



PRO WorkFlow JES

Automate extraction of input files from JES spools for data manipulation applications, such as transformations, and for routing results to printers, JES spools, folders, FTP sites, etc., over the Web or internally

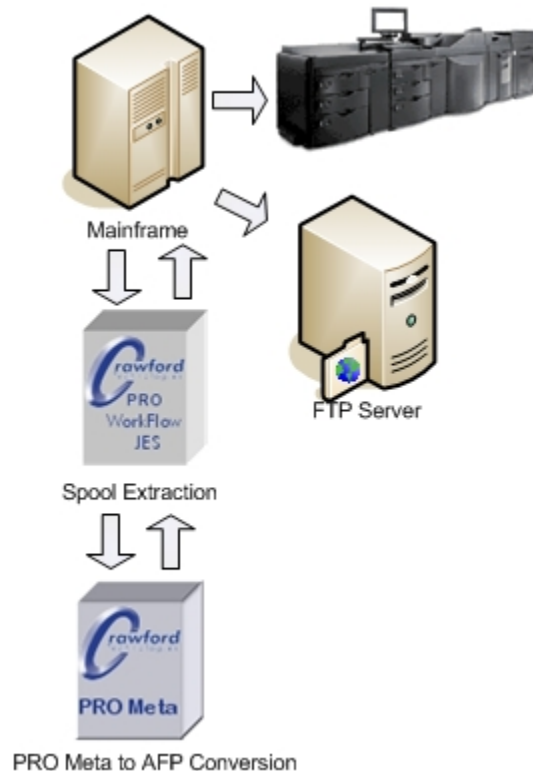
Crawford Technologies' **PRO WorkFlow JES** product, a component of the **PRO WorkFlow Family** of products, is used to automate the extraction of input files from the JES spool for data manipulation applications, such as transformations, print stream re-engineering, ACIF and/or composition engines. It is also used for routing the output files to the specified destinations, such as a printer, JES spool or FTP site.

PRO WorkFlow JES provides customers with four functional options described below.

PRO WorkFlow JES Spool Extraction

On many occasions, clients need the capability to access and modify files that are loaded into a z/OS JES queue. There may be a need to modify the output format before it is released for printing. Or, the file may need to have some special format attributes merged into the print data stream. In these and many more cases Crawford Technologies' **PRO WorkFlow JES Spool Extraction** product can be of assistance.

PRO WorkFlow JES Spool Extraction automates the conversion of print output in JES2 and JES3 environments. This program automatically allows output to be selected from JES queues and converted to other formats, such as AFP, using **PRO Meta to AFP** or PCL, using **PRO Meta to PCL**. The converted output files are then automatically sent back to the JES Spool for printing or routed to an FTP Server on the network.



The **PRO WorkFlow JES Spool Extraction** product makes it easy for data centers to convert many applications from one type of printer to another without the need to modify application JCL procedures. When run as a Started Task, the program can be controlled with MVS operator commands. For example, reports can be pulled from the JES queues and then routed to PCs or workstations using FTP. Converted output files can be automatically routed to a Windows, Unix or AIX FTP Server.

PRO WorkFlow JES Spool Extraction runs in z/OS, MVS or OS/390 environments using JES2 or JES3 in three different modes:

- Batch Program
- Started Task
- Functional Sub-System (FSS).

PRO WorkFlow JES to FTP

PRO WorkFlow JES to FTP is designed for z/OS and OS/390 JES2 and JES3 customers, who want to automate the transfer of print output from the spool to other systems using TCP/IP communications lines.

PRO WorkFlow JES to FTP automates the transfer of print output in JES2 and JES3 environments. This product can automatically select output from the JES2 or JES3 spool for transmission using the FTP protocol to target FTP sites. Output can be selected from the spool based on a variety of criteria, including CLASS, FORM, DEST, WRITER and JOBNAME. Wildcards can be used and JES work selection criteria can be used in the FSS mode.

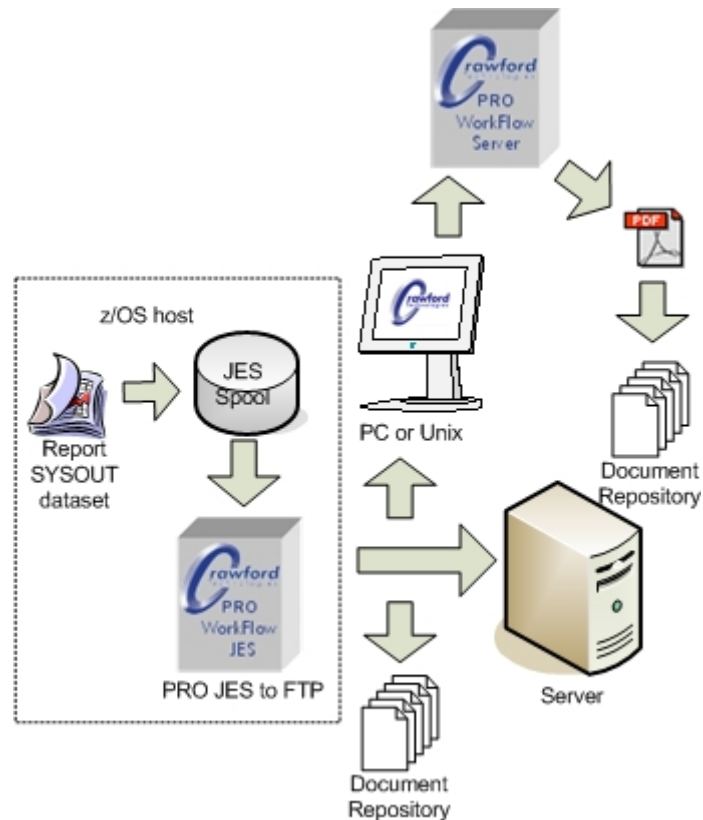
The **PRO WorkFlow JES to FTP** product makes it easy for data centers to move print output to other systems without the need to modify application JCL procedures. The other systems can be print servers, archive systems, imaging systems, disaster recovery systems, outsource services systems, and can be running any operating system that supports FTP. Print files can be line print data, Xerox LCDS and metacode, AFP, PostScript, PCL or any other format.

PRO WorkFlow JES to FTP fits into the z/OS and OS/390 system and runs just like any other system software. When run as a Started Task, the program can be controlled with MVS operator commands. Multi-threading functionality allows throughput to be maximized during critical print windows. It includes SAPI, FSS and External Writer JES spool interface capabilities in order to fit any environment. In most environments, temporary DASD space is not necessary, optimizing the entire process.

PRO WorkFlow JES to FTP monitors the FTP process to ensure that file transfers are completed correctly. In the event of a communication error the job in progress is put on hold and the operator is notified.

PRO WorkFlow JES to FTP can be used to eliminate obsolete hardware-centric solutions where specialized communications devices, such as channel extenders and S/370 channel adapters, are used to connect systems to the mainframe. This can result in substantial maintenance cost savings as well as performance improvements.

See the illustration overleaf.



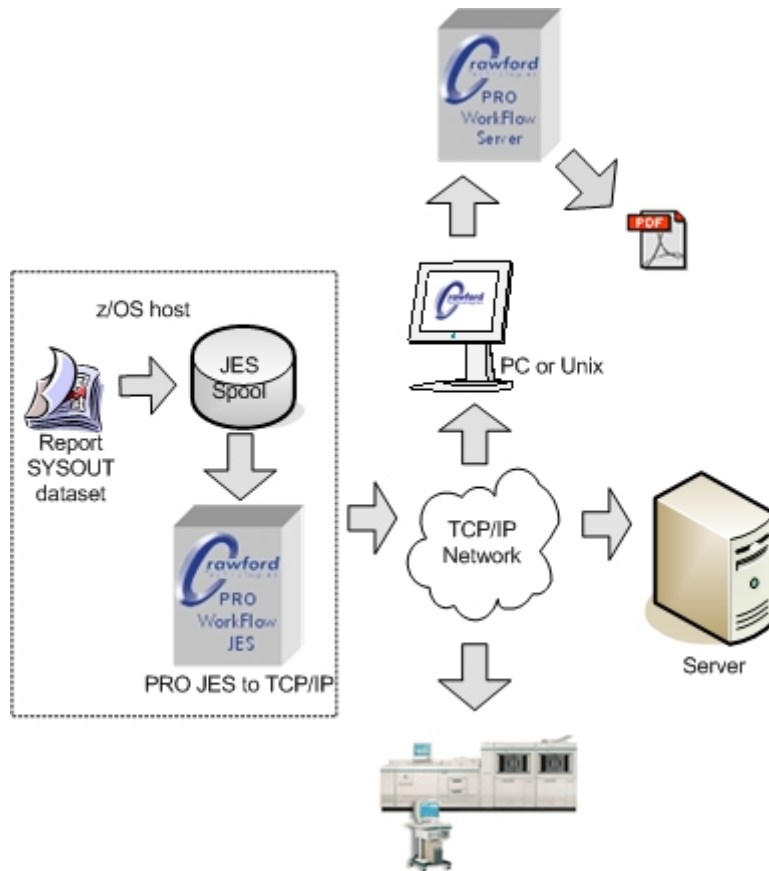
PRO WorkFlow JES to TCP/IP

The **PRO WorkFlow JES to TCP/IP** product automates the transmission of print output over LPR or sockets connections in JES2 and JES3 environments. Output can be selected from the spool based on a variety of criteria, including CLASS, FORM, DEST, WRITER and JOBNAME.

PRO WorkFlow JES to TCP/IP fits into the z/OS and OS/390 system and runs just like any other system software. When run as a Started Task, the program can be controlled with MVS operator commands. For example, a Xerox metacode dataset can be pulled from the JES queues and transferred over the TCP/IP protocol for printing or further processing.

Multi-threading functionality allows throughput to be maximized during critical print windows. It includes SAPI, FSS and External Writer JES spool interface capabilities in order to fit any environment. In most environments, temporary DASD space is not necessary, optimizing the entire process.

PRO WorkFlow JES to TCP/IP can be used to eliminate obsolete hardware-centric solutions where specialized communications devices such as channel extenders and S/370 channel adapters are used to connect systems to the mainframe. This can result in substantial maintenance cost savings as well as performance improvements.



PRO WorkFlow JES ACIF/Automate

Crawford Technologies automates Disaster Recovery, indexing, outsourcing, offloading, image system importing and AFP resource Management for z/OS and OS/390 systems.

The IBM AFP Conversion and Indexing Facility (ACIF) provides a very useful program for indexing print files, preparing print files for inter-system transmission, and gathering print resources used by print files. However, ACIF usage requires JCL changes in the applications that need to be used with it. The **PRO WorkFlow JES ACIF/Automate** product, a component of the **PRO WorkFlow Family**, automates the use of ACIF by selecting output from the JES queue and processing it through ACIF.

The **PRO WorkFlow JES ACIF/Automate** product automates the conversion of print output in JES2 and JES3 environments. The converted output files are then automatically sent back to the JES Spool for printing or routed to FTP Servers on the network. **PRO WorkFlow JES ACIF/Automate** can be used to:

- Automate Disaster Recovery printing processes
- Automate outsourcing of AFP print applications
- Automate print applications to Archival, Imaging, COLD and Report Management Systems
- Automate preparation and movement of AFP print applications to Output Management Systems

The **PRO WorkFlow JES ACIF/Automate** product makes it easy for data centers to convert many applications without the need to modify application JCL procedures. When run as a Started Task, the program can be controlled with MVS operator commands.

PRO WorkFlow JES ACIF/Automate runs in z/OS and OS/390 environments using JES2 or JES3 in 3 different modes:

- Batch Program
- Started Task
- Functional Sub-System (FSS)

