM utility This utility accepts as input a partitioned dataset, such as the DDTLIB or PMETLIB PDSs, and copies those members into a VSAM KSDS. Look in members PDS2VSDX, PDS2VSJX, and PDS2VSPX of JCLLIB for examples of this utility.

RCP2VSAM utility This utility accepts as input a set recipient table, usually the SETRCPTB member in the DEFLIB PDS, and copies this table into a VSAM KSDS. When you have large set recipient tables, this conversion can speed the reading of the table. Look in member RCP2VSMX of JCLLIB to find an example of this utility.

SAMPAFP utility This utility accepts as input the name of either an AFP overlay or page segment and generates a SYSOUT file that, together with the correct USERLIB reference to this AFP resource, will print this overlay or page segment resource. Look in member SAMPAFPX of JCLLIB to find an example of this utility.

TRANSLAT utility

This utility accepts as input a tokenized message file (MSGFILE) that is output from the GenTrn, GenData, GenPrint, or GenArc program. This utility then produces a readable error file. The TRANSLAT utility lets you translate the tokens in the MSGFILE into various languages or simply change the contents to meet your needs. Look in member TRANSLTX of JCLLIB to find an example of this utility.

XERDNLD utility

This utility lets you get resources to a Xerox printer if you do not have other software programs to accomplish this task.

The utility accepts as input a Xerox Metacode resource, such as a font, image, or FRM file, encapsulates it with location-specific DJDE information and generally writes the resource back out to a PDS. You can then send the contents of this PDS to the JES SPOOL and target those contents to a specific Xerox printer where the resource will be stored on the printer's local disk device. The resources will then be available when needed at print time. Look in the XERDNLDX member of JCLLIB to find an example of this utility.

Using the Documentation

After you download Oracle Documaker and unzip the file you downloaded, you will find a readme file that provides an overview, installation instructions, information on any known issues, and brief instructions for downloading the documentation. For more detailed instructions on downloading the documentation, see the following topic.

The documentation available for this release is in Portable Document Format (PDF) files which you can view or print using the Adobe® Acrobat™ Reader™. In the documentation file you download from the OTN site, you will find the various manuals that accompany this release, such as:

- Documaker Administration Guide
- Documaker Studio User Guide
- Docutoolbox Reference
- Rules Reference
- DAL Reference
- Release Notes

For best results, make sure you have the latest version of Acrobat Reader. You can download the free reader at Adobe's web site: www.adobe.com.

Updating Your Documentation

You can download the latest Oracle Insurance documentation at the Oracle Technology Network (OTN) web site. The process includes:

- Going to the Oracle Insurance Documentation page on the OTN site
- Searching for the application documentation you want to download
- Downloading that documentation

To download Oracle Insurance application documentation, go to the Oracle Insurance Documentation page:

http://www.oracle.com/technetwork/documentation/insurance-097481.html

Downloading Patches

You can download the latest Oracle software patches at the My Oracle Support web site. The process includes:

- Going to the My Oracle Support site (requires registration)
- Searching for the patches you want to download
- Downloading those patches

To download Oracle software patches, go to the My Oracle Support web site:

https://support.oracle.com

Chapter 3

Installing Documaker on UNIX/Linux

This guide provides detailed information on how to install and configure the system on an IBM AIX, Sun Solaris, and Linux environments.

You will find information on these topics:

OVERVIEW

This chapter provides you with steps to install and test the system on your UNIX/Linux system. This overview discusses the contents of this chapter.

NOTE: See System Requirements on page 2 for information about requirements.

Downloading the Software

You can download Documaker Server for UNIX/Linux by downloading the Oracle Documaker media pack from the Oracle Software Delivery Cloud web site. A media pack is an electronic version of the software products available to Oracle customers. The media pack contains .zip files for a suite of related products on a single operating system so you can build a complete solution for your business needs.

For more information, see Downloading the Software on page 97.

Installing the System

This topic explains how to install the system once you have downloaded the media pack. For more information see Installing the System on page 98.

Checking Your Installation

After you install your system, use the sample resources to check your installation. For detailed instructions, see Checking Your Installation on page 100.

Using the Documentation

This topic describes the on-line documentation and explains how to use it. For more information, see Using the Documentation on page 102.

Start-Up Tips

This topic provides additional information on using the system in a UNIX/Linux environment. For more information, see Start-Up Tips on page 103.

Directory Structures

This topic describes the layout of the files in a typical installation. For more information, see Directory Structures on page 104.

Downloading the Software

Oracle Insurance applications are available for download at the Oracle Software Delivery Cloud web site. The process includes:

- Logging in and agreeing to the terms and restrictions
- Searching for the applications you want to download
- Downloading those applications

Go to the Oracle Software Delivery Cloud web site to download Oracle Insurance applications:

https://edelivery.oracle.com

INSTALLING THE SYSTEM

Follow these steps to install the Oracle Documaker on a computer running AIX, Solaris, or Linux (Intel-based). The following fonts are also included in the media pack you download from the Oracle Software Delivery Cloud, see Downloading the Software on page 97 for more information.

- Monotype, PCL, and PostScript fonts
- AFP fonts
- Xerox fonts

NOTE: Re-installation of the Run Time Environment *does not* overwrite your INI files.

If you install the system into an existing directory, the current library setup (INI files) is retained. If you install the system into a new directory, you must set up all of your libraries—just as you would for a new customer.

Before you begin

Make sure you have full directory access permissions (read/write/execute) to the directory into which you will be installing Documaker Server.

Installation

Follow these steps to install the system:

1. Log on to the UNIX/Linux system using the account you want to use for the installation. By default the installation process installs the system into a subdirectory in your home directory with a name based on the release number.

   For example, if you are installing the system using an account named *fap* that has a home directory of */home/fap*. the installation installs the system in the */home/fap/rel115* directory. You can, however, override the default.

2. Unzip the file you downloaded from the Oracle Software Delivery Cloud. Included in this file is a readme file and an installer. For each type of UNIX, the name of the installer is the same except for the extension. The name of the installer is as follows:

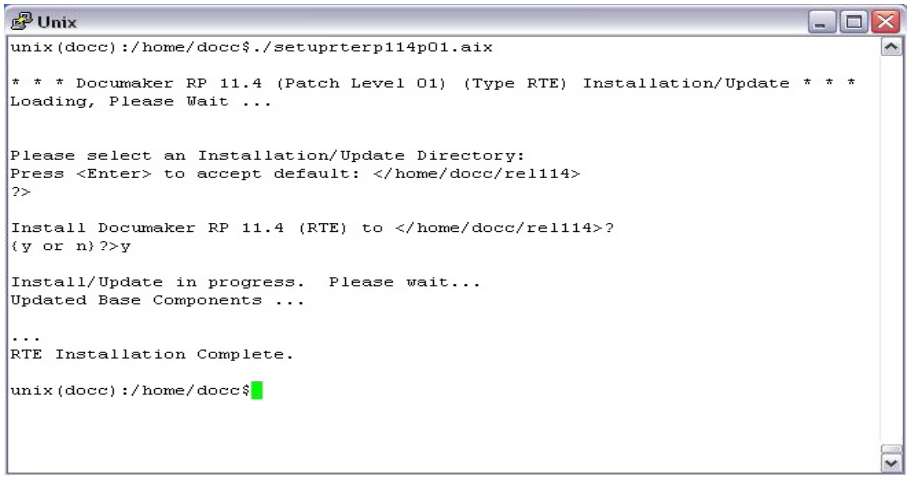
   ```
   setuprterp115pxx.zzz
   ```

   Where *115* is the version number, *pxx* is the patch number, and *zzz* is one of these extensions:

This extension	Indicates
aix	AIX
spc	Solaris SPARC
lnx	Linux x86

3. Open the install.txt file using a text editor and review it. This file contains any additional information that could not be added to this document before publication.
4. Run the installer using either a Korn or a Bash shell prompt.

The initial installation screen describes the type of installation, displays the default directory the installation will use, and lets you override the installation location. Here is an example of the RTE installation screen:



Checking Your Installation

You can also download a sample MRLs (master resource libraries) from the Oracle Software Delivery Cloud. You will find these sample MRLs with the downloads for Oracle Documaker for the Microsoft Windows (32-bit) platform.

There are several sets of sample resources. The DMS1 sample resources are designed for the insurance market. You can check your installation by processing the resources in the sample resource library. The sample library includes an example directory which you can use to test against the results you get when you run the following tests.

These examples use scripts such as *run.sh* that pre-set the PATH and library PATH environment variables so the Dynamically Shared Objects (DSOs) and executables can be located at run time.

To manually run the programs or utilities (such as gentrn, gendata, genprint, ovlcomp, fap2cfa, and so on) at a shell command prompt, set these environment variables by prepending the PATH and the appropriate library PATH environment variables with the location of these files (such as LD_LIBRARY_PATH for Solaris and Linux and LIBPATH for AIX).

Some implementations may set these environment variables using a .profile for the shell so they are pre-set automatically when a Korn shell is run. Please check with your system administrator for options.

This is an example of the command-line shell prompt commands to enter if you installed the system into the /home/fap/rel115 directory:

Solaris and Linux

```
PATH=/home/fap/rel115/bin:$PATH
LD_LIBRARY_PATH=/home/fap/rel115/bin:$LD_LIBRARY_PATH
export PATH LD_LIBRARY_PATH
```

AIX

```
PATH=/home/fap/rel115/bin:$PATH
LIBPATH=/home/fap/rel115/bin:$LIBPATH
export PATH LIBPATH
```

Testing with the DMS1 Sample Resources

The system includes a shell script file (run.sh) which lets you process the DMS1 sample resources. There is are specific options and arguments you can use to select the Documaker Server modules (gentrn, gendata, genprint, and genarc) in single- or multi-step mode. The DMS1 sample resources only outputs PCL printer files. To set up other printer types, refer to Documaker Administration Guide.

The shell script file executes the Documaker Server modules (gentrn, gendata, genprint, and genarc) in the appropriate mode for the PCL printer type and copies the appropriate INI files and into the proper directories (see the Documaker Administration Guide for more information).

Processing the DMS1 Sample Resources

To run the system through a processing cycle, follow these steps:

1. Download the Sample MRLs from the Oracle Software Delivery Cloud and install the DMS1 sample resources into the mstrres/dms1 directory.

2 Go to the mstrres/dms1 directory where you installed the MRL examples. At the Korn or Bash shell prompt, enter this command:

```
run.sh
```

3 Follow the prompts that appear on your screen.

Printing the DMS1 Output

After running the system, the printer ready files can be found in the ../dms1/data directory.

NOTE: See the Documaker Administration Guide for detailed instructions on printing to AFP, Metacode, PCL, or Postscript printers.

Testing WIP with DMS1

The DMS1 library is set up to place two transactions into WIP. Follow these steps to perform the test:

NOTE: If you are licensed for WIP the following steps apply. If, however, you *are not* licensed for WIP, do not perform these steps.

1 First run the GenWIP and GenArc programs on your UNIX machine.

2 Then copy the entire MRL to your Windows machine and run Documaker Workstation (afemnw32.exe) from the DMS1 root directory.

3 Choose the WIP, WIP List option.

4 Select transaction *2234567* and click Ok.

Viewing Archived DMS1 Forms

Optionally, you can archive the bills previously printed by following these steps:

NOTE: If you are licensed for Archive Retrieval the following steps apply. If, however, you *are not* licensed for Archive Retrieval, do not perform these steps.

1 At a UNIX/Linux Korn or Bash shell prompt, enter this command:

genarc

2 Then copy the entire MRL to your Windows machine and run Documaker Workstation (afemnw32.exe) from the DMS1 root directory.

3 Choose the Retrieve, Formset option to view the archived bills.

Using the Documentation

After you download Oracle Documaker and unzip the file you downloaded, you will find a readme file that provides an overview, installation instructions, information on any known issues, and brief instructions for downloading the documentation. For more detailed instructions on downloading the documentation, see the following topic.

The documentation available for this release is in Portable Document Format (PDF) files which you can view or print using the Adobe® Acrobat™ Reader™. In the documentation file you download from the OTN site, you will find the various manuals that accompany this release, such as:

- Documaker Administration Guide
- Documaker Studio User Guide
- Docutoolbox Reference
- Rules Reference
- DAL Reference
- Release Notes

For best results, make sure you have the latest version of Acrobat Reader. You can download the free reader at Adobe's web site: www.adobe.com.

Updating Your Documentation

You can download the latest Oracle Insurance documentation at the Oracle Technology Network (OTN) web site. The process includes:

- Going to the Oracle Insurance Documentation page on the OTN site
- Searching for the application documentation you want to download
- Downloading that documentation

To download Oracle Insurance application documentation, go to the Oracle Insurance Documentation page:

http://www.oracle.com/technetwork/documentation/insurance-097481.html

Start-Up Tips

Here are some additional tips to help you get your system up and running:

Using long file names

File names in UNIX and Linux can be up to 256 characters long or longer. You should, however, limit the names of resource files, such as FAP and LOG files, to 100 characters or less, excluding the path.

Documaker Server software imposes no limits on the length of the names use for the output files, such as print streams, so you can name those files however you like.

plugin.ttf font file

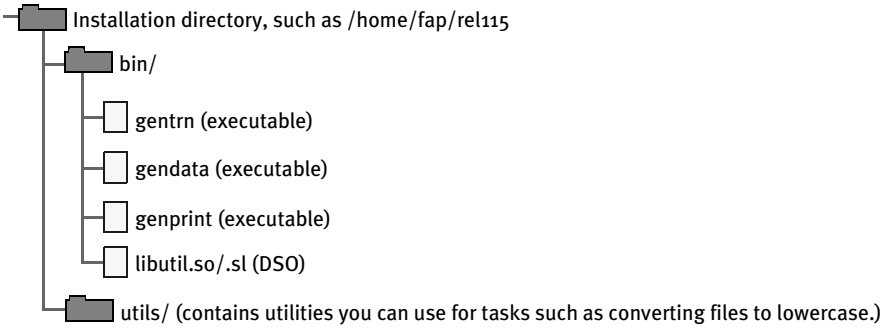
Make sure the plugin.ttf font file is not in your font directory. This font file is only applicable on Windows platforms.

Directory Structures

The installation programs create these directory structures:

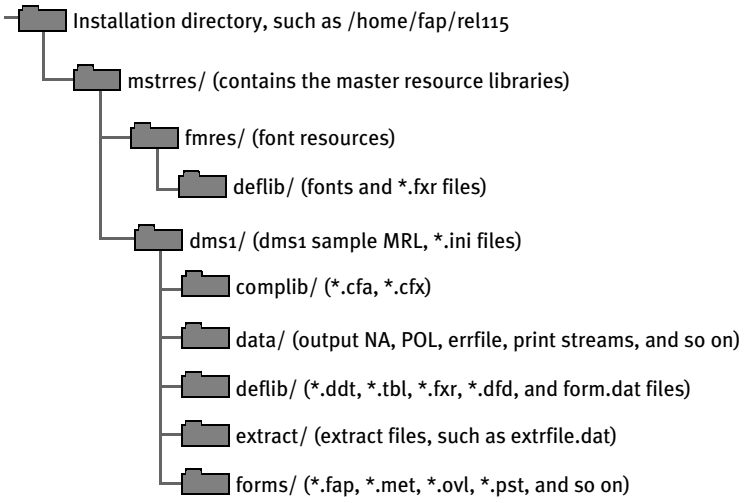
Run Time Environment (RTE)

The run time environment consists of these subdirectories under the directory where the system is installed:



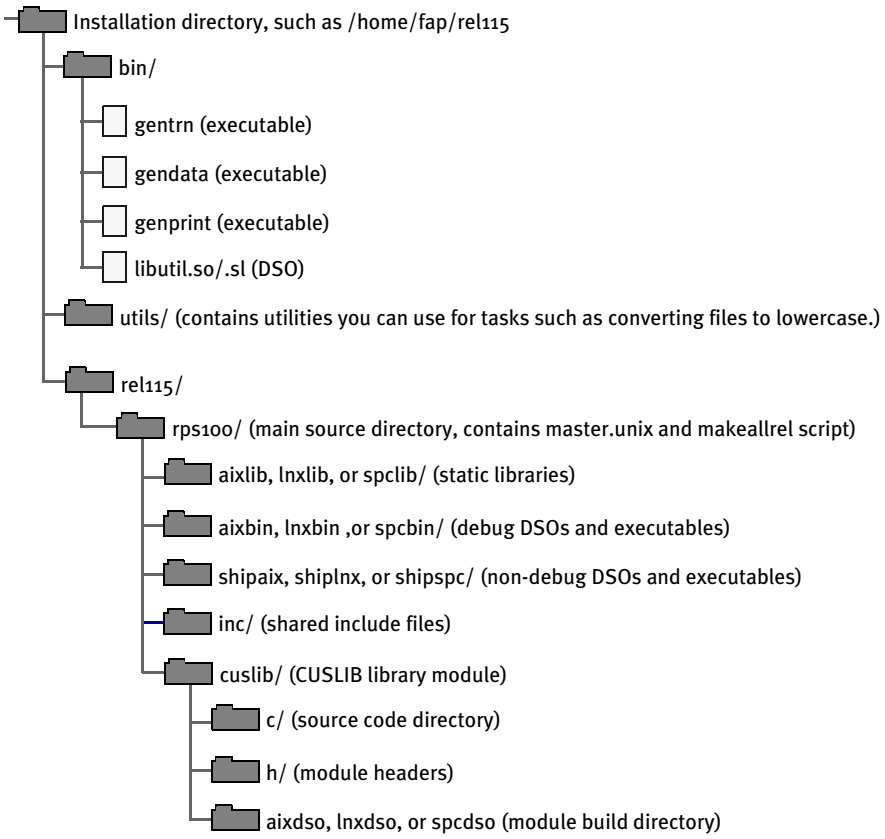
Master Resource Library (MRL)

The MRL installation creates these subdirectories under the directory where the system is installed:



Software Development Kit (SDK)

The SDK installation creates the follow subdirectories under the directory where the system is installed:



Downloading Patches

You can download the latest Oracle software patches at the My Oracle Support web site. The process includes:

- Going to the My Oracle Support site (requires registration)
- Searching for the patches you want to download
- Downloading those patches

To download Oracle software patches, go to the My Oracle Support web site:

https://support.oracle.com

Chapter 4

Installing Documaker on Windows

This chapter provides detailed information on how to install and configure the system in a Windows (Windows 2000, Windows XP, or Windows Vista) environment.

You will find information on these topics:

OVERVIEW

This chapter provides you with steps to install and test the system on your Windows system. This overview discusses the contents of this chapter.

NOTE: See System Requirements on page 2 for information about system requirements.

Downloading the Software

You can download Documaker Server for Windows by downloading the Oracle Documaker media pack from the Oracle Software Delivery Cloud web site. A media pack is an electronic version of the software products available to Oracle customers. The media pack contains .zip files for a suite of related products on a single operating system so you can build a complete solution for your business needs.

For more information, see Downloading the Software on page 109.

Installing the System

This topic explains how to install the system. For more information see Installing the System on page 110.

Checking Your Installation

After you install your system, use the sample resources to check your installation. For detailed instructions, see Using the Documentation on page 120.

Using the Documentation

This topic describes the on-line documentation and explains how to use it. For more information, see Using the Documentation on page 120.

Start-Up Tips

This topic provides additional information on using the system in a Windows environment. For more information, see Start-Up Tips on page 121.

Downloading the Software

Oracle Insurance applications are available for download at the Oracle Software Delivery Cloud web site. The process includes:

- Logging in and agreeing to the terms and restrictions
- Searching for the applications you want to download
- Downloading those applications

Go to the Oracle Software Delivery Cloud web site to download Oracle Insurance applications:

https://edelivery.oracle.com

INSTALLING THE SYSTEM

Follow these steps to install the Oracle Documaker on a personal computer running Windows. The following fonts are also included in the media pack you download from the Oracle Software Delivery Cloud, see Downloading the Software on page 109 for more information.

- Monotype, PCL, and PostScript fonts
- AFP fonts
- Xerox fonts

The installation process also installs the DMS1 sample resource library which includes test results and sample data.

NOTE: Re-installation *does not* overwrite your INI files.

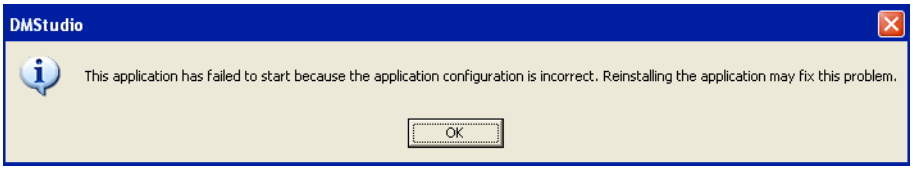
If you install the system into an existing directory, the current library setup is retained. If you install the system into a new directory, you must set up all of your libraries—just as you would for a new customer.

If you need to uninstall Oracle Documaker or one of its registered add-ins, such as Oracle Documaker Add-In for Microsoft Word, use Control Panel's Add or Remove Programs option.

Before you begin

Keep in mind...

- Be sure to log onto your computer as *Administrator* and make sure you have full directory access permissions to the \all users folder, as well as to the registry.
- When using NTFS drive formats, the logon name must be assigned all privileges and permissions to the Windows operating system folder and all sub-folders within, as well as to make changes to the Windows registry.
- The installation wizard will verify that you have the Microsoft Visual C++ Redistributable Package (vcredist_x86.exe) before beginning the installation. This program installs runtime components of Visual C++ Libraries, which are required to run Documaker Studio. If you try to run Studio without the Microsoft Visual C++ Redistributable Package, you will get the following message:



INSTALLATION

Follow these steps to install the system:

NOTE: If you plan to install the optional Documaker Add-In for Microsoft Word, review Installing the Documaker Add-In for Word on page 112 and make sure Word is closed before you begin.

If you plan to install the optional IStream Migration Utility, review Installing the IStream Migration Utility on page 115 and make sure Word is closed before you begin.

1. From the directory into which you downloaded the media pack, double click on the following program:

   `CD1-7spDocumakerStudioFullSystemW32Rel(version and patch number).exe`

   The installation wizard starts.

2. Follow the instructions that appear on your screen to install the software. The installation creates folders and icons on your Start\Programs menu.

After you install the system, restart your computer so the various system settings can take affect. If you install the software on a network, you will need to set up icons and a program group for each user. Refer to your operating system's documentation for information on how to do this.

Installing the Documaker Add-In for Word

The Documaker Add-in for Microsoft Word is an optional module that lets you create Documaker documents using Microsoft Word 2007.

NOTE: Before installing the Documaker Add-in for Word, you must make sure Microsoft Word 2007 is installed on the computer. If you have older versions of Word installed on the computer that will run the Add-In, uninstall those versions of Word *before* you install the Add-In.

Also, review the Readme file, which is included with the version 11.5 software download, for important information on Microsoft Word updates.

Add-In requirements

In addition to the basic Documaker Windows system requirements outlined on page 4, you need the following applications to run the Add-In:

Item	Version
Microsoft VSTO Runtime	Version 3.0 with Service Pack 1, or higher
Microsoft .NET Framework	Version 3.5 or higher

Review the Microsoft Download Center site for any additional requirements associated with these applications:

http://www.microsoft.com/downloads/

In addition, Microsoft .NET Programmability Support for Word must be enabled. For more information, see Checking for .NET Programmability Support on page 116.

NOTE: You can only install one copy of the Documaker Add-in for Word on a computer.

Configuring resource options

During installation, the Setup wizard lets you override default resource location options. You can override these locations at this time or you can change the locations as needed while working in the Add-In by choosing Options from the Documaker ribbon.

The Setup wizard lets you set these configuration options:

Option	Description
Workspace Service URL	(Optional) Enter the default web address for the Docupresentment web service. This service can be used to download workspace definition files.
Workspace Definition Folder	Enter the default location for storing workspace definition files (WDF).

Option	Description
Resource File	Enter the name of the local resource file for this installation. This XML file contains all of your locally created resources. The default is: `localresources.xml` If this file is missing, the system generates a new copy of it.
Graphics Folder	Enter the default location for storing graphic files.
Default Graphic	Enter the file name and extension for the default graphic, also called the placeholder image. The Add-In displays this graphic if it cannot find a specified graphic.
Log Folder	Enter the default location for storing log files. These files contain error and other operational messages which can be useful when diagnosing problems.

Updating Microsoft Word

If you have Microsoft Word 2007 version 12.0.6504.5000, you *must* apply the November 2009 update.

NOTE: If you do not apply this update, your documents *will not* be saved correctly and you *will not* be able to import them into Documaker Studio.

To determine if you need to update Microsoft Word, follow these steps:

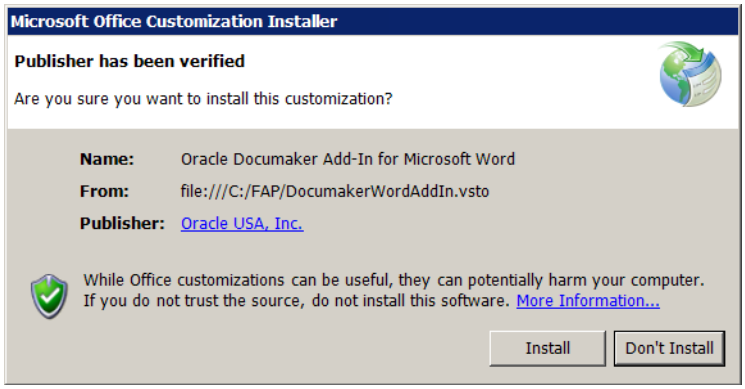
1. From the Office menu, click Word Options.
2. On the left pane, click Resources, then click the About button.
3. If your version number is 12.0.6504.5000, then you will need to download and install the November 2009 update:

Follow the instructions at this web site to download and install the update.

http://support.microsoft.com/kb/974561

Starting the Documaker Add-In for Word

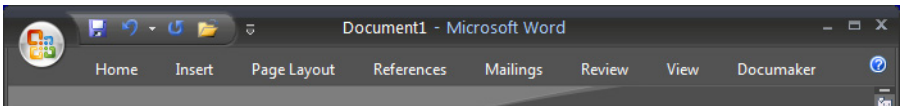
After you install the Documaker Add-In for Microsoft Word, the next time you start Microsoft Word 2007, you will see this message if you have Internet access:



If you do not have Internet access, this message appears instead:

```
Publisher cannot be verified.
Are you sure you want to install this customization?
To continue, click Install.
```

Click Install to continue. Then make sure the Documaker tab appears as the last tab on the Microsoft Word ribbon.

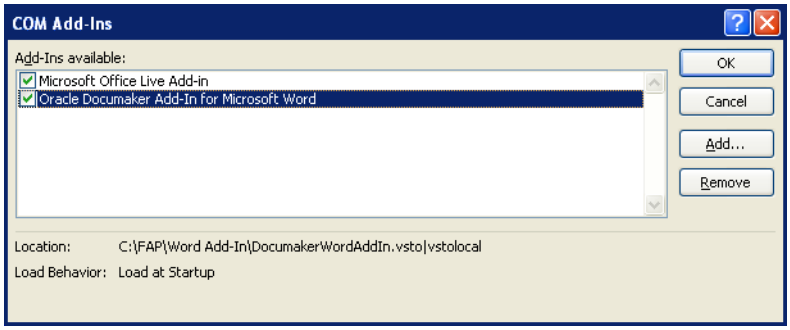


Re-enabling the Add-In if the Word certificate is not installed

If, after installing Documaker and opening Microsoft Word, you selected not to install the certificate for the Add-in, you can re-enable it as follows:

1. Click the Microsoft Office Button and select Word Options.
2. On the left pane of the Word Options window, click Add-Ins.
3. At the bottom of the Word Options window, for Manage select COM Add-ins, then click Go.

4. Click the Oracle Documaker Add-In for Microsoft Word entry to enable it. Then click Ok.



The Documaker tab should now appear in Word. If it does not, close and reopen Word.

Installing the IStream Migration Utility

The IStream Migration Utility is an optional utility that helps you migrate IStream model documents to Documaker. In addition to the basic Documaker Windows system requirements outlined on page 4, you need the following applications to run this utility:

Item	Version
Operating system	Windows Server 2003, XP, Vista, or Windows 7
Microsoft Word	Word version 2003, with Service Pack 2 or higher Word version 2007, with Service Pack 1 or higher
Microsoft .NET Framework	Version 2.0 or higher

Review the Microsoft Download Center site for any additional requirements associated with these applications:

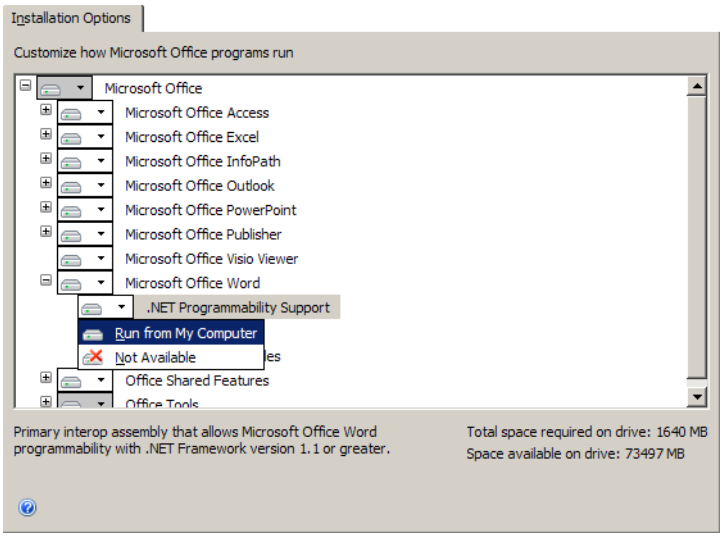
http://www.microsoft.com/downloads/

In addition, Microsoft .NET Programmability Support for Word must be enabled. For more information, see Checking for .NET Programmability Support on page 116. For information on using the IStream Migration Utility, see the Docutoolbox Reference.

Checking for .NET Programmability Support

Both the Documaker Add-In for Word and the IStream Migration Utility require Microsoft .NET Programmability Support for Microsoft Word to be available. This feature is typically installed and enabled when you install Word. If, however, you need to check, follow these steps:

1. From the Control Panel, choose the Add or Remove Programs option, then highlight Microsoft Word or Microsoft Office and click Change.
2. Select the Add or Remove Features option and click Continue.
3. On the Installation Options tab, expand Microsoft Office Word and make sure Microsoft .NET Programmability Support is available, as shown here:



4. Once you make sure the Run from My Computer option is selected, click Continue and exit Control Panel.

Checking Your Installation

You can also download a sample MRLs (master resource libraries) from the same site (Oracle Software Delivery Cloud) you downloaded Documaker. The DMS1 sample resources are designed for the insurance market. You can check your installation by processing the resources in the sample resource library. The sample library includes an example directory which you can use to test against the results you get when you run the following tests.

Testing with the DMS1 Sample Resources

The system includes several batch files which let you process the DMS1 sample resources. There is a specific batch file that lets you select Documaker Server modules (GenTrn, GenData, GenPrint, and GenArc) in single- or multi-step mode for each type of printer, such as PCL, PostScript, Xerox Metacode, and AFP.

The batch files execute the Documaker Server modules (GenTrn, GenData, GenPrint, and GenArc) in the appropriate mode for the specified printer type and copies the appropriate INI files and printer overlays into their proper directories (see the Documaker Administration Guide for more information).

Processing the DMS1 Sample Resources

To run the system through a processing cycle, follow these steps:

1. Download the Sample MRLs from the Oracle Software Delivery Cloud and install the DMS1 sample resources into the mstrres\dms1 directory.
1. Go to the \dms1 directory. At the operating system prompt, enter this command:

   ```
   run.bat
   ```
2. Follow the prompts that appear on your screen.

Printing the DMS1 Output

To print the PCL output you generated when you ran the system, follow the instructions below.

NOTE: See the Documaker Administration Guide for detailed instructions on printing to AFP, Metacode, PCL, or Postscript printers.

Copy the rel113.FNT font file located in \mstrres\fmres\deflib directory to the printer along with the PCLBAT1 file, which is located in the \data directory. You can do this by entering the following command from the \dms1 directory:

copy /b ..\fmres\deflib\rel113.fnt + DATA\pclbat1 lpt1

NOTE: Depending on your printer environment, you may need to substitute *servername**queuename* for *lpt1* in the command shown above.

Testing WIP with DMS1

The DMS1 library is set up to place two transactions into WIP. Follow these steps to perform the test:

NOTE: If you are licensed for WIP the following steps apply. If, however, you *are not* licensed for WIP, do not perform these steps.

1. At an operating system prompt, enter this command:

   genwpw32

2. Start the Entry module by entering:

   afemnw32 /mode=wip

3. Choose the WIP, WIP List option.

4. Select transaction 2234567 and click Ok.

Viewing Archived DMS1 Forms

Optionally, you can archive the bills previously printed by following these steps:

NOTE: If you are licensed for Archive Retrieval the following steps apply. If, however, you *are not* licensed for Archive Retrieval, do not perform these steps.

1. At an operating system prompt, enter this command:

   genacw32

2. Start the Entry system by entering this command:

   afemnw32 /mode=retrieve

3. Choose the Retrieve, Formset option to view the archived bills.

Using the Documentation

After you download Oracle Documaker and unzip the file you downloaded, you will find a readme file that provides an overview, installation instructions, information on any known issues, and brief instructions for downloading the documentation. For more detailed instructions on downloading the documentation, see the following topic.

The documentation available for this release is in Portable Document Format (PDF) files which you can view or print using the Adobe® Acrobat™ Reader™. In the documentation file you download from the OTN site, you will find the various manuals that accompany this release, such as:

- Documaker Administration Guide
- Documaker Studio User Guide
- Docutoolbox Reference
- Rules Reference
- DAL Reference
- Release Notes

For best results, make sure you have the latest version of Acrobat Reader. You can download the free reader at Adobe's web site: www.adobe.com.

Updating Your Documentation

You can download the latest Oracle Insurance documentation at the Oracle Technology Network (OTN) web site. The process includes:

- Going to the Oracle Insurance Documentation page on the OTN site
- Searching for the application documentation you want to download
- Downloading that documentation

To download Oracle Insurance application documentation, go to the Oracle Insurance Documentation page:

http://www.oracle.com/technetwork/documentation/insurance-097481.html

START-UP TIPS

Here are some additional tips to help you get your system up and running:

Using long file names

In Windows, file names, including the path, can be up to 256 characters long. You should, however, limit the names of resource files, such as FAP and LOG files, to 100 characters or less, excluding the path.

Documaker software imposes no limits on the length of the names use for the output files, such as print streams, so you can name those files however you like.

Naming conventions for printers in Windows

Windows does not use the LPT naming convention, such as LPT1, LPT2, and so on, for printers. Instead, it uses the \\server name\printer convention. For Documaker, you may need to modify the FSISYS.INI and FSIUSER.INI files. You must log on as the administrator and establish your printer connections to set up the naming conventions for your printers.

Displaying objects in color in Windows

By default, variable fields use the color red. If, when you open a FAP file in Windows, the first variable field appears in red and the other variable fields appear in dark red, you can change the colors using the Windows Control Panel. To change the color settings, select My Computer, Control Panel, and then Display. The Display Properties window appears. Click the Settings tab. In the Color Palette field, choose High Color (16 bit). Then, reboot your system.

Downloading Patches

You can download the latest Oracle software patches at the My Oracle Support web site. The process includes:

- Going to the My Oracle Support site (requires registration)
- Searching for the patches you want to download
- Downloading those patches

To download Oracle software patches, go to the My Oracle Support web site:

https://support.oracle.com

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