

Oracle® Documaker

Frequently Asked Questions

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This document provides answers to frequently asked questions concerning Oracle Documaker. It also provides tips and techniques. In this document you will find the following information:

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Chapter 1

Requirements

This chapter provides information on the hardware and software you need to run Oracle Documaker Desktop and Oracle Documaker (both Enterprise and Standard Editions) applications.

In this chapter you will find requirements for the following applications:

- *Documaker Enterprise Edition Requirements on page 4*
- *Documaker Standard Edition Requirements on page 7*
- *Docupresentment Requirements on page 11*
- *iPPS Requirements on page 14*
- *EWPS Requirements on page 16*
- *Documaker Web Services Requirements on page 20*
- *Documaker Desktop Requirements on page 21*

SYSTEM REQUIREMENTS

The following Oracle Insurance 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 operating systems such as Windows XP, Windows 2003, Windows Vista, and Windows 7, UNIX/Linux 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.

	Windows+	z/OS	AIX	Linux	Solaris
Oracle Documaker Enterprise Edition (ODEE)					
Document Factory ++	Yes	No	No	Yes	Yes
Documaker Interactive ++	Yes	No	Yes	Yes	Yes
Oracle Documaker Standard Edition (ODSE)					
Documaker Server	Yes	Yes	Yes	Yes	Yes
Documaker Studio	Yes	No	No	No	No
Docupresentment	Yes	No	Yes	Yes	Yes
iPPS +++	Yes	No	No	No	No
EWPS ++	Yes	No	Yes	Yes	Yes
Oracle Documaker Desktop					
Documaker Workstation	Yes	No	No	No	No

+ Includes Windows 2003, Windows XP, Windows Vista, Windows 7, Windows 2003 Server, and Windows 2008 Server. This includes both 32 and 64-bit versions of these operating systems. Be sure to have the latest service packs installed.

++ Runs under any operating system that supports the Java Virtual Machine. ODEE web applications run under WebLogic deployed on Windows or any UNIX platform.

+++ Runs under Microsoft Windows 2003 Server and Windows 2008 Server, both 32 and 64-bit versions.

	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 2003, Windows XP, Windows Vista, Windows 7, Windows 2003 Server, and Windows 2008 Server.

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

** XML on Z/OS is EBCDIC, plain text, limited character set support only. There is no ASCII, no ANSI, no UTF-8, and no UTF-16 support.

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 Workstation 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 ENTERPRISE EDITION REQUIREMENTS

The following operating system and infrastructure software is needed to run Oracle Documaker Enterprise, which consists of Document Factory and Documaker Interactive:

	Operating System/Software	Comments
Presentation Tier	Any operating system that supports WebLogic 11g, version 10.3.4.	This layer hosts the web-based applications. Note: 64-bit Windows and JVM for WebLogic are recommended.
	Application Server 1 (logical)	Hosts the WebLogic Admin server, Messaging Middleware and the collection of JMS queues. The Admin server is used to configure the WebLogic domain and monitor resources.
	Application Server 2 (logical)	Hosts the Oracle SOA Suite with BPEL, Oracle Business Rules, OPSS, and UMS enabled.
	Application Server 3 (logical)	Hosts Documaker Interactive. Note: This server is only need for deployments using Documaker Interactive.
	Application Server 4 (logical)	Hosts Documaker Administrator and the Document Factory Dashboard.
	An HTTP web server for static content	Hosts the WIP Edit plug-in and can be used to host online help content. Note: This server is only need for deployments using Documaker Interactive.
Application Tier	Windows 2008 Server (32 or 64-bit) Standard Edition, Solaris 10/Sun OS 5.10 (SPARC), and Oracle Enterprise Linux 5.3 or higher 32-bit JVM is required for Document Factory processing.	This layer runs Documaker Document Factory and Docupresentment services. These 32-bit applications do not require a 64-bit machine. Note: Documaker is a 32-bit application, and requires 32-bit drivers, even when running on a 64-bit machine.
Data Tier	Any operating system that supports Oracle 11g R2 and the DB Client for Oracle 11g R2.	This layer houses the database tables used to store system configuration and processing records.
		Unicode must be enabled. Case sensitivity must be enabled. (This is the default). Database connections*
Archive/Enclosure Content (Optional)	FMW 11.1.1.3.0 or higher Oracle Universal Content Management (UCM) 11.1.1.3.0 or higher	UCM can be used to store attachments or to archive output from Documaker.

*Use this formula to determine the number of database connections you need:

$500 + (5 \times \text{number of users})$

WebLogic JDBC connection pools should also be adjusted appropriately.

Clients accessing the web-based applications will need:

- Adobe Acrobat Reader, to preview documents in Documaker Interactive
- One of these web browsers:
 - Microsoft Internet Explorer version 7.0 or higher
 - Mozilla Firefox version 3.6.6 or higher

Note If you are using Internet Explorer version 9.x to view Documaker Enterprise web applications, you must enable Compatibility View.

The browser running the WIP Edit plug-in must be a 32-bit version of either Internet Explorer or Firefox. Your operating system can be a 32- or 64-bit operating system, but the browser must be a 32-bit application.

Minimum hardware requirements

Here is the recommended minimum hardware for the various tiers, on a Windows, Solaris, or Linux operating system:

	Windows	Solaris	Linux
Presentation Tier			
OS	Windows Server 2008 x64	Solaris 10/Sun OS 5.10 (SPARC)	Oracle Enterprise Linux release 5.3
CPU #	Intel® 2 Cores 2.3GHz x64	64-bit machines	
Memory #	4 GB RAM	16 GB RAM	
Hard disk	150 GB		
Application Tier			
OS	Windows Server 2008 x32 or x64	Solaris 10/Sun OS 5.10 (SPARC)	Oracle Enterprise Linux release 5.3
CPU	Intel® 4 Cores 2.3GHz	64-bit machines	
Memory	4 GB RAM	16 GB RAM	
Hard disk	150 GB		
Printer	HP-compatible printers supporting PCL version 5 or Postscript		
Printer memory ***	8 MB RAM		
Data Tier			
OS	Windows Server 2008 x32 or x64	Solaris 10/Sun OS 5.10 (SPARC)	Oracle Enterprise Linux release 5.3

Additional CPU and memory resources required with more interactive users.

* 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.

**** The database will carry historical information about all transactions processed, which could require a large amount of space.

	Windows	Solaris	Linux
CPU	Intel® 4 Cores 2.3GHz	64-bit machines	
Memory *	4 GB RAM	16 GB RAM	
Hard disk ****	500 GB		

Additional CPU and memory resources required with more interactive users.

* 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.

**** The database will carry historical information about all transactions processed, which could require a large amount of space.

Minimum sandbox platform

Here is the recommended minimum hardware for a sandbox, on a Windows or Solaris operating system:

	Windows	Solaris
OS	Windows Server 2008 x64	Solaris 10/Sun OS 5.10
CPU	Intel® 2 Cores 2.3GHz x64	64-bit machines
Memory	8 GB RAM	16 GB RAM
Hard disk	150 GB	150 GB
Printer	HP-compatible printers supporting PCL version 5 or Postscript	
Printer memory	8 MB RAM	

DOCUMAKER STANDARD EDITION REQUIREMENTS

Your computer must have certain software and hardware components to run the programs that comprise the Documaker system. Depending on your software license, operating environment, and your processing needs, these requirements vary. The following tables outline the minimum hardware used to test Documaker and are included for informational reasons only. You should run the system on a computer configured appropriately for the operating system 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](#).

On Windows

When running Documaker Studio, keep in mind:

- You can use Oracle, DB2, and SQL databases with Documaker Studio.
- If you are using Internet Explorer version 9.x on the machine where Documaker Studio is running, turn on Internet Explorer's compatibility view.

This table outlines the minimum hardware used 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*	1.99 GB RAM
Hard disk**	148 GB
Printer	HP-compatible printers supporting PCL version 5
Printer memory***	8 MB 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 used 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*	1022 MB RAM
Hard disk**	75 GB
Printer	HP-compatible printers supporting PCL version 5
Printer memory***	8 MB 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)

Documaker Server runs 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	150 MB
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

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 5.3 or higher
Model*	pSeries - Power RISC
Compiler	(Only necessary if adding custom code to the system) IBM XL C/C++ version 8
Runtime library	C/C++ runtime for AIX version 10.1.0.2 or higher
	Tested on
Model*	pSeries 9116
CPU	8 x 1.6 GHz POWER5+
Memory*	16 GB
Hard disk**	Two 74 GB SCSI and two 140 GB SCSI disks

*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 Distribution Oracle Enterprise Linux (OEL) version 5.3 or higher Kernel 2.6.18-164+
Model	Intel/AMD based systems
Compiler	(Only necessary if you are adding custom code to the system) GNU C/C++ compiler gcc-4.1.2-44, gcc-c++-4.1.2-44
Runtime library	libgcc-4.1.2-44 libstdc++-4.1.2-44
Additional requirements	<ul style="list-style-type: none"> The installer requires the sharutil package for the uudecode applet. Any other utilized third-party software required packages, such as Oracle, DB2, MySQL, and so on.

	Tested on
CPU*	Intel® Core™2 CPU 6600 @ 2.40 GHz
Operating system	Oracle Enterprise Linux (OEL) version 5.3 Oracle VM guest
Memory*	2 GB
Hard disk**	75 GB

*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 10/SunOS 5.10 (SPARC based)
Model*	UltraSPARC based
Compiler	(Only necessary if adding custom code to the system) Sun Studio 11 for C/C++ development
Runtime library	Core Solaris 10

	Tested on
Model*	Sun Ultra 45
Operating system	Solaris 10/Sun OS 5.10 SPARC 64-bit
CPU	2 x 1.6 GHz UltraSPARC-IIIi
Memory*	4 GB
Hard disk**	500 GB SCSI disk

*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.

You can run Docupresentment on the following operating systems:

- Windows
- AIX
- Linux
- Solaris

Note For Docupresentment 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 5.3 or higher
Model*	pSeries - Power RISC
	(Only necessary if adding custom code to the system)
Compiler	IBM XL C/C++ version 8 C/C++ runtime for AIX version 10.1.0.2 or higher
Runtime library	C Set ++ runtime for AIX version 5.0 or higher

	Tested on
Model*	pSeries 9116
CPU	8 x 1.6 GHz POWER5+
Memory*	16 GB
Hard disk**	Two 74 GB SCSI and two 140 GB SCSI disks

*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 Distribution Oracle Enterprise Linux (OEL) version 5.3 or higher Kernel 2.6.18-164+
Model	Intel/AMD based systems
Compiler	(Only necessary if you are adding custom code to the system) GNU C/C++ compiler gcc-4.1.2-44, gcc-c++-4.1.2-44
Runtime library	libgcc-4.1.2-44 libstdc++-4.1.2-44
Additional requirements	<ul style="list-style-type: none"> The installer requires the sharutil package for the uudecode applet. Any other utilized third-party software required packages, such as Oracle, DB2, MySQL, and so on.

	Tested on
CPU*	Intel® Core™2 CPU 6600 @ 2.40 GHz
Operating system	Oracle Enterprise Linux (OEL) version 5.3 Oracle VM guest
Memory*	2 GB
Hard disk**	75 GB

*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 10/SunOS version 5.10 (SPARC based)
Model*	UltraSPARC based
Compiler	(Only necessary if adding custom code to the system) Sun Studio 11 for C/C++ development
Runtime library	Core Solaris version 10

	Tested on
Model*	Sun Ultra 45
Operating system	Solaris 10/Sun OS version 5.10 SPARC 64-bit
CPU	2 x 1.6 GHz UltraSPARC-IIIi
Memory*	4 GB
Hard disk**	500 GB SCSI disk

*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 version 4.0 or higher.
AIX	Web server for AIX 5.3, 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 version 1.3.12 or higher or IBM HTTP Server version 1.3.9 or higher.
Solaris	Web server for Sun Solaris version 7 or higher on SPARC, such as Java Web Server 2.0 or Apache version 1.3.9 with the Java Runtime Environment and/or JDK for Solaris, version JRE version 1.4.0 or higher. IBM HTTP Server version 1.3.9 or higher can also be used.

Note Oracle tests DocuPresentment implementations on WebSphere Application Server (WAS) version 6.1.x and Tomcat 6.x Application Server.

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 XP, Windows 2003 Server, or higher
Memory*	256 MB 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 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 6.0 for iPPS version 3.12 and higher
- DocuPresentment version 2.2 or higher

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 version 5 or higher
Linux (x86-32 and x86-64) 32- and 64-bit kernels	
Oracle Enterprise Linux version 5.3 or higher RedHat Enterprise Linux version 5.3 or higher	Sun Java version 5 or higher or IBM Java version 5 or higher
Sun Solaris (SPARC) 32-and 64-bit kernels	
Solaris 10/SunOS version 5.10 or higher)	Sun Java version 5 or higher
IBM AIX 5L pSeries (RISC) 32- and 64-bit kernels	
version 5.3 TL 5200-09	IBM Java version 5 or higher
version 5.3 TL 5300-07	IBM Java version 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 Oracle tests with 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 you can use.

For this platform	You can use one of these message busses
Microsoft Windows (x86-32 and x86-64) <ul style="list-style-type: none"> • XP (SP 2) • Server 2003 (SP2) 	HTTP/SOAP(*) MSMQ IBM WebSphere MQ, version 5.3 or higher WebLogic 11g, version 10.3.4 Other JMS providers
Linux (x86-32 and x86-64) ** <ul style="list-style-type: none"> • Oracle Enterprise Linux version 5.3 or higher • RedHat Linux Enterprise Server version 5.3 or higher 	HTTP/SOAP(*) IBM WebSphere MQ, version 5.3 or higher WebLogic 11g, version 10.3.4 Other JMS providers
Sun Solaris (SPARC) <ul style="list-style-type: none"> • Solaris 10/SunOS version 5.10 or higher 	HTTP/SOAP (*) IBM WebSphere MQ, version 5.3 or higher WebLogic 11g, version 10.3.4 Other JMS providers
IBM AIX 5L pSeries (RISC) 32-bit and 64-bit <ul style="list-style-type: none"> • version 5.3 TL 5200-09 • version 5.3 TL 5300-07 	HTTP/SOAP (*) IBM WebSphere MQ, version 5.3 or higher WebLogic 11g, version 10.3.4 Other JMS providers

(*) HTTP is recommended for development systems, not for production use.

(**) 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) <ul style="list-style-type: none"> • 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)**** <ul style="list-style-type: none"> • Oracle Enterprise Linux version 5.3 or higher • RedHat Enterprise Linux version 5.3 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) <ul style="list-style-type: none"> • Solaris 10/SunOS 5.10 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 <ul style="list-style-type: none"> • version 5.3 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 19* 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, Document Factory, 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:
<http://jcp.org/aboutJava/communityprocess/mrel/jsr222/index2.html>
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.

DOCUMAKER WEB SERVICES REQUIREMENTS

Here is a list of the software requirements for Documaker Web Services (DWS).

Component	Description
Java version 1.6	Sun build 1.6.0_01-b06 JRockit 160_05_R27.6.2-20 IBM 1.6.0 SR5
Application server	Oracle WebLogic version 10.3.4 Note: The following Java web servers are supported by DWS, but that support does not extend to the rest of Oracle Documaker Enterprise Edition. IBM WebSphere version 7.0 JBoss 6.0.0.M1 Tomcat 6.0.20
Operating system	Windows XP Windows 2003 AIX 5.3 Oracle Enterprise Linux version 5.3 Solaris 10
Database	A database is required by Document Factory for the administration and assembly tables. The administration tables are used by composition services. The assembly tables are used by publishing services.
Message bus	A message bus is required by Docupresentment and also used by composition services.
Docupresentment	Oracle Docupresentment is required for composition services.
Document Factory	The Oracle Document Factory is required for publishing services.

Note You must download the JAX-WS RI when using Tomcat version 6.0.20 or later because Tomcat is not a J2EE container and therefore does not provide a JAX-WS RI. Extract the JAX-WS RI jar files and place them inside WEB-INF\lib directory of the Tomcat DWS.war file before deployment. You can download the JAX-WS RI from this site:
<http://jax-ws.java.net/ri-download.html>

DOCUMAKER DESKTOP REQUIREMENTS

Your computer must have certain software and hardware components to run Documaker Desktop.

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

On Windows

This table outlines the minimum hardware used 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*	1.99 GB RAM
Hard disk**	148 GB
Printer	HP-compatible printers supporting PCL5
Printer memory***	8 MB 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 used 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*	1022 MB RAM
Hard disk**	75 GB
Printer	HP-compatible printers supporting PCL5
Printer memory***	8 MB 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.

Chapter 2

Questions and Answers

This chapter includes answers to common questions about the system.

The following pages provide a list of the questions and answers included in this chapter. These questions are organized under the following categories:

- [Documaker Enterprise Edition on page 24](#)

Documaker Standard Edition

- [Archive Issues on page 47](#)
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- [Docupresentment Issues on page 113](#)
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- [Documaker Workstation Issues on page 132](#)
- [Miscellaneous Issues on page 137](#)

See [Overview on page 24](#) for a list of all the questions and answers in each category.

OVERVIEW

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DOCUMAKER STANDARD EDITION

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DOCUMAKER ENTERPRISE EDITION QUESTIONS

Here are some commonly-asked questions about the Documaker Enterprise Edition components.

Can I customize my WIP or TRNS layout?

No. The Document Factory and Documaker Interactive: Correspondence table schema is static to enable consistent UI design, enable faster installation and implementation, enable future upgrades, and aide support.

Each table within the schema provides additional columns, in varied formats, for flexibility needed within a specific implementation. If you need to store a certain type of information, use the associated type of field in the Assembly Line table:

Field	Format
String data	NVARCHAR2
Numeric or sequential data	INT
Monetary data	DEC
Time or date	DATETIME (stored in UTC)

Is all of the error and logging information in one location?

Yes, and it is accessible via the Document Factory Dashboard. The Document Factory Assembly Line schema provides two tables – LOGS and ERRS. Each of the factory workers, including all Java workers and their C based components, plus IDS and Documaker Interactive write their logging and error details to these tables. The information tracked includes:

- The activity
- Time the activity occurred
- Process Name: The worker or process that generated the activity
- The worker's version information
- The host or server where the worker processed the activity

Dashboard users can get to this information in two ways:

- Search for the error code, error ID (unique ID for the error), or log ID to locate specific information.
- Drill down from a processing object – such as a job to link directly to the associated error or log details.

NOTE: The object links to the first error generated in the process, to see more details about the error or the remainder of errors that generated for the processing object — Job, Transaction, Batch, Recipient, Publication, and so on, click the error code associated with the object.

Using the debugging options listed for each specific worker, you can control the level of logging information maintained in the LOGS table.

Does the Document Factory process in single- or multiple step mode?

Single step and multiple step refer to methods of running Documaker Server's primary process flow, of three separate executables in series as: GenTrn -> GenData -> GenPrint.

- Multiple step means three separate steps for the process.
- Single step means that you can run GenData once with additional rules (defined in the AFGJOB.JDT) to support the functions that were originally done in GenTrn and GenPrint.

Document Factory splits out each of the functions of GenTrn, GenData, and GenPrint into its own *workers*, with even more functions added to the mix and uses the Java portions of the workers to schedule the work as needed to speed processing.

Since the GenTrn, GenData, and GenPrint activities of Documaker Server all happen during Document Factory processing using Document Factory rules that can be invoked by the Scheduler, it is not really a single or multiple step issue because the timing of those activities is controlled by the Scheduler.

Does the Document Factory Dashboard also monitor and address jobs processed from Documaker Interactive?

Yes, Document Factory is the publishing facility for jobs from Documaker Interactive, and these jobs will go through Docupresentment and to the Data Access Object (DAO) to be input into Document Factory.

The DAO is a central Data Access Object and it is the basis for all entry points into the Document Factory, the hot folder is a Java process that the factory controls and watches one or more folders defined in the APPCONFIGCONTEXT table.

Do I have to restart the system when I make changes to the configuration or MRL?

If you change a configuration file or setting via the Administrator, Document Factory automatically restarts.

If you change a resource in the MRL, you must restart Document Factory and the Docupresentment services. If you are using Documaker Interactive, you must also restart it.

Can I use both the hot folder and web service receiver methods to submit jobs into one assembly line?

Yes.

How are status codes used?

The status code indicates the processed state of an object as it moves through the Assembly Line.

Typically, at the start of each step, the state is set to #11. When the Scheduler provides the work to the next worker or step in the process, the state is set to #21. When the worker begins the activity and processes the object, the state changes to #31. At the end of each process, the state is set to: an error code, #41, or to the ready state of the next step in the process.

This code	Indicates
#00	Not Ready or On Hold
#01	Pending
#11	Ready
415	Is special "Batch Processing" means a batch is collecting recipients until scheduled to run.
#21	Scheduled
#31	Processing
#41	Error
#88	Cancelled
#90	Processed
999	All Complete

This table shows the object status code values and what process or event sets the status code:

Object	Status code	Description	Used to	Set by	Value found in
JOBS	0	Job Not Ready	Initial status for the job, set when the job is first initiated	Database default	JOBSTATUS
JOBS	101	Job Pending	Temporary status of the job just after creation prior to the identification of the transactions	Receiver	JOBSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
JOBS	111	Job Ready (Identifier-Ready)	Scheduler looks for this value in the JOBSTATUS to determine when to notify the Identifier that a job is ready to be split into individual TRNS	Receiver	JOBSTATUS
JOBS	121	Job Scheduled (Identifier-In Progress)	Value that the Scheduler sets after it has retrieved the job and sent the JOB_ID to the Identifier queue (bus) for processing	Scheduler	JOBSTATUS
JOBS	131	Job Processing (Identifier- ACK)	Alerts the user that the Identifier activity is in process on the job. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Identifier, during the process of create the TRNS. The initial state of the TRNS record when created is 201.	JOBSTATUS
JOBS	141	Job Error (Identifier-Error)	Indicates that a processing error occurred	Identifier*	JOBSTATUS
JOBS	211	Assembly Ready (Assembler-Ready)	Scheduler looks for this value in the JOBSTATUS to know when to notify the Assembler that a TRNS associated with a job are ready for document creation by triggering forms and mapping fields	Identifier	JOBSTATUS, TRNSTATUS
JOBS	290	Assembly Processed	Alerts the user that the Assembler has completed processing all TRNS associated with the job	Database trigger	JOBSTATUS
JOBS	311	Distribution Ready (Distributor Ready)	Alerts the user that the Scheduler has submitted a TRNS associated with the job to the Distributor.	Database trigger	JOBSTATUS
JOBS	341	Distribution Error (Distributor-Error)	Alerts the user that the Distributor process has experienced an error.	Database trigger	JOBSTATUS
JOBS	390	Distribution Processed (Distributor-Complete)	Alerts the user that the Distributor process is complete and all RCPS have been created.	Database triggers	JOBSTATUS
JOBS	411	Batching Ready (Presenter-Ready)	Alerts the user that the Scheduler has submitted RCPS associated with the job to the Presenter to batch the recipient.	Database triggers	JOBSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
JOBS	441	Presentation Error (Presenter-Error)	Alerts the user that the Presenter process has experienced an error.	Database triggers	JOBSTATUS
JOBS	490	Presentation Completed (Presenter-Complete)	Alerts the user that the Distributor process is complete and all PUBS have been created.	Database triggers	JOBSTATUS
JOBS	541	Archive Error (Archiver-Error)	Alerts the user that the Archiver process has experienced an error for a RCP within a BCH.	Database trigger	JOBSTATUS
JOBS	999	All Completed (Processing-Complete)	Alerts the user that all processing for the job is complete.	Database triggers	JOBSTATUS
TRNS	190	Job Processed (Identifier-Complete)	Default value assigned to the TRNS when added to the database, soon updated to 201	Database default	TRNSTATUS (Is the JOBSTATUS also set to this?)
TRNS	201	Assembly-Pending	Initial status assigned to a TRNS identified from a job	Identifier	TRNSTATUS
TRNS	211	Assembly Ready (Assembler-Ready)	Alerts the Scheduler that the TRNS is ready for form triggering and mapping	Identifier	TRNSTATUS
TRNS	221	Assembly Scheduled (Assembler-In Progress)	Specific TRNS_ID has been sent to the Assembler process by the Scheduler	Scheduler	TRNSTATUS
TRNS	231	Assembly Processing (Assembler-ACK)	Alerts the user that the Assembler activity is in process on the TRNS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Assembler	TRNSTATUS
TRNS	241	Assembly Error (Assembler - Error)	Indicates that a processing error occurred	Assembler*	
TRNS	290	Assembly Processed	Assigned with Assembler is completed,	Database triggers	TRNSTATUS
TRNS	301	Distribution-Pending	When all TRNS to be processed for a job are set to 290, they are then ready for Distributor.	Database triggers	TRNSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
TRNS	311	Distributor-Ready	Scheduler looks for this value in the TRNSTATUS to know when to notify the Distributor that TRNS associated with a job are ready for distribution to the designated recipients (Create the RCPS records)	Assembler	TRNSTATUS
TRNS	321	Distribution Scheduled (Distributor - In Progress)	Specific TRNS_ID has been sent to the Distributor process by the Scheduler	Scheduler	TRNSTATUS
TRNS	331	Distribution Processing (Distributor - ACK)	Alerts the user that the Distributor activity is in process on the TRNS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Distributor	TRNSTATUS
TRNS	341	Distribution Error (Distributor-Error)	Indicates that a processing error occurred	Distributor*	TRNSTATUS
TRNS	390	Distribution Processed	Indicates that the distribution process successfully completed.	Distributor	TRNSTATUS
TRNS	401	Batching Pending (Batch Created)	Initial default batches created for the recipients of the transaction	Distributor	TRNSTATUS
TRNS	411	Batching Ready (Presenter-Ready)	Scheduler looks for this value in the TRNSTATUS to know when to notify the Presenter that TRNS associated with a job are ready for presentation (print stream creation) (Create the PUBS records)	Distributor	TRNSTATUS, RCPSTATUS
TRNS	415	Batching Processing (Batcher-In Progress)	Indicates that the first step of the Present, Archive, Publish, Notification process is underway. Batcher activity is monitored by the Scheduler to set the next status.	Batcher	TRNSTATUS, BCHSTATUS
BCHS	421	Presentation Scheduled (Presenter - In Progress)	Specific BCH_ID has been sent to the Presenter process by the Scheduler	Scheduler	BCHSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
BCHS	431	Presentation Processing (Presenter - ACK)	Alerts the user that the Presenter activity (including Archive, Publication, and Notification) is in process on the BCHS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Presenter	TRNSTATUS (note - the TRNSTATUS will stay at this state during the Archive, Publish, Notify activities and will only move to 441 Presenter - Error or 999 - Complete when all designated activities have occurred on all BCHS associated with the TRNS)
TRNS	441	Presentation Error (Presenter-Error)	Indicates that a processing error occurred	Presenter*	TRNSTATUS
TRNS	490	Presentation-Completed	Presenter has finished creating recipients and linking recipients	Presenter	TRNSTATUS
TRNS	541	Archive Error (Archiver-Error)	Indicates that a processing error occurred	Database trigger	TRNSTATUS
RCPS	411	Batching Ready (Presenter-Ready)	Scheduler looks for this value when processing the BCH to determine if the Recipient can be ready for the Presenter	Database default	RCPSTATUS
RCPS	999	All Completed	Signal that all the RCPS associated with the BCH have completed processing	Database trigger	RCPSTATUS
BCHS	401	Batching Pending	Default value assigned when the BCH is created	Database default	BCHSTATUS
BCHS	421	Presentation Scheduled (Presenter - In Progress)	Specific BCH_ID has been sent to the Presenter process by the Scheduler	Scheduler	BCHSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
BCHS	431	Presentation Processing (Presenter - ACK)	Alerts the user that the Presenter activity (including Archive, Publication, and Notification) is in process on the BCHS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Presenter	TRNSTATUS (note - the TRNSTATUS will stay at this state during the Archive, Publish, Notify activities and will only move to 441 Presenter - Error or 999 - Complete when all designated activities have occurred on all BCHS associated with the TRNS)
BCHS	441	Presentation Error (Presenter - Error)	Error when creating the print stream associated with the BCH	Presenter	BCHSTATUS
BCHS	490	Presentation Completed (Presenter Complete)	Presenter completed BCH processing	Presenter	BCHSTATUS
BCHS	501	Archive Pending			
BCHS	511	Archive Ready (Archiver-Ready)	Scheduler looks for this value in the BCHSTATUS to know when to notify the Archiver that BCHS associated with a TRNS are ready for Archive.	Presenter	BCHSTATUS
BCHS	521	Archive Scheduled (Archiver - In Progress)	Specific BCHS_ID has been sent to the Archiver process by the Scheduler	Scheduler	BCHSTATUS
BCHS	531	Archive Processing (Archiver - ACK)	Alerts the user that the Archive activity is in process on the BCHS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Archiver	BCHSTATUS
BCHS	541	Archive Error (Archiver-Error)	Indicates that a processing error occurred	Archiver *	BCHSTATUS
BCHS	590	Archive Complete	Denotes that Archiving is complete for the BCH	Archiver	BCHSTATUS
BCHS	601	Publication Pending			

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
BCHS	611	Publication Ready (Publisher-Ready)	Scheduler looks for this value in the BCHSTATUS to know when to notify the Publisher that BCHS associated with a TRNS are ready for publishing.	Archiver (or Scheduler if the Archive process is disabled)	BCHSTATUS
BCHS	621	Publication Scheduled (Publisher-In Progress)	Specific BCHS_ID has been sent to the Publisher process by the Scheduler	Scheduler	BCHSTATUS
BCHS	631	Publication Processing (Publisher-ACK)	Alerts the user that the Publishing activity is in process on the BCHS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	Publisher	BCHSTATUS
BCHS	641	Publication Error (Publisher-Error)	Indicates that a processing error occurred	Publisher*	BCHSTATUS
BCHS	690	Publication Complete (Publisher-Complete)	Indicates that the Publisher has successfully completed processing the BCH.	Publisher	BCHSTATUS
BCHS	701	Notification - Pending			
BCHS	711	Notification Ready (PubNotifier-Ready)	Scheduler looks for this value in the BCHSTATUS to know when to notify the PubNotifier that RCPS associated with a BCHS are ready for Publication Notification.	Publisher (or Scheduler if the Publisher process is disabled)	BCHSTATUS
BCHS	721	Notification Scheduled (PubNotifier-In Progress)	Specific BCHS_ID has been sent to the PubNotifier process by the Scheduler	Scheduler	BCHSTATUS
BCHS	731	Notification Processing (PubNotifier-ACK)	Alerts the user that the Publication Notification activity is in process on the BCHS. Also, monitored by the Scheduler to indicate a length of time in which processing should be completed.	PubNotifier	BCHSTATUS
BCHS	741	Notification Error (PubNotifier-Error)	Indicates that a processing error occurred	PubNotifier	BCHSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

Object	Status code	Description	Used to	Set by	Value found in
BCHS	790	Notification Complete (PubNotifier-Complete)	Indicates that the Notification process has successfully completed for the BCH.	PubNotifier	BCHSTATUS
PUBS	490				PUBSTATUS
PUBS	511				PUBSTATUS
PUBS	611				PUBSTATUS
PUBS	711				PUBSTATUS
PUBS	999				PUBSTATUS
BCHS-> RCPS-> TRNS-> JOBS	888	Cancelled	Indicates processing of the object has been manually cancelled	Manual	BCHSTATUS, TRNSTATUS, JOBSTATUS
PUBS-> BCHS-> RCPS-> TRNS-> JOBS	999	Processing Complete	Indicates that processing of the object is complete	PubNotifier, (or Scheduler if the PubNotifier process is disabled)	BCHSTATUS, TRNSTATUS, JOBSTATUS

* Error codes can also be set by the Scheduler if communication with the worker bus/queue timed out or was unable to be generated, but workers are typically the source of error updates.

What can make the Identifier create the wrong number of transactions?

Check the Receiver's transaction identification properties for the input file type in use. This could be either the XMLDelimiter, XPathDelimiter, or TextDelimiter based on the input file format. Note that the TextDelimiter supports only one offset and length for the transaction identifier.

What can cause Assembler, Distributor, and Presenter to start repeatedly?

Assembler, Distributor, and Presenter validate their connection to the database, via ODBC, when you start the system. If you notice that these processes are starting and failing repeatedly, turn on logging for the Supervisor within Documaker Administrator. Set the logging option to *debug* for each process by updating the appconfigcontext set, as shown here:

```
value='debug' where app_id=1 and group_name like
'%oracle.documaker.processmonitor.process%';
```

Then look at the logs in the docfactory\logs directory. Some of the logs will contain the startup arguments for all the processes, including the startup arguments being passed to the GenData instances. If something is wrong there, you will likely see:

```

ERROR- [null-Distributor-1-
oracle.documaker.processmonitor.process.instance.Instance] -
[InstanceMonitor.java:260] -
oracle.documaker.processmonitor.process.monitors.InstanceMonitor.ru
n:
Instance <1> with pid <0> is no longer running. Exit
code=<8>. Restarting!
Instance Console Output:
--- GenData ---
Error in main(): Unable to
RunGenData(). See error file for more messages.
--- GenData Completed ---

```

Here is an example of the Receiver error:

```

2011-07-07
10:42:05,775-ERROR- [main] - [AbstractDAO.java:2521] -
oracle.documaker.dao.AbstractDAO.ack:
java.lang.Exception: No column metadata available!
at
oracle.documaker.dao.AbstractDAO.getColumnMetadata (AbstractDAO.java
:631)
at
oracle.documaker.dao.AbstractDAO.updatePreparedStatement (AbstractDA
O.java:954)
at
oracle.documaker.dao.AbstractDAO.setUpdates (AbstractDAO.java:923)
at oracle.documaker.dao.AbstractDAO.ack (AbstractDAO.java:2508)
at oracle.documaker.rp.jdbc.GenericDAO.ack (GenericDAO.java:772)
at oracle.documaker.rp.jdbc.DAO.updateObject (DAO.java:308)

```

Here are some steps to take to resolve the problem:

- 1** Check the ODBC Connection information in INI file references for these three processes (typically fsuser_1.ini, fsuser_2.ini, and fsuser_3.ini) which all point to the fsisys.ini file. Update these values to point to the correct schema/ODBC data source name.
- 2** Check the data source connection and turn on logging. The issue may be caused by an invalid reference in the tnsnames.ora file. If you see this in the sql.log file:


```
DIAG [S1000] [Oracle] [ODBC] [Ora]ORA-12541: TNS:nolistener (12541)
```

 check the values for the env.TNS_ADMIN property of the Assembler, Distributor, and Presenter workers within the Documaker Administrator.
- 3** Make sure the bindings files for all of the workers have the correct schema name for the Assembly Line established. The default installation uses the account: dmkr_asline.
- 4** Look in the current directory of the MRL for a trace file and see if there are errors there.
- 5** Look in the docfactory\logs directory for additional start or restart errors.
- 6** Look in the docfactory\temp\gendata\logs directories, where the GenData program is really the Assembler, Distributor, or Presenter.

What causes an unexpected exception error in the Receiver?

Here is an example:

```
842-ERROR- [Receiver_#1-T2] - [Receiver.java:177] -
oracle.documaker.receiver.Receiver.logErrorMessage:
File Receiver error - unexpected exception:
java.lang.NullPointerException
at
java.lang.String.<init> (String.java:515)
at
oracle.documaker.dao.tables.jobs.JOBS.getJobObject (JOBS.java:805)
at
oracle.documaker.dao.tables.jobs.JobDAO.putObject (JobDAO.java:229)
at
oracle.documaker.receiver.monitors.FileReceiver.run (FileReceiver.java:256)
```

This usually occurs when the Receiver cannot process the content of the input or extract file. To correct, check the validity of the input file. This file is located in the following directory:

```
temp\Receiver\errors
```

Any time the Receiver encounters an error when processing a file it will place it in this directory.

How do you increase the size of the Datafile?

By default Documaker Enterprise Edition creates a Datafile for the Assembly Line's Tablespace that has a maximum size of 2GB. This limit prevents a demo system from using all of the disk space. For a production system, you need to remove this limitation. You can use Oracle Database Enterprise Manager to remove this limitation:

To	Enter
Increase the size limit	ALTER DATABASE DATAFILE 'C:\ORACLE\ORADATA\IDMAKER\DMKR_ASLINE.DBF' AUTOEXTEND ON MAXSIZE 4096M
Remove the size limit	ALTER DATABASE DATAFILE 'C:\ORACLE\ORADATA\IDMAKER\DMKR_ASLINE.DBF' AUTOEXTEND ON MAXSIZE UNLIMITED

What causes an invalid message queue error?

Messages generated by workers which indicate an invalid message queue, such as error IDF0400100004 for the Identifier, can occur if a queue is unavailable or was configured incorrectly. This can occur when WebLogic is unavailable during a stop and restart process while the ODDF service (or Document Factory service) is still running. Once the queues are available, Document Factory should function as expected.

How do you resolve an SUP0402300001 error message?

```
Error Code: SUP0402300001 Failed to remove <your path>  
docfactory\temp
```

This error occurs if another application or process has locked the temp directory. It can be caused by file editors holding a lock on a file in the temp directory or if a docfactory_*.exe instance was left running after the Supervisor shut down. You should check for possible causes but this error should not prevent Documaker Factory from restarting and functioning as expected.

DOCU MAKER STANDARD EDITION QUESTIONS

Here are some commonly-asked questions about the Documaker Standard Edition components.

ARCHIVE ISSUES

How do you define paths for the archive file and related index files?

Use the CARPath INI option to define the path for the ARCHIVE file and use the CARFile option to specify the name of the archive file. Do not enter a complete path in the CARFile option.

There are no options for specifying the paths for the APPIDX, CATALOG, and TEMPIDX files. For these files, you must specify the complete path when you specify the file name. Otherwise, the system creates these files in the directory where it runs the GenArc program.

For these examples, assume the ARC directory under current directory is the destination for the archive and related index files.

Correct	Incorrect
CARFile = ARCHIVE CARPath = .\ARC\	CARFile = .\ARC\ARCHIVE
AppIdx = .\ARC\AppIdx Catalog = .\ARC\Catalog TempIDX = .\ARC\Temp	AppIdx = AppIdx ArcPath = .\ARC\ Catalog = Catalog TempIDX = Temp

NOTE: Do not define ArcRet control group in both the FSIUSER.INI and FSISYS.INI files. This causes duplicate entries to be displayed during retrieval.

How do you create multiple CAR files and CAR paths?

You can set the CarMaxFileSize option so that when your CAR file reaches this size (in bytes), the system automatically creates a new CAR file.

For example, suppose at the end of the year you have three CAR files in your Archive subdirectory. If you leave the CAR files in the Archive subdirectory and use the Archive module to retrieve a particular form set, everything works fine. If, however, you move CARFILE1 and CARFILE2 to another subdirectory and try to retrieve a particular form set, you can run into problems. The data for the form set you want to retrieve may have been in CARFILE1 or 2.

To set up the system so it will search subdirectories when it retrieves forms, you can put multiple semicolon delimited paths in the CARPath INI option,

```
CARPath = D:\ARC;E:\ARC
```

See the [Documaker Administration Guide](#) for more information on the archive process.

NOTE: The number of subdirectories affects performance. If you only list two or three subdirectories, you should not see any change, however, the more subdirectories you add, the more it affects performance.

What is the purpose of the FORMSETID and RECNUM fields?

FORMSETID and RECNUM are required fields, but if you look at the APPIDX.DFD file, you will see that these fields are not in there. This means they do not affect your database file size.

NOTE: In older versions, such as release 6.0, you will encounter errors if these fields are missing in the APPIDX.DAT file.

To retrieve sections from archive, why do you need read/write access to the Arc directory but only read access to the archive files?

Earlier releases of the system would open the archive *only* if the system detected read/write rights. In version 10.0, this was changed. From version 10.0 onward, the system tests to see if the archive is read/write and if it is, it opens it that way. If not, the system opens the archive in read only mode. This lets you set up your rights any way you want.

What compression mechanism is used on the CAR file?

The compression mechanism is called LZSS.

Can you change CAR file compression routines?

The base system does not provide a way to change compression routines.

Can you increase the compression of a CAR file?

There is no INI option available to increase compression ratio.

After using REINDEX on a WIP index, why does it then take up less space?

The base WIP index is by default a dBase IV format table, maintained by a licensed 3rd party library of code. A dBase IV database table consists of the records themselves (DBF) and the index (MDX). dBase IV files work in this manner:

- When you delete records, they are marked as deleted, but not physically removed from the DBF file.
- The deleted record space is not recovered until the file is packed

REINDEX packs the file first, eliminating the deleted records in the DBF file, and then creates new index (the MDX file).

How do you decrease the size of CAR files?

If you have large NA files, you may have too many in-line sections. All of the FAP information goes into the NA file. Also, the CAR file includes the POL file and duplicated index information as well as NA file, so, if you make index records smaller, it will decrease the size of the CAR file.

What is the maximum number of variables you can use to trigger an archive?

There is no limit to the number of fields defined in the Trigger2Archive option. The INI file is, probably, limited to 16,000 values.

This group normally resides in the FAPARC.INI file. For versions 8.5 or higher the Trigger2Archive control group can reside in any of the INI files. The hierarchy is:

FSIUSER.INI

FSISYS.INI

FAPARC.INI

In the Trigger2Archive control group, be sure to list the APPIDX.DFD file field name on the left side of the equation and the TRNDFDFL.DFD file field name on the right side of the equation. The APPIDX.DFD file field name you specify will be the name you use to save to the archive file.

How do version/revision numbers affect Retrieval?

If you archive a document created using version/revision 1.1 of a document, then it will be retrieved using that version/revision of the document no matter how many other revisions were checked in using the same effective date.

Retrieval always tries to return the version/revision that was current when the document was archived, if the version/revision information was available.

It is, however, possible through batch processing to create a document in which some section references are archived without version/revision information. In this situation, the Library manager gets only the transaction date (RunDate) during retrieval. If this happens, the system returns the latest revision of the section in effect for that date.

This can happen if you are not loading FAP files during batch processing, because unless the system actually retrieves the FAP file from the library, it will not know what revision is in effect when the document is created.

What are the dates shown on the Archive/Retrieval window for?

On this window the system shows these dates:

Date	Description
------	-------------

Run Date	Only used with Documaker. Has no affect on the Entry module of Documaker Workstation.
Create Date	The date on which you created the form set.
Modify Date	The date on which you modified the data using the WIP module.

The *run date* is stored in the EXTRFILE.DAT file. To get this information from the EXTRFILE.DAT file into the TRNFILE.DAT and APPIDX.DBF files, the Run Date field must be defined in the INI and DFD files. Use dms1 as an example to see how this is done. You can also use the RunDate rule to get this information into NAFILE.DAT file.

NOTE: The run date does not indicate the date on which the transaction is processed by Documaker.

Use of run date in the Archive module

Imagine a company is using the Archive system. The company archives thousands of transactions each day. Few years later, a user needs to retrieve a transaction from the archive and view it. The user does not know the policy number but does know when the transaction was processed. With this knowledge, the user can use the date as a search filter, as long as the date is defined in the APPIDX.DFD file. In our dms1 example, this date is called the *run date*.

You can also use this field as a filter to list the archived transactions up to the date in the Retrieve field.

In addition, the Run Date field is used for tracking versions of forms based on the effective date of the transaction. So if your database does not have this information, you can not use the Library manager and form versions with the retrieval system.

The Run Date field is required for the TRNDFDFL.DFD and APPIDX.DFD files, and must be defined in the Trigger2Arc control group.

Format of the run date

Enter run dates in YYYYMMDD format, since the archive index reads from left to right. This means the system archives files by the year first, then month, and finally by day. If you enter the run date in MMDDYYYY format, the archive index starts from month, then date, and finally year, which is not recommended. You should also use four-digit years (YYYYMMDD) instead of two-digit years (YYMMDD).

If the run date is in the format of YYMMDD or MMDDYY, you may have to define the run date in the APPIDX.DFD file with EXT_TYPE=NOT_PRESENT and EXT_LENGTH=0 options to retrieve form sets.

NOTE: The run date can be blank in the extract file.

How do you check the integrity of a CAR file?

Use the CARINTEG utility to check the integrity of a CAR file. This utility queries the table of offsets to determine the number entries, counts back to the first entry in the table, then verifies that the record referenced by that offset is a valid CAR record.

The CARINTEG utility returns a message which tells you if the CAR file is Ok or if it has errors. For more information on this and other utilities, see the [Utilities Reference](#).

How do I handle case issues in the Archive module?

NOTE: We recommend that you only use uppercase for table and column names when storing information in a database. For instance, avoid CustomerName, Customername, or customername and instead use CUSTOMERNAME.

Database management systems (DBMS) vary in how they handle case issues so it is best to standardize on uppercase. With version 11.2, all column names must be in uppercase.

Suppose you have two transactions archived as: Funk, Joe and GEIGER, MICHAEL. When you enter *F* into the Account Name field, you get all transactions beginning with *F*, including Funk, Joe.

If you enter *Fnn*, the system tells you there are no transactions with that key. If you enter *G*, you get all transactions beginning with *G*. If you enter *GEI*, you get GEIGER, MICHAEL.

You must specify whether the keys are case sensitive. When keys are not case sensitive, the system expects the fields to be uppercase in the database index. If you use case sensitive keys, as in the option shown below, you have to enter the data on the Archive/Retrieval window just as it appears in the archive file.

For instance, case sensitive keys would cause the following situation:

```
< Archival >
CaseSensitiveKeys = Yes
```

Fu - will find Funk, Joe

FU - will find nothing

GE - will find GEIGER, JOE

Ge - will find nothing

NOTE: The GenArc program looks at the CaseSensitiveKeys option before it adds records to the archive file.

To handle case sensitivity when producing WIP, add a CaseSensitiveKeys option to the Control INI control group.

Here are a couple of scenarios:

Scenario 1 If you want a search for *John Doe* and *JOHN DOE* to yield the same results, use this setup:

- For the GenArc program, make sure archived data is upper cased. Set the CaseSensitiveKeys option to No, as shown here:

```
< Archival >
CaseSensitiveKeys = No
```

- For Documaker Workstation, make sure the applicable INI option matches the GenArc setting.

```
< Control >
CaseSensitiveKeys = No
```

- For IDS, omit the CASESENSITIVE attachment variable

Scenario 2 If you want a search for *John Doe* and *JOHN DOE* to find only exact matches based on case, use this setup:

- For the GenArc program, set the CaseSensitiveKeys option to Yes so the archived data can be in mixed case:

```
< Archival >
CaseSensitiveKeys = Yes
```

- For Documaker Workstation, make sure the applicable INI option matches the GenArc setting:

```
< Control >
CaseSensitiveKeys = Yes
```

- For IDS, submit the CASESENSITIVE attachment variable

NOTE: If you want archive data to include both cases, such as John Doe and JOHN DOE, and you want a search to yield the same results regardless of whether you are searching for John Doe or JOHN DOE, there is no way to set this up.

To switch to Scenario 1, you would have to uppercase the keys in the archive.

To switch to Scenario 2, you do not have to make any changes.

How do you change the archive keys?

When the new key information exists in the archive index, back up your current archive index (should include *.DBF, *.MDX and DFD files) and follow these steps:

- 1 Change the APPIDX.DFD file to create a key based on new field. Here is an example key section from APPIDX.DFD:

```
< Keys >
  KeyName = Key1
  KeyName = Key2
  KeyName = KeyID
< Key:Key1 >
  Expression = Key1
  FieldList = Key1
< Key:Key2 >
  Expression = Key2
  FieldList = Key2
< Key:KeyID >
  Expression = KeyID
  FieldList = KeyID
```


To replace Key2 key with CUSTNAME key, you will need to do this:

```
< Keys >
  KeyName = Key1
  KeyName = CUSTNAME
  KeyName = KeyID
< Key:Key1 >
  Expression = Key1
  FieldList = Key1
< Key:CUSTNAME >
  Expression = CUSTNAME
  FieldList = CUSTNAME
< Key:KeyID >
  Expression = KeyID
  FieldList = KeyID
```

2 Remove the APPIDX.MDX file.

3 Run the reindex command as shown here:

```
REINDEXW /I=APPIDX /D=APPIDX.DFD
```

This creates a new APPIDX.MDX file.

4 Change the ArcRet control group to specify CUSTNAME as Key2.

If one of these steps fails, restore the original index before you try again.

NOTE: You cannot simply add a new field to the DFD for an existing archive unless you have a database that supports dynamic columns. Even in that situation, however, the new field for all the existing records will be blank.

When the new key information does not exist in the archive index, follow these steps:

1 Back up your current archive index (include *.DBF, *.MDX and DFD files).

2 Use your third party database software to create the new key field in the APPIDX.DBF file. Again, the new key information will not be populated for existing archive records. This new key field will be blank.

3 Remove the APPIDX.MDX file.

4 Run the reindex command as shown here:

```
REINDEXW /I=APPIDX /D=APPIDX.DFD
```

This should create a new APPIDX.MDX file.

5 Change the ArcRet control group to specify CUSTNAME as Key2.

If one of these steps fails, restore the original index before you try again.

Keep in mind that this is not something to be done unless you have first created and verified that you have a full backup — perhaps even to permanent media (like a CD).

Also note that although it is possible to add a new field in the manner described, changing the index also means that you have to start a new CAR file. If you are running the GenArc program, this is probably not an issue since, typically, most users are set up to create a new CAR file each time they run GenArc.

You should, however, make sure this is how your system is set up. If you are also using Documaker Workstation to create archives, you will need to handle this manually.

Also note that you will no longer be able to rebuild your archive index from the old (original) CAR files. Instead, you would first have to restore the original DFD and then use the utility to rebuild the index from the CAR files. You then would have to do the steps again to re-add the field in question. Then you would have to rebuild the index from any newer CAR files that were created after that original change.

How do you determine which version of Oracle you need?

Your system documentation should provide information on the software you need.

When you access any SQL-based DBMS from Windows, you should always set up your system for ODBC access. With ODBC, if the correct version is properly installed, it should not matter which DBMS it is, or which version of Oracle.

The Oracle version is only important when you are running on a platform that has to perform native direct access to the DBMS, rather than using ODBC.

How do you resolve transaction errors when using GenArc and Documanage?

If the GenArc program produces an error similar to the following example, it indicates the INT_Length or EXT_Length (or both) options in the CARData control group have not been set in the CARFILE.DFD file:

```
Error:
====
GenArc
Transaction Error Report - System timestamp: Fri Sep 07 02:07:33 2001
-->Transaction: 1234567
Error in RPFAPErrorNotify(): FAP library error:
area:<..\C\dxmerror.c
Jun 16 2001 12:44:04
400.101.002
DXMSetLastError>, code:<2>, code:<2>, msg<Invalid object handle was
passed>.
```

Here is an example of the correct INI settings:

```
< Field:CARData >
  INT_Type = BLOB
  INT_Length = 8
  EXT_Type = BLOB
  EXT_Length = 8
  Key = N
  Required = N
```

Does GenArc handle SQL Server 2000 Standard Edition vs. SQL Server 2000 Enterprise Edition differently?

No. To Documaker, the product integration is the same. For GenArc to archive via ODBC, there is no functionality Documaker needs that only exists in the Enterprise Edition.

The SQL Server Enterprise Edition has better performance, greater scalability (licenses on more CPUs and more RAM servers), better availability, more analysis tools, and can only be run on a Windows Server OS (Windows 2003 Server). The Standard Edition is more suited for small to medium-sized organizations.

When do you use the CreateTime, AddedOn, and MaxFolders options?

If you are using Documaker version 10.1 and the patch level is 185 or higher, none of these options are required. If the patch level is below 185, you need the following options in your FSIUSER.INI file:

```
< PO:DBHandler >
    MaxFolders      = 1000
< PODocument2Field >
    CreateTime      = AddedOn
< POField2Document >
    AddedOn         = CreateTime
```

NOTE: You can use the FSIVER utility to determine the patch level of your system. See the [Utilities Reference](#) for more information about this utility.

How do you specify a default sort order?

The DefaultTag option lets you specify the default tag for ODBC and DB2. This tag is then 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.

Can you run concurrent GenArc sessions to archive to the same flat file?

No. This will corrupt the archive file. The GenArc program runs in batch mode, which differs from the way Documaker Workstation operates.

Documaker Workstation is designed to let several users complete and archive form sets at the same time without corrupting data. The checks required to protect the data would slow performance in a batch processing environment, so they are omitted from GenArc and other Documaker programs.

Normally, you run batch programs, such as GenTrn, GenData, and GenArc, one after another. If, however, you choose to archive in a relational database such as SQL, DB2, or Oracle, you can get around this by specifying a unique job ID for each GenArc process. Refer to the [Documaker Administration Guide](#) for more information about job IDs.

Can you use the VARCHAR2 data type for storing data?

Based on our testing, you should not use Oracle's VARCHAR2 data type to store binary data. The VARCHAR2 data type is intended for text data. If binary data is used with the VARCHAR2 data type, Oracle performs an automatic conversion on the binary data and one of the results is that data is truncated during archival retrieval. Future versions of Oracle may work differently, but at this time, VARCHAR2 is not suitable for storing binary CAR data in an Oracle database.

NOTE: The approach of using multiple VARCHAR rows worked previously with DB2 and was used because some versions of DB2 did not support BLOB. This approach, however, may not be a good long term solution. It may also be less efficient in terms of total storage since it requires multiple, redundant rows in the CARTABLE.

Oracle supports and recommends the BLOB type for binary data and now recommends using BLOB rather than *long raw* for storing binary data.

We have verified that Documaker's ODBC driver works with BLOBs and Oracle. We have tested this on Windows and also on UNIX using the DataDirect for UNIX ODBC driver.

Since the current Oracle Insurance UNIX native Oracle driver only supports *long raw*, We recommend using ODBC on Windows or UNIX for BLOB support.

RULES PROCESSING ISSUES

What does GenTrn filtering do?

Filtering lets the GenTrn program remove certain records from the extract file so they will not be referenced in the TRN file. The search masks of the records to be filtered out of the extract file are specified in a separate file. Here's how GenTrn filtering works:

```
GenTrn [/f] [/b] [/fb] /ini
```

Parameter	Description
/f	The GenTrn program filters the extract file, then stops. It does not generate a TRN file.
/b	The GenTrn program will not filter the extract file. It generates a TRN file from the existing extract file. If you want to keep the extract file on a drive different from that used for the library resources, choose this option. Otherwise, the GenTrn program will not run.
/fb	The GenTrn program first filters the extract file, then generates the TRN file from the filtered extract file.
/ini	Enter the name of the FSIUSER.INI file.

The GenTrn program creates a TRN (transaction) file by reading an extract file. The TRN file contains offsets which refer to the extract file.

When you run the GenTrn program with filtering on, the GenTrn program reads the extract file record by record. It compares each record with the filter list. Records which do not match are copied into a temporary extract file. At the end of the filtering process, the temporary extract file contains all of the original extract records except those which match the filtering criteria.

This temporary extract file is then copied over the original extract file, and the GenTrn program continues by generating a TRN file based on the filtered extract file. This is the default. If there is no filter file, the GenTrn program does not filter the extract file and provide warning messages, but it does generate a TRN file.

NOTE: The EXCLUDE.DAT file is used on the personal computer platform only. The system does not use it on the host.

How do you set up overflow for a multipage section?

When you have a multipage section and include the IncOvSym rule for that section, subsequent sections increment the overflow variable. So, the system looks for the second occurrence of the data to map to the second page, the third occurrence to map to the third and so on.

The work-around is to add a dummy section after this section (using the same trigger as the main multipage section) in the form. Then move the IncOvSym rule into the DDT file for the dummy section. This makes sure pages are not incremented as they are processed so all page sections get the same overflow symbol value.

How do you insert the current page number on a form with overflow?

Follow these steps:

- 1 In the PrtType:XXX control group, where XXX could be PCL, AFP, XER, and so on, add this option:

PageNumbers = Yes

- 2 In the section, create a variable for the page number. If you need something like *Page Number: xx*, add a text label for *Page Number:* before the variable field. Set the attributes for this field as follows: Type=Alphanumeric, Scope=Form. Name this field as shown below:

Option	Description
FORM PAGE NUM	Use this name if you want the system to count the page number within the form. If you set up a 5-page form as two forms (one has three pages and the other has two pages), the system treats them as two separate forms.
FORMSET PAGE NUM	Use this name, if you want the system to count the page number within the form set.

- 3 If you want the system to count the total page number of the form or form set, add another variable for the total page number. Again, the variable is just for the number. If you want to add text to help presentation, also add a text label.

Set the attributes for this field as follows: Type=Alphanumeric, Scope=Global. Name this field as shown below:

Option	Description
FORM PAGE NUM OF	Use this name for the total page number for a form.
FORMSET PAGE NUM OF	Use this name for the total page number for a form set.

The system automatically inserts the page number for you. You do not have to add processing rules.

If you turn off the DownloadFAP INI option, use the Mk_Hard rule for these variables. Otherwise, no additional rules are required.

NOTE: Do not embed these variables fields in text areas.

How do you use the MoveNum rule with overflow?

I have a section which uses a counter for overflow (rather than @GETRECSUSED) and am using the MoveNum rule with a format mask of Z. I expect to see \$0.00 for any record that contains a zero but I am seeing \$0.00 for all fields even when there is only one record that contains a blank (not a zero). Here is an example:

Schedule of Riders	Rider Benefit	Monthly Cost
-----	-----	-----

ESTATE PROTECTION RIDER	\$75,000,000.00	\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00
		\$0.00

Use the *Z* and *E* flags in the format mask.

The *Z* flag gets zero (0) output while input data is zero (0). The *E* flag stops a calculation if the search condition is false. And if a record was found but the mapped data was blank, it returns a null output buffer. So this solves the output zero (0) with blank input data problem, too. See the [Rules Reference](#) for more information about this rule.

How do you make sure overflow pages are created when running in single-step mode?

Be sure to place the PrintFormset rule before the PaginateAndPropagate rule in the AFGJOB.JDT file when running in single-step mode. Otherwise, overflow pages may not be properly created. Here is an example:

```
<Base Form Set Rules>
;NoGenTrnTransactionProc;;;
;UseXMLExtract;;;
;ResetOvFlw;;;
;BuildFormList;;;
;LoadRcpTbl;;;
;RunSetRcpTbl;;;
;WriteOutput;;;
;WriteNaFile;;;
;BatchingByRecipINI;;;
;PaginateAndPropagate;;;
;PrintFormset;;;
;PaginateAndPropagate;;;
;FormDescription;;;

```

How do you get rid of a blank space?

Suppose you have four sections (A, B, C, and D) and sections A and D always trigger and print for all recipients. Section B triggers and prints for the Agent recipient. Section C triggers and prints for all other recipients. You get the correct section for the correct recipient but a blank space is left for the section that does not print, as shown below:

Section A	Section A
Section B	
	Section C
Section D	Section D

The blank space is called a carbon copy. For example, a form which contains four copies, of which the first copy is for the Recipient 1, the second copy is for the Recipient 2, and so on, and if one of the sections of the form is not applicable for a particular recipient, that section on that copy is blanked out. This is how the system works.

If you do not want to see the blank space, set up the form as separate forms. In the example, set up form 1 for all recipients except the Agent, and form 2 for the Agent, and leave the SetOrigin rule as shown here:

```
Rel+0,Max+0
```

How do you prevent group pagination from using set origin commands?

Since the release of version 11.3, the system honors the section origin rules during a pagination event. If, however, you want the system to ignore set origin commands during group pagination, set the PreRel113GrpPagi option to Yes, as shown here:

```
< RunMode >  
PreRel113GrpPagi = Yes
```

Can you make the RecipIf rule continue to search after a false condition?

No, you need custom code.

For example, if you are using RecipIf rule to trigger a form if the system finds two consecutive records in a single transaction and each record meets specific criteria, such as...

```
Record 001 and record 002 occurs x-times consecutively in a  
transaction.  
Record 001 record 002 record AAA record BBB record 001 record 002 . . .
```

The RecipIf rule tells the system to check the first 001/002; but if it is false, the system does not continue to search for another set of 001/002 records in the transaction. Is there a way for recipif to do this?

When the system evaluates the rule, its search differs from that triggered by search mask 1 or 2 because the system evaluates the first found record which matches the search identifier and evaluates if that record is true or false. Then, the system stops. If that record is false, the system performs the steps for the false trigger. For example, suppose the custom rule is specified as...

```
;Recipif;A={11,SPECIAL  
51,4};;if (A='1995');;return ("^1^");;else;;return ("^0^");;end;;
```

For overflow situations, the system continues searching and counts the number of true conditions. The system triggers the number of sections or forms based on the number of True conditions it finds.

Once the system finds a matching record, it processes the rule and returns the necessary value, if any. At that point, the system thinks that it has finished that entry. It does not keep looking for more records in the extract file for that entry (except for those exceptions described below). Then, it moves on to the next entry. This applies to all this applies to all field and section rules.

Here are some exceptions:

- You can use the @GETRECSUSED function with the with field and section rules. When you use this function, the system keeps looking for more records in the transaction which match the search criteria. Please note, however, that not every field and section rule supports this function. For example, the IF rule does not support this function.
- When the system evaluates the counter or True/False mask, it searches through all of the records in the extract file for the transaction. If any of them match the search criteria, the system considers the condition to be true. If there are multiple records with the same search identifier, the system evaluates all of them. If any of these records match the search criteria, the trigger condition is true.

For example, suppose the Search Mask 2 is specified as 11,SPECIAL,20,5 and in the extract file there are two records which have *SPECIAL* at offset 1; the first one has A at offset 20, and the second one has 5 at offset 20. The system evaluates both records and, since it finds the second record meets the search condition, determines the second record to be True.

The system stops searching once a True condition is found. For overflow situations, the system will continue searching after it finds the first True condition. In overflow situations, the system counts the number of True conditions and triggers the number of sections or forms based on the number of True conditions.

How do you set up the SendCopyTo rule to work with FRM files?

The SendCopyTo rule grabs the recipient copy names from the FSISYS.INI file and lets the recipient copy name print on a form. When printing using printer resident FRM files, the recipient copy name doesn't appear at the bottom of the printed output. All other variable data appears fine, except for the recipient copy name.

The SendCopyTo rule works as FORM PAGE NUM/FORMSET PAGE NUM. If the DownloadFAP option is turned off in the INI file, use the Mk_Hard rule. Otherwise, no rules are required.

A SendCopyTo field prints the name of the current recipient. For this to work, however, the field must exist at the time it is printed. There are several ways in which a field can exist at print time:

- The field is contained in the NAFILE.DAT file. Blank fields do not unload in the NAFILE.DAT file. Fields in the NAFILE.DAT file are created if necessary during the print process.
- The field is in the FAP file. For performance reasons, it's usually better if FAP files are not loaded during the print process. (You can use the DownloadFAP option to automatically load all FAP files, but this slows performance.)

The preferred method is to get the variable field from the NAFILE.DAT file. Since blank fields do not unload in the NAFILE.DAT file, you must have some way to make sure a SendCopyTo field unloads in the NAFILE.DAT file. Some value must exist in the field to make it unload.

The best and easiest way to do this is to use the Mk_Hard rule to force a value, any value, into SendCopyTo fields so they unload into the NAFILE.DAT file. The correct value is then assigned to the field during the print process.

For more information, see the [Rules Reference](#).

How do you protect the fields populated during processing?

For instance, suppose you download information from the host and populate documents using Documaker. The form set is then saved to work-in-process using the GenWIP program for further processing by a data entry operator.

The user retrieves records using Documaker Workstation, enters additional information and completes the form set. However, the operator can also create a form set from scratch using Documaker Workstation. You, however, must make sure the fields which are filled during batch processing are not overwritten.

After running the GenWIP program and creating the WIP transactions, an entry operator would enter the last bit of data that is flagged as *operator required*. To protect the fields that are populated during batch, use this option:

```
AFEMNW32 /mode=wip
```

From the command line you could enter **AFEMNW32 /mode=wip** or you could set up an icon that points to the library to have */mode=wip* in the target, for example:

```
D:\FAP\DLL\AFEMNW32.EXE /mode=wip
```

Also, for the icon, make sure the start in directory points to your batch library where your WIP transactions are located. When the operator opens AFEMNW32 in this manner, he or she will only have access to the fields flagged as operator required. Use TAB and SHIFT+TAB keys to move through the fields that need entry.

NOTE: For more information, see the [Documaker Workstation Administration Guide](#).

Can you right-justify amounts using a proportional font?

The system right-justifies dollar amounts if you use a non-proportional font, such as Courier or Letter Gothic. For proportional fonts, such as Times, Arial, or Helvetica, there are two ways to right-justify amounts:

- JustFld rule. Use this rule in batch processing to right justify amounts. For more information, see the JustFld rule in the [Rules Reference](#).
- CSTParseJustify function. Use this post-edit function to have the system right justify amounts when the user leaves the entry field. You set up this function on the variable field's Field Options pane.

Is there an easy way to predict where a line of text will break?

No. Where the text will break in a multiline text field depends upon on the font being used, where the text begins, the margins, the tab stops, whether columns are being used, and so on. There are many factors that affect where text wraps to the next line.

When using the Text Editor, you can control many of the factors that affect line wrapping, but when text is mapped in from an extract file, you have little control.

How are field rule flags 3 and 4 are handled?

If flag 3 (operator required) is set to *Y* and the field is blank, all recipients will be sent to the manual batch (for the GenWip program to process).

If flag 4 (either required) is set to *Y* and the field is blank, all recipients will be sent to the manual batch (for the GenWip program to process).

There is no difference in the logic for either flag.

NOTE: If you use the NoOpFunc rule the system skips the above logic.

What is the maximum file size for an extract file?

Prior to version 11.4, extract files, NAFILE.DAT, and POLFILE.DAT files could not exceed 2GB in size. In version 11.5 and higher, there is no limit. See the [Documaker Administration Guide](#) for information on handling large extract and NAFILE files.

Can the GenData program continue processing through all transactions after it detects errors on a particular transaction?

Yes, just include the following control group and options in your FSISYS.INI file. Here are the default values:

```
< GenDataStopOn >
    BaseErrors           = Yes
    TransactionErrors    = Yes
    ImageErrors          = Yes
    FieldErrors          = Yes
```

If you want the GenData program to continue processing the next transaction when errors are encountered, set the above options to *No*. The ERRFILE.DAT file identifies which transactions contains errors.

How do I make one section overlay another?

I have a full page section with the SetOrigin rule set to ABS+0,ABS+0. I want to overlay a two-word section onto the full page section and be triggered by the SETRCPTB.DAT file. The two-word section has no margins and the SetOrigin rule is set to ABS+2400,ABS+2400. The forms print on separate pages. How do I make the two-word section overlay the full page section?

For batch processing, mark both of the sections' options as same page and make sure that the form options for both sections are set to the same thing—either front or back (not rolling). This cannot be done using the Entry module.

How can I get data into the NEWTRN.DAT file without using

Trn_Fields?

Use the Ext2GVM rule to get data into the NEWTRN.DAT file during GenData processing instead of using Trn_Fields. To do this you define a field for the data to be mapped in the TRNDFDFL.DFD file and then use the Ext2GVM rule to map the data from extract file to the NEWTRN.DAT file.

See the [Rules Reference](#) for more information on this rule.

Why won't the system work with F-PROT?

The problem lies with the anti-virus software F-PROT. This software does not accept input from NUL devices. Using the system in single step mode, the INI file parameter TRNFILE = NUL creates a NULL file.

One work around would be to substitute CON or AUX instead of the NUL device. These are two other system devices. More information can be found about system devices in your operating system documentation.

So in the FSISYS.INI file, under the Data control group, change

```
TrnFile = NUL
```

to

```
TrnFile = CON (or AUX)
```

Can you use the same field name on multiple sections within the same form?

Yes, the same field name can be used on multiple sections within the same form. And, the formatting can differ for each field. The reason that the formatting is the same for all the fields is because in one of the FAP files, the field's scope is set to *form*. Check all of the sections that uses a common field name and make sure that the field's scope is set to *section*.

Does it matter that the field's scope is set to Form if the form will never be viewed in Documaker Workstation?

Yes it does matter. If the field attribute is set to *Form* and the FAP file is loaded into memory during GenData processing, the first occurrence of the field's mapping will be propagated throughout the entire form.

What causes a FAP file to be loaded into memory?

Several things cause FAP files to be loaded into memory. For instance, setting the LoadCordFAP option to Yes, or using the CheckImageLoaded or TextMergeParagraph rules instruct the system to load the FAP file into memory. In addition, some of the grouping and message from extract rules also cause a FAP file to be loaded into memory, as does the use of the CopyOnOverflow option.

What causes the LoadCordFAP option to generate warnings?

During single-step processing, if you set the LoadCordFAP option to No, the system generates warning messages. During multistep processing, however, these warnings are not generated if the LoadCordFAP option is set to No.

The LoadCordFAP option is used by the GenData program to load FAP files.

The DownloadFAP option is used by the GenPrint program to load FAP files.

In single-step mode, the GenData program produces print streams using the GenPrint program. Therefore, the GenData program needs the LoadCordFAP option set to Yes so the FAP files are loaded before it produces PCL print streams.

In multistep mode, GenData does not produce PCL print streams. Because it does not produce PCL print streams, it does not need the FAP files loaded. Therefore, the GenData program needs the LoadCordFAP to be set to No.

NOTE: When running in single step mode and the DownLoadFAP option is set to Yes, the system automatically loads FAP coordinates. Even if the LoadCordFAP option is set to No, the system still loads the coordinates. This results in a warning message that indicates the LoadCordFAP option is set to Yes.

How do you set up different output paths?

Use INI files to set up different output paths for Documaker. This is helpful when you have several people testing the system with the same code or resources.

Here is an example of how to start the GenData program (running on Windows 32-bit) and set the INI files for a specific user:

```
gendaw32 /ini=fsiuser.csn
```

What is the limit for the MaxRecordLength option?

The code does not set a limit for the MaxRecordLength option, but some operating systems do. For example, MVS has a maximum record length of 32K. Keep in mind, whatever you set the MaxRecordLength option to will be loaded into memory when running Documaker. Be conservative in your length selection to avoid running out of memory.

Can you run the GenTrn program on Windows with a variable length extract file?

Yes, as long as you specify the maximum extract record length in your INI file:

```
< TrnFile >
    MaxExtRecLen = XXX
```

NOTE: Make sure your transaction search mask and key information do not occur beyond the length of the shortest line. Otherwise, the system might assume a new transaction begins at the wrong point.

For instance:

```
< ExtractKeyField >
  SearchMask = 11,HEADERREC
  Key = 100,7
```

If you have a line that will be shorter than 107 characters (offset 100 for length 7), you will get a new transaction starting at that row.

When CopyOnOverflow is set, why won't data copy to the fields on the overflow pages?

Field data propagates to CopyOnOverflow sections automatically for those variable fields that have a form-global scope (rather than section-local or formset-global).

Make sure the variable fields in the FAP files you want data to propagate into are assigned a form-global scope. You can check this on the Field Options pane in Studio.

Next, make sure the FAP files are loaded correctly for those sections. The system automatically loads FAP files for CopyOnOverflow sections. If, however, you make these changes and still do not see the desired results, see if you elected to explicitly load pre-compiled FAP files and did not recompile. If this is the problem, consider whether your application would be better served by using on-the-fly compilation rather than explicit pre-compilation.

Also, if you are maintaining different versions of the FAP files in Library manager, make sure you checked in the FAP file changes.

When should I recompile CFA files?

Whenever you modify the FAP file.

Why are OMR marks omitted from the overflow pages of my form set?

The OMRMark rule is a post process rule. This means that pagination and propagation has already taken place before this rule is called. So, all this rule does is go back through the form set, after the forms and pages to the forms have been created, and place a mark on each page.

Place this rule after the WriteNAFile rule in the AFGJOB.JDT file. In addition, the PaginateAndPropagate rule should be added after the OMRMark rule because during post processing, the system executes the rules in the JDT file from bottom to top.

Is there a base rule that lets you dynamically change the font

ID for a text label within the GenData program?

Handle both problems with a field. A field ultimately has a text label (or not) and is not compiled into MET files and therefore is dynamic.

In Studio, specify one field for each possible signature — each using a different signature font. All the fields could be defined to occupy the same space and, because only one will trigger, it should not cause a problem.

For instance, here is an example that would yield a mutually exclusive result.

```
;0;0;HEADERREC;1;46;SIGNATURE;0;46;;hardexst;11,HEADER,15,TBS
ABCD;N;N;N;N;6379;8265;12012;

;0;0;HEADERREC;1;46;SIGNATURE;0;46;;hardexst;11,HEADER,15,TRJ
ABCD;N;N;N;N;6379;8265;12013;

;0;0;HEADERREC;1;46;SIGNATURE;0;46;;hardexst;11,HEADER,15,JSN
ABCD;N;N;N;N;6379;8265;12014;
```

Except for the font ID at the end of each line and the search mask criteria, these lines are identical. Notice that each line specifies the same destination field name. Although this is permissible, it is sometimes difficult to maintain in the Field Database Editor. For clarity and ease of maintenance, give each field a different name.

This example uses the HardExst rule. This rule checks for the existence of a specific text string occurring at a specific location. If found, the subsequent text is hard-coded into the field. In this case, assume that each signature only takes the characters *ABCD* to print. If one required more or less letters or different letters, you would change this.

You could use a different rule, such as the IF rule, and try to handle all cases in a single DAL script, but this may be more difficult for some people and harder to debug if the correct results were not yielded.

You could also write a custom field rule and change the font ID yourself.

Does the system support environment variables in INI files?

The system supports a built-in function `~GetEnv` but do not support the `%format%` directly. You would do something like this:

```
FormLib = ~GetEnv FORMLIB
```

When the system gets the INI option for FormLib, the returned data will be from the environment variable FORMLIB.

Is the Exclude option mandatory?

In version 10.1 and later, the Exclude option in the Data control group is no longer mandatory. In single-step mode, you must include the BuildExcludeList rule to work with the NoGenTrnTransactionProc rule to activate this option.

Why are multiple entries created in the POL file for an section that's only triggered once?

If multiple entries are created in the POL file for an section that's only triggered once and has a copy count of one, check to see if there is an unnecessary EjectPage rule assigned to the section.

The GenData program would create an entry in the POL file for the first page plus a second entry due to the unnecessary EjectPage rule.

How do you record the INI files and options used?

You can log INI file names and options in the TRACE file during GenTrn, GenData, GenPrint, GenArc, and Documaker Studio processing.

To turn on the logging of INI file names and options, include these INI options:

```
< Debug_Switches >  
  Enable_Debug_Options = Yes  
  INILib                = Yes
```

For the GenTrn, GenData, GenPrint, and GenArc programs, you can include the /L command line parameter to log these file names and options in the TRACE file.

NOTE: Logging the INI file names and options in the TRACE file replaces the writing of the INI file names and options to the LOGFILE as was done prior to version 11.1, patch 02.

During processing, does the 2GB file size limit apply to Documaker for z/OS and Documaker for Windows?

NOTE: Prior to version 11.5, this limit applied on z/OS. With version 11.5, this restriction was removed. See the [Documaker Administration Guide](#) for information on handling large extract and NAFILE files on z/OS.

Prior to version 11.5, the restriction did apply. Technically, it was not a physical file size limit, but rather the limit resides in the size of the file offset that is found in the NEWTRN file. The limit refers to the 2GB maximum file size that can be directly accessed using standard direct access methods, on Windows, UNIX, or z/OS.

As Documaker builds offsets into key files, if those offsets exceed 2GB, the GenData program experiences a problem. During GenTrn processing, offsets to individual transactions within the extract file are written to the TRNFILE.

During GenData processing, offsets to the NAFILE and POLFILE, for each transaction are written to the NEWTRN file and to the recipient batch files. A long integer is used to contain these offsets and this long integer can have a value up to roughly 2,100,000,000 or about 2GB.

Starting with Documaker version 11.0, patch 11, the system includes the following error messages which appear when the NAFILE's offset (size) approaches or exceeds the 2GB limit allowable for the NAFILE.

When the NAFILE's offset number within the NEWTRN file approaches the 2GB limit, you get this error message:

```
DM30035: Error in SetOffsets(): Offset for NAFile is approaching 2GB  
limit.
```


When it exceeds the 2GB limit, you get this error message:

```
DM30034: Error in SetOffsets(): Unable to obtain offset for NAFile.  
2GB limit may have been reached.
```

When should you set the CompileWhenLoaded option to No?

The CompileWhenLoaded option is generally used to improve performance. If you enter Yes for this option (the default is No), the system loads and compiles all of the functions in a DAL library file at the beginning of a processing job. There are, however, times when you may not want to do this, such as...

- If you are only doing a few transactions at a time. In this case, compiling the functions ahead of time can actually impede performance. While compiling functions ahead of time can save time if you are processing a large number of transactions, if the transaction count is small, you may not gain anything.
- If your library contains a large number of functions but very few of them are actually used. It does not improve performance to compile functions you do not use.

If you have a problem in DAL execution, turn off the CompileWhenLoaded option temporarily to help determine if the problem is related to precompiling the scripts. Be sure to include your results when you report the issue.

What causes the warning in the Get Doc Set Names message?

The system validates Key field lengths to make sure Key field data will fit in the field defined by the DFD. If the length defined in the DFD is too short for the incoming data, you get this message:

```
DM30099: Warning in Get Doc Set Names: The DFD defined length<4> for  
GVM <Company> is less than the longest <GroupName1> name.
```

This additional check can help you determine why the system will not load a BDF group at runtime.

DOCUTOOLBOX (UTILITIES) ISSUES

Can you create a single MET file which contains multiple pages like the FAP file used to generate it?

The FAP2MET utility supports multiple page FAP files. For example, if TEST.FAP file contains 10 pages, the FAP2MET utility will build 10 pre-compiled MET files. These files are used by the GenPrint program as each page is printed.

When you run the FAP2MET utility on a multipage FAP file, the utility creates a FAP file for each page. In the FAP file, you should add an EjectPage rule for each additional page that makes up the form. The system knows by the eject pages to look for additional FAP files for this form.

The FAP2MET utility can also produce a test print version of a FAP file, otherwise known as a print-ready file. This file is only to be sent to the printer. It is not to be used with GenPrint. This type of file is produced when the `/SV` option is not used.

For more information about this utility, see the [Utilities Reference](#).

For more information about the EjectPage rule, see the [Rules Reference](#).

I only want FixOffs to fix the NewTrn file, but since I have Batch1 defined in my Print_Batches control group, it insists on fixing that also. How can I tell it not to fix Batch1?

To resolve this, try taking the Print_Batches control group and the entries below it out of the INI file. If this group is not defined, the program will process only the NEWTRN file.

How do you tell which patch level source code was used for a given version?

If you are using version 10.0 or higher, use the FSIVER utility (FSIVRW32.EXE) in the DLL directory. This utility returns the patch level for each DLL file.

Earlier versions of the FSIVER utility do not return the same information. For earlier releases, the easiest way would be to print a directory listing of the DLL directory (`dir /ong > list.txt`) and compare the date, time, and file size to the same files in the `\patches\rel97` directory file.

DOCUMAKER STUDIO ISSUES

How do you get Studio to import DAL scripts?

When you import a master resource library (MRL), Studio automatically looks for DAL scripts in your DefLib folder or in *.LBY files and imports the ones it finds. If, however, you are importing an MRL that includes DAL scripts in a different folder, first import the MRL as normal, then import the DAL scripts manually using the File, Import Workspace Files, Scripts option.

Can you share XDD files?

For instance, when multiple users are working in the same workspace, having the extract dictionary (SYMBOL.XDD) locked by one user slows down other users who need to add or make changes to the file. Is there a way for users to share that file?

The XDD file is like any other library resource file, only one user can have it at a time. Depending on what you are trying to accomplish, you could, however, create additional extract dictionary files, such as SYMBOL1.XDD, SYMBOL2.XDD, and so on. This lets you could add resources in each file, then import those resources into the original SYMBOL.XDD file. You could also set up an XDD file for each line of business you have.

If you do not use multiple XDD files, it is a good idea to check in the XDD file when you are not actually using it and only check it out when you need to add something. This will minimize any conflicts.

Can you import spreadsheets into the XDD and the FDB?

For the field database (FDB), you can save the spreadsheet file as a Comma Separated Value (CSV) file while in a spreadsheet such as Excel. Any column names that match Studio's internal column names should import. Column names that do not match are ignored.

For the extract dictionary (XDD), there is no CSV import, however, depending on the information you are specifying, you may be able to import the FDB into the XDD.

Keep in mind that you would not be able to import rule information because the FDB does not store that type of information.

Can you use the same workspace for development and production purposes?

We recommend that you have separate workspaces for development and production. This will avoid file access conflicts and improve performance.

Does Studio require Internet Explorer?

Studio has no specific need for Internet Explorer but some of the underlying Microsoft framework does rely on Internet Explorer. As long as you have Internet Explorer version 6.0—which came out in August of 2001—or higher, you should experience no problems.

What do you if Studio just stops when “putting” a file?

If the system appears to halt while you are trying to add a file to the library, it probably means another application has the LBY file open and you cannot open it in exclusive-write mode until that user closes it.

So you have to figure out who has the file open. If you are running on a network, your network administrator can probably tell you who has the LBY file open.

Keep in mind that if anyone is running Documaker Workstation, IDS, or some other application that is using the library in a runtime environment, that is most likely the cause. You cannot have a runtime and a development use of the library at the same time.

What is the maximum length for a table name?

For the physical file on disk, there are two answers:

- For DBF files (Entry and Help tables), the limit is eight (8) characters. These tables are xBase files supported by a 3rd-party product that has not increased the length of supported file names.
- For batch supporting table files, any valid long file name will work.

For logical table names stored within an Entry table, you can have up to 40 characters.

Form names are limited to 100 characters, which is also the Library manager limit on any file name. Section names are limited to 64 characters.

Why does my firewall give an error when processing a batch?

If your firewall tells you that GENDAW32.EXE is trying to listen to or connect to other computers, instruct your firewall to stop blocking this program and allow it to continue. GENDAW32.EXE is the program name for the GenData program, which handles batch processing. It is normal for it to try to open a TCP/IP port to talk to IDS.

How are embedded LOG files compressed?

Version 11.3 uses ZLIB compression for embedding LOG files. These are most commonly used when multipage TIFF files are inserted into transactions or during conversions, such as the PDF to FAP conversion.

You do not need to do anything to enable this compression routine. Once you install version 11.3, all embedded bitmaps are compressed before being written into NA or FAP files.

NOTE: Previous versions of Documaker will not be able to read bitmaps from FAP or NA files which use the ZLIB compression method.

What causes Studio to not recognize a document from the Documaker Add-In for Word?

For example, if you use the Conversions option to import Documaker documents created via the Add-In and the document you chose to import disappears from the list with this text appearing in the Output area:

```
[04:35:59PM] Starting Microsoft Word...
[04:36:21PM] Error: Platform error: <document name>.docx is not a
Documaker Document
```

NOTE: You can also get this error when you import a plain Word document that was not created with the Documaker Add-In for Word.

You should download and install the following update from Microsoft:

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

What system DLL enables Microsoft Word to save a document as a FAP file?

The file used to create FAP files is named DCIWDW32.CNV.

Can you shrink a section?

You can use the Autosize button on the Section Options pane when working on a section to calculate custom page dimensions based on the size of the section.

What section options are available?

There are several options available for use with a section:

Option	Indicates the section...
Entry and print	Is a section that contains variable fields. It is used during data entry and is printed.
Entry only	Is used during data entry. The section contains variable fields, however the section never prints. These sections are designed for electronic image exchange.
Hidden	Is neither displayed nor printed. A form marked hidden <i>only</i> appears on the Form Selection window in the data entry system. The hidden section is a segment on a page with other sections. The hidden segment never appears in the data entry system and never prints.
Optional back	Only prints on the back page when you use duplex rolling.
Placeholder	The form is hidden from view in the data entry system and does not print or occupy space. Data can be embedded on the form for later use.

Option	Indicates the section...
Print only	Is a static section which is printed but does not contain variable fields.
View and print	Displays but the section does not contain variable fields. This section can be printed.
View only	Displays but the section itself does not contain variable fields. This section is never printed. Such sections are used for reference information.

You choose one of these options for a section using the Form Section Options in Studio.

Does Studio support GIF files?

No. GIF (Graphics Interchange Format) files, a format developed by CompuServe, compresses raster data using the LZW (Lempel/Ziv) algorithm. This algorithm is patented by IBM and Unisys Corporation and royalties can be charged to those who develop systems which work with GIF files.

To avoid the royalty issue, Studio does not support GIF files. If you have GIF files you want to use on your forms, first convert those files in to a format supported by Studio, such as bitmap. There are numerous tools you can use to do this, such as Paint Shot Pro from JASC or Paint by Microsoft.

NOTE: TIFF files support multiple compression methods and one of the methods is LZW. We do not support LZW compression in the TIFF library either.

What can cause the conversion to fail when converting a TrueType font to an AFP font?

The conversion can fail if Studio does not know which code page file to use. Normally, Studio selects the code page file for you, based on the path you entered for the CODEPAGE.INI file in the DefLib option in the FMRes control group. If, however, there is no entry for that option and it cannot find the CODEPAGE.INI file, the conversion will fail.

Why do graphics appear as one size in some applications and another size in Studio?

Studio interprets the raw data of the bitmap file as if it would appear on a printed page. Some other applications interpret the raw data of the bitmap to display nicely on your monitor. The difference is based on the intended destination.

For example, think of the graphics application as a TV screen and the logo as a TV show. If you viewed the TV show on a 50-inch TV screen vs. a 13-inch screen the picture size would be different. The show (graphic) does not change but the display changes.

One way to judge the true size of the graphic is, when you open the graphic in an application such as PaintBrush, to check the current size in pels or dots.

What sets the alignment of a graphic inserted a DAL function, such as the ChangeLogo function?

When changing graphics or placing graphics on a section, place the portrait (zero rotation) version of the graphic on the page. Do not worry about the orientation of the section.

Think of it the same way you would when using Studio. When you design a landscape section, you do not rotate all of the objects that occur on the section. You would not rotate the graphics either.

Let the print driver handle the rotation problems. For graphics, the rotation names should be included in the LOG file. This way, if the page is not a zero rotation (portrait) page, the print driver uses the proper rotation bitmap from the list in the LOG file.

Each rotation of the saved logo should not have exactly the same list within them. For instance, four rotations that have the same list would look like this:

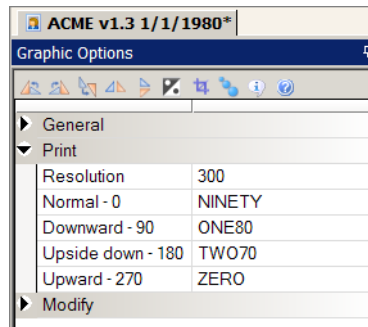
```
ZERO      = ZERO, NINETY, ONE80, TWO70
NINETY    = ZERO, NINETY, ONE80, TWO70
ONE80     = ZERO, NINETY, ONE80, TWO70
TWO70     = ZERO, NINETY, ONE80, TWO70
```

This is incorrect, instead, define them as shown here:

```
ZERO      = ZERO, NINETY, ONE80, TWO70
NINETY    = NINETY, ONE80, TWO70, ZERO
ONE80     = ONE80, TWO70, ZERO, NINETY
TWO70     = TWO70, ZERO, NINETY, ONE80
```

Think of it like this. The zero degree rotation of a graphic is itself. The 90-degree rotation is turned counter-clockwise 90 degrees. Therefore, a graphic you already think of as 90 will have 180 as the 90-degree rotation.

Rotation names are defined using the Graphic Options pane. Here is an example:



The first line in a LOG file would look similar to the following after defining rotation names and saving the zero-degree copy of the graphic:

```
* 0052,0112,0014,300,1,0,"ZERO ","NINETY ","ONE80 ","TWO70 ",2...
```

Does Studio use the FAPCOMP.INI file?

Studio can optionally use the FAPCOMP.INI file when you create a workspace. Once the workspace is created, Studio no longer uses this file. Some utilities can use the FAPCOMP.INI file.

What is the difference between the XRF and FXR files?

Basically, there is no difference. The XRF is the old DOS extension for the font cross reference file. Clients may still have old XRF files from an older system that need to be converted to FXR files.

Why does text sometimes print lower on landscape forms?

If you have a situation where text on landscape forms printed from Studio drops 3/16 of an inch, yet printing the same FAP file as a portrait form works correctly, the problem is likely a font conversion issue.

This usually happens when Xerox landscape fonts are converted into PCL fonts. In the conversion, you get an identical bitmap font, but when you print on Xerox the landscape fonts are printed using a different coordinate system. For PCL, a *baseline* of the font is used. These fonts have a large amount of white space at the top of each character and that is why they appear jogged down the page.

To correct this situation, edit your font cross-reference file (FXR) and change all the PCL font references to use the portrait font rather than the converted landscape font.

For instance, open Studio's Font manager and select the landscape font. In the Font File field under PCL Properties, you will see the font being used, such as 5LH08B. Change this font to its portrait equivalent, such as 5PH08B.

The next time you print the FAP file, any text using this font will print correctly. If you have other fonts exhibiting the same problem, you will have to change them too.

How does the system name FAP files when they become multiple output files?

When a single FAP file turns into multiple output files, the first FAP file will have the name of the original section. The subsequent pages are named using up to six characters from the original name plus a suffix of the page number in a 2-digit format, such as *fapfap02*. Once the number of pages exceeds 99, only five characters from the original name are used and the suffix is increased to three digits.

How do you delete fonts from the FMRes library?

If you are using fonts other than the ones that came with the system, you may want to delete the system fonts in FMRes. There is no problem in doing this—as long as you do not also delete the four FAP files stored in this library. These FAP files are used by the system to create reports.

Follow these steps to delete the fonts from the FMRes library:

- 1** Copy the FAP files from `\fmres\forms` to your library\forms directory. The system uses these files to create reports.

You can also copy the contents of `fmres\deflib` to `library\deflib` if you merely want to perform a consolidation.

- 2** In the FMRes control group, set the path of the DefLib and FormLib options to `library\deflib` and `library\forms`, respectively.
- 3** Set the XRFFile option to your FXRFile directory.

How do you make sure you are using the right USERINFO file?

Locate the UserInfo control group in your FSISYS.INI or FSIUSER.INI file. Include these options to define the location of the USERINFO database file:

```
< UserInfo >
  File = USERINFO
  Path = (path of the system's USERINFO file)
```

If you specify the absolute path, when you open a FAP file using another application, such as Windows Explorer, the system will use the correct USERINFO file. Otherwise, it creates a new USERINFO file.

NOTE: In version 12.0 and later, Studio stores this information in a database instead of in a xBase file.

Can you keep the USERINFO file in an SQL or DB2 database?

In version 12.0 and later, Studio stores this information in a database such as SQL or Oracle, which can avoid some problems. For example, if someone accidentally deletes the USERINFO file, the next time a user joins the workspace the database automatically creates new USERINFO.MDX and USERINFO.DBF files with default access.

In prior versions, you can optionally do this. For example, to store the USERINFO.MDX and USERINFO.DBF files in an SQL or DB2 database, there are a couple of INI options you need to set. For instance, be sure to turn off the default encryption:

```
< UserInfo >  
    Encrypt = No
```

Also, be sure to specify the ID in the UniqueTag option. The system expects that column to be unique within the file, therefore, it is the primary key for looking up things. Here is an example:

```
< DBTable:USERINFO>  
    DBHandler = ODBC  
    UniqueTag = ID
```

How do you insert a variable TIFF file into a document for Xerox printing?

For instance, suppose you need to insert a two-page TIFF file into Metacode output and the TIFF data changes approximately once month. You want to keep the print output file as small as possible.

The best way to do this is to convert each page of the TIFF file into a separate graphic file. Then convert each graphic into a Xerox IMG file that can be stored on the printer. The IMG and graphic file must have the same name.

Next, create two new forms or two-page form onto which each graphic will be placed. Insert the new forms in your form list and set a recipient trigger to trigger the forms for each transaction.

Include this option in your INI file:

```
< PrtType:XER >  
    ImageOpt = Yes
```

Keep in mind that if you set the ImageOpt option to Yes, the system assumes all graphics in your master resource library have been converted to IMG files and are stored on the printer.

How do you get a list of the TerSub section names selected by a DAL script?

You can do this by associating another field with the TerSub field. When you do this, the *paragraphs* you select are assigned to that field. The paragraphs are separated with a semicolon. You can then use DAL to get those values and parse the names.

To keep TerSub selections, set the data token as shown here:

```
;K= xxx
```

Where xxx represents a variable field you must add to your form. This variable field must be alphanumeric and be marked as Hidden and No User Edit to prevent it from displaying or printing on your form. This field should not exceed 1024 characters. Make it long enough to handle the number of paragraphs or names you expect the user to pick.

The system uses this field to store the items selected from the Paragraph Selection window. This field should follow the multiline text field. Here is an example:

```
;K=Selections
```

where *Selections* is the name of a second variable field on your form. During testing, you would probably want to see the field. To later hide it from users, mark it as Hidden and No User Edit.

When you tab off the multiline text variable field and then back tab into it, the Paragraph Selection window shows whatever items you selected previously in the Selected Paragraphs section of the Paragraph Selection window.

Begin all token flags with a semicolon. The Data field may contain multiple token flags in a series, such as:

```
;ZS;NE
```

Any text occurring before the first flag should be assumed to be the old parameter supporting an insertion field point.

In the FAP file that names the TerSub, append a semicolon to the data followed by...

```
K=field name
```

where you name the field added to receive the selections. In your DAL script, get the value of this field and parse the individual names using string functions.

When did Library Manager index files change?

Columns were added to Library manager index files in version 10.2. These columns are used by additional workflow features. The legacy Docucreate tools prompted you to convert your library indexes into the new format when they try to open older format indexes.

If you want to continue using version 10.1 executables, you *must* maintain a separate copy of your libraries. The 10.2 libraries are not compatible with 10.1 executables. Make a backup of your 10.1 libraries *before* you convert any indexes.

NOTE: Back up the *.LBY, *.DBF, and *.MDX files.

Place the backup in a different directory. The conversion process overwrites your original file. Be sure to convert your libraries before you run Documaker.

How do you control data field truncation on a form?

For instance, suppose you have an embedded field in a text area. You *do not* want the data to wrap, overlaying a subsequent line in the section. Will having the Can Grow flag turned *off* insure the data will not wrap and overlay the subsequent line?

No. If a line exceeds the width of the text area, the system wraps it, even if the Can Grow option is turned off for that text area. Furthermore, if the Can Grow option is turned off, the system will not reposition the next object to prevent the text from overlapping. You turn on the Can Grow option to tell the system to reposition subsequent objects when necessary to avoid overlapping.

Keep in mind the system does not truncate data unless instructed to do so via the rule that populates the field.

Can you use compression when creating DCD files?

If you are using the following versions (or later) of Printcommander, Common Objects, and Control Panel, you must add an option to your ISL.INI file to disable compression when the DCD file is created:

- Control Panel (version 5, release 1, level 11)
- Print Commander 5.1.2 build 20020619
- Common Objects 10.2.0 build 20020717

Add this option and control group:

```
< PrintDef - DCD >  
Compression = 0
```

If compression is left on, the system cannot create FAP files, nor can it display compressed DCD files. The file appears to open but none of the objects display.

Disabling compression results in a bigger DCD file.

NOTE: Older versions of Print Commander, Common Objects, and Control Panel do not require this setting because they do not create compressed DCD files.

How do you convert Word files into FAP files?

There are several ways to convert Word files (DOC) into FAP files.

NOTE: Studio version 11.5 and later can convert DOC files and Documaker documents (created with the Documaker Add-In for Microsoft Word).

For example:

- Save the Word file as an RTF file. Then open the RTF file in Studio's Section manager.
- Use the Word Converter to add FAP files as a *Save As* type in Word.
- Use Printcommander (version 5.x or greater) to produce FAP files from DOC files. Then open the FAP files in Studio. This approach avoids some font issues.
- Use Printcommander (version 5.x or greater) to produce DCD files from DOC files. Then open the DCD files in Studio's Section manager.
- Use Printcommander (version 5.x or greater) to produce AFP files from DOC files. Then open the AFP files in Studio's Section manager.
- Use Printcommander (version 5.x or greater) to produce Metacode files from DOC files. Then open the Metacode files in Studio's Section manager.

- Use Word and an older print driver, such as the HP IID driver, to produce a PCL print stream. Then open the PCL file in Studio's Section manager.
- Use the RTF2FAP utility to convert the file.
- Use the DCD2FAP utility to convert DCD files or use the MRG2FAP utility to convert AFP or Metacode files.
- Use Word to produce a PCL file (via the print driver) and then use the PCL2FAP utility to convert PCL files into FAP files.

How do you correct replacement characters that overlap fixed text on an AFP document?

If the replacement characters (Xs) overlap the fixed text on your AFP document, you need to first understand that if the Xs are running into the adjoining text label the actual field data could do the same. The width of the template characters shown in design mode is simply a representation of how wide the field data may be. Depending upon the length of the data mapped and the characters used, the actual space used might be more or less than that shown.

If you are using a fixed-pitch font, like Courier, all characters are the same width. That means any data that fills the entire field with the currently defined length will overlap that same text. Therefore you have to consider whether you defined the field length too long or placed the adjoining text label too close.

If you are using a proportional font, characters can have different widths. Within a typical proportional font, the characters *W* and *M* are usually the widest, where characters like *i* and *l* are the narrowest. The system shows Xs because that character is typically a little wider than average, but not excessively large. Ultimately, the mix of characters mapped into the field determines whether the data fits into the space you have provided.

Assuming you are reasonably sure the field length and space provided are acceptable, you can configure Studio to show the variable locations using the Documerge replacement character instead of the normal Xs.

To see the Documerge replacement characters instead of Xs, add this INI option to your FSISYS.INI or FSIUSER.INI file:


```
< Control >
TemplateUseReplaceChar = Yes
```

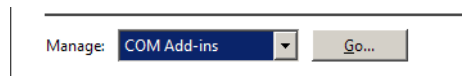
Then each location will show the Documerge replacement character you have assigned to that field. If you chose a thinner character, the template text of the field will not run into the subsequent label. Remember that the actual space consumed by the field is determined by the data you map into the field and the font you choose.

DOCUMAKER ADD-IN FOR WORD QUESTIONS

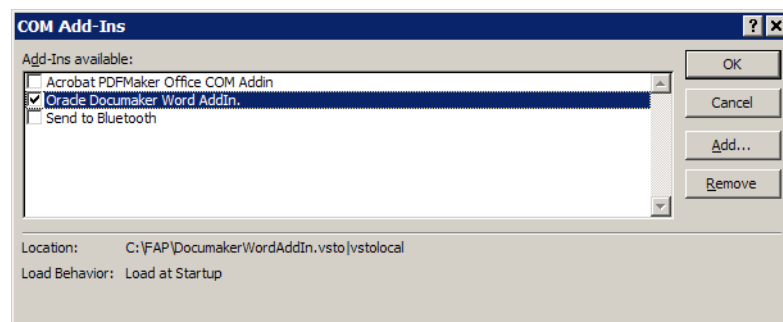
Why is the Documaker tab missing?

If the Documaker tab does not appear when you open Word, the Documaker Add-In for Word may have become inactive or may have been disabled. Follow these steps to correct the problem:

- 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.

Why are the Documaker commands disabled when I open my Documaker Word document?

For instance, if you create a Documaker document in Word, save it, close it, reopen it, and Documaker ribbon options such as Validate, Properties, Field, Trigger, and Graphic are disabled, you should download and install the following update from Microsoft:

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

Why did elements in my Documaker Word document disappear from the tree view after re-opening?

If you open a Documaker Word document and notice that the tree view is empty, it means your document is corrupt. Another symptom is that you can not edit Documaker elements, instead getting the following error message:

There are no Documaker elements in the area of the document currently selected.

You should download and install the following update from Microsoft:

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

WIP ISSUES

What fields are required in the WIP.DFD file?

As a minimum you need the following fields:

- Unique_ID (This field is required for a WIP table in an ODBC-compliant database such as SQL, Oracle and DB2 but is not required for WIP stored as xBase files. If you are migrating from a prior version, such as 10.0 to 10.1 (patch 445) or 10.2 (patch 36) or higher, be sure to include this entry in your DFD files, since the system checks for its presence.)
- Key1
- Key2
- KeyID
- RecType
- CreateTime
- OrigUser
- CurrUser
- ModifyTime
- FormSetID
- TranCode
- StatusCode
- FromUser
- FromTime
- ToUser
- ToTime
- Desc
- InUse
- ArcKey
- AppData
- RecNum

NOTE: Never remove any field from the standard WIP file definition. Never rename any field in a WIP DFD file. Doing so can cause damage to your system and can hinder Support's efforts to solve the problems you will encounter.

Key1, Key2, and KeyID can be called something different but the other fields must use the names shown in this list. You can add additional items if necessary—just make sure you have the fields shown here.

The only reason to add new fields is if you can place values in the new fields. And only then, if the values are actually going to be used in some manner—either displayed on WIP windows or transferred with the WIP to Archive upon completion.

There are several ways to get nonstandard field values mapped into WIP records:

- From the GenWIP program —mapped from the fields in the MANUAL.BCH file when kicking form sets to WIP
- By using DAL functions to store the WIP field values during form set editing

Using hooks to write custom code to store the values into the WIP record.

Is case important when storing WIP on a DBMS?

We recommend that you only use uppercase for table and column names when storing information in a database. For instance, avoid CustomerName, Customername, or customername and instead use CUSTOMERNAME.

Database management systems (DBMS) vary in how they handle case issues so it is best to standardize on uppercase. With version 11.2, all column names must be in uppercase.

Is there an easy way to delete all records from WIP that do not match the current date?

Follow these steps to delete all records from WIP that do not match the current date:

- 1 Edit the MEN.RES file as follows to add the Batch DAL option to your system. Add the lines in bold below:

```
POPUP  "W&ip" 257 "Wip menu"
BEGIN
  MENUITEM "&Wip List..." 297 "AFEW32->AFECombineWipDlg" "Wip
Functions"
  MENUITEM "&Edit..." 270 "AFEW32->AFEUpdate" "Edit existing
document"
  MENUITEM "&Batch Print..." 271 "AFEW32->AFEPrint" "Batch Print
existing document"
SEPARATOR
  MENUITEM "Batch DAL..." 29400 "AFEW32->AFEBatchDalProcess"
"Process DAL in Batch"
  SEPARATOR
  MENUITEM "&View Batch Queue..." 272 "AFEW32->AFEViewBatch" "View
existing document in Batch Queue"
...
END
```

- 2 Add the following control groups and options (in bold) to your FSISYS.INI or FSIUSER.INI file.

```
< Batch_DAL >
  ScriptFile      = delete.dal
< DAL >
  EXT             = .DAL
< MasterResource >
  ...
  DALFile         = [CONFIG:new] DalFile =
< CONFIG:new >
  ...
DALFile          = H:\DMRP\MSTRRES\NEW\DEFLIB\
```

- 3 Use a text editor to create a DAL script called *DELETE.DAL*. Place this DAL script in the DefLib directory of your master resource library. Add this to the script:

```
D=WIPFld("MODIFYTIME");
D=date2date(D,"X","14");
DD=DiffDate(D);
if DD > 0 then DelWip();
end;
```

Now you can open your library in Documaker Workstation and choose the WIP, Batch DAL option. The DAL script will then run automatically, deleting all WIP records that do not match the current date—including their NA and POL files.

Can you store WIP files in a relational database?

Both archive and WIP files include index (appidx.* for archive and wip.* for WIP) and data (NA and POL files).

- For archive, the system can store the index *and* data in relational database management systems (RDBMS), including Oracle.
- For WIP, the system can store the index in relational database management systems (RDBMS), including Oracle.

How do you control the length of file names for WIP transactions?

When running the GenWIP program in a batch process, the DAT and POL files that appear in the WIP directory follow the 8.3 file name convention.

In Documaker Workstation, when you save a transaction to WIP the system checks the WIPData control group for the WIP database file name and path. If the system finds the WIP.DBF file, it uses the existing database file name convention.

If the WIP.DBF file is not present, the system checks the WIPData control group and looks for WIPDFDFile option. This option is not required, but you can use it to specify the full path and name for the WIP DFD file. By default the system uses the WIPData control group file and path.

If the system finds the WIP.DFD file, the system checks for an entry for the INT_Length field in the FormSetID control group and Documaker Workstation uses that convention.

For example, the WIP.DFD file name length below is set to 8 in the WIP.DFD file:

```
[Fields]
FieldName=FORMSETID

[Field:FormSetID]
EXT_Length = 8
INT_Length = 8
```

If the system does not find a WIP.DBF or WIP.DFD file, the system uses internal settings to create DAT and POL files using a GUID 32-bit file name.

The WIP.DBF is created and that database is used by Documaker Workstation.

For WIP, the system can store the index, but not the data. We have tested using the AFEMAIN program to store a WIP index in MS SQL and on Oracle ODBC version 8.01.71.00 on Windows 2000 to save the WIP table to Oracle 8i Enterprise Edition Release 8.1.6.0.0 on a Sun OS 5.7 Oracle database.

PRINTING ISSUES

Which printers are supported?

Our applications do not support specific printers, but instead are designed to emit print streams that adhere a printer language standard, like PostScript, PCL, AFP, Metacode, and so on. It would not be feasible to test hundreds of printer models.

Our applications also emit PDF print streams that adhere to the PDF language standard and can be viewed by Adobe Reader, Acrobat, or the Acrobat plug-in from within Internet Explorer.

NOTE: PDF viewers from other companies and other browsers may also work with our applications, but are not tested with our applications and using them with our applications is not recommended.

Some customers have experienced problems with multifunction copier/scanner/printer devices. These devices are often incapable of printing complex documents that include a mixture of simplex and duplex printing, different paper sizes, portrait and landscape pages, and so on.

How does the system use the Printer, Printers, and PRTType:XXX control groups?

The Printers control group lists the types of printers you have.

The Printer control group specifies the default printer.

The PRTType:XXX control group defines the individual printer settings for each type or printer. The system uses these options when printing.

For instance, the following tells the system that you have two printers defined (PCL and PDF) and that PDF is the default. The options in the PRTType:PDF control group define the settings for the PDF Print Driver.

```
< Printers >
  PRTType = PCL
  PRTType = PDF
< Printer >
  PRTType = PDF
< PRTType:PDF >
  Device           = E:\TEST.PDF
  Bookmark         = Yes,Page
  DownloadFonts    = No,Enabled
  Module           = PDFW32
  PageNumbers      = Yes
  PrintFunc        = PDFPrint
  SendOverlays     = No,Enabled
  SendColor        = Yes,Enabled
  PrintViewOnly    = No
  SplitText        = No
  SplitPercent     = 50
  Class            = PDF
```

```
DisplayMode      = UseOutlines
PaperSize        = 0
FontCompression= 2
```

NOTE: The PDF printer, called the PDF Print Driver, is a add-on for some configurations. For instance, it is included in Docupresentment (IDS) licenses, but not in PPS licenses. Contact your sales representative for more information.

How does the system determine which print tray to use?

The system looks for the paper tray selection in the POLFILE instead of the NAFILE.DAT. A slash (/) in the NAFILE.DAT file indicates A4, a C indicates a custom sized sheet of paper.

How do you collate forms?

If you want to collate a form set for one recipient batch, here is an example which will help you understand what to do. In this example, you have a form set which includes two copies of FORM1 and three copies of FORM2 and you want to collate the forms in this order:

- FORM1
- FORM1
- FORM2
- FORM2
- FORM2

Here is how to do it:

For single section forms, repeat the section in the form. If you need two copies, set up the section two times for that form. If you need three copies, set up the section three times, and so on. Make sure you set the copy count to 1 in the SETRCPTB.DAT file.

For multiple section forms, repeat the entire set of sections in the form. And, as described above, repeat as many times as you need for the copies.

How do you use the JDLRPage setting?

Suppose you have a three-page duplex form (printing on front, back, front), followed by a one page form as a front page form. The second form is printed on the back of the previous form if the JDLRPage setting was not remarked out. In other words:

With JDLRPage setting:

```
Form 1 (set to duplex): pg1 front, pg1 back, pg2 front
Form 2 (set as front): pg2 back
```

Without JDLRPage setting:

```
Form 1 (set to duplex): pg1 front, pg1 back, pg2 front
Form 2 (set as front): pg3 front
```

And, the JDLRPage setting was 0,5,EQ,X'FFFF26FFFF'

The key is that if you use...

```
JDLRPage = 0,5,EQ,X'FFFF26FFFF'
```

you must have your JSL set up so that it has matching RPAGE commands.

Can you dynamically choose the paper source?

The base system supports dynamic formatting, and will overflow to subsequent pages if required. Some users, however, use a different paper stock for second and subsequent pages. For example, suppose your company uses a color logo on page one and a black and white logo on subsequent pages. The content of the form set determines whether page two and subsequent pages are inserted.

In the base system, you cannot control the paper tray assignment of each section as upper, lower, 3 or 4, and so on, because the section could possibly print on page one or on page two.

The base system lets you select the paper tray at the section level per page. You can specify tray selection (upper tray, lower tray, tray 3, or 4) for each section. Once you select the tray, the system will always print the section on paper from that tray.

To handle a situation where you want an section to print from tray 1 in some situations and from tray 2 in other situations, you will need custom code. Contact the Professional Services Group.

Can you take print files created on a PC and upload them for printing on mainframe printers?

Yes, assuming the print files were created for Metacode or AFP printers. Here's how:

For AFP printers

- 1** Run the GenPrint program on the PC to generate an AFP print stream.
- 2** Allocate a sequential dataset with RECFM=VBM, LRECL=8205, BLKSIZE=23000.
- 3** Upload the AFP print stream (in binary) to the sequential dataset allocated in step 2.
- 4** Run the AFP2MVSX utility (look at sample in FSI.V102.JCLLIB) with the dataset in step 2 as input – in other words, put the dataset into DD:RSCOS2 in the AFP2MVSX JCL. This utility converts the AFP print stream from PC to MVS format and writes to the dataset specified by DD:RSCMVS in the AFP2MVSX JCL.
- 5** Run the GENERAFP job (see the sample in FSI.V102.JCLLIB) to send the MVS format AFP print stream from step 4 (the dataset in DD:RSCMVS) to the printer.

For Xerox Metacode printers

- 1** Generate the Metacode print stream on the PC in Xerox BARR format by including this INI option:

```
< PrtType:XER >
    OutMode = BARR
```

- 2** Upload the print stream into an MVS data set with DCB characteristics. Here is an example:

```
DSORG: PS
RECFM: VBM
LRECL: 259 (higher is ok)
BLKSIZE: 23000 (high is ok)
```

Be sure your fonts and logos (as IMG or FNT files) are loaded on the Xerox printer. You might want to use a dataset name like:

```
FSI.V101.DMS1.GENPRINT.XERBAT1.FROMPC
```

Where *FROMPC* identifies the file as one that was uploaded into from the PC. Make sure you upload the dataset using binary mode. Otherwise, the print stream is converted from ASCII to EBCDIC. If you are using FTP, set the transfer mode to binary mode by specifying *Binary*.

- 3** Run the BARR2MVS utility to convert the print stream from BARR format to a format that the MVS and JES2 will be able to use. See the BARR2MVSX member in JCLLIB for sample JCL to run BARR2MVS. This job then...
 - Takes the uploaded dataset (such as FSI.V101.DMS1.GENPRINT.XERBAT1.FROMPC)
 - Removes the BARR information
 - Places the print-ready dataset into another dataset (such as FSI.V101.DMS1.GENPRINT.XERBAT1)

Can the system print a postage-paid return address on a form, such as on the back side of Form W-9?

Assuming the Postal Service has no restrictions on reproducing the section, you can simply scan the Postage Paid emblem in as a logo. Then create text labels or text areas for the return address.

What options do I set to print in color?

You need to add the following setting to your FSISYS.INI file:

```
< PrtType:PCL >  
    SendColor = Yes,Enabled
```

Other things to check:

- Make sure certain elements in the FAP file have been set to print in color, such as text, shaded areas, and so on.
- Make sure that the FAPs have been precompiled with the /C option on the FAP2MET utility.

When pulling paper stock from trays 3 and 4 on a Xerox printer, why do trays 3 and 4 default to tray 1?

By default, Metacode output usually specifies the main tray for pages that use tray 1. The AUX tray is specified for all other trays. If you have named trays in your JSL, specify these named trays in your options. An example is shown below:

```
Tray1 = ONE1  
Tray2 = TWO2  
Tray3 = THREE3  
Tray4 = FOUR4
```

For more information, see the Setting Up Printers chapter in the [Documaker Server System Guide](#).

Why does Acrobat Reader only display the first transaction in a PDF file which contains multiple transactions?

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.

If you do not split transactions into separate PDF files, you 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 that was processed. Since the last transaction can look a lot like the first PDF file, Acrobat may be fooled into displaying the first transaction. It will not, however, display the other transactions included in the file.

For PDF output, the GenPrint program should not write all the transactions into one file. Each transaction should be created as a separate PDF file by using the MultiFilePrint callback function. See the [Printers Reference](#) for more information. You must configure your FSISYS.INI file as shown here:

```
< Print >
  CallbackFunc = MultiFilePrint
  MultiFileLog = {full path and file name of the log file{optional}}
< RunMode >
  DownloadFAP = Yes
  LoadFAPBitmap = Yes
  CheckNextRecip = No
< Printer >
  PrtType = PDF
< PrtType:PDF >
  Device = c:\test.pdf
  DownloadFonts = No, Disabled
  LanguageLevel = Level2
  Module = PDFW32
  PageNumbers = Yes
  PrintFunc = PDFPrint
  SendOverlays = No, Disabled
  SendColor = Yes, Enabled
< Printer1 >
  Port = ..\DMS1\DATA\AAAA####.PDF
```

Where *AAAA* is the four-character print file description and *####* is a four-character sequence number.

NOTE: The CheckNextRecip option enables recipient batch records for the same transaction that occur in sequence in a recipient batch file to be queued and printed in one call to the print driver. This enables the transaction to be loaded only once and then each recipient is processed in turn inside the print driver.

For instance, you would set this option to No when you want a separate file for each recipient when using the PDF, XML, HTML, and RTF print drivers. With the option set to Yes, all the recipients for the same transaction in the same batch are written to a single output file.

If you set this option to Yes, some environments may see a marginal performance benefit. If you prefer to have this option enabled and have all recipients printed together, be sure you add both the option and the Yes setting into your INI file.

```
< RunMode >  
    CheckNextRecip = Yes
```

Otherwise, the system default (No) will govern the GenPrint program's behavior.

With the release of version 11.2, the default for this option is No. In prior releases, the default was Yes.

Why do background sections sometimes display incorrectly?

Typically, this occurs when the background section is not the first physical section on a page. In this situation, the display or print of the background section can obscure any previously displayed or printed section. Make sure the background section is the first section because the order in which the section appears on the page matters, especially with color sections.

How do I print out a list of all fonts available on my IBM 3130 printer?

The IBM 3130 is a 30 page-per-minute, cut-sheet, AFP printer. Most companies use an IBM program called Print Services Facility (PSF) to submit AFP print streams to an IBM printer. There are different versions of PSF for different operating systems. On z/OS (OS/390 or MVS), it is called PSF/MVS.

While there are some resident fonts on an IBM 3130 printer, most companies use PSF to make additional fonts available to the printer. When you set up PFS, you install AFP fonts and other resources into PSF. On MVS, the files are copied into PDSs (partitioned data sets). Later, when an AFP print job is submitted to PSF, it looks for the fonts and other resources required by the print stream. PSF downloads fonts and other resources to the printer before converting the AFP print stream into IPDS (Intelligent Printer Data Stream) and sending the IPDS to the printer.

As of this printing, this IBM web address contains documentation on AFP, IPDS, and PSF:

www.s390.ibm.com/bookmgr-cgi/bookmgr.cmd/Shelves/APSBKA20

How do you print using the short binding option and have the output print back to back instead of on separate sheets of paper?

To make a form print short bind, set your first section, or page, with the duplex option of short bind, and set your second page with the duplex option of back page. You may want to set the first page to *short* and subsequent pages to *rolling*. This makes it easier when some of the forms are conditionally triggered.

For example,

```
form1
  section1 - short
form2
  section2 - rolling(instead of back)
form3
  section3 - rolling(instead of short)
form4
  section4 - rolling(instead of back)
```

If all four forms are triggered, sections 1 and 2 print as short bind on the first page while sections 3 and 4 print as short bind on the second page.

If form2 was not triggered and rolling was used, section3 would appear on the back of the first page and section 4 would appear on the front of the second page.

If form2 was not triggered and back/short was used, the first page would only contain section1 and the second page would contain sections 3 and 4 in a short bind form.

Of course, if you wanted sections 3 and 4 to appear on the same piece of paper, the best options are to define section 3 as short binding and section 4 as back page.

Does the system support full color printing?

Printer support information can be found in the Printers Reference. Below is a list of supported printer languages and whether color is supported:

Printer Language	Color Support
AFP	AFP named color is supported.
Metacode	Only highlight color is supported. There is no full color Metacode printer.
PCL	Full color is supported
PostScript (level 2)	Full color is supported.

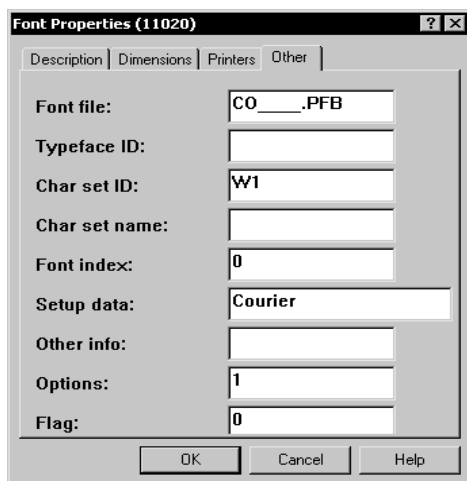
When do you set the DownloadFonts option to Yes?

When you cannot get the desired output by letting the system match a Documaker base font with one of the 14 Adobe internal fonts (see also [What are the 14 base fonts distributed with Acrobat Reader? on page 117](#)). Setting the DownloadFonts option to Yes lets the system override the default font substitution Adobe makes, letting you specify the exact font to use.

NOTE: Bar codes and logos require downloading fonts. There are no Adobe internal fonts that match bar codes and logos.

The following must be true when you set the DownloadFonts option to Yes:

- A TrueType (*.TTF) or a PostScript (*.PFB) font must be named in the Font File field on the Other tab of the Font Properties window in Font Manager.
- The Options field on the Other tab font ID must be set to 1 for the font ID.
- The font file specified on the Other tab is located in the directory specified in the FontLib path of the master resource library.



When you set the DownloadFonts option to Yes, for each font ID, the system...

- Checks the FXR for each font ID which has its Options field set to 1.
- If the Options field is set to 1, the system gets the name of the font from the Font File field on the Other tab.
- The system then looks for that font file in the FontLib path of the MRL.
- If found, the system embeds the font into the PDF file.

When do you set the DownloadFonts option to No?

Setting the DownloadFonts option to No increases speed and decreases the size of the PDF file. A smaller PDF file also transfers faster over the network and opens faster in a browser.

By setting the DownloadFonts option to No, you let the system use one of the 14 Adobe internal fonts (see also [What are the 14 base fonts distributed with Acrobat Reader? on page 117](#)) when it attempts to match one of Documaker's base fonts. In essence, you are trading accuracy for speed and performance, although a high level of quality can still be achieved with this option.

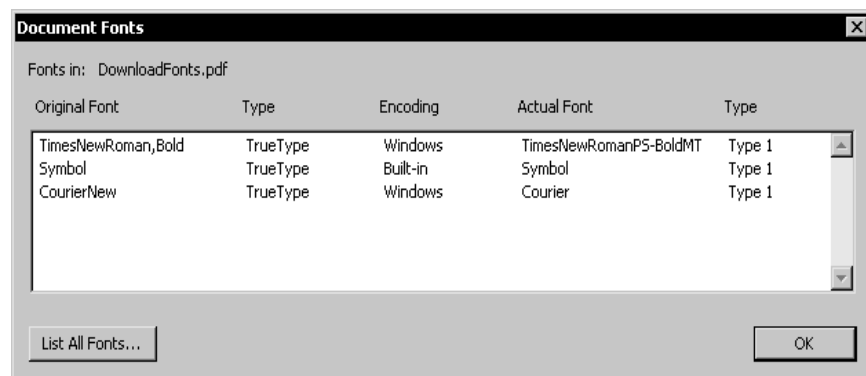
To determine which font to use, the system looks at the Setup Data field on the Other tab of the Font Properties window for the name of the Adobe internal font to use. If a match is not made, the system then uses the TypeFace field on the Description tab. If no match is made, the system then maps the font as indicated here:

- Proportional fonts to the Adobe Helvetica font (normal, bold, italic, or bold italic)
- Non-proportional fonts to the Adobe Courier font (normal, bold, italic, or bold italic)

The system then checks these fields to determine additional attributes, such as the fonts style (italic or upright) and stroke weight (bold or normal).

How do you find out which fonts are embedded in a PDF file?

To see what fonts are embedded in a PDF file, open the PDF in Acrobat Reader and choose the File, Document Properties, Fonts option (File, Document Info, Fonts in version 4.0 and earlier). Depending on the version of Acrobat Reader you are using, a window similar to the one shown here appears:



Can you produce a single PDF file that contains all the transactions in a batch?

Yes, but doing so is not recommended.

If you set the PDF Print Driver with GenPrint and *do not* use the MultiFilePrint callback function, the system will create multiple linearized PDF files appended into a single file. Acrobat, however, ignores the appended linearized PDF files that follow the first linearized PDF file.

If you use the PDF Print Driver with GenPrint and *do* use the MultiFilePrint callback function, the system creates a linearized PDF file for each transaction, which is the recommended way of using the PDF Print Driver.

NOTE: Linearized PDF files allow for page-at-a-time downloading which reduces the amount of time it takes to display a PDF file.

To create linearized PDF files, the PDF Print Driver has to have information about the entire print job and this information must be known at the beginning of the print job. The system, however, only has information about the current transaction, not the entire batch so omitting the MultiFilePrint callback function to make the system append the linearized PDF files accomplishes little.

There are, however, a number of third-party utilities that combine PDF files. You can use these tools to combine the individual transaction PDF files into a single PDF file. For more information on the products, search the Internet for the text “*combine PDF files*.”

NOTE: The Customizing PDF Outputs topic in the [Printers Reference](#) contains detailed examples of how to use GenPrint with the PDF Print Driver in both single- and multistep mode.

How do you produce a non-linearized PDF file?

Set the Linearize option to No, as shown here:

```
< PrtType:PDF >  
  Linearize = No
```

It takes longer to produce a linearized file and linearized files are slightly larger. Linearized PDF files load fast over the Internet. See [What are linearized PDF files? on page 118](#) for more information.

How do you add security features to PDF files?

Beginning with version 10.3, the PDF Print Driver lets you add security to the PDF files you create. For information on producing PDF files with security features, see the [Printers Reference](#).

NOTE: This feature was retrofitted to Documaker releases 10.1 and higher and IDS releases 1.6 and higher.

How do you create a PDF file that will disallow printing without requiring a password to open the PDF file?

To create a PDF file that cannot be printed, you must set up your INI file with the appropriate encryption information.

Use the PDFKEY utility to generate the encrypted passwords used in the security control group. This control group specifies where permissions, passwords, and encryption strength are set. For more information on this utility, see the [Utilities Reference](#).

NOTE: Permissions not explicitly denied are allowed.

For example, if you run the PDFKEY utility as shown here:

```
pdfkw32 /P=N
```

The utility will generate a PDF_Encryption control group that contains encryption information which prevents printing. Here is the output from the PDFKEY utility:

```
C:\> pdfkw32 /P=N

<PDF_Encryption>
KeyLength = 128
OwnerKey =
36451bd39d753b7c1d10922c28e6665aa4f3353fb0348b536893e3b1db5c579b
UserKey =
1d5993d363f2c3b3815f48417c5a0bb600000000000000000000000000000000
AllowPrinting = FALSE

C:\>
```

This control group and options will generate the encryption keys needed to produce a PDF file that cannot be printed and does not require a password to open the PDF file. You must copy the PDF_Encryption control group and options into your INI file.

NOTE: Because there were no password parameters specified (/U=user password or /O=owner password), the PDF_Encryption control group does not contain user or owner passwords.

Also, be sure to modify the PDF printer control group (usually PrtType:PDF) to contain the following Encrypt and SecurityGroup options:

```
< PrtType:PDF >
  Encrypt          = Yes
  SecurityGroup    = PDF_Encryption
  ...
  Module           = PDFW32
  PrintFunc        = PDFPrint
```

See the [Printers Reference](#) for more information on adding security settings to PDF files.

What causes character height changes in PDF files?

Prior to version 11.1, when using internal Acrobat fonts the PDF Print Driver varies the point size of each text string so that the width of the text string matches the original document. Since most fonts are not an exact match for the internal Acrobat fonts, this problem can occur whether you are using the fonts licensed with our software or someone else's.

Version 11.1 introduces a new way of using internal Acrobat fonts that maintains the original font height and string width characteristics.

What version of PDF does the PDF Print Driver produce?

When it creates a PDF file, Documaker's PDF Print Driver begins using the lowest possible PDF version (version 1.3). If features are found in the transaction that require a higher version of Acrobat, the PDF Print Driver increases the required version accordingly.

When new features are introduced to the PDF specification, older versions of Acrobat will not support them. If you open a PDF file that includes features not supported by your version of Acrobat (or Acrobat Reader), Acrobat warns you that some features may not be supported. Here are some examples:

If you want...	You need...
The PDF viewer to display the document title.	PDF version 1.4
To specify the default page scaling option for the Print window.	PDF version 1.6
To specify the default duplex options for the Print window.	PDF version 1.7
To use the PDF page size to select the paper tray when printing.	PDF version 1.7
To specify the range of pages to be printed.	PDF version 1.7
To specify the number of copies to print.	PDF version 1.7

The PDF version numbers correspond to the following versions of Acrobat and Acrobat Reader:

This version of Acrobat	Supports
4.0 and higher	PDF version 1.3
5.0 and higher	PDF version 1.4
6.0 and higher	PDF version 1.5
7.0 and higher	PDF version 1.6
8.0 and higher	PDF version 1.7

Why do black boxes print instead of text?

For instance, suppose you have this text label positioned on the left edge of the FAP file (left offset = 0):

Beneficiary

When printed, black boxes appear instead of the text. The black boxes occur because some of the characters in the italic font (Times New Roman) have a *negative left offset*. This means that the characters print to the left of where they would normally start. A negative left offset may be easier to understand by looking at these characters:

ef

Notice the bottom of the *f* goes under the *e*. This is an example of a negative left offset. Because it is positioned to the left of where it would normally start, the character is now positioned off the left edge of the overlay.

This kind of detailed character information is not stored in the FXR file so Studio has no way to know there may be a problem. You can, however, move the text labels in the FAP file to correct the problem.

How do you print in duplex on a Xerox PostScript printer?

Xerox PostScript printers do not have a Duplex Front command that forces the next page to print on the front side. A way to get around that limitation is to use the AddBlankPages DAL function.

NOTE: The AddBlankPages function was added as feature 1107 in version 10.2. This feature was also patched back to versions 10.0 and 10.1.

Use the AddBlankPages function to add dummy (blank) pages to a form set so each physical page has a front and back. This changes a simplex or mixed-plex form set into a fully duplexed form set.

For instance, you can use the AddBlankPages function to make it easier to add OMR marks, which are often printed on the back of simplex forms. You can also use it to create PDF files for mixed-plex form sets that print in a similar fashion on printers that support mixed-plex.

One way to use the AddBlankPages function is by using banner page processing in GenPrint. You specify a DAL script that runs at the start of each transaction. The DAL script calls the AddBlankPages function. This tells the GenPrint program to convert each transaction into a fully duplexed form set with blank pages added as needed.

Here is an example of the INI options you would need:

```
< Printer >
  EnableTransBanner = TRUE
  TransBannerBeginScript = PreBatch
< DALLibraries >
  LIB = BANNER
```

Here is an example of the BANNER.DAL script you would use:

```
BeginSub PreBatch
AddBlankPages()
EndSub
```

How do you make page numbers appear in RTF files?

In Documaker, if the page numbers do not appear in output from the RTF print driver, make sure this option is included in the FSYSYS.INI file:

```
< PrtType:RTF >
  PageNumbers = Yes
```

How do you print envelopes with the PCL Driver?

The system lets you include additional PCL printer commands which you can use to override both the paper size and the tray selection. For instance, you can use this technique to get an envelope feeder to work.

Just include a paper (page) size PCL command along with the paper tray PCL command. When you include a PCL paper (page) size command, the system does not emit its own paper (page) size PCL command based on the form's page size. This lets you use a page size the system does not support.

For example, suppose you want to print on #10 business envelopes ($4\frac{1}{8}$ inch by $9\frac{1}{2}$ inch) using an optional envelope feeder on your PCL printer. The PCL command to select a paper (page) size for printing COM-10 (Business $4\frac{1}{8}$ x $9\frac{1}{2}$ inches) is shown here:

```
~&l81A
```

The PCL command to feed an envelope from an optional envelope feeder is shown here:

```
~&l6H
```

If your system contained a form for printing on an envelope and the form was specified to print from tray 4, you would use this INI setting:

```
< PrtType:PCL >
...
Tray4 = ~&l81A~&l6H
```

Because some characters are hard to distinguish, refer to this table for an explanation of the characters shown for the Tray4 field, in order:

Character	Description
~	A tilde
&	An ampersand
l	A lowercase <i>L</i>
8	The numeral eight (8)
1	The numeral one (1)
A	An uppercase <i>A</i>
~	A tilde
&	An ampersand
l	A lowercase <i>L</i>
6	The numeral six (6)
H	An uppercase <i>H</i>

When writing PCL commands as an INI setting, the tilde (~) is used as a substitute for the PCL escape character (x1B).

The PCL 5 Technical Reference manual contains information on PCL commands used to select paper trays and paper sizes. You can get a copy of the PCL 5 Technical Reference manual by going to www.hp.com and entering the phrase *PCL technical reference* in the search window.

NOTE: When printing envelopes, you may want to design your form (section) in landscape mode. When printing on PCL printers, there are unprintable margins on the left/right edge of 1/4 inch and top/bottom edge of 1/6 inch. These unprintable margins apply when printing envelopes. Remember to account for these unprintable margins when designing your form (section).

How do you generate PostScript files on z/OS?

You can generate PostScript output files on z/OS systems with an updated (version 11.0 or later) PSTLIB. Include these settings in your FSI SYS.INI file to print PostScript on z/OS:

```
< Printer >
  PrtType = PST
< PrtType:PST >
  Module = PSTW32
  Printfunc = PSTPrint
  SendOverlays = (Yes or No)
  SendColor = (Yes or No)
  DownloadFonts = (Yes or No)
```

For more information on these INI options, see Chapter 6, Setting Up Printers in the [Documaker Administration Guide](#).

What paper sizes are supported?

This table outlines the various paper sizes supported by the different print drivers for version 11.0 and higher.

The table includes information for the PDF, RTF, HTML, Metacode, PCL 5, PCL 6, GDI, PostScript, and AFP print drivers. The PDF, RTF, HTML, and Metacode print drivers support all paper sizes.

Paper size	PDF, RTF, HTML, and Metacode	PXL ¹	PCL ²	GDI ²	PST ³	AFP ⁴
US letter	X	X	X	X	X	X
US Legal	X	X	X	X	X	X
US executive	X	X	X	X	X	X
US ledger	X	X	X	X	X	X
US tabloid	X	Y	US letter	X	X	X
US statement	X	JIS B5	US executive	X	X	X
US folio	X	US legal	US legal	X	X	X
US fanfold	X	US ledger	US ledger	X	X	X
ISO 4A	X	Y	US letter	US letter	US letter	C
ISO 2A	X	Y	US letter	US letter	US letter	C
ISO A0	X	Y	US letter	US letter	X	C

Sizes marked with an *X* are fully supported by the corresponding driver.

Sizes marked with a *Y* are supported by sending the paper dimensions in millimeters to the printer.

Sizes that refer to another size substitute the referred size when *paper size matching* is turned on. If paper size matching is not turned on, the behavior depends upon the specific driver. To turn on paper size matching, use this INI option:

```
< PrtType:XXX >
    PaperSizeMatching = Yes
```

¹ When paper size matching is not turned on, the PCL 6 (PXL) driver sends the paper dimensions in millimeters to the printer.

² When paper size matching is not turned on, these drivers substitute US letter.

³ This driver does not use paper size matching. US letter is substituted for the unsupported paper sizes

⁴ Sizes marked with a *C* are supported, but are commented out of the AFP formdef source file called F1FMMST.DAT. See [Paper sizes for AFP printers on page 107](#) for more information.

Paper size	PDF, RTF, HTML, and Metacode	PXL ¹	PCL ²	GDI ²	PST ³	AFP ⁴
ISO A1	X	Y	US letter	US letter	X	C
ISO A2	X	Y	US letter	US letter	X	C
ISO A3	X	X	X	X	X	X
ISO A4	X	X	X	X	X	X
ISO A5	X	X	X	X	X	X
ISO A6	X	X	X	X	X	X
ISO A7	X	ISO A6	ISO C5	ISO A6	X	C
ISO A8	X	ISO A6	ISO C5	ISO A6	X	C
ISO A9	X	ISO A6	ISO C5	ISO A6	X	C
ISO A10	X	ISO A6	ISO C5	ISO A6	X	C
ISO 4B	X	Y	US letter	US letter	US letter	C
ISO 2B	X	Y	US letter	US letter	US letter	C
ISO B0	X	Y	US letter	US letter	X	C
ISO B1	X	Y	US letter	US letter	X	C
ISO B2	X	Y	US letter	US letter	X	C
ISO B3	X	Y	US letter	US letter	X	C
ISO B4	X	JIS B4	US ledger	X	X	X
ISO B5	X	JIS B5	X	X	X	X

Sizes marked with an *X* are fully supported by the corresponding driver.

Sizes marked with a *Y* are supported by sending the paper dimensions in millimeters to the printer.

Sizes that refer to another size substitute the referred size when *paper size matching* is turned on. If paper size matching is not turned on, the behavior depends upon the specific driver. To turn on paper size matching, use this INI option:

```
< PrtType:XXX >
    PaperSizeMatching = Yes
```

¹ When paper size matching is not turned on, the PCL 6 (PXL) driver sends the paper dimensions in millimeters to the printer.

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⁴ Sizes marked with a *C* are supported, but are commented out of the AFP formdef source file called F1FMMST.DAT. See [Paper sizes for AFP printers on page 107](#) for more information.

Paper size	PDF, RTF, HTML, and Metacode	PXL ¹	PCL ²	GDI ²	PST ³	AFP ⁴
ISO B6	X	JIS B6	ISO C5	X	X	X
ISO B7	X	ISO A6	ISO C5	ISO A6	X	C
ISO B8	X	ISO A6	ISO C5	ISO A6	X	C
ISO B9	X	ISO A6	ISO C5	ISO A6	X	C
ISO B10	X	ISO A6	ISO C5	ISO A6	X	C
ISO C0	X	Y	US letter	US letter	X	C
ISO C1	X	Y	US letter	US letter	X	C
ISO C2	X	Y	US letter	US letter	X	C
ISO C3	X	Y	US letter	X	X	C
ISO C4	X	JIS B4	US ledger	X	X	C
ISO C5	X	X	X	X	X	C
ISO C6	X	JIS B6	ISO C5	X	X	C
ISO C7	X	ISO A6	ISO C5	ISO A6	X	C
ISO C8	X	ISO A6	ISO C5	ISO A6	US letter	C
ISO C9	X	ISO A6	ISO C5	ISO A6	US letter	C
ISO C10	X	ISO A6	ISO C5	ISO A6	US letter	C
ISO DL	X	X	X	X	X	X
JIS B0	X	Y	US letter	US letter	X	C

Sizes marked with an *X* are fully supported by the corresponding driver.

Sizes marked with a *Y* are supported by sending the paper dimensions in millimeters to the printer.

Sizes that refer to another size substitute the referred size when *paper size matching* is turned on. If paper size matching is not turned on, the behavior depends upon the specific driver. To turn on paper size matching, use this INI option:

```
< PrtType:XXX >
    PaperSizeMatching = Yes
```

¹ When paper size matching is not turned on, the PCL 6 (PXL) driver sends the paper dimensions in millimeters to the printer.

² When paper size matching is not turned on, these drivers substitute US letter.

³ This driver does not use paper size matching. US letter is substituted for the unsupported paper sizes

⁴ Sizes marked with a *C* are supported, but are commented out of the AFP formdef source file called F1FMMST.DAT. See [Paper sizes for AFP printers on page 107](#) for more information.

Paper size	PDF, RTF, HTML, and Metacode	PXL ¹	PCL ²	GDI ²	PST ³	AFP ⁴
JIS B1	X	Y	US letter	US letter	X	C
JIS B2	X	Y	US letter	US letter	X	C
JIS B3	X	Y	US letter	US letter	X	C
JIS B4	X	X	X	US fanfold	X	X
JIS B5	X	X	X	X	X	X
JIS B6	X	X	X	X	X	X
JIS B7	X	ISO A6	ISO C5	ISO A6	X	C
JIS B8	X	ISO A6	ISO C5	ISO A6	X	C
JIS B9	X	ISO A6	ISO C5	ISO A6	X	C
JIS B10	X	ISO A6	ISO C5	ISO A6	X	C

Sizes marked with an *X* are fully supported by the corresponding driver.

Sizes marked with a *Y* are supported by sending the paper dimensions in millimeters to the printer.

Sizes that refer to another size substitute the referred size when *paper size matching* is turned on. If paper size matching is not turned on, the behavior depends upon the specific driver. To turn on paper size matching, use this INI option:

```
< PrtType:XXX >
    PaperSizeMatching = Yes
```

¹ When paper size matching is not turned on, the PCL 6 (PXL) driver sends the paper dimensions in millimeters to the printer.

² When paper size matching is not turned on, these drivers substitute US letter.

³ This driver does not use paper size matching. US letter is substituted for the unsupported paper sizes

⁴ Sizes marked with a *C* are supported, but are commented out of the AFP formdef source file called F1FMMST.DAT. See [Paper sizes for AFP printers on page 107](#) for more information.

Paper sizes for AFP printers

The AFP formdef source file (F1FMMST.DAT) contains support for all paper sizes marked with either an *X* or a *C* in the preceding table. Since this file contains support for so many paper sizes, its size could affect printer performance. To limit the effect, all but the following paper sizes are commented out in the file:

- Letter
- Legal
- Executive
- Ledger
- Tabloid
- Statement

- Folio
- Fanfold
- ISO A3
- ISO A4
- ISO A5
- ISO A6
- ISO B4
- ISO B5
- ISO B6
- ISO DL
- JIS B4
- JIS B5
- JIS B6

The commented source line begins with an asterisk (*). To add support for another paper size, you open the F1FMMST.DAT file and delete the asterisk at the beginning of each line that references the paper size you want to add.

Because the AFP formdef is composed on medium map names that specify page orientation, paper size, tray selection, and duplex settings, there are 31 groups of medium map settings. Each of these groups contains the 57 possible paper sizes. So, for each paper size you add, there are 31 sources lines you must *uncomment* to fully support a paper size for all orientations, trays, and duplex settings.

After you uncomment the lines that reference the paper size you want to add, run the AFPFMDEF utility to rebuild your AFP formdef file with the new information. For more information on this utility, see the [Utilities Reference](#).

Can you add Windows fonts to the FXR?

Most of these fonts are not distributed with Documaker so you must purchase a separate license from the company that owns the font. Windows fonts are licensed by Microsoft and other companies. Without a proper license, you cannot convert Windows fonts into printer fonts for PCL, AFP, or Metacode. Furthermore, you cannot distribute the Windows fonts with your application.

Oracle Insurance has licensed fonts that are equivalent to Arial (called Albany), Arial Narrow, Arial Black, and Wingdings (called DocuDings). Beginning with version 10.3 (REL103.FXR), Documaker font cross-reference (FXR) files include these fonts. These fonts are similar in appearance to the corresponding Windows fonts and have the same character width attributes.

Other Windows fonts, such as Tahoma, Verdana, Georgia, Comic Sans MS, Microsoft Sans Serif, Nina, Webdings, and Trebuchet MS, must be licensed from the Ascender Corporation.

For information about licensing and embedding specific Windows fonts, open Control Panel and choose fonts. Highlight the font and choose the File, Properties option.

How did Metacode output change from 10.1 to 11.0?

If you compare RPEX1 print streams produced using 10.1 and 11.0 (current patch levels), you will note these changes in Metacode output:

- When multiple logos appear on a page and printing using IMG files instead of FNT files (ImgOpt=Yes):

- Version 10.1 issues consecutive DJDE IMAGE commands with the last DJDE IMAGE terminated with an END parameter.

```
@@@DJDE IMAGE=(Q1DLOG,3019 DOTS,56 DOTS),;
@@@DJDE IMAGE=(Q1DLOG,850 DOTS,56 DOTS),END;
```

- Version 11.0 issues each DJDE IMAGE terminated with an END parameter and separates DJDE IMAGE commands with some nonprintable text.

```
@@@DJDE IMAGE=(Q1DLOG,3019 DOTS,56 DOTS),END;
.2.....BLANK TEXT.
@@@DJDE IMAGE=(Q1DLOG,850 DOTS,56 DOTS),END;
```

- When printing charts or inline graphics logos on a page

- Version 10.1 issues one or more DJDE IMAGE commands for the number of charts on a page (with the last DJDE IMAGE terminated with an END parameter) followed by some nonprintable text followed by the DJDE GRAPHIC commands for the each chart.

```
@@@DJDE IMAGE=( XXXX1,661 DOTS,203 DOTS,T,2),;
@@@DJDE IMAGE=( XXXX2,655 DOTS,1228 DOTS,T,2),;
@@@DJDE IMAGE=( XXXX3,1564 DOTS,181 DOTS,T,2),;
@@@DJDE IMAGE=( XXXX4,1566 DOTS,1267 DOTS,T,2),END;
.2.....BLANK TEXT.
@@@DJDE GRAPHIC=XXXX1,END;
(graphic data)
@@@DJDE GRAPHIC=XXXX2,END;
(graphic data)
@@@DJDE GRAPHIC=XXXX3,END;
(graphic data)
@@@DJDE GRAPHIC=XXXX4,END;
(graphic data)
```

- Version 11.0 issues a DJDE GRAPHIC command with positioning information for each chart (essentially combining DJDE IMAGE and DJDE GRAPHIC commands into a single DJDE GRAPHIC command).

```
@@@DJDE GRAPHIC=( XXXX1,661 DOTS,203 DOTS,2),END;
(graphic data)
@@@DJDE GRAPHIC=( XXXX2,655 DOTS,1228 DOTS,2),END;
(graphic data)
@@@DJDE GRAPHIC=( XXXX3,1564 DOTS,181 DOTS,2),END;
(graphic data)
@@@DJDE GRAPHIC=( XXXX4,1566 DOTS,1267 DOTS,2),END;
(graphic data)
```

Both of these changes make Documaker's Metacode output more compatible with Documerge.

NOTE: If you compare your own 10.1 and 11.0 output, make sure the NAFILE.DAT files produced are effectively identical. There will be some differences in the SIZE parameter on the NA line (for example, 10.1 SIZE=C, 11.0 SIZE=3360x18600). There may be additional values in the OPT parameter. The key is that the same sections are triggered with the same field data so that you can compare print streams.

How do you assign one recipient batch to multiple printers?

You can use INI options like the ones shown below to assign one recipient batch to multiple printers instead of having one batch for every printer.

NOTE: This capability was added via feature 1632 which was released in version 11.1.

```
< Print_Batches >
  Batch1    = .\data\BATC11.bch
  AFPBatch  = .\data\BATC11.bch
  HTMBatch  = .\data\BATC11.bch
  PDFBatch  = .\data\BATC11.bch
  PSTBatch  = .\data\BATC11.bch
  RTFBatch  = .\data\BATC11.bch
< Batch1 >
  Printer = Printer1
< AFPBatch >
  Printer = Printer2
< HTMBatch >
  Printer = Printer3
< PDFBatch >
  Printer = Printer4
< PSTBatch >
  Printer = Printer5
< RTFatch >
  Printer = Printer6
< PrinterInfo >
  Printer = Printer1
  Printer = Printer2
  Printer = Printer3
  Printer = Printer4
  Printer = Printer5
  Printer = Printer6
< Printer1 >
  Port = .\print\pclbat1.pcl
  Callbackfunc =
< Printer2 >
  Port = .\print\afpmat2.afp
  PrtType = AFP
  Callbackfunc =
```

```
< Printer3 >  
    Port = ~DALRUN namehtm.dal  
    PrtType = HTML  
< Printer4 >  
    Port = ~DALRUN namepdf.dal  
    PrtType = PDF  
< Printer5 >  
    Port = .\print\pstbat1.pst  
    PrtType = PST  
    Callbackfunc =  
< Printer6 >  
    Port = ~DALRUN namertf.dal  
    PrtType = RTF
```

z/OS ISSUES

What is the maximum logical record length of a file?

The maximum logical record length (LRECL) of a file on z/OS is 32,760 bytes. This maximum is set by IBM and applies to all files, including an extract file.

How do you bypass the message translation process?

On MVS, if you set the following INI option the system makes error translation a manual process. This means you must run the TRANSLAT utility. The system will not do the translation automatically when one of the system programs finish.

```
< Control >  
ImmediateTranslate = No
```

Also, since you are running the programs as separate jobs, in separate directories, you should delete the MESSAGE.DAT file each time before you run the program. Deleting only the ERRFILE and LOGFILE will not help.

For information about the TRANSLAT utility, see the [Utilities Reference](#).

DOCUPRESENTMENT ISSUES

On what platforms can you run Docupresentment (IDS)?

You can run IDS on Windows XP, Windows 2003 Server, Solaris, Linux, and AIX. For more information, see [Docupresentment Requirements on page 11](#).

What version of Documaker works with my version of IDS?

The following table can serve as a guideline to the various combinations:

For this version of Documaker	You should have this IDS version
11.2	1.8 or 2.x
11.3	1.8 or 2.x
11.4	1.8 or 2.x
11.5	1.8 or 2.x
12.0	1.8 or 2.x

To some extent, the version you need depends on how you have implemented Documaker and IDS. If you have any questions, contact Support.

Can IDS access a Documaker archive on a different platform?

For example, if the Documaker system runs on a z/OS system and stores legacy Documaker archives in a DB2 database, can you retrieve the archived data from IDS running on a Windows system?

Yes. The legacy Documaker archive system has two DBLib methods for handling this. You can use...

- The native DB2 DBLib driver. This driver can use either the thick DB2 access or the thinner CAE support.
- A DBLib driver for access via ODBC-to-DB2.

Another example is of IDS accessing a legacy Documaker archive in Oracle on a UNIX platform via the DBLib ODBC driver to retrieve or archive data.

Do I have to restart the system when I make changes to the configuration or MRL?

If you change a Docupresentment configuration file (DAP.INI, DOCSERV.XML, LOGCONF.XML, and so on) IDS automatically restarts. If you change a resource in the MRL, you must restart Docupresentment.

The same is true for Document Factory and Documaker Interactive.

Why does IDS use a message bus?

Here are some of the reasons IDS uses a message bus:

- A message bus is a modern solution that enables a potentially unlimited number of clients to be loosely coupled with a lesser number of servers. The alternative would be to have as many servers as there are clients. This is usually not an effective use of resources on the server side.

Other servers, like Microsoft IIS, IBM WebSphere and Apache HTTP Server, are all using a message bus to resolve this resource problem since there is no one-to-one connection from client to server. When a web client (web browser) connects to the web server the server does not automatically start a new thread or process; it has a pool of these with a maximum size. Once the maximum size is reached, the server queues up the request and waits for the next available thread or process to serve it.

- A message bus lets IDS do the following (neither of which is possible without using a message bus):
 - Fire-and-forget request. Clients do not have to wait for the result from a server; they can simply send the request and move on to other business. There is no need for the server to be up or available. When the server becomes available the request will be served.
 - Guaranteed delivery request. The server responds to a client request regardless of whether the server was available when the request was submitted. The client may have to wait for a response but the server will send it.
- IDS uses industry standard messaging systems like IBM WebSphere MQ (former MQSeries) or Microsoft MSMQ. More message bus systems are supported in later versions of the server.

Most customers already have the messaging system in place so there is no additional cost associated with a message bus system. For example, MSMQ is part of Windows 2000 so in a Windows shop one of the message bus systems is readily available.

- Using a standard message bus system lets IDS take advantage of failover, load balancing, and clustering in products that are already installed without having to develop redundant or competitive systems.
- A standard message bus system and industry standard SOAP protocol promotes cross-platform deployment with clients on one platform and server/servers on another. For example, clients on Windows can talk to servers on UNIX.

Can you use JDBC to access Documaker archives stored on an AIX machine with DB2?

No, you cannot use Java Database Connectivity to access Documaker archives via IDS.

You can, however, use unixODBC instead of Documaker's native DB2 DBHandler. To do so, you must install unixODBC and follow IBM's instructions for creating the DSO from the static library that comes with the DB2 client software on AIX to set up the DB2 client ODBC driver for unixODBC. This would let you use Documaker's ODBC DBHandler. And there may be solutions from other vendors which you can use to establish an ODBC-JDBC bridge. This would let you use JDBC indirectly through unixODBC.

What bridges are used to view GenArc files archived in Documanager?

If you are using Documanager to archive (DPA) files created by the GenArc program and you then want to view those files with IDS, you can use the Documaker Bridge or the Documanager Bridge. See the [Internet Document Server Guide](#) for more information.

The typical method of viewing is to convert to PDF format and view using Adobe Acrobat Reader.

How does the IDS SOAP message layout affect my application or code?

It does not affect any application that uses IDS APIs to talk to IDS. When APIs are used, the message layout is transparent to the application and to the IDS rules.

Can you send files through IDS queues when default queues are in use?

Yes. You can send and receive files. Keep in mind, however, that the default queues have a message size limit of 64K. The attached file and the message and all attachment variables cannot exceed 64K.

While the default xBase queues will scale Ok, it's better to use MQSeries queues. The biggest problem with the default queue is that the attachment is limited to 64K, which is not large enough to send large extract files (like XML) through the queue or receive back a PDF file.

IDS includes a TCP/IP-based queue option that scales better than xBase and does not have the file size limitation. It is not the best method for production use, however, because TCP/IP is not a guaranteed delivery mechanism. It might be Ok for web queries that are not mission critical or if the web server and IDS are running on the same computer.

We recommend you use MQSeries or MSMQ. IDS 2.x also supports JMS which lets you integrate with any messaging system that offers a JMS interface.

How does IDS get a form's effective date?

Documaker Bridge rules expect the attachment variable ARCEFFECTIVEDATE in the format YYYYMMDD to specify the effective date of the transaction. Effective date is important if library manager is used to store versions of forms. Here is an example how this attachment variable can be passed in via a CGI interface when using the sample Documaker Bridge CGI retrieval pages.

When using Library manager with IDS, include the following attachment variable on the RECIPS.HTM page so IDS can compare the form's effective date to the archived run date when you retrieve a form using Library manager.

```
<FORM METHOD=POST ACTION="#EXENAME, #">
<INPUT NAME="USERID" VALUE="#USERID,%s#" TYPE="HIDDEN">
<INPUT NAME="DOCTYPE" VALUE="#DOCTYPE,%s#" TYPE="HIDDEN">
<INPUT NAME="REQTYPE" VALUE="PRT" TYPE="HIDDEN">
<INPUT NAME="CONFIG" VALUE="#CONFIG,%s#" TYPE="HIDDEN">
<INPUT NAME="ARCKEY" VALUE="#ARCKEY,%s#" TYPE="HIDDEN">
<INPUT NAME="Company" VALUE="#Company,%s#" TYPE="HIDDEN">
<INPUT NAME="Lob" VALUE="#Lob,%s#" TYPE="HIDDEN">
<INPUT NAME="PolicyNum" VALUE="#PolicyNum,%s#" TYPE="HIDDEN">
<INPUT NAME="RunDate" VALUE="#RunDate,%s#" TYPE="HIDDEN">
<INPUT NAME="PRINTPATH" VALUE="#PRINTPATH,%s#" TYPE="HIDDEN">
<INPUT NAME="ARCEFFECTIVEDATE" VALUE="#RunDate,%s#" TYPE="HIDDEN">
```

Why do point sizes change when using Acrobat fonts?

When you use internal Acrobat fonts in producing your PDF file, the PDF Print Driver maps your printer fonts from the FXR file to internal Acrobat fonts. Because printer fonts in FXR file differ from the internal Acrobat fonts, the PDF Print Driver adjusts the point size of the font to produce each piece of text so that the total character width of the text in the PDF file matches the character width of the text as it would have printed using the printer font. This may cause the height of text to vary slightly. This is done to maintain the proper character width of the text.

The following example may help to understand the issue. The two sentences below represent the text from a FAP file and that same text, rendered using an internal Acrobat font.

This is Arial 24 point.
This is Arial 24 point.

The first line uses an Arial 24 point font. The second line uses a 21 point Verdana font. If your system has both screen fonts installed, the periods at the end of each sentence will appear line up together (or nearly so).

While the two fonts are similar in design, you can see that the heights and widths of the characters are different. For this particular sentence, a 21 point Verdana font will approximate the width of the same text when using an Arial 24 point font.

Similarly, our PDF Print Driver determines the point size of the internal Acrobat font to use such that the total width of the text string is identical to the total width of the text string in the original form (FAP file).

If higher fidelity is required, you can embed a PostScript or TrueType font that has the exact metrics of the original printer font used in the FXR file. This creates a larger PDF file and a higher fidelity document.

Consider the alternatives and decide which approach best meets your needs — using internal Acrobat fonts (less fidelity, smaller file size) vs. embedded fonts (high fidelity, larger file size).

Can you print banner pages using the PDF Print Driver?

No. You can only print banner pages with the standard print drivers such as AFP, Metacode, PCL, and PostScript.

What are the 14 base fonts distributed with Acrobat Reader?

Adobe includes the following fonts with Acrobat Reader. You do not have to embed these fonts in PDF files.

Fixed Pitch Fonts	Proportional Fonts
Courier	Helvetica
Courier-Bold	Helvetica-Bold
Courier-Oblique	Helvetica-Oblique
Courier-BoldOblique	Helvetica-BoldOblique
	Times-Roman
	Times-Bold
	Times-Italic
	Times-BoldItalic
	Symbol
	ZapfDingbats

What is the maximum amount of queue data that can be handled by IDS?

For MQSeries and MSMQ the limitation is either set by the MSMQ or MQSeries setup or by a limit of physical memory (no real limit). For xBase queues, the limit is 64K.

What is the maximum amount of data that can be part of a message sent through the queue?

For MQSeries and MSMQ, the message size limitation is set by the MSMQ or MQSeries setup or limited to the amount of physical memory. For the default or *local* queue support provided with the product, the limit on message size is 64K. The HTTP-TCP/IP method also is limited by available memory.

Can the DSI APIs handle storing and retrieving binary data from a queue?

Yes. Any file can be passed, whether it is a binary or text file, this includes PDF and XML files. This functionality exists in the ATCSendFile and ATCReceiveFile rules. You can find more information about these rules in the [SDK Reference](#).

On the client side, APIs are available to send and receive files. These APIs are also documented in the SDK Reference.

What is the most efficient way to send input XML data to IDS, FTP, HTTP, and so on?

Passing file through a queue is the most efficient way, but you can also use a network. Simply mapping the drive and copying the file using the NETBIOS is the easiest way. If this is not possible, research the efficiency of different protocols (HTTP, FTP) on the Internet. Keep in mind the efficiency also depends on the network load.

Can I modify ATCLoadAttachment to take XML data from the queue as input to a REQTYPE?

If you submit a file to IDS via an attachment and load it into your XML parser and whatever tree you are going to use, you can do this with the current version of IDS.

Can you search for text in PDF files?

It depends on what type of file was used to create the PDF file. If you retrieve archived Documerge print streams or Documaker archives via Documanager and then use the PDF Print Driver in IDS, you will produce *PDF Normal* files. PDF Normal files can include both text and graphics and you can search for text in these files.

Documanager can also convert archived Documerge print streams into TIFF (bitmap) files. If you send the TIFF files to IDS, the PDF Print Driver produces *Image Only* PDF files. Since these TIFF files are bitmaps, there is no text to search.

What are linearized PDF files?

A *linearized* PDF file is a special format of a PDF file that makes viewing faster over the Internet. Linearized PDF files contain information that allow a byte-streaming server to download the PDF file one page at a time. If byte-streaming is disabled on the server or if the PDF file is not linearized, the entire PDF file must be downloaded before it can be viewed. All supported versions of IDS produce linearized PDF files. See [How do you produce a non-linearized PDF file? on page 98](#) for more information.

Does the PDF print driver support the generation of FDF files?

No. The FDF format is a PDF form file, which the print driver does not generate.

What causes this message to appear when displaying an ASP page?

```
dsicoapi::initqueue (0x80020009)
```

This error can occur if you do not have the Visual Basic runtime installed. To correct, install the runtime and shut down the computer on which IDS is running. Then restart the computer and IDS.

Can you prevent some pages in a PDF file from being printed?

Form sets are converted into PDF format and displayed using Acrobat Reader. Acrobat Reader is in control at that point and it will let users print anything they can display, unless restricted by Acrobat's security settings. These settings affect the entire document, not individual pages.

What causes the LBYRegisterFAPLibLoader to fail?

In default IDS installations, the INI files for the default libraries (such as UTILITY.INI or FINANCE.INI) ask IDS to look for the library manager file (MASTER.LBY) which relates to the Library manager that manages all FAP and LOG files.

In most libraries, IDS uses the FAP and LOG files independently. In many cases, the MASTER.LBY file is not even part of the library IDS is using.

The INI default settings occasionally cause a non-fatal error on the server side as IDS looks for the MASTER.LBY file. The error is not critical and will not make the server fail, but you can avoid the error by commenting out the following option from the INI file for your library (within your docserv directory). Here is an example:

```
< MasterResource >
XRFFile  = utilfxr
DefLib   = mstrres\utility\deflib\
FormLib  = mstrres\utility\forms\
LbyLib   = mstrres\utility\forms\
; FormFile = master.lby (comment out this line)
```

How do you use DSIQSET_INTIME and DSIQSET_OUTTIME?

The INTIME and OUTTIME fields are used by the queuing code. If the client does not set the values, they are set by the queuing code to the value of the C function time() — the number of seconds since midnight January 1, 1970, coordinated universal time.

Keep in mind if you try to use this to determine queue latency, the time is set by the client and by the server, if you are running on different PCs, you get different time values based on the local time on each PC. Also keep in mind that the time is measured in seconds, so you cannot get a better than 1 second resolution.

For the queue latency, the best approach is to use the Log file report (available in version 1.6 and greater) of total transaction time and the attachment variable TOTALTIMESPENT which includes the time in the queues as well as time on the server.

How do you hide user IDs and passwords in FSIUSER.INI files?

You can use the GetEnv variable in Windows environments. For instance, define these options in your FSIUSER.INI file:

```
< DBHandler:PO >
  Cabinet      = DMS1
  Domain       = docucorp
  UserID       = ~GetEnv UID
  Password     = ~GetEnv PWD
```

You can then define a user or system variable (or both) under the environment variables on Windows. Here is an example:

```
Variable Name:  UID
Variable Value: erm
```

This way, you are not only using secure variables, you also prevent users who do not have proper security from viewing your user ID and password, unless they already know your Windows user ID and password.

If you are using Documanager 6.0, you can remove the UserID and password options from the INI file so Documanager will use the Windows account currently in use. The settings below are useful, however, if you want to specify a different Windows account than the one currently in use.

```
< DBHandler:PO >
  Cabinet      = DMS1
  Domain       = docucorp
  UserID       = ~GetEnv UID
  Password     = ~GetEnv PWD
```

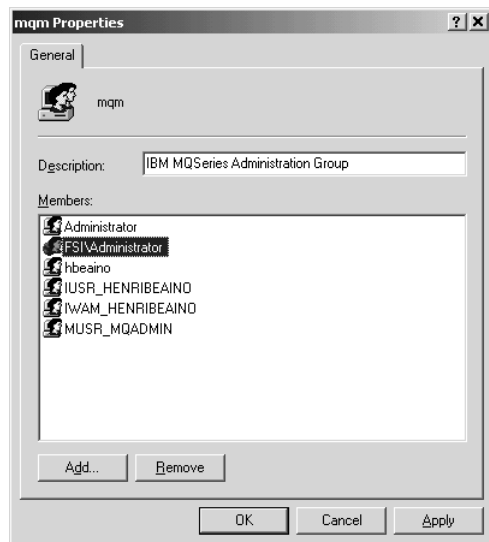
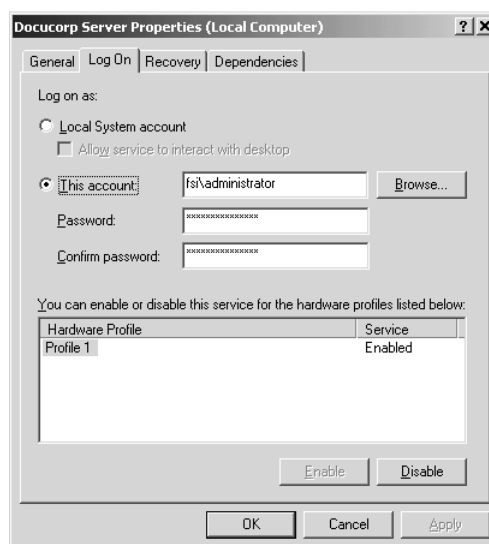
For instance, a user could be logged on locally, but want to use the company domain where the Documanager Server is housed for Windows accounts authentication. These UserID and Password settings would apply in that situation.

How do you make IDS start automatically after rebooting?

For instance, suppose you have installed IDS with MQSeries and you have set it up to start automatically as a service using the SCVINST.EXE utility. However, when the machine is rebooted, IDS fails to start automatically.

This can be explained two ways:

- IDS is set up to start using an account that is not a member of the MQM group (MQSeries administration group). To correct this, you need to specify an account for IDS to use during startup and then add that account to the MQM group. You can do this from the Windows Services Console and User Manager utility, respectively.



- When IDS tries to start, the MQSeries server is not ready to accept client connections. To prevent this from happening, specify that IDS is dependent on the MQSeries service when you create the IDS service. To do this, run the SVCINST utility as follows:

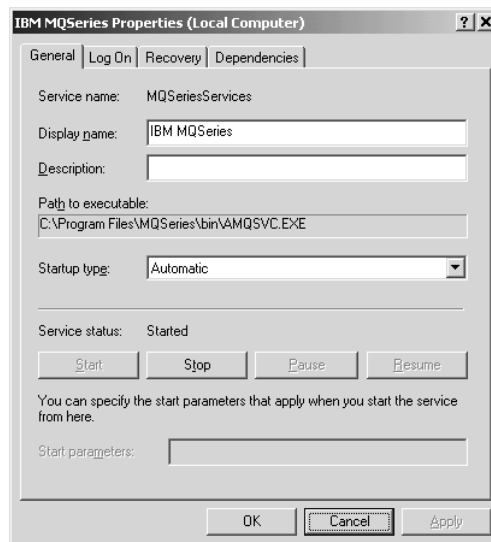
```
SVCINST -d=MQSeriesServices
```

The -d option is valid for any service dependency installation.

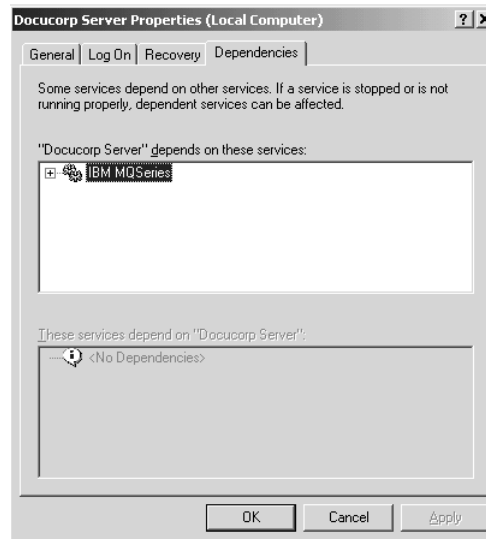
For example, MSMQ or any other service can also be specified. If multiple services are desired, the names should be provided in a comma delimited format. If the name of the service includes spaces use double quotes in the syntax. For example:

```
svcinst -d="MSMQ, (some other service)"
```

To find out the name of the MQSeries service on your operating system, go to the services console and check the service properties. Make sure you use the real Service name value and not the Display Name value:



When finished, you will have a newly-created IDS service dependent on the IBM MQSeries Service:



How do you retrieve DPA files via the Documanage Bridge?

For instance, suppose you are storing legacy Documaker archive (DPA files) in Documanage and you can retrieve the files using Documaker Workstation but not via the Documanage Bridge. Instead, you get this message:

N/A

If this happens, make sure the APPIDX.DFD file you are using with the GenArc program (or Documaker Workstation's archive/retrieval) includes the Config field, set up as shown here:

```
< Fields >
  FileName      = CONFIG
< Field:CONFIG >
  EXT_Type      = CHAR_ARRAY
  EXT_Length    = 10
  EXT_Precision = 0
  INT_Type      = CHAR_ARRAY
  INT_Length    = 10
  INT_Precision = 0
  Key           = Yes
  Required      = Yes
```

NOTE: The value of the Config option is written into the DPA file archived in Documanage. So, when you retrieve an archived item using the Documanage bridge, make sure the value of the Config field is the same in both your DAP.INI file and in the FSIUSER.INI file used by Documaker to archive the transaction.

For instance, if the FSIUSER.INI file includes this setting:

```
< Configurations >
```

```
Config = Batch Proc
```

You must set the Config option in the DAP.INI file to *Batch Proc* to retrieve the transaction using the Documanager bridge.

How do you set up debug and trace files?

For server side debugging, set this option in the DOCSERV.INI file to Yes to produce the DSRVTRC.LOG in the IDS server directory:

```
< DocSrvr >  
Debug = Yes
```

For client side debugging, set this option on the client side INI file (DOCCLNT.INI or DSI.INI) to produce the DCLNTTRC.LOG file in the IDS client directory. This option is only used by CGI clients—not DSI clients:

```
< DocClient >  
Debug = Yes
```

If you are using MQSeries, use this option in the DSI.INI or DOCSERV.INI file to trace the queues on the client and server sides and produce a *trace* file:

```
< DBHandler:MQSeries >  
Debug = Yes
```

If you are writing Visual Basic code to pass requests to IDS, add this statement in your function after creating the DSI instance handle to produce the DSICO.TRC file:

```
m_oDSI.TraceEnable = True
```

When using Visual Basic COM objects, the system usually uses the Windows system directory as the current directory (where DSICO.TRC will be written). You can define another path for the DSICO.TRC file by adding a statement similar to this:

```
oDSI.TracePath = "D:\TEMP"
```

Use this option in the DOCSERV.INI file to set the trace file name on the server:

```
< DocSrvr >  
TraceFile =
```

The default is DSRVTRC.LOG.

Use this option in the DOCCLNT.INI file to set the trace file name on the CGI client:

```
< DocClnt >  
Trace =
```

The default is DCLNTTRC.LOG.

Can you use IDS to run Documaker?

Yes. Starting with IDS 1.7, you can run Documaker. You must use IDS 1.8 to run Documaker 10.2 See the [Internet Document Server Guide](#) for more information.

How do you send your own SOAP message?

For instance, suppose you send a SOAP request to IDS to generate a PDF file on the MQ request queue and you receive the XML result containing the PDF on the MQ result queue. How do you determine which reply message corresponds to the request message?

If you have multiple clients sending requests to IDS, how do you make sure each client efficiently retrieves its own results from the MQ result queue?

Can you configure IDS to use dynamic MQ reply queues or, can clients filter MQ messages based on the MQ message ID and correlation ID?

There are several approaches you can take. For instance, you can...

- Use the APIs provided in the IDS SDK, including pure Java, COM, and so on. We recommend this method.
- Set the UNIQUE_ID inside the IDS message you send. This is the value IDS will set as an MQ message ID on the reply. In MQSeries, it is message ID. In MSMQ, it is correlation ID.
- Have the client application omit the UNIQUE_ID inside the message. In this case the message ID of a reply is the same as the message ID of the request message. The message ID is automatically assigned by MQSeries if needed. Keep in mind that you must have IDS version 1.8 to do this.

This approach is only valid for MQSeries. The client application has to retrieve the message ID of the message it sent and use this same message ID to find the reply message from IDS.

Where can you find documentation on installing MSMQ or MQSeries?

From Microsoft or IBM.

When using IDS to run Documaker, how do you set it up to use different CUSLIBs?

For instance, suppose you use IDS to run Documaker and generate transactions real-time and you have two different library configurations, each using a different CUSLIB. How do you set up IDS to use a single version of Documaker, but two different CUSLIBs?

Also, if for some reason, you need to have different versions or patch levels of Documaker per configuration and different CUSLIBs, how do you set it up?

Each separate configuration in the DAP.INI file specifies a separate configuration INI file, as shown here:

```
< Configurations >
  Config      = SAMPCO
  Config      = DMS1
< Config:SAMPCO >
  INIFile     = SAMPCO.INI
< Config:DMS1 >
  INIFile     = DMS1.INI
```

Each of the configuration INI files, such as SAMPCO.INI, includes the following options:

```
< RPDRunRP >
  Executable  = <\\sampco_drive\sampco_path\gendaw32.exe>
  Directory   = <\\sampco_drive\sampco_dir\>
  UserINI     = fsiuser.ini
```

Option	Description
Executable	The file name and path of the executable program to run. The file name is gendaw32.exe.
Directory	The directory in which you want to start when gendaw32.exe is executed.
UserINI	The name of FSIUSER.INI file you want gendaw32.exe to load.

If each configuration uses the same exact version (and patch level) of Documaker but has a different CUSLIB, then install the DLL files for Documaker in the directory specified in the system path, but place only the following files in the directory specified by the Executable option:

- gendaw32.exe
- cusw32.dll

If each configuration uses a different version or patch level of Documaker, then install all of the DLL files for each Documaker version, including each version's CUSLIB, in the directory specified by the Executable option for each configuration.

NOTE: Versions of the Documaker Bridge prior to version 11.0 only run one configuration or instance of Documaker at a time per IDS instance, so as messages swap to different configurations, IDS has to stop and restart the GenData program. For best performance prior to version 11.0, use separate instances of IDS and configure each to service a different queue for each configuration.

With version 11.0 and later, the Documaker Bridge can manage multiple configurations and Documaker instances simultaneously, so it does not have to stop and restart the GenData program if a configuration changes. It will route it to the correct live instance of the GenData program for that configuration and each can be a different version or patch level, or have a different CUSLIB.

Can you use a unique ID passed to IDS to name an output file?

For instance, if the MQ message being passed to IDS contains a unique ID request number, such as *WOI123456*, can you name the output file produced by Documaker using that ID number, for example: *WOI123456.pdf*?

To do this you have to submit the PRINTBATCHES input attachment variable and then include additional input attachment variables named PRINTBATCHESX for each output file where X denotes the print batch file number, as described under the input attachment variables section for the RPDCreateJob rule in [Using the Documaker Bridge](#):

Here is an example:

```
<VAR NAME="PRINTBATCHES">3</VAR>
<VAR NAME="PRINTBATCHES1">111.pdf</VAR>
<VAR NAME="PRINTBATCHES2">222.pdf</VAR>
<VAR NAME="PRINTBATCHES3">333.pdf</VAR>
```

The system will then use the values 111.pdf, 222.pdf, and 333.pdf for the output files.

What is the maximum length for an MQSeries message?

The maximum length of an MQSeries message written is 100 MB (104 857 600 bytes).

To support messages larger than 4MB (4194304 bytes), which is the default value for the Maximum Message Length property for a queue manager object, queue object or Server Connection channel object, you have to change the value for the Maximum Message Length property for each of them. In MQ Explorer you do this on the Extended tab of the properties for each object.

For a typical IDS setup, you would have to change the Maximum Message Length property for the queue manager, request queue, result queue, and the server connection channel used.

For IDS version 1.8 and earlier

In version 1.8 and earlier, use a Client Connection Channel that will bind to a Server Connection Channel object that has been modified to support messages larger than 4MB. You do this by creating a Client Connection Channel for the same queue manager that contains the Server Connection Channel that has been modified. When you create the Client Connection Channel, you must...

- Specify the same name as that of the Server Connection Channel
- Use the IP address of the box hosting the queue manager as the Connection Name — be sure to include the port number for the listener, such as 10.1.10.101(1416)
- Specify the same Maximum Message Length property value
- Leave the queue manager field blank

Then restart the queue manager for the changes to take effect.

Next, copy the AMQCLCHL.TAB file for the queue manager onto the computer running IDS. The typical location of this file would be the following subdirectory:

```
qmgrs\queueManagerName\@ipcc
```

under the MQSeries installation directory, where *queueManagerName* represents the name of the queue manager you created. Each queue manager will have its own tab file.

The AMQCLCHL.TAB file, or Channel Definition Table, contains the client connection information you need to connect to the queue manager.

Once you copy the tab file to the computer running IDS, specify these system environment variables:

Variable	This variable
MQCHLLIB	Points to the path where the tab file is located.
MQCHLTAB	Contains the name of the tab file.

Here is an example:

```
MQCHLLIB = c:\docserv\ibm\tabfile  
MQCHLTAB = AMQCLCHL.TAB
```

Then specify an asterisk (*) as the value for the queue manager in the server and client configuration files for IDS (you must also specify client mode). Here is an example:

```
< DBHandler:MQSeries >  
  Client      = Yes  
  QueueManager = *
```

IDS should then be able to process messages larger than 4MB.

NOTE: You cannot use the MQSeries system environment variable to process messages larger than 4MB because it has a 4MB message size limitation. Also, make sure you do not have an MQServer system environment variable defined because it will override the MQCHLLIB and MQCHLTAB system environment variables.

For IDS version 2.0 and higher

For IDS version 2.0 and higher, you just configure the queue manager, request queue, result queue, and Server Connection Channel to support messages larger than 4MB. Then restart the queue manager and specify the Server Connection Channel name along with all other MQ properties in the queue configuration section of the server and client configuration files for IDS.

It is a simpler configuration in IDS version 2.0 and higher because the Java code uses the MQEnvironment class which does not require any of the environment variables—it just needs to know the name of the Server Connection Channel that has been configured to support messages larger than 4MB.

How does Daylight Saving Time affect the system?

Our Java-based software relies on the underlying Java runtime for the correct time, so you will have to update your Java runtime. In addition to Java, system administrators and users will have to update their underlying operating systems — Windows, Linux, AIX, and so on.

NOTE: Windows XP has a Daylight Saving Time change as part of its regular updates. For information on other operating systems, check with your vendor.

Here are links to information on how you can update your Java runtime. In addition to runtime updates, both Sun and IBM offer time zone updating utilities that update your in-place installations of Java. You will find more information in these links:

For Sun Java runtimes

See *U.S. Daylight Saving Time Changes in 2007* at:

<http://java.sun.com/developer/technicalArticles/Intl/USDST/index.html>

For IBM Java runtimes

See *Changes to Daylight Saving Time (DST) affecting IBM SDKs for Java* at:

<http://www-1.ibm.com/support/docview.wss?uid=swg21249338>

or *Daylight Saving Time (DST) 2007 information for WebSphere Application Server* at:

<http://www-1.ibm.com/support/docview.wss?uid=swg21219396>

or *Updating DST information in IBM products on Solaris and HP-UX platforms* at:

<http://www-1.ibm.com/support/docview.wss?uid=swg21254470>

iDOCUMAKER, IPPS, AND WIP EDIT ISSUES

What are iPPS and iDocumaker?

iPPS is the Internet-enabled version of the Policy Production System. iDocumaker is the Internet version of Documaker Workstation. iPPS and iDocumaker let you import and export data, create, modify, print, and archive transactions via the Internet. iDocumaker also works with Documaker, via IDS.

iPPS is available in COM+. iDocumaker is available in J2EE. Both products work with IDS to handle the flow of information across the Internet and both products can use the WIP Edit plug-in.

NOTE: For more information on iPPS and iDocumaker, see [Using Web Enabled Solutions](#).

What is WIP Edit?

WIP Edit is a browser-based plug-in application that lets you edit transactions via the internet in a *what you see is what you get* (WYSIWYG) format. For instance, with WIP Edit you can go to a web site, log on, open a form selection screen to select lines of business, and so on, that determine which forms to complete. The forms and other files are sent to your workstation.

You see the forms via the WIP Edit plug-in which fits within the browser. You see and complete the forms exactly as you or a regulatory party designed them. If you are already familiar with the PPS or Documaker Workstation products, then using WIP Edit is the same, except that you are seeing the application displayed in a browser.

For more information on WIP Edit, see [Using Web-Enabled Solutions](#). For licensing information, contact your Sales representative.

NOTE: If you are using WIP Edit version 11.0, there is a known conflict with Outlook that can prevent the Save on Exit option from working. To avoid any potential problems, be sure to click Save before exiting. This problem does not affect later versions of WIP Edit which include all available patches.

Can you configure WIP Edit?

You can configure WIP Edit using the iDocumaker's global.xml file. For more information on this file, see [Using Web-Enabled Solutions](#).

Can you install and run WIP Edit from a network drive?

Yes. You can install and run the WIP Edit plug-in from either a local or network drive.

How can you hide DLL load errors?

You can use the ShowLoadDLLError option when you have custom edit hooks set up in FAP files but some users do not have the applicable custom DLL files. For example, you can use this option when a master resource library (MRL) uses custom hooks but a user is trying to use the same MRL with the WIP Edit plug-in.

Here is an example:

```
< Control >
    ShowLoadDLLError = No
```

Option	Description
ShowLoadDLLError	Set this option to No if you want the system to ignore missing DLL files. The default is Yes.

Can iDocumaker provide base functionality out of the box?

Yes. Once correctly installed, iDocumaker provides support for WIP, archive, publish, and entry without you having to make any modifications. No ASP or JSP work is necessary.

The default configuration provides MRL support via a temporary in-memory database. This default configuration grants backward compatibility. The pre-requisite for WIP and archive, and publish, support assumes IDS will be configured with the Amergen MRL. iDocumaker default messaging is done via HTTP queues using the default port 49152.

Does iDocumaker retrieve the actual form or an HTML version of the form?

With iDocumaker version 11.x Shared Objects, MRL resources can be retrieved real-time via IDS. This means the need to build HTML pages and store them in a database is no longer required. See the information on iDocumaker's global.xml file in [Using Web-Enabled Solutions](#) for configuration details. iDocumaker patch 3.1.23 and above include this capability.

The MRL resources can be in the newer 11.x format or the format used prior to 11.0. The MRL resources do not have to be in a database. The connection details to the MRL resources are left to IDS and IDS does not typically use the JDBC protocol when retrieving resources from a database.

Can you run iPPS on Windows 2008 Server (64-bit)?

To run iPPS on Windows 2008 Server (64-bit), you must first allow 32-bit systems to run. Otherwise, you will get the LRRGetResource Failed error. To enable Windows 2008 Server to run iPPS, go to IIS Manager and click the Advanced tab. Change the iPPSAppPool option to allow 32-bit systems to run.

DOCUMAKER WORKSTATION ISSUES

Here are some commonly-asked questions about Documaker Workstation:

When viewing database screens, why doesn't the scroll bar move as the list scrolls?

The entry applications use a library from a third party to display this box and we use a virtual list box. In other words, we do not know how many records there are, we only get one screen of records at a time from the index file.

Most users don't want to wait for us to go and read every record before displaying the list. Placing the thumb in the middle is functional. You can click on the area above the thumb to accomplish a page up. Click below the thumb for a page down. You can click on the arrows on either end to move one record at a time. You can also grab the thumb and move it up or down to quickly scroll through the records. When you see the records that you want to display, simply let go of the thumb. The thumb will return to the middle, but the rows you have displayed will remain in the window.

Why does a variable field on page 2 sometimes appear on page 1 when using the Text Editor?

Actually, the field is not *bleeding* through, it has actually been moved to page 1. When a TerSub field is assigned new data, the first thing that happens is the old data is removed and the space it occupied is used. So, the field is being pulled to page 1 during this process.

Then the paragraph information is inserted in and this pushes the field back down the page. So, the system thinks the field was pushed to page 2 originally because the text area grew. When the text area shrinks, the system assumes it can pull the information from page 2 back to page 1.

What is the maximum field size when importing and exporting information?

The maximum field size for an import/export file is 1024 bytes.

How do you take data from a form and assign it to an INI option?

Use the `~FIELD` built-in INI function to extract field data and return it as the value for an INI option. An example of how you can use this involves using the Combined (NA/POL) Export method. Suppose that, in addition to certain WIP record fields, you also want to map several fields directly from the form set into the WIPHEADER record.

```
< ImpExpCombined >
Field = Key1
Field = Key2
Field = KeyID
Field = ;~FIELD "Insured Name"
Field = ;~FIELD "ZIP_FIELD";DEC PAGE"
```


For the Combined Export method, the Field options normally map WIP record fields to the WIPHEADER section of the export file. The first three lines map Key1, Key2, and KeyID from the WIP Record.

Notice how the next two lines start with a semicolon. This indicates you are specifying constant data instead of a WIP record field. In this case, you want the constant data mapped from a field within the form set.

This example shows how you can use the ~FIELD function to get the data for the INI option. All INI built-in function names should be followed by a space. The ~FIELD function supports a quoted parameter string to name the specific field to locate within the form set.

The definition of the field can name a specific section, form, and group (Key2 or Line of Business), separated by semicolons, that contain the requested field. This way, you can make sure you are retrieving a specific field occurrence within the document.

Because object names, like fields, sections, forms, and groups, can sometimes contain spaces or other special characters, you must enclose the entire definition in quotes. The system does not support quoting the individual elements of the search.

```
~FIELD "Field;Image;Form;Group"      <-- a valid field definition.
~FIELD "Field";"Image";"Form";"Group" <- not a valid definition.
```

If you only name a field, omitting the section, form, and group options, this tells the system to find the first occurrence of any field with the given name in the form set and return that data.

If you name a field and section but omit the form or group, the system first locates sections with that name in the document (on any form) and looks for the field there. Likewise, if you name a form, the form is retrieved and then searched. Naming a group (Key2 or Line of Business) limits the search for the field to that region of the document.

If multiple copies of a field are found, the system selects the first occurrence. To identify a specific occurrence of a field, use a backslash followed by a number. Here is an example:

```
~FIELD "Insured\2"
```

This tells the system to look for the second occurrence of the Insured field and return the data from that field. You can also use backslashes to indicate an occurrence for sections and forms. Since group (Key2) names are unique, there's no need to specify an occurrence.

NOTE: If you have multiple occurrences of the same field name and those fields contain different types of data, you must specify the section, form, or group name to make sure you get the right data. If, you make the definition very specific, then you leave little variance in what forms or sections can comprise the document.

Keep in mind that when INI built-in functions resolve data, the resulting data is merged back into the INI option being returned. For example, suppose you have a field named *Email* on your document and a field named *Domain*. Suppose these fields contain the following data:

```
Email    = JohnsonR
```

```
Domain = Somewhere.COM
```

If you wanted an INI option to return an email address for your recipient, you could do something like this:

```
Recipient = ~FIELD "Email"@~Field "Domain"
```

The result would be:

```
"johnsonR@Somewhere.COM"
```

Notice that two items were retrieved from field data and the @ character was a constant defined in the original INI definition. There is no space after the quote that ends the first field definition and the constant data, just like there is no space following the constant data before the second ~FIELD built-in definition. The field's data will replace the INI built-in name used and the field naming definition. The remainder of the line remains intact.

Another way you can use ~FIELD is to get the recipient's email address out of the document. So, a section could be designed to have a section that would have the email information that is picked up by INI option.

```
< PrtType:EPT >
  Recipient = ~FIELD "Email"
  Subject   = ~FIELD "Subject"
  Message   = ~FIELD "Message"
```

Assuming that "EMAIL", "Subject", and "Message" are all fields in the document, this would retrieve the values from those fields to provide the mailing information for the EPT print INI options.

Can you store WIP files in a relational database?

Both archive and WIP files include index (appidx.* for archive and wip.* for WIP) and data (NA and POL files).

- For archive, the system can store the index *and* data in relational database management systems (RDBMS), including Oracle.
- For WIP, the system can store the index in relational database management systems (RDBMS), including Oracle.

How do you prevent Outlook from displaying warning messages when using the EPT print type?

When using the EPT print type with Documaker Workstation, Microsoft Outlook may display a message that tells you a program is trying to open your address book. This is caused by an Outlook security feature introduced in Outlook 2000 (SR2 and newer), and installed by default with Outlook 2002 and Outlook 2003. These features help guard against viruses spread by email attachments, as well as protect users from worm viruses that replicate through Microsoft Outlook.

Please refer to the Microsoft Support site for information on creating security forms or Administrative options you can add to your Exchange server environment to turn off this feature. There is no option in our applications to override Microsoft's security setting.

When retrieving transactions, Documaker Workstation expects a date in YYYYMMDD format. What if the date is in another format in the extract file?

Normally, the system expects the archive RUNDATE field to be stored in YYYYMMDD format because this is the only format which can be sorted. Using the AFEArchiveDisplay control group, you can tell the system that you want to display the run date in a different format. The default display format is MM/DD/YYYY.

Behind the scenes, the system converts the date back to the YYYYMMDD format before it searches the archive index.

The Trn_Fields control group defines the components of the Header extract record of a transaction for Documaker. You can use this control group to convert a date into the standard format. For instance, in the Trn_Fields control group in the FSISYS.INI file, define the field as shown here:

```
FIELD = OFFSET,LENGTH,KEY;SOURCE DATE;DESTINATION DATE
< Trn_Fields >
    Date = 19,11,N;DM-4;D4
```

This example is converts an extract date in the format DD-Mon-YY to YYYYMMDD. DD-Mon-YY (17-Feb-11) is format M-4 and YYYYMMDD (20110217) is format D4.

How do you control the length of file names for WIP transactions?

In Documaker Workstation, when you save a transaction to WIP the system checks the WIPData control group for the WIP database file name and path. If the system finds the WIP.DBF file, it uses the existing database file name convention.

If the WIP.DBF file is not present, the system checks the WIPData control group and looks for WIPDFDFile option. This option is not required, but you can use it to specify the full path and name for the WIP DFD file. By default the system uses the WIPData control group file and path.

If the system finds the WIP.DFD file, the system checks for an entry for the INT_Length field in the FormSetID control group and Documaker Workstation uses that convention. For example, the WIP.DFD file name length below is set to 8 in the WIP.DFD file:

```
[Fields]
FieldName=FORMSETID

[Field:FormSetID]
EXT_Length = 8
INT_Length = 8
```

If the system does not find a WIP.DBF or WIP.DFD file, the system uses internal settings to create DAT and POL files using a GUID 32-bit file name.

The WIP.DBF is created and that database is used by Documaker Workstation.

For WIP, the system can store the index, but not the data. We have tested using the AFEMAIN program to store a WIP index in MS SQL and on Oracle ODBC version 8.01.71.00 on Windows 2000 to save the WIP table to Oracle 8i Enterprise Edition Release 8.1.6.0.0 on a Sun OS 5.7 Oracle database.

How do you use FSIPath?

NOTE: This is especially important if you use Documange with Documaker Workstation (PPS).

When you set the FSIPath environment variable, it affects the actual path for every INI option that points to a relative path. For example, if

```
< Config:SAMPCO >
    DefLib = .\deflib\
< MasterResource >
    DefLib = [CONFIG:SAMPCO] DefLib =
```

is defined in the FSIUSER.INI file and FSIPath is set to *d:\arcview*, the actual path for DefLib will be:

```
d:\arcview\deflib\
```

This may produce the wrong path, especially if you are using multiple master resource libraries. The solution is to specify an absolute path in the INI files. For example, if

```
< Config:SAMPCO >
    DefLib = d:\fap\mstrres\sampco\deflib\
< MasterResource >
    DefLib = [CONFIG:SAMPCO ] DefLib =
```

is defined in the FSIUSER.INI file and the FSIPath environment variable is set to *d:\arcview*, the actual path for DefLib will still be

```
d:\fap\mstrres\sampco\deflib\
```

MISCELLANEOUS ISSUES

How do you determine the version and patch level?

There are several ways to determine the version and patch level you have.

- If you downloaded the software from our E-Delivery or Support site, the name of the file you downloaded will indicate the version and patch level. For instance, within the ZIP file you downloaded, you will find an executable file named as shown here:

```
CD1-7spDocumakerStudioFullSystemW32Rel114p02.exe
```

This tells you the software that will be installed is version 11.4, patch 02.

- If you received your software on CDs, the version and patch level appears on the CD labels. Also check the README.TXT file on each CD.
- For some applications, like Documaker Studio, you can use the About option on the Help menu to find version and patch information. Click the Patch Information button to get detailed information about patches.
- Run the FSIVER utility.

For command line programs and to see more detail, use the FSIVER utility. This utility gathers library version information and produces these reports:

- Version report - reports the version information
- Patch report - reports the patches applied to each of the files you queried.
- Summary report - reports all patches applied to the set of files you queried. Missing patches are noted.

The FSIVER utility also includes information about patches made to the libraries under the 3rdparty directory tree. For more information, see the discussion of the FSIVER utility in the [Utilities Reference](#).

Can you load an INI file from another INI file?

Yes. You can use the following option to do this:

```
< INIFiles >
File = filename.ini
```

This feature works with the FSISYS.INI and FSIUSER.INI files.

After loading the FSIUSER.INI file, the system then looks for the FSISYS.INI file. After loading the FSISYS.INI file, the system looks for the INIFiles control group. The system then loads any file you specify in the INIFiles control group.

What can you enter for a Yes/No INI option?

For all binary INI options which require a Yes/No or True/False value, the system looks for Y, y, T, or t. Any of these values is interpreted as Yes or True. If the value entered begins with the letter "t," the system interprets the value as True. Any other value, including blank, is interpreted as No or False.

Does Oracle Insurance certify new versions of software?

Current supported base product versions of Oracle Documaker and Oracle Documaker Desktop modules are designed to run on a variety of platforms and supported databases. Future versions of those platforms and databases should continue to work with no problems.

NOTE: In this book and in the installation guides, you will find information on system requirements. See [System Requirements on page 2](#) for information on which platforms, applications, and databases were used for testing when the products became generally available.

We use industry interface methods such as ODBC so we do not have to test every version of every operating system, DBMS, application server, and so on, with every version of our software. For example, although we may have not explicitly tested this environment, we can support the use of SQL Server 2008 with Documaker 11.2 and 11.3 using ODBC. If a problem occurs, we will work with you to resolve the issue.

We strive to provide support for the broadest footprint across the customer base and therefore limit the combinations we test, typically focusing on testing older baseline versions. We periodically review the minimum versions we test with and move the baseline forward.

If problems are reported, we will investigate and work with you to resolve the issue. Typically, we will seek to provide a work-around first and then follow with a correction if the problem is affecting a production system. Of course, we always recommend that you test thoroughly before moving to production use, use a phased approach, and have a rollback plan in place in case of problems.

Some issues may not fall within the scope of our applications and can only be addressed by other vendors, such as Microsoft, Adobe, and others, such as issues involving network printer drivers. In such cases, we will work with you to recommend a course of action.

We will make every attempt to reproduce the reported problem with the base product. Problems that can be only be resolved by updating a customized version of our applications may require a Services contract to fully resolve.

NOTE: We do not certify software but do test our software with vendor supported versions of various platforms and databases.

What languages are supported by the spell checker?

The spell checking system provides spelling and hyphenation support for Afrikaans, Canadian English, Czech, Danish, Dutch, Finnish, French, German, Greek, Italian, Norwegian, Polish, Portuguese, Brazilian Portuguese, Russian, Slovak, Spanish, Swedish, US English, UK English, and Welsh.

What is XPath?

XPath (XML Path Language) is a query language you can use to extract data from XML files. Using XPath statements, you can retrieve data from XML files using a syntax that works across various implementations. You can use XPath to do direct XML mapping in extract files used by Documaker and you can use it in DAL scripts. For more information about XPath, see:

www.w3.org/TR/xpath

Are XML extract files “well-formed?”

A *well-formed* or *valid* XML file is one that is built following all applicable XML conventions. You can view well-formed XML files in any XML editor. A well-formed XML file would contain a discrete entity, in this case, a single transaction.

Since extract files typically contain more than one transaction, appended one after another, and include Documaker-related tags, this kind of XML extract file is not considered *well-formed*. It would, however, feed transaction information into the rules processing engine, which is generally the main concern.

If you need to have well-formed XML files, you should output each transaction as a separate XML file. Your extract file would then be a simple flat-file that contains key information and a list of XML file names that correspond to the XML transaction files. To summarize, for Documaker, you can use these types of XML extract files:

Type	Well-formed?	Contains Documaker tags?	Requires flat file index?	Use with this rule
Single transaction	Yes	No	Yes	XMLFileExtract rule with the SCH (schedule) option
Multiple transaction	No	Yes	No	UseXMLExtract

See the [Rules Reference](#) for more information on these rules.

Does the system support the Universal Naming Convention (UNC)?

Yes. UNC (Uniform Naming Convention), is a personal computing convention you can use to specify the location of resources, such as files or printers, on a local area network or LAN. UNC uses this format:

```
\\server-name\shared-resource-pathname
```

For example, to specify the location of a logo file named SGNATURE.LOG, in the \rps\mstres\forms directory on a server named *Oracle*, you would enter:

```
\\Oracle\rps\mstres\forms\signature.log
```

UNC is supported by Windows and many network operating systems, such as Novell Netware. You can also use explicit paths, like

```
c:\mstres\deflib\ and \\ServerName\mstres\deflib\
```

and relative paths, like...

```
\mstres\deflib\ or .\wip
```

Support for these ways of handling paths is an operating system feature.

Does the system support languages such as Thai, Japanese, and Chinese?

With version 10.2, the system began to include support for Unicode. Unicode provides a single encoding system for all major languages in which each character has a unique number. This means you can use Documaker to compose, print, and present characters from Far Eastern languages like Thai, Chinese, and Japanese.

NOTE: All user interfaces, help, error messages, and documentation for tools and runtimes are designed for single-byte ANSI characters and are primarily available in English. No changes have been made to the basic system interface.

This feature is designed for an English-speaking developer who wants to create documents for Asian language users.

For Documaker Studio, Unicode support is available for Windows, beginning with Windows 2000.

For Documaker, Unicode support is available on Windows 2000, Windows XP, and Solaris. Printer support for Unicode forms is via GDI (Windows print drivers), PCL (via the PCL6 driver), and PDF (via TrueType font support).

How do you include spaces in long file names when running utilities?

To include spaces in long file names, you must enclose the file name within quotation marks. This tells the operating system to treat the enclosed text as a single parameter. Here is an example:

```
mrq2fapw /i="571173390DECPAGE DUP INS    _1.met" /x=progr.fxr /t=met
```

In this example, the file name associated with the first parameter (/i) includes spaces.

Also use quotation marks if the parameter data includes commas, semicolons, hyphens, or forward slashes.

Is there a limit to the number of characters for an INI option?

For Documaker applications, the limit is 256 characters. For IDS, the limit is 1024. When entering paths in INI options, you can include up to eight subdirectories.

How is SmartHeap used with the system?

Our software includes a runtime version of SmartHeap with the base product for optimal performance on Windows 32-bit systems. This is all you need for running the base product. If, however, you are developing software to use with the base system and you want to use the debugging features of SmartHeap or use its special debug version HeapAgent, you must get a separate license from MicroQuill Software (www.microquill.com)

For registered users, we publish information about the required and used third party components and development tools in its technical documentation. For more information, see the Programmer's Reference (PrgGuide_v114.PDF).

NOTE: Beginning with version 11.1, our software uses SmartHeap version 8.

What causes a SmartHeap error on Windows XP?

This error occurs because of the set up and the service pack installed on the machine. Typically Windows XP with Service Pack 2 installed on a machine configured for East Asian languages (Unicode) will cause the following SmartHeap error when running Documaker software:

```
--- GenData Completed ---
Error in SmartHeap
Code 14
File Unknown
Line 0
```

To correct this error, copy the VMMW32W.DLL file over the VMMW32.DLL file. For more information on this problem, see...

<http://www.microquill.com/support.html>

What do I do if I receive a message stating that the application is incomplete while trying to install the software?

If you have problems installing the software from a CD, follow these steps:

- 1 At a command prompt, enter the *SET* command and see what it says for *TEMP=*.
- 2 Look in the directory specified in *TEMP=* and see if there are any subdirectories whose names begin with *PFT* or *_IS*.
- 3 If there are directories with names which begin with *PFT* or *_IS*, and if you are not running an installation, delete those directories because they can cause installation errors if they exist before you run an install.

Most installations create these directories and remove them when finished. If there is a problem or if the operating system is too busy managing other temporary files, these directories may not be deleted in a timely manner.

Are there names to avoid when naming tables and other databases?

Yes. several system tables and databases have default names which you should avoid using as names you assign. For instance:

This name	Is the default name of the
USERINFO	User database
MASTER	Library manager database
AFELOG	Entry logging system
WIP	WIP database
APPIDX	Archive index

In many cases, you can override these defaults using INI options, but to avoid any potential confusion or collision, we recommend that you not use these names, except for their expressed purpose.

What utilities do you use to convert from Documaker FP to Documaker (AFP)?

Here are the AFP utilities you could use in such a conversion:

Utility	Description
MRG2FAP	Converts a Documerge AFP print stream or Documerge AFP EDL member to a FAP file. When converting Documerge EDL members, field tags are automatically converted to variable fields in the FAP file. Use this utility instead of the OVL2FAP utility for converting Documerge AFP EDL members.
OVL2FAP	Converts an AFP overlay into a FAP file.
FAP2OVL	Converts a FAP file into an AFP overlay.
AFP2PCL	Converts an AFP character set file into a PCL font.
PCL2AFP	Converts a PCL font into an AFP character set file.
PSEG2LOG	Converts an AFP page segment file into a logo file.
LOG2PSEG	Converts a logo file into an AFP page segment.
VB2AFP	Converts an AFP file written in Documerge variable block format to an AFP file written in native AFP format. Most of our AFP utilities expect the AFP file (page segments, overlays, and so on.) to be written in native AFP format.
AFP2VB	Converts an AFP file that is written in native AFP format to an AFP file written in Documerge variable block format (probably won't be needed).
AFPCOPY	Converts an AFP print stream from cut-sheet to continuous-form. Whether you need this depends on the AFP printer you are using.
AFP2MVS	Converts an AFP print stream after it is uploaded from a PC to MVS so that it can be printed from MVS.
AFPDUMP	Converts an AFP print stream (or any AFP file) to a text file which contains a list of the AFP commands used.
AFPCF	Creates AFP coded font files.
AFPFMDEF	Creates an AFP form definition resource file.

NOTE: Do not use the ADDCRLF utility. This utility adds CRLF bytes at the end of each AFP record so an AFP file can be uploaded by some communications packages.

This is dangerous since AFP files can naturally contain the CRLF sequence before ADDCRLF is run and this would cause the communications package to upload the file incorrectly. The safe way to upload an AFP file from a personal computer is to use a binary upload in the communications package and then run the AFP2MVS utility on the host.

For more information on these utilities, see the [Utilities Reference](#).

How do you use FSIPath?

NOTE: This is especially important if you use Documanager with Documaker Workstation (PPS).

When you set the FSIPath environment variable, it affects the actual path for every INI option that points to a relative path. For example, if

```
< Config:SAMPCO >
    DefLib = .\deflib\
< MasterResource >
    DefLib = [CONFIG:SAMPCO] DefLib =
```

is defined in the FSIUSER.INI file and FSIPath is set to *d:\arcview*, the actual path for DefLib will be:

```
d:\arcview\deflib\
```

This may produce the wrong path, especially if you are using multiple master resource libraries. The solution is to specify an absolute path in the INI files. For example, if

```
< Config:SAMPCO >
    DefLib = d:\fap\mstrres\sampco\deflib\
< MasterResource >
    DefLib = [CONFIG:SAMPCO ] DefLib =
```

is defined in the FSIUSER.INI file and the FSIPath environment variable is set to *d:\arcview*, the actual path for DefLib will still be

```
d:\fap\mstrres\sampco\deflib\
```

Chapter 3

Advanced Topics

This chapter provides tips and techniques you can use to further customize your system to meet specific processing needs. Many of these tips and techniques came from our Support staff, in response to user questions.

In addition, you will also find information on some common error messages.

The information in this chapter is organized as shown below:

- [Overview on page 146](#)
- [Tips and Techniques on page 148](#)
- [Optimizing Performance on page 162](#)
- [Error Messages on page 170](#)

OVERVIEW

Here is a summary of the topics covered in this chapter:

Tips and Techniques

Here are some general tips and techniques:

- [Setting Up Print Batches on page 148](#)
- [Archiving from z/OS on page 149](#)
- [Using Library Manager to Archive Forms and Data on page 150](#)
- [Using the GDI Printer Driver on page 153](#)
- [Merging Text on page 154](#)
- [Setting the Scope of Variable Fields on page 155](#)
- [Searching from a Specific Place in an Extract File, Instead of Starting at the First Record on page 155](#)
- [Setting Up a Bar Code Variable on page 156](#)
- [Printing Duplex for a Multiple Page FAP File on page 156](#)

Optimizing performance

There topics help you optimize performance:

- [Use Single-Step Processing on page 162](#)
- [Avoid Loading FAP Files on page 163](#)
- [Get Rid of Warnings and Errors on page 165](#)
- [Use Features Specific to Your Printers on page 166](#)
- [Optimize Your FXR Files on page 166](#)
- [Designing Your FAP Files on page 166](#)
- [Using the IF Rule on page 167](#)
- [Using the Set Recipient Table and Extract Files on page 167](#)
- [Setting Cache Resources on page 168](#)
- [Improving Database Retrieval Performance on page 168](#)

Error Messages

Here are some common error messages:

- [Error in RULUpdateRecips\(\): Unable to GENGetGlbDataPtr\('RCBPrtFlag'\) on page 170](#)
- [Missing Code Page on page 170](#)
- [What causes the Error in UpdateRecips error message? on page 170](#)
- [What causes the Error in GENAddFormToSet error message? on page 171](#)
- [What causes the bad or missing input format error message? on page 171](#)
- [What causes the no forms for current transaction error message? on page 171](#)
- [What causes the unable to FAPLoadImage error message? on page 171](#)
- [What causes the GenLMGRpt \(\) failure using Linerpt error? on page 172](#)
- [What causes the "Unable to DBOpen \(TrnfileH\)" error? on page 172](#)

TIPS AND TECHNIQUES

SETTING UP PRINT BATCHES

Suppose you have a situation where each transaction in an extract file creates a form set. Each form set can go to one or more recipients. Each recipient is defined as a separate batch. For example, recipient *ORIGINAL* goes to Batch1, recipient *COPY* goes to Batch2, and recipient *SAMPLE* goes to Batch3.

And, you want to...

- Send *COPY* and *ORIGINAL* to the GenPrint program, but not *SAMPLE*.
- Send *ORIGINAL* to archive, but not *SAMPLE* or *COPY*

To handle the first requirement, sending the *COPY* and *ORIGINAL* batches to the GenPrint program, but excluding the *SAMPLE* batch, include these settings in your FSISYS.INI file:

```
< ExcludeBatches >
    Batch3
< Print_Batches >
    Batch1 = BATCH1.BCH
    Batch2 = BATCH2.BCH
    Batch3 = SAMPLE.BCH
< Batch1 >
    Printer = PRINTER1
< Batch2 >
    Printer = PRINTER2
< Printer1 >
    Local = Y (or N)
    Port = DATA\PCLBAT1 (or any meaningful file name...)
< Printer2 >
    Local = Y (or N)
    Port = DATA\PCLBAT1 (or any meaningful file name...)
< Recip_Names >
    Original = 001, ORIGINAL (actual text to print)
    Copy     = 002, COPY (actual text to print)
    Sample   = 003, SAMPLE
```

And, in the AFGJOB.JDT file, include these settings:

```
;IfRecipUsed;2;BATCH1=ORIGINAL
;IfRecipUsed;2;BATCH2=COPY
;IfRecipUsed;2;MANUAL=SAMPLE
```

Concerning the second requirement, sending *ORIGINAL* to archive, but not *SAMPLE* or *COPY*, the system does not allow this—even with custom code. The system is designed to archive either all recipients or none. Please note, that although the system archives all recipients, it stores the data only once. So, it does not waste any disk space.

Printer Tray Specifications and Terminology

The system defines document attributes in a device-independent fashion. PCL support is based on options available to PCL level 5 and compatible printers. The HP 5SI printer, however, offers additional capabilities which require PCL level 6 commands. The following table outlines the various PCL commands and the terminology used by the system and the various PCL printers:

Term	PCL command	PCL term	HPLJ4 term	HPLJ4SI term	HPLJ5SI term
Tray 1 (Main)	~&l1H	Tray 2 (upper)	PC Tray	Upper tray	Tray 2 (upper drawer)
Tray 2 (Aux)	~&l4H	Tray 3 (lower)	MP	Lower tray	Tray 3 (lower drawer)
Tray 3	~&l5H	HCI, first tray	LC Tray	n/a	First tray of HCI
Tray 4	~&l20H	High Capacity Input (HCI) Tray 2	n/a	n/a	Tray 2 of HCI

Please note...

- The command ~&l5H (first high capacity tray) is supported by PCL5, but this hardware is not typically found on those printers.
- The command ~&l20H requires PCL6.

The system now includes these INI options supported by the PCL print driver.

```
< PrtType:PCL >
  Tray3 = pcl command sequence (default is ~&l5H)
  Tray4 = pcl command sequence (default is ~&l20H)
```

If you use the earlier sequences, you can restore your original operation by specifying:

```
< PrtType:PCL >
  Tray3 = ~&l12H
  Tray4 = ~&l13H
```

NOTE: The tilde (~) represents the escape character and is translated internally. Note also that the third character in each sequence shown is a lowercase letter *L*.

ARCHIVING FROM Z/OS

In earlier versions, indexes could be in DB2 but not the actual compressed data. This let you store indexes on the host, but the compressed data must be on the LAN. You could store compressed data on the host in flat files, but there was no client-server mechanism to retrieve the data from a workstation, and flat file access is not compatible with CICS.

In version 5.0 and in later versions, the compressed data could also be stored in DB2. Although this is still called *archive*, it differs from traditional archive, since data stored in DB2 is not permanent, and not as long-lived as it could be if it were stored on a high-volume optical drive. Depending on the DB2 tables and access rights, data could be changed or tables could be dropped.

The Client Application Enabler is an IBM product related to DB2 and DDCS which gives a *thin* version of DDCS on the client workstations and a *fat* gateway on a server-type machine. This allows each workstation to have less software than a pure DDCS solution.

From Documaker's perspective, the system just talks to DB2. Therefore, it does not matter to the system if it is DDCS or CAE, as long as DB2 itself can get to the z/OS DB2 tables. This is independent of the Documaker system.

USING LIBRARY MANAGER TO ARCHIVE FORMS AND DATA

The GenArc program only saves data, not forms. Using Library manager, you can have multiple FAP and LOG files with the same name but with different effective dates.

Archived records include a list of the section names included in the form set and the date on which the data was created. With this information, you can find the version of the form used to create the form set.

You are still responsible for forms management, which means you must determine when changes need to be made to forms and when those changes should be applied in daily operations. No function which calls the Entry module can alter a library.

You can create and maintain libraries in several ways. One way is using Studio's Library manager. There you can create a new form and save it into a library. Or, you can check out an existing form from a library, make changes, and then check the revised form back into the library.

The Library manager keeps all versions of the form and assigns to each version a revision number. When you check in a form, you can change the date on which the form becomes effective. Effective dates are then used by Documaker Workstation and Documaker Server to find the correct form to use on a given date.

This concept of check-out and check-in is known as *version control* and also makes sure two people are not working on the same revision of a form at the same time.

NOTE: You can also use the LBRYMGR utility to maintain libraries. The LBRYMGR utility can run on a variety of environments, including UNIX and z/OS. For more information, see the [Utilities Reference](#).

Using these tools, you can also add forms and logos to the library and set effective dates—just as you can using Studio. In addition, these programs let you delete forms or revisions of forms from the library or extract forms back to an external FAP or LOG file. These tools also let you change the effective date of a form or graphic without changing its revision date.

You can change a form and enter a new effective date for that revision in the library. When you use the Entry module of Documaker Workstation or Documaker Server, the system determines which forms are required. It then loads the forms from the library—selected by effective date—and saves the data to WIP or Archive. When you retrieve and view the archived form set, the system uses the original date of creation for Documaker Workstation (or Run Date for Documaker Server) to again match the proper effective date of each form.

For example, suppose these entries are in a library.

	Form Library	Effective Date	Revision
APPPFORM1/1/951.0	APPPFORM	1/1/98	1.0
APPPFORM1/1/961.1	APPPFORM	1/1/99	1.1
DECPAGE1/1/95	DECPAGE	1/1/98	

Notice APPFORM has two entries, each with different effective dates. DECPAGE has only one entry because it has not been changed.

If a transaction which contains APPFORM(1/1/99) and DECPAGE(1/1/98) has a run date of 1/24/99, the system chooses these forms because they had the latest date (and revision in case of a tie on date) which did not exceed the run date.

If you choose to view an archived policy which has a run date of 12/12/98, the system returns APPFORM(1/1/98) and DECPAGE(1/1/98). The system chooses the earlier version of APPFORM because the new revision had an effective date which was later than the archived data.

Notice, however, that Documaker Workstation and Documaker Server do not alter the library. Those in charge of revising the forms are also in charge of establishing the effective dates in the library.

Documaker Server compares the Run Date to the Effective Date in the library database. This helps it determine which version of the FAP or LOG file to print using the GenPrint program, or to archive using the GenArc program.

You must include the Run Date in the recipient batches and in the TRNFILE in this format: YYYYMMDD. The Run Date is the date you get from the extract file—not the date you ran Documaker Server. The FSIUSER.INI file must have LBY set up in the MasterResource control group.

If you check in the FAP and LOG files into the library, Documaker Server looks for the FAP file first. If the FAP file does not include logos, the system ignores the LOG files even if there are effective LOG files in the library. If the FAP file contains logos, the system uses the logo file names specified in FAP file to look for the logos based on the run date vs. effective date, regardless of which version that you designate in the FAP file.

You should not have more than one version of a FAP, DDT, or LOG file for each effective date. If you do, the system will select the version with the highest version\revision number. For example, if you have two versions, both with an effective date of 1/1/999, the Library manager selects version two. If keeping version one is necessary, change its effective date to an earlier date. If you really want to have both versions effective on the same day, do not check the files into the Library manager.

Documaker Server works similar to Documaker Workstation. The main difference is that Documaker Server uses the Run Date from the extract file and stored in the TRNFILE, instead of the Creation Date.

MIGRATING AN ARCHIVE

When using the ARCRET utility to migrate an archive and replace the old names with new names for the retrieval keys, one approach is to define only one Trigger2Archive control group in all the INI files required for the migration. You would place this control group in the INI file this option points to:

```
< GenArcPlugIn >
  INIFile =
```

For example, assume that before the migration, you rename the FSIUSER.INI file to OLDUSER.INI and modify the FSIUSER.INI file is for migration. Also assume both OLDUSER.INI and FSIUSER.INI point to the same FSISYS.INI file. You would then move the Trigger2Archive control group from the FSISYS.INI file into the FSIUSER.INI file.

The reason is because the left-hand side of this control group should represent the new key names. Assuming Company, LOB, and PolicyNum are the new names, this control group would look as follows:

```
< Trigger2Archive >
  Company      = Key1
  LOB          = Key2
  PolicyNum    = KeyID
  Rundate      = Rundate
```

If this control group is defined in the FSISYS.INI file, the ARCRET utility will not find matching key names (Key1, Key2, and KeyID) in the old archive and will return nothing for these fields in the temporary transaction file. When the GenArc program (called by PLGGenArc) runs, no data is mapped to the new key fields. As a result, the new key fields (Company, LOB, and PolicyNum) are empty after the archive is migrated.

Using Library Manager with a DBMS

To use Library manager with a DBMS system, like Oracle's ODBC driver, DB2, or SQL Server, update your master resource library to include these changes:

LBYINDEX.DFD

The LBYINDEX.DFD file is used as the Library manager's index. You typically can omit this DFD file unless you are using Library manager with a DBMS, like DB2, SQL Server, or Oracle.

Reference this file in the ArcRet control group of the FSIUSER.INI file using the LBYIndexDFD option. You must use this option because the default settings include a Resource column which is a reserved word in Oracle.

NOTE: You can see an example of this file in the DMS1 master resource library.

To create an index table, be sure to comment out these fields in the LBYINDEX.DFD file:

```

< Fields >
;   FieldName   = RESOURCE
;< Field:RESOURCE >
;   INT_Type    = CHAR_ARRAY
;   INT_Length  = 25
;   EXT_Type    = CHAR_ARRAY
;   EXT_Length  = 25
;   Key         = N
;   Required    = N

```

CARFILE.DFD You must change the default setting for this file because of the Total_Size field. For that field set the EXT_Type field to *Double*. For the CARData field of BLOB type, you need to specify an INT_Length and EXT_Length for the column to be created in the Oracle data table. Here is an example:

```

< Field:Total_Size >
   INT_Type    = Long
   INT_Length  = 4
   EXT_Type    = Double
   EXT_Length  = 4
   Key         = N
   Required    = N
< Field:CARData >
   INT_Type    = BLOB
   INT_Length  = 252
   EXT_Type    = BLOB
   EXT_Length  = 252
   Key         = N
   Required    = N

```

USING THE GDI PRINTER DRIVER

In some cases, users want to use the GDI printer driver when there's no PCL printer available, such as for faxing. But sometimes, the print quality is not as good as with the PCL driver. To understand why, it helps to understand how the printer drivers work with fonts.

In the Windows world, users often use TrueType fonts. Windows printer drivers create bitmap representations of those fonts as needed from the information contained in the TrueType fonts during printing. These programs try to make the printer look like the screen.

To the system, the user usually dictates that fonts that already reside on a Xerox printer be used. This gives the system the challenge of working backward from those fonts and trying to represent the output on the screen. The system tries to make the screen look like the printer, not the other way around. We can convert Xerox bitmap fonts to PCL bitmap fonts without too much trouble, but we do not have the technology to create TrueType screen fonts from Xerox or PCL fonts. Even if we did, there are licensing issues.

GDI print quality correlates to the fonts used for display, compared with the attributes describing those fonts. What you see on the screen is how GDI print will look. So, the key to improving GDI print is to improve the fonts used in the display system, and to match substitutions, attributes, character widths, and scaling attributes. Some of this can be improved by making sure the font widths and family names are correct.

There are INI options you can use to improve the substitutions, if you cannot match the names. For the best results, use screen fonts that match exactly.

The system comes with a set of TrueType fonts that match the included printer fonts. Install and use these fonts if possible. If, however, you are working backward from an end-user's existing fonts, you will have to get the matching fonts or use fonts that are similar.

Xerox can create PostScript fonts from Metacode fonts for you. There are tools that will convert a PostScript font to a TrueType font. With the proper fonts installed, and with the proper FXR settings, GDI print will match the bitmap font print quality very closely.

MERGING TEXT

The system lets you define paragraphs of text with embedded variable fields. You create these paragraphs and save them as ordinary FAP files. Once created, the system can then load the paragraphs as template data at run time and merge data derived from field-level rules. The system reformats the resulting text, based on your form design, and includes it in the form data output stream.

Use this feature if the section has variables embedded in a text area which has the Can Grow and Shrink option turned on and the section is defined as Can Grow.

The TextMergeParagraph rule supports this feature. This rule checks to see if the FAP data for the requested section is currently loaded, and, if not, it loads it. As the system executes field rules, it propagates the data into the text area, causing necessary text reformatting. The section is flagged in memory as *in-line* so it will be treated as a template, rather than a static section. The system will unload the resulting FAP data into the data stream as dynamic content.

This section-level rule lets the GenData program load the entire FAP file into the NA file so the GenPrint program can reformat the text and data at run time, even if the DownloadFAP option is set to No in the INI file.

Since the section is considered an in-line FAP file, its precompiled overlay is not used by the GenPrint program. You can, however, use precompiled overlays when you have static and Can Grow sections to increase performance. Use this rule on a section-by-section basis.

For example, suppose a form is composed of five sections, of which four sections are static and one can grow. You can use the SendOverlays and DownloadFAP options and precompile the overlays for the four static sections. The GenPrint program uses the overlays for those static sections and reformats the text for the section with the TextMergeParagraph rule, using the information in the NAFILE.DAT file.

NOTE: The TextMergeParagraph rule, when used unnecessarily, slows performance, causing sections to be loaded and unloaded unnecessarily. This can create huge NAFILE.DAT file output. As with any rule, only call it when necessary. Also, the smaller the FAP file, the better the performance.

SETTING THE SCOPE OF VARIABLE FIELDS

In overflow situations, when you create a form, always define variable fields with the scope of *section* and not *form* or *global*.

If a form has fields which have a scope of *form* or *global* the GenData program does not propagate the data, but the Retrieve function in the GenArc program does. This can cause inconsistent results, such as data showing up in archive which did not show up in the GenPrint program.

There is only one exception to this rule. If you want data to propagate within headers or footers, you must define the scope of those fields as *form*.

NOTE: If you have a field which has the same name as a field on a non-header or footer, that field will also get propagated. Make sure all non-headers and footers have variable fields defined with the scope of *section*.

SEARCHING FROM A SPECIFIC PLACE IN AN EXTRACT FILE, INSTEAD OF STARTING AT THE FIRST RECORD

You can use a flag with the Move_It rule to begin a search from a prior occurrence in a file, instead of always starting at the beginning of the extract file. While this technique can reduce processing time, be careful when using it.

NOTE: This flag is only supported by the Move_It rule.

If you enter *N* in the mask field of a Move_It rule, the system begins its search at the last record processed by a Move_It rule. This flag speeds the processing of sequential and multiple Move_It rules in a single DDT file.

For example, suppose you have an extract file with over 1000 records and you know that near end of this list there are exactly 20 sequential records—not 19 or 21, but 20.

You can add a series of 20 sequential Move_It rules into your DDT file. The 1st occurrence in the list of 20 Move_It rules should not contain the *N* flag. All other occurrences (2 through 20) *should* have the *N* flag.

NOTE: Omit the *N* for the first record because that makes the system start looking from just about anywhere in the list, depending on your last Move_It.

You must put a one (1) in the Record field on each line of the DDT file for this technique to find the next record in the series. Remember to also enter 1 on the first record line; the line without *N* in the mask.

For very large extract files, as in this example, this technique eliminates a large number of function calls which get you to the next record in the list. You may have to move through many records to find the first record in the list, but every hit thereafter is going to find a subsequent record in the list.

SETTING UP A BAR CODE VARIABLE

If you want to use a bar code to represent a unique code that could appear on all documents produced, try using the EAN (European Article Numbering) system.

Remember that the data in the extract file must be valid for the type of bar code that you use and each type of bar code has its own definition of valid data. For example, a ZIP code must consist of five digits, nine digits or 11 digits, with no dashes. Some bar codes allow alphabetic characters, while other bar codes require specific characters at the beginning and end of the data string.

Here are the steps you need to do:

There are two types of EAN bar code: 8 digit and 13 digit. The data in the extract file must be 7 digits or 12 digits of numeric numbers for EAN-8 Digit, or EAN-13 Digit respectively.

Set up a variable field in Studio. Select the bar code as the Type. Then select EAN-8 Digit or EAN-13 Digit as the variable format. The variable field length for EAN-8 Digit should be 7 digits, and EAN-13 Digit should be 12 digits.

Use the Move_It rule to map the bar code variable field to your data.

PRINTING DUPLEX FOR A MULTIPLE PAGE FAP FILE

If you have several FAP files which contain multiple pages and are static forms which should print duplex, be sure to set the multipage section to *F* for front.

IMPORTING ACCESS FILES INTO TABLE EDITOR

The Table Editor does not let you import Access database files. The steps below, however, outline a way to convert an Access database (MDB) into dBASE IV (DBF) format so it can then be imported into Table Editor.

In this example, the original Access database is called PICCLASS.MDB and contains a table called *classcodes*.

NOTE: The file name should be in 8.3 format, such as *FILENAME.DBF*.

Because the example requires a new database file from Access, create BLANK.DBF as a dBASE IV template. Do this by opening the default GENERALT.DFB file and removing the existing tables. This lets you import an empty file with the Documaker table format into Access.

Importing the DBF file

To append an Access database to a DBF table, you import the DBF file. Follow these steps to import BLANK.DBF from the table directory into Access as a new database.

- 1 Open Access, select the Create New Database Using Blank Database option.
- 2 Import BLANK.DBF by selecting the File, Get External Data option. Then choose Import.

- 3** Point to the BLANK.DBF file, setting the Files of Type field to *dBASE IV (*.dbf)*, then choose Import. Click Ok if there is a warning message.

Modifying your database

To modify your database to match the BLANK.MDB file, open the existing database (PICCLASS) in Access in Design View and make these changes:

- 1** Remove any primary key.
- 2** Change the field names to match the Documaker table format.
 - TABLE_NAME
 - ENTRY_NAME
 - DESCRIP
- 3** Change the data type to *Text* for the three fields.
- 4** Make sure the Table Field's properties match the following:

Field	Size	Other properties
TABLE_NAME	40	None set.
ENTRY_NAME	40	None set.
DESCRIP	248	None set.

NOTE: When changing these field lengths, make sure there is no loss of data.

- 5** Change all the TABLE_NAME fields to the same value, such as "CLASSCOD".

If there are a large number of records in the database, it may be easier to open an Excel spreadsheet, create a field called *CLASSCOD*, and drag the fill box down to the desired number of records in the table. You can then cut and paste from the Excel file into the TABLE_NAME column.

Combining the databases

Follow these steps to combine the databases:

- 1** Open BLANK.MDB and select the File, Get External Data, Import option. Then select the existing database (MDB file) and import.
- 2** Select the desired table from the Import Objects box (modified in previous steps). Under Objects, select Queries. Then create the query in design view.
- 3** In the Show Tables field select desired table (CLASSCODES), click Add, then Close.
- 4** Click on the asterisk (*) and drag it to the Field box. This selects all the fields in the table. Then choose the Query, Append Query option.
- 5** Select the table to append to (BLANK) and run the query by clicking the red exclamation mark (!) on the tool bar. Then exit the query.

- 6 In the new DB table (BLANK), insert a new record with the table name identifier, such as *classcod* in the ENTRY_NAME field, and the number (1) in the DESCRIP field. Then sort the table by selecting the TABLE_NAME field and clicking on the Sort Ascending button. The new record is now the first record. Delete the original table (CLASSCODES).

Exporting the
appended database

To export the appended database to the table directory, choose File, Export, and select *dBASE IV (dbf)* as the file type. Point to the table directory in the MRL where you want the database exported to.

CONVERTING A MULTILINE LOGO FONT INTO A LOGO

For instance, suppose you have a Xerox font file called EAGLE.FNT. Using this font, if you print the following letters on three lines:

ABC
DEF
GHI

you would see a circle containing an eagle surrounded by three stars, as shown here:



If, however, you merely open the Xerox font file in Studio, you see this:



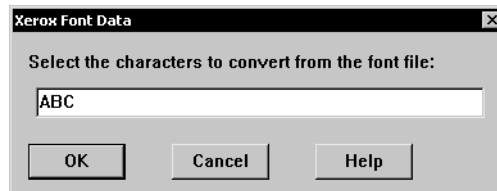
To create a logo from this font file, you will need to open each part of the font, save it as a logo file, then combine the parts. Here's how:

Opening the parts

- 1 In the Studio's Graphics manager, click Browse, then choose Xerox font data (*.FNT) in the Files of Type field.

NOTE: Make sure you select Xerox font *data*, not Xerox font *files*.

- 2 Select EAGLE.FNT as the font to open and click Ok. The Xerox Font Data window appears so you can select the characters to convert from the font file.



- 3** Type **ABC** into the field and click Ok (make sure you type capital ABC, not lower case *abc*). Studio displays the top portion of the eagle with stars graphic.



- 4** Choose File, Save As and type **TOP.LOG** as the name of the graphic. Then choose File, Close to close the graphic.
- 5** Repeat steps 1-4 but use **DEF** as characters to convert and **MIDDLE.LOG** as the name of the graphic. MIDDLE.LOG should contain the middle portion of the eagle with stars graphic, as shown here:



- 6** Repeat steps 1-4 again time but enter **GHI** as characters to convert and **BOTTOM.LOG** as the name of the graphic. BOTTOM.LOG should contain the bottom portion of the eagle with stars graphic, as shown here:



Combining graphics files

Now you have these graphic files: TOP, MIDDLE, and BOTTOM. The next step is to combine them into a single graphic file called COMBINED.LOG. Here's how to do that:

- 1 Open TOP.LOG in a text editor. The file will look something like this:

[illegible]

The first line starts with a number (0076) that represent the number of rows of data in the graphic and ends with the number of colors used (two).

The second and third lines represent the red, green, blue (RGB) values to use for the two colors used. The fourth line is the first row of data for the graphic.

- 2** Open MIDDLE.LOG in a second text editor. It will look something like this:

It should look like this:



OPTIMIZING PERFORMANCE

One of the great advantages of the system is its flexibility. It imposes few restrictions on what you can do. Yet careful design during the implementation of the system is needed, otherwise performance can become an issue. By understanding what affects performance, you can better design a solution which offers the features and performance you need.

Whenever performance is concerned, there are three main factors involved:

- Hardware
- Software
- Input data

The focus of this topic is on how the software, in this case GenData and GenPrint, handles the input data.

NOTE: We load graphics files (.LOG) when running the GenPrint program with the benchmark resources. The LoadFAPBitmap option in the RunMode control group is not specified and defaults to Yes. This option should be set to No for optimal performance.

The LoadFAPBitmap option is required for any type of printing, if the SendOverlays option is set to No (CompileInStream=Yes for Xerox). Since the SendOverlays option is not supported PCL printing, you will need to set the LoadFAPBitmap option, as well as DownloadFAP option, to Yes for PCL printing.

The LoadFAPBitmap option is also required when a FAP file which contains a logo is inlined in the NA file.

The main sources of input data for the GenData program are the extract and FAP files. While you may not have much control over how the extract files are structured, you do have control over the FAP files and the pre-compiled FAP files you can create. The following topics provide information you should keep in mind as you create and process FAP files.

NOTE: The following topics are not platform specific. For additional information on MVS-specific performance issues, see the [Documaker Installation Guide](#).

Use Single-Step Processing

To enhance performance, you can combine the execution and functionality of the GenTrn and GenData steps into a single step. Combining these steps enhances performance by reducing the number of times files have to be opened and closed.

For more information see the discussion of Single-Step Processing in chapter 2 of the [Documaker Administration Guide](#).

Avoid Loading FAP Files

For maximum performance, you want to avoid loading FAP files whenever possible. While there may be some FAP files you have to load, make sure you keep them to a minimum. There are several ways to avoid loading FAP files, such as by...

- Turning off the LoadCordFap INI option
- Compiling FAP files beforehand
- Using overlays
- Limiting the use of the TextMergeParagraph rule

These topics are discussed in more detail below:

Turn off the LoadCordFAP option

By default, the GenData program will load FAP files. If the LoadCordFAP option is turned on, the GenData program will load all FAP files. Avoid turning on this INI option as it will negatively affect performance. For example, make sure this option is set as follows:

```
< RunMode >
    LoadCordFAP = No
```

The GenData program should only write information about dynamic data, such as variables, into NA file from DDT files. You can more efficiently do this by loading the DDT files instead of the FAP files.

There are, however, situations which require you to load FAP files. The CheckImageLoaded and TextMergeParagraph rules were included in the base system for these situations. These rules let you load data for a single FAP file. You'll find more information about the TextMergeParagraph rule later on in this topic, for now, just keep in mind that the TextMergeParagraph rule affects a *single* FAP file while the LoadCordFAP option affects *all* FAP files.

Since, in some cases, you must load FAP files, the system includes utilities which let you pre-compile FAP files and FXR files. By pre-compiling these files into CFA (FAP) and CFX (FXR) files, you can speed performance by eliminating parsing operations. The system is set up to use pre-compiled FAP and FXR files. You can see this setting below:

```
< RunMode >
    CompiledFAP = Yes
```

To turn off this setting, change the *Yes* to *No*. We recommend you leave the setting set to *Yes*.

Avoid underlining variable field data

Underlining variable fields slows batch processing performance. This option, which you set via Studio's Manage, Settings option, requires that either the DownloadFAP or LoadCordFAP INI option be set to Yes in the RunMode control group.

Pre-compile FAP and FXR files

As mentioned in the previous topic, you can pre-compile your FAP and font cross reference files (FXR) into CFA and CFX files. This improves performance. The system includes several utilities which you can use for this purpose.

Use	To convert
FAP2CFA	A single FAP file into a compiled FAP file. For more information see the Utilities Reference .
FDT2CFA	All of the FAP files that make up the form into compiled FAP files. For more information see the Utilities Reference .
CFA2FAP	A CFA file into a FAP file. Use for testing purposes. For more information see the Utilities Reference .

NOTE: The version of the system you use to compile the FAP and FXR files must be the same version you will use when running Documaker Server. Furthermore, the platforms must also match. For instance, if you compile the FAP and FXR files on version 11.0 for Windows, to use them in Documaker Server (GenTrn, GenData, GenPrint), you must run version 11.0 for Windows of Documaker Server.

Make sure the CompiledFAP option is set to *Yes* (the default) in the RunMode control group of your INI files before you run the system using precompiled FAP files.

In addition, use the File, Library Setup option (or edit your INI files) to specify the path for the CompLib, which is where the system will look for the compiled files. In your INI files, you will find this setting in the following control group:

```
< MasterResource >  
  CompLib = (directory the CFA and CFX files are stored in)
```

For MVS systems, you can specify a DD name, such as DD:COMPLIB()

NOTE: If you are going to use pre-compiled FAP files, you must also use precompiled FXR files.

Use overlays

The GenPrint program merges static data with the data in the NA file. Static data can come from FAP files or from overlay files. FAP files contain some information, such as updating information, which is not needed by the GenPrint program.

FAP files are larger than overlays and the system must also parse these files. Therefore, it's more efficient to compile FAP files into overlays and tell the GenPrint program to use overlays instead of FAP files. You do this for AFP and PCL printers by setting the DownloadFAP and SendOverlays INI options as shown below:

```
< RunMode >  
  DownloadFAP = No  
< PrtType:XXX >  
  SendOverlays = Yes
```


Use the
TextMergeParagraph
rule only as necessary

For Xerox Metacode printers, set the CompileInStream INI option to *No*. For Metacode printers, the SendOverlays option has no affect. The time you save on one FAP may not be significant, but the time saved on all FAP files will be.

When you define a text area with embedded variable fields in a FAP file, the text paragraph must be loaded as template data at runtime and then merged with data derived from the field level rules. The resulting text is re-wrapped and reformatted, based on the design of the FAP file. The text is then unloaded into the form data output stream. The TextMergeParagraph rule supports this capability.

This section-level rule checks to see if the FAP data for the section is loaded, and if not, it loads it. As field rules execute, the data is propagated into the text area, which causes the text to be reformatted. The section is flagged in memory as in-line so it will be treated as a template, instead of a static section. Even if the DownloadFAP option is set to *No* in the INI file, the GenPrint program will unload its resultant FAP data into the data stream as dynamic content instead of its precompiled overlay.

Although the system warns you if this rule is used in a normal static section which does not contain text areas, it is up to you to heed the warning and make the correction. Some users ignore warnings and only look at errors.

When you use this rule in a FAP file which contains the text area, the system unloads the entire FAP file, except for version records, into the NAFILE.DAT file. This occurs even if there are no embedded variable in the text area.

The static data in the FAP files does not have to be written into the NAFILE.DAT file. The less data the GenData program has to write to the NAFILE.DAT file, the faster it will run. Performance is affected because the NAFILE.DAT file is an input file for the GenData, GenPrint, and GenArc programs. The longer it takes these programs to read the NAFILE, the slower performance. Furthermore, if your NAFILE.DAT file is large, your archive file will also be large, which again affects performance.

For the best performance, avoid including other objects in the text area when you use this rule. This will minimize what the system has to unload into the NAFILE.DAT file.

For more information on this rule, see the [Rules Reference](#).

Get Rid of Warnings and Errors

If there are many errors and warnings, these files that log the errors and warnings can become very large, especially the MESSAGE.DAT file. It's a good idea to periodically review the warnings and errors to see if there are any changes you can make to remove them. The fewer messages the system has to process, the better the performance.

You can also change your INI settings to turn off some of the system's logging features. This will also improve performance—just make sure you have evaluated the messages first. For example you can make the following changes in the Control control group:

```
LogTransactions = No (eliminates the LOGFILE.DAT file)
LogToConsole    = No (eliminates messages which appear on the screen)
```

These INI options default to *Yes*.

The system always creates the MESSAGE.DAT file and deletes it automatically each time you run the GenTrn program. The GenData and the GenPrint programs append errors and warnings to the file. So it gets larger and larger if you do not run the GenTrn program as often or if you do not remove the file between runs. For the best performance, evaluate the errors and warnings to see if there are any changes you need to make in the files, then purge the MESSAGE.DAT file and go for a clean run, beginning with the GenTrn program.

Use Features Specific to Your Printers

Printers are designed to handle printer resources efficiently. If you can convert your system resources into printer resources, do it. For instance, if you can convert some of your FAP files into Xerox forms, be sure to do so. For more information see the [Utilities Reference](#).

Optimize Your FXR Files

Remove any unused fonts from the font cross reference file (FXR). The smaller the FXR file is, the faster it will load. You can use Studio's Font manager to edit your FXR file. For more information, see the [Documaker Studio User Guide](#).

Designing Your FAP Files

When you design your FAP files, consider any alternative designs which will make the system process more efficiently. For instance, if you design a form with a large number of small overlapping boxes, it will take longer to process than one designed with longer, and more efficient continuous lines.

Also, isolate objects which cause the FAP file to be in-lined into their own FAP files. Avoid including other objects with the object that causes the FAP file to be in-lined. For instance, if you must use the TextMergeParagraph rule in a text area, avoid including other objects in that text area. Especially avoid mixing bar code, rotated variables, or charts with text areas.

Using charts

Charts, especially 3D charts, look great and can add a lot to your form, but remember that they have a big affect on performance. Charts are one kind of inline graphics which include dynamic data. This means the GenData program has to perform computations on them and charts cannot be pre-compiled for the GenPrint program.

If you use charts,

- Make the chart as simple as possible and limit the number of series. The more complicated the chart, the more data in the NA file, and the larger the data stream from the GenPrint program. It takes a long time to print a large data stream.
- Avoid putting several charts on a single section.
- Avoid mixing charts with other objects on the same section.
- If you are using a Xerox Metacode printer, make sure you are using a CompressMode option other than *UNC* (uncompressed). You'll find this option in the PrtType:XER control group.

Using conditional and multiple sections in one form

Loading times are affected by the number, size, and complexity of your section files. If you can combine some sections in the same form, do so unless they are conditional sections. A lot of small floating sections on one page, will slow performance.

Using the IF Rule

The IF rule evaluates each condition in sequence. The more conditions you have, the longer it takes. It is better to only use the IF rule during testing and implementation and replace it with a custom rule in production.

Turn off debug-related option by setting the Debug_if option to *No* in the If_Rule control group.

For more information about the IF rule, see the [Rules Reference](#) and [Setting the Scope of Variables on page 40](#).

Using the Set Recipient Table and Extract Files

Here are some hints on how to best use the set recipient table (SETRCPTB.DAT) and extract files:

- Fewer triggers equals better performance. Each trigger is like a condition statement for the system to evaluate. The more conditions the system has to evaluate, the slower the processing cycle.
- Use the master (M) and subordinate (S) flags to avoid repetition.

The set recipient table contains both form and section-level triggers to handle cases of conditional sections on forms. A section-level trigger can be used to trigger a form. This is beneficial in situations where a conditional image can trigger header and footer images. If, however, you use it improperly, you will add redundant conditional logic at both image and form level—which slows performance.

There are two flags (S and M) which you can use to control the evaluation of image level triggers and to maintain a hierarchy of form and image with respect to the inclusion of these entities into a form set. The S flag, called the subordinate flag, identifies the image as subordinate to the parent or master form level trigger. If the form is not triggered, all underlying image triggers can be ignored, which eliminates unnecessary processing. The subordinate flag also eliminates processing the same conditional logic over and over again since the logic is only performed once at the form level.

The master form flag (M) works in a similar manner but at the form level. When you use the M flag with a form level trigger, it does not matter whether the underlying image level triggers have an S flag—all will be treated as if they did. If the logic in a master form level trigger fails, the form does not trigger and all of the form's image level triggers are ignored.

- Limit your use of the RecipIf rule.

The RecipIf rule is just like the IF rule except it is used in the SETRCPTB.DAT file. The more conditions the system has to evaluate, the slower the processing cycle. Avoiding the RecipIf rule often depends on the structure of the extract file.

The ideal situation is to trigger a form or image based on one search criteria. If you want to trigger a form or image based on more than one search criteria, you may need to use the RecipIf rule. The more conditions you have, the more complicated the RecipIf rule will be. If the system has to look for a value in a given range of data instead of at an exact location, you have to add a long and complicated recipif. There is a price to pay for flexibility and it's paid in performance.

For more information on the RecipIf rule, see [Using the RecipIf Rule in the Documaker Administration Guide](#).

- Structure the data in your extract file to be read in the order that it will be processed. This improves performance since the system will find the next piece of data to process faster.

Setting Cache Resources

Use the cache feature for FAP and PMET files if the number of these files is over 100. It will reduce the number of times the system has to open and close these files. Here is an example of where you set the cache:

```
< Control >
  CacheFAPFiles =100(Default is 100)
  RuleFilePool = 100(Default is 100)
```

Caching pre-compiled Metacode files (PMETs) has a big affect on the GenPrint program. Here is an example of where you can set the cache for pre-compiled Metacode files:

```
< PrtType:XER >
  CacheFiles = 100 (Default is 100)
  InitFunc = XERInit
  TermFunc = XERTerm
```

NOTE: You must include the InitFunc and TermFunc options in the PrtType:XER control group to enable caching.

IMPROVING DATABASE RETRIEVAL PERFORMANCE

Indexing

One way to improve the speed at which transactions are retrieved from a database is to create and use indexes. You can implement indexes on the database side where the queries are executed.

You can use indexes any time a back-end database is used, such as for archive/retrieval and for use with Library manager and Documanager.

The Documanager font-end interface does not allow for indexing, but you can do it on the back-end side (SQL Server). You can also do the indexing manually on the back-end after the tables have been created. Set the index on the search key fields of any relational table, such as Key1, Key2, KeyID, for faster searches.

By using indexes, the database engine avoids having to do a full table scan when searching for data. A table can have any number of indexes, but keep in mind that when you insert or delete rows, you must update all indexes on the table. When a column is updated, all indexes on the column must be updated.

Since both Library manager and archive tables are constantly updated and since there is a trade-off between the retrieval speed for queries on a table and time it takes to update the table, you may want to limit the indexes to the Key1, Key1, KeyID fields for the Archive index table. For Library manager, consider only using the FileName, FileType, and Effectiv fields.

Clustering

You can also fine tune database performance using clustering. The cluster key is the column or group of columns the clustered tables have in common. You specify the columns of the cluster key when creating the cluster. Each cluster key value is stored once in the cluster and in the cluster index, no matter how many rows in different tables contain the value. When you have two tables that share the same columns, such as the APPIDX and CARARC tables which share the ArcKey field, you can use a cluster on those two tables.

This lets the database store all rows for each ArcKey from both the APPIDX and CARARC tables in the same data blocks. Do not use clusters for tables that are accessed individually. The benefit is reduced disk I/O and improved access time when doing a retrieval. Although clustering occurs when the table is created—a point at which you have no control—you may be able to cluster the tables after creation time using an Alter Table statement.

You can run an Explain Plan statement on the Oracle side to see how the query mechanism changes based on associated indexes and clusters. The retrieval time difference is usually very noticeable when using tables with lots of rows.

SQL Server has a GUI interface you can use to manage table relationships, keys, and indexes. You can access it from the table design view (by clicking the Table Properties button on toolbar).

Limiting the number of keys

If the archive is a flat file and the index is in xBase, limit your search keys to one to retrieve from a large index and archive. Performance slows when you use two or more search keys.

If you need two or more search keys, consider using a relational DBMS such as SQL, DB2, or Oracle to store the archive and index.

ERROR MESSAGES

Here is a discussion of some common error messages:

Error in RULUpdateRecips(): Unable to GENGetGlbDataPtr('RCBPrtFlag')

The problem is in the RCBDFDFL.DFD file, which is missing four required fields, RCBZip, RCBPrtFlag, RCBError, RCBRcpCode. Refer to the sample resources for examples of how to define these variables.

Missing Code Page

If, when using the CPCNV utility to switch code pages, the utility tells you the CODEPAGE.INI file is missing or that it contains less than two code pages, the utility may be looking in the wrong directory.

By default, the utility looks in the mstrres\fmres\deflib\ directory for the CODEPAGE.INI file. You can specify a different location for this file by adding an INI setting in the FSI SYS.INI or FSI USER.INI files. The INI setting is:

```
< FMRes >  
DefLib = the path where the codepage.ini is located.
```

NOTE: You can find more information about this and other utilities in the [Utilities Reference](#).

What causes the Error in UpdateRecips error message?

Error in UpdateRecips(): GlobalRecip.code:<> is invalid for GlobalRecip.name:<Insured>. You may be flushing too much of the form set.

First possible cause

There is a line in the SETRCPTB.DAT file that is trying to reference a recipient named *Insured*; however, there is no reference to that recipient in the AFGJOB.JDT file. The appropriate reference should look like this:

```
IfRecipUsed;2;BATCH2=Insured;
```

Resolution

Place the correct reference to the recipient and batch in AFGJOB.JDT file.

What causes the Error in GENAddFormToSet error message?

Error in GENAddFormToSet(): Unable to VMMLocateOrdElem(pRPS ->FormDatH,<:XXX;CPP;DECPG:>.).

- | | |
|------------|---|
| Cause | The system found a line in the SETRCPTB.DAT file that indicated that the form DECPG should be added to the list of forms to be triggered for this particular transaction. However, when the system tried to find DECPG, it was unable to locate it. |
| Resolution | <ul style="list-style-type: none"> • If DECPG is a valid form, check the form list to see if the form is listed. If not, add it. • If DECPG is a valid form, check the form list to see if the form is listed. If it is there, check the spelling to make sure that it matches the SETRCPTB.DAT. • If DECPG is not a valid form, remove it from the SETRCPTB.DAT file. |

What causes the bad or missing input format error message?

(Error in GEN_NUMUTIL_FormatNumber(): Bad or missing input format.)

- | | |
|------------|--|
| Cause | <p>You are using a format mask in the MoveNum rule or a similar number handling rule that is either:</p> <ul style="list-style-type: none"> • missing required data or • formatted incorrectly, such as commas and so on |
| Resolution | Review the documentation for the MoveNum rule in the Rules Reference to make sure you have the required format mask. |

What causes the no forms for current transaction error message?

Warning in SetNextImage(): No forms for current transaction. FapTotalForms(pRPS->CurrentFapFormsetH) < 1). Processing will continue.

- | | |
|-------|--|
| Cause | There is no line in the SETRCPTB.DAT file that had a search criteria on it which matched the record values in the current transaction. |
|-------|--|

What causes the unable to FAPLoadImage error message?

Error in RULLoadImage(): Unable to FAPLoadImage (ImageH,<q1vrfl>, FAPIImageLoader(), OBJ_FIELDS).

- | | |
|------------|--|
| Cause | In the FSIUSER.INI, under in both the Config:XXX and MasterResource control groups, the CompLib option is specified but the path and directory of the compiled library has not been defined. |
| Resolution | <p>Either...</p> <ul style="list-style-type: none"> • Comment out the CompLib option under both sections by placing a semicolon in front of it; or |

- Create a directory that contains the compiled FAP files and lists the path for the CompLib option.

Also, if you comment out the CompLib option in both sections in the FSIUSER.INI file, go to the RunMode control group in the FSISYS.INI file set the CompiledFAP option to *No*.

What causes the GenLMGRpt () failure using Linerpt error?

When you get this message, which will look something like this:

```
GenLMGRpt () failure using Linerpt for \s3vv2v9vr.1
```

This message indicates the system cannot find a FAP file it uses for one of its reports.

Linerpt is the form (LINERPT.FAP) the system uses when you request reports such as image report, Library manager report, table report, and so on. This file is one of the four FAP files included in the FMRes library when you install the system.

\s3vv2v9vr.1 indicates the temporary work file the system is trying to build.

GenLMGRpt varies, depending on where you are running the report. This example applies to the Library manager report being run from Library manager.

The FMRes control group includes options which tell the system where to get the files it needs to create the report. Here is an example of this control group, which is typically found in the FAPCOMP.INI file:

```
< FMRes >
  DefLib      = g:\libs\fmRES\DEFLIB\
  FormLib     = g:\libs\FMRES\FORMS\
  XrfFile     = rel95sm
```

The error can appear for these reasons:

- You do not have the FMRes control group in your INI file.
- You have the FMRes control group but the paths are missing or are invalid
- You do not have the FMRes library
- You do not have the LINERPT.FAP file

You can modify your INI files to correct the first two scenarios. Just be sure you exit all of the tools before you make any changes.

Use the library installation routine to install the FMRES library and the FAP file.

What causes the "Unable to DBOpen (TrnfileH)" error?

The DBOpen function could not find and open the TrnFile and returned this error to GENInitTrn. To avoid the error when running in two-step or single-step mode, make sure the INI file has this setting:

```
< Data >
  Trnfile = .\NUL
```

Depending on the operating system you are using, you may have to use:

```
< Data >
```



```
Trnfile = .\NULL
```

Also, if you are using UNC paths, create an empty TRNFILE.DAT file and use:

```
< Data >
Trnfile = trnfile.dat
```

Why does GenWIP tell me the UNIQUE_ID field is not in the DFD?

Specifically, why do you get the following message when running the GenWIP program?

```
UNIQUE_ID field is not defined in the DFD and no <DBTable:wip>
UniqueTag= INI option is specified.
```

This message tells you that you do not have a WIP.DFD file in your MRL or your WIP.DFD file does not have the UNIQUE_ID field defined. It typically means the system needs to know the primary key for this table. Since people often do not define one, the system looks for the UNIQUE_ID. The UNIQUE_ID field is not included in the default WIP.DFD file.

This message usually occurs when you try to send WIP transactions to a repository other than xBase, such as DB2 or SQL. Here is a sample WIP.DFD file that does contain the UNIQUE_ID field:

NOTE: The UNIQUE_ID field (column) is included in both <FIELDS> and <KEYS> section in the DFD file.

```
< FIELDS >
; UNIQUE_ID field is not in the standard WIP.DFD, you must add it
FIELDNAME = UNIQUE_ID
FIELDNAME = KEY1
FIELDNAME = KEY2
FIELDNAME = KEYID
FIELDNAME = RECTYPE
FIELDNAME = CREATETIME
FIELDNAME = ORIGUSER
FIELDNAME = CURRUSER
FIELDNAME = MODIFYTIME
FIELDNAME = FORMSETID
FIELDNAME = TRANCODE
FIELDNAME = STATUSCODE
FIELDNAME = FROMUSER
FIELDNAME = FROMTIME
FIELDNAME = TOUSER
FIELDNAME = TOTIME
FIELDNAME = DESC
FIELDNAME = INUSE
FIELDNAME = ARCKEY
FIELDNAME = APPDATA
FIELDNAME = RECNUM
< FIELD:UNIQUE_ID >
; This section is not in the standard WIP.DFD, you must add it
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 32
```

```
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 32
KEY = Y
REQUIRED = Y
< FIELD:KEY1 >
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 30
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 30
KEY = Y
REQUIRED = Y
< FIELD:KEY2 >
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 30
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 30
KEY = Y
REQUIRED = Y
< FIELD:KEYID >
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 20
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 20
KEY = Y
REQUIRED = Y
< FIELD:RECTYPE >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 3
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 3
INT_PRECISION = 0
KEY = N
REQUIRED = Y
< FIELD:CREATETIME >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = Y
< FIELD:ORIGUSER >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:CURREUSER >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
```

```
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:MODIFYTIME >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:FORMSETID >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:TRANCODE >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 2
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 2
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:STATUSCODE >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 2
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 2
INT_PRECISION = 0
KEY = N
REQUIRED = Y
< FIELD:FROMUSER >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:FROMTIME >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
```

```
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:TOUSER >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:TOTIME >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 8
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 8
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:DESC >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 30
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 30
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:INUSE >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 1
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 1
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:ARCKEY >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 18
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 18
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:RECNUM >
EXT_TYPE = NOT_PRESENT
EXT_LENGTH = 0
EXT_PRECISION = 0
INT_TYPE = LONG
```

```
INT_LENGTH = 4
INT_PRECISION = 0
KEY = N
REQUIRED = N
< FIELD:APPDATA >
EXT_TYPE = CHAR_ARRAY
EXT_LENGTH = 150
EXT_PRECISION = 0
INT_TYPE = CHAR_ARRAY
INT_LENGTH = 150
INT_PRECISION = 0
KEY = N
REQUIRED = N
< KEYS >
KEYNAME = UNIQUE_ID
KEYNAME = DOCTAG
KEYNAME = KEY2TAG
KEYNAME = KEYIDTAG
KEYNAME = USERTAG
< KEY:UNIQUE_ID >
EXPRESSION = UNIQUE_ID
FIELDLIST = UNIQUE_ID
< KEY:DOCTAG >
EXPRESSION = KEY1+KEY2+KEYID+RECTYPE
FIELDLIST = KEY1,KEY2,KEYID,RECTYPE
< KEY:KEY2TAG >
EXPRESSION = KEY2
FIELDLIST = KEY2
```


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