

# Chapter 16

## Appendix

### Command overview

The following command interface is provided in order to integrate i-effect into already existing applications or routines. The commands permit the invocation of compression and decompression routines. The described functions may also be retrieved through the i-effect user menu.

#### **IEFFECT, \*CMD**

The command IEFFECT calls up the i-effect main menu where all functions are centralized.

#### **SETUP, \*CMD**

The command SETUP invokes the i-effect setup routine. (See “Chapter 3, i-effect Installation Routine”).

### Commands for (Spool-)Conversion

#### **CVTSTMSPLF, \*CMD**

This command serves the reconversion of data stream files in the SAV file format into spool files. (See “Chapter 4, menu item 32”).

#### **STREDICON, \*CMD**

The interface command STREDICON (Start EDI converter) calls up complex converter commands for the conversion of DB2 database formats to one of the many supported output formats. (See “Chapter 4, Start EDI Conversion (STREDICON)”).

**CVTDBF**

The CVTDBF command allows the export of System i database tables as data stream files in the PC file format. (See Chapter 4).

**Commands for Data Compression****CRTARC, \*CMD**

This command creates a blank ZIP archive.  
(See "Chapter 5, menu item 1").

**WRKARC, \*CMD**

This command enables working with archives.  
(See "Chapter 5, menu item 2").

**ADDZIP**

This command is used to add files to an archive.  
(See "Chapter 5, menu item 3").

**ADDARCFIL, \*CMD (veraltet)**

This command adds files or spool entries to a ZIP archive.  
(See "Chapter 5, menu item 3").

**DSPARCFIL, \*CMD**

This command displays data from archives.  
(See "Chapter 5, menu item 4").

**EXTARCFIL, \*CMD**

With this command files from an archive are extracted.  
(See "Chapter 5, menu item 5").

**DLTARCFIL, \*CMD**

With this command files are deleted from an archive.  
(See "Chapter 5, menu item 6").

**STRGZIP, \*CMD**

The command STRGZIP starts a compression or decompression. The use parallels the description in Chapter 5.  
(For compression, see "Chapter 5, menu item 7").  
(For decompression, see "Chapter 5, menu item 8").

**CRTSFXARC, \*CMD**

The command CRTSFXARC creates a self extracting archive.  
(See "Chapter 5, menu item 9").

**Commands for Communication****SNDFILE, \*CMD**

The SNDFILE command sends EDIFACT files via predefined partner- and communication profiles. (See "Chapter 6, menu item 5").

**SNDas2**

The command SNDas2 is used to send AS2 data. The AS2 is a standard for transmission of B2B-data via http to defined business partners.  
(See "Chapter 6, menu item 10").

**SNdTELEBOX, \*CMD**

The SNdTELEBOX command is used to send data via TELEBOX400 (X.400).  
(See "Chapter 6, menu item 20").

**RcvTELEBOX, \*CMD**

The command RcvTELEBOX is used to receive TELEBOX (X.400) data and file it. .  
(See "Chapter 6, menu item 21").

**SNdEMAIL, \*CMD**

The SNdEMAIL command is used to send a text or any file attachments from the IDM System i with email. (See "Chapter 6, menu item 30").

**RCVEMAIL \*CMD**

The RCVEMAIL command is used to receive emails from a POP3 or IMAP compatible mail server and to store them on the IBM System i (in the IFS directory). (See " Chapter 6, menu item 31").

**SNDFAX, \*CMD**

The SNDFAX command is used to send spooled files from the IBM System i as a fax. (See " Chapter 6, menu item 40").

**SNDSMS, \*CMD**

The SNDSMS command is used to send text as an SMS. The text is sent by the \*EMAIL module to an Internet service provider, who in turn sends it as an SMS. Because SMS and FAX transmission is handled by the same service provider, licenses for i-effect \*BASE, \*FAX, and the \*EMAIL modules are required to use these functions. (See " Chapter 6, menu item 34").

**SNDFTP, \*CMD**

The SNDFTP command is used to transmit data from a predefined partner profile via FTP. (See " Chapter 6, menu item 50").

**RCVFTP, \*CMD**

The command RCVFTP is used to receive data over a predefined partner profile via FTP. (See " Chapter 6, menu item 51").

**SNDOFTP, \*CMD**

The SNDOFTP command is used to send data via the OFTP protocol. (See " Chapter 6, menu item 60").

**RCVOFTP, \*CMD**

The RCVOFTP command is used to receive data via the OFTP protocol. (See " Chapter 6, menu item 61").

**SNDHTTP, \*CMD**

The command SNDHTTP is used to send data over a predefined partner profile via HTTP or HTTPS (HyperText Transfer Protocol (Secure)). (See " Chapter 6, menu item 70").

**Commands for Encryption and Signature****CPYIFS2SPL, \*CMD**

The CPYIFS2SPL command enables copying of IFS-data of the following printer- data-stream formats into a spooled file. (See "Chapter 4, menu item 33").

**DECRYPT, \*CMD**

The command DECRYPT is used to decrypt any file. (See "Chapter 7a, Decrypt Files").

**ENCRYPT, \*CMD**

The command ENCRPT is used to encrypt any file. (See "Chapter 7a, Encrypt Files").

**SIGNPDF, \*CMD**

The command SIGNPDF is used to sign the desired PDF files. (See "Chapter 7a, Sign PDF File").

**SIGNQDATA, \*CMD**

The SIGNQDATA command is used to digitally sign different file formats and files in general but especially PDF files. (See "Chapter 7b, Start Signature Job").

**VERIFYPDF, \*CMD**

The command VERIFYPDF verifies the signed PDF files. (See "Chapter 7a, Verify PDF Signature").

## Commands for Automation

### WRKEFFSRV, \*CMD

This command is used to work with i-effect server entries. Spool conversions, compressions or email mailings can be defined and automatized. The program shows the existing entries in an overview and allows to create, change and delete entries. (See "Chapter 9, menu item 40").

### ADDEFFSRVE, \*CMD

This command allows to add an entry to the server pool of the i-effect server. (See "Chapter 9, menu item 40").

### CHGEFFSRVE, \*CMD

This command allows to change an entry to the server pool of the i-effect server. (See "Chapter 9, menu item 40").

### DSPEFFSRVE, \*CMD

This command allows to display an entry to the server pool of the i-effect server. (See "Chapter 9, menu item 40").

### WRKSRVSLT, \*CMD

This command calls up the interactive program to select data sources. (See "Chapter 9, menu item 40").

### ADDSRVSLTE, \*CMD

This commands adds a new entry to the data selection table. (See "Chapter 9, menu item 40").

### CHGSRVSLTE, \*CMD

This commands changes an entry to the data selection table. (See "Chapter 9, menu item 40").

### DSPSRVSLTE, \*CMD

This commands displays an entry to the data selection table. (See "Chapter 9, menu item 40").

### WRKSRVPRC, \*CMD

This command calls up the interactive program to define processing steps. (See "Chapter 9, menu item 40").

### STREFFSRV, \*CMD

This command starts the i-effect server. (See "Chapter 9, menu item 41").

### ENDEFFSRV, \*CMD

This command ends the i-effect server. (See "Chapter 9, menu item 42").

## Commands for Administration

### RMVEFFLNK

The command RMVEFFLNK can remove or archive any IFS files. It is possible to either delete all files or select files to be deleted. (See "Chapter 11, Remove no longer required Files (RMVEFFLNK)").

### STREFREORG, \*CMD

The command STREFREORG can organize all logbook files, archive directories, and internal protocols generated by i-effect. It is possible to either delete all files or select files to be deleted. (See "Chapter 11, menu item 83").

### WRKEFFMOD, \*CMD

The command WRKEFFMOD is used to manage all modifiable parameters of the installed modules. Additionally, every module can be licensed anew if the license number has been communicated. (See "Chapter 11, menu item 80").

### WRKEFFLOG, \*CMD

With this command a list of all logbook entries can be displayed. (See "Chapter 11, menu item 81").

## WRKEFFMON \*CMD

With this command a monitor program can be called up.  
(See "Chapter 11, menu item 84").

## Commands for Print Finishing

### PRTMAPRPT

The command PRTMAPRPT documents the rules and conditions of a mapping used for EDIFACT conversion in a report.  
(See "Chapter 4, Print Mapping Report").

## Commands for Administration

### ENDEFFSBS

This command is used to end i-effect sub systems.  
(See "Chapter 11, menu item 86").

### HLDEFFSRVE

With this command a designated i-effect server entry can be held.  
(See "Chapter 9, HLDEFFSRVE (Hold Server Entry)").

### RLSEFFSRVE

With this command a designated i-effect server entry can be released.  
(See "Chapter 9, RLSEFFSRVE (Release Server Entry)").

### STREFFSBS

This command is used to start i-effect sub systems. This will be required if the default settings of the module concerned have been modified.  
(See "Chapter 11, menu item 85").

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**Note:** Slots are used to access the information, which is saved on a SmartCard (provided by a Token). Signature jobs are processed by the logic, which is contained in the slot.

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## Technical Advise Hardware

### The Integrated File System

The IBM System i Integrated File System (IFS) provides a coherent, coordinated set of file systems which can be used for both physical storage of multiple files on System i, and to communicate with file systems of other platforms.

In order to save i-effect data stream files on the local IBM System i, or remotely controlled on other platforms (PC, UNIX-Server, etc.), the IFS set of file systems includes the following file systems.

„root“	The file system „root“ (/) has the advantage of data stream file support and of a hierarchical directory structure of the integrated file system (IFS). The file system „root“ (/) carries the characteristics of the file systems Disk Operating System (DOS) and OS/2. The file system „root“ (/) should be used if i-effect generated data stream files are stored on the same local IBM System i from where the i-effect command originates.
QNTC	QNTC is the Windows NT server file system. This file system allows to access files and objects that are saved on a PC with the operating system Windows NT 4.0 (or above). System i server applications are enabled to use the same data as Windows NT clients. QNTC can be used to enable i-effect to store data stream files on a PC with the operating system Windows NT, Windows 2000 or Windows XP etc., if this is preferred to the local IBM System i. This provides an efficient method to share i-effect generated files with other users in the network, or with costumers.
NFS	NFS stands for <i>Network File System</i> . This file system allows to access files and objects that are stored on a remote NFS server. A NFS server is able to export a network file system which can be set up dynamically by NFS clients. For example, this file system can be used to send data stream files to a UNIX server.
QNetWare	The QNetWare file system allows to access local and remote files and objects stored on a Novell NetWare 4.10 or 4.11 server or individual Novell Netware 3.12, 4.10 4.11 or 5.0 servers. NetWare file systems can be set up dynamically via existent local file systems.

- QOpenSys** The Open Systems file system is compatible with UNIX based Open System standards such as POSIX and XPG. Like the file system „root“ (/), it has the advantage of data stream file support and of a hierarchical directory structure of the integrated file system (IFS). Additionally, it supports upper and lower case in object names.
- QDLS** QDLS stands for the *Document Library Service* file system (formerly known as “shared folders”). This file system allows to access files and folders. It should only be used if applications needing it are in use. QDLS is considerably slower and is subject to significant restrictions compared to the file system „root“ (/), e.g. concerning naming.
- QFileSvr.400** This file system allows to access other file systems on remote IBM System i servers. QFileSvr.400 can be used to save i-effect output files directly on other System i systems.

All details concerning IFS can be found here: <http://publib.boulder.ibm.com/series/v5r1/ic2924/info/rzaia/rzaiacon.htm>

In the following, the QNTC file system will be treated in more detail because its range of functions is still not much known, but of a certain importance to System i users.

## QNTC

The QNTC file system is subordinated to the Integrated File System and allows System i to access files and network releases (e.g. printer or CD-ROM drive) being located on a distant Windows NT system. Please note: In opposition to the widespread opinion, the access is not restricted to integrated IBM NetFinity servers (also known as IPCS or FSIOP).

Using the QNTC file system, IBM System i can read and write files which are physically located on a PC with the operating system Windows NT (or above), i.e. i-effect can output data directly to an NT server, if this is preferred to storing data in the file system „root“ (/).

In order to use QNTC, both a simple operating system and the TCP/IP Connectivity Utilities for the IBM iSeries 400 (5722-TCP) are required. Please note: The setup of QNTC might be difficult! For more detailed information concerning QNTC, please refer to the following domain of the IBM System i information center:

<http://publib.boulder.ibm.com/infocenter/series/v5r4/topic/ifs/rzaaxqntcfs.htm>

Below, a short overview on the setup of QNTC can be found. It refers to the operating system OS/400, version V5R1:

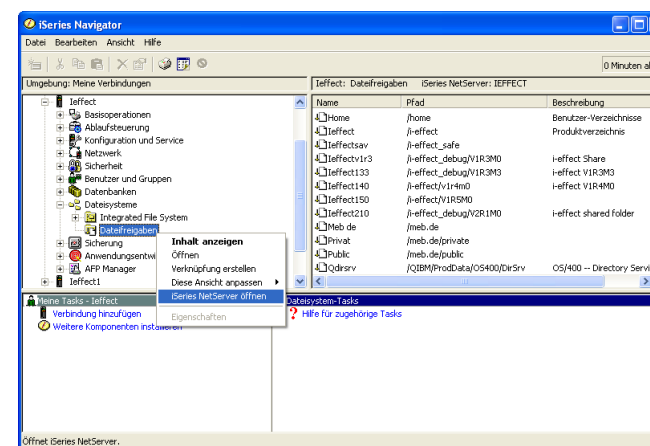
1.

## Domain name

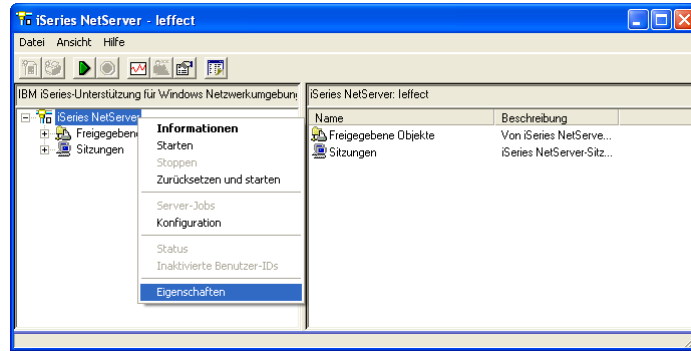
First of all, please make sure that the domain name defined by the System i NetServer configuration is identical to the PC's Windows network workgroup name. NetServer is the System i function providing support for the Windows Network Neighborhood. The iSeries Navigator may be used in order to setup and manage NetServer.

Please note: Changing the domain name in NetServer may have consequences concerning the recognition of network neighborhoods.

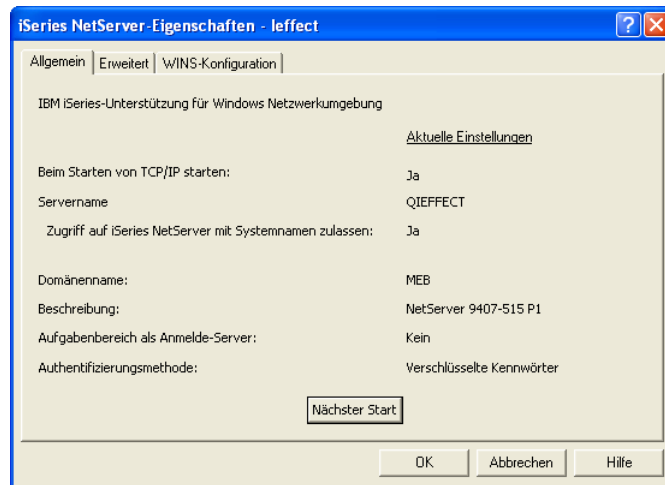
In order to setup and manage NetServer, click the name of your machine and open “File Systems” in the iSeries Navigator main window. Then, right-click on File Shares. Select “Open System i NetServer” from the menu to display the NetServer window.



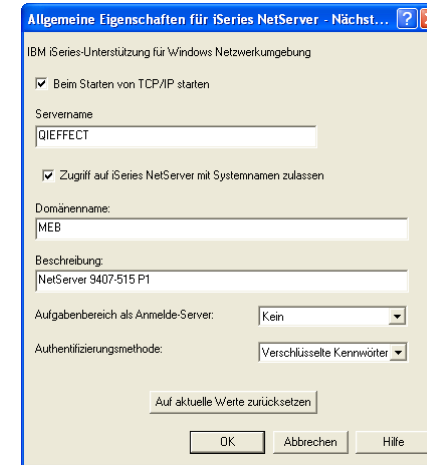
2. Right-click on AS/400-NetServer and select Properties to display the Properties dialog window where you can change the domain.



3. Select the General tab and click on "Next Start"



4. A dialog window appears where the properties can be modified. They will take effect from the next restart of NetServer on. Enter the workgroup name matching the NT PC you wish access into the field Domain Name.



5. Please make sure that NetServer is not used by any other user before ending and restarting it. To end the NetServer, click on "Stop" and, once NetServer has fully ended, click on the green triangle icon to restart it.

Changing the network identity from the PC side is possible on the Windows interface.

- For Windows 2000 choose Start/Settings/Control Panel/System. Select the Identification tab, click on Properties, select Workgroup and enter the workgroup name matching the System i NetServer domain name.
- In Windows XP this option is located on the Computer Name tab.
- In Windows NT this option is located in Start/Settings/Control Panel/Network.

Please note: You may have to reboot the PC for these changes to take effect.

## 6. User ID and Password

Furthermore, between IBM System i and NT PC an accordance of user ID and password is obligatory. It is necessary that the IBM System i user ID is recognized as a valid network user ID by the NT PC and that the passwords for IBM System i users and PC network users match. It is therefore advisable to create a special user ID to communicate between the platforms using QNTC. This guarantees that the password can be changed manually on both systems, if changing the password is needed.

## 7. Testing the Connection

To test the connection, it is required to be logged on with exactly the same user ID/password on System i and in the PC network (as per description above). Then, run the command `WRKLNK '/QNTC/*'` on IBM System i. The execution of this command may take some minutes to complete at the first time it is run! The NT system will appear on the list. If not, a connection to the NT system could be established manually by using the command `CRTDIR /QNTC/ <servername>'`. Replace `<servername>` by the name of the NT system.

As soon as the NT system appears on the list, use option 5 (Display) in the WRKLNK dialog (Work with Object Links) in order to display the shared data network devices on NT.

To access the QNTC file system, insert QNTC, the name of the target PC and the name of the shared NT network into the `OUTPATH` parameter's path name of the `CVTSPL` command.

Concerning the following example, we assume that output data, which was generated by i-effect, will be saved on the company's network server on Windows NT 4.0 (or above). It carries the name `NTServer` to ensure that every user in the company has shared access to these files. On `NTServer` there is a share called `NTFiles`. Inside of it, a directory called `CustData` is to be found. The command to convert a spooled file into a PDF file and save it under `JOBLOG.PDF` may look as follows:

```
CVTSPL FILE(QPJOBLOG)
      JOBNAM(041013/MENTEN/QPADEV000K)
      SPLNBR(1)
      OUTPATH('/QNTC/NTServer/NTFiles/CustData')
      OUTPFILE('JOBLOG.PDF')
```

Please note: The path name starts with `/QNTC` in order to tell System i that it is the QNTC file system that is referred to. `/QNTC` is followed by the name of the PC to which the data is transmitted: `NTServer`. Hereafter follows the name of the share (`NTFiles`) and the selected target directory inside the share (`CustData`). Finally, the name of the file itself is to be indicated (`joblog.pdf`).

## CCSID Overview

<i>Code Page 00037</i>	(EBCDIC) USA/Canada	<i>Code Page 00838</i>	(EBCDIC) Thai Extended
<i>Code Page 00256</i>	(EBCDIC) International #1	<i>Code Page 00850</i>	(IBM Personal Computer) Multilingual
<i>Code Page 00260</i>	(EBCDIC) Canadian French	<i>Code Page 00851</i>	(IBM Personal Computer) Greece
<i>Code Page 00273</i>	(EBCDIC) Germany F.R./Austria	<i>Code Page 00852</i>	Latin-2 Personal Computer
<i>Code Page 00277</i>	(EBCDIC) Denmark, Norway	<i>Code Page 00855</i>	(IBM Personal Computer) Cyrillic
<i>Code Page 00278</i>	(EBCDIC) Finland, Sweden	<i>Code Page 00856</i>	(IBM Personal Computer) Hebrew
<i>Code Page 00280</i>	(EBCDIC) Italy	<i>Code Page 00857</i>	(IBM Personal Computer) Turkey
<i>Code Page 00281</i>	(EBCDIC) Japan (Latin)	<i>Code Page 00860</i>	(IBM Personal Computer) Portugal
<i>Code Page 00284</i>	(EBCDIC) Spain/Latin America	<i>Code Page 00861</i>	(IBM Personal Computer) Iceland
<i>Code Page 00285</i>	(EBCDIC) United Kingdom	<i>Code Page 00862</i>	(IBM Personal Computer) Israel
<i>Code Page 00290</i>	(EBCDIC) Japanese (Katakana) Non-extended	<i>Code Page 00863</i>	(IBM Personal Computer) Canadian French
<i>Code Page 00290</i>	(EBCDIC) Japanese (Katakana) Extended	<i>Code Page 00864</i>	(IBM Personal Computer) Arabic
<i>Code Page 00297</i>	(EBCDIC) France	<i>Code Page 00865</i>	(IBM Personal Computer) Nordic
<i>Code Page 00367</i>	7-Bit ASCII	<i>Code Page 00866</i>	(IBM Personal Computer) Cyrillic #2
<i>Code Page 00420</i>	(EBCDIC) Arabic Bilingual	<i>Code Page 00869</i>	(IBM Personal Computer) Greece
<i>Code Page 00423</i>	(EBCDIC) Greece	<i>Code Page 00870</i>	Latin-2 Multilingual
<i>Code Page 00424</i>	(EBCDIC) Israel (Hebrew)	<i>Code Page 00871</i>	(EBCDIC) Iceland
<i>Code Page 00435</i>	(EBCDIC) Teletext Isomorphic	<i>Code Page 00874</i>	(IBM Personal Computer) Thai Extended
<i>Code Page 00437</i>	(IBM Personal Computer) USA	<i>Code Page 00875</i>	(EBCDIC) Greece
<i>Code Page 00500</i>	(EBCDIC) Multilingual #5	<i>Code Page 00880</i>	(EBCDIC) Cyrillic, Multilingual
<i>Code Page 00813</i>	(ISO 8859, Part 7) Greece	<i>Code Page 00891</i>	(IBM Personal Computer) Korea
<i>Code Page 00819</i>	(ISO 8859, Part 1) Latin Alphabet No. 1	<i>Code Page 00895</i>	Japan 7-Bit
<i>Code Page 00833</i>	(EBCDIC) Korea Extended	<i>Code Page 00897</i>	(IBM Personal Computer) Japan PC #1
<i>Code Page 00836</i>	(EBCDIC) Simplified Chinese Extended	<i>Code Page 00903</i>	(IBM Personal Computer) People's Republic of China (PRC)
		<i>Code Page 00904</i>	(IBM Personal Computer) Republic of China (ROC)
		<i>Code Page 00905</i>	(EBCDIC) Turkey Extended Code Page

<i>Code Page 00912</i>	Latin-2
<i>Code Page 00915</i>	8-Bit ASCII/ISO Cyrillic
<i>Code Page 00916</i>	(ISO 8859-8) Hebrew
<i>Code Page 00920</i>	(ISO 8859-9) Turkey
<i>Code Page 00921</i>	Baltic 8-Bit
<i>Code Page 00922</i>	Estonian 8-Bit
<i>Code Page 01008</i>	Arabic 8-Bit
<i>Code Page 01009</i>	(7-Bit ISO) International Alphabet 5 (IA5)
<i>Code Page 01010</i>	French 7-Bit
<i>Code Page 01011</i>	German 7-Bit
<i>Code Page 01012</i>	Italian 7-Bit
<i>Code Page 01013</i>	United Kingdom 7-Bit
<i>Code Page 01014</i>	Spanish 7-Bit
<i>Code Page 01015</i>	Portuguese 7-Bit
<i>Code Page 01016</i>	Norwegian 7-Bit
<i>Code Page 01017</i>	Danish 7-Bit
<i>Code Page 01018</i>	Finnish/Swedish 7-Bit
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<i>Code Page 01041</i>	(IBM Personal Computer) Japanese Extended
<i>Code Page 01042</i>	(IBM Personal Computer) Simplified Chinese Extended

<i>Code Page 01043</i>	(IBM Personal Computer) Traditional Chinese
<i>Code Page 01046</i>	Arabic Extended PC Data
<i>Code Page 01051</i>	(8-Bit) H-P Emulation, Roman 8
<i>Code Page 01088</i>	(IBM Personal Computer) Korean
<i>Code Page 01097</i>	(EBCDIC) Farsi
<i>Code Page 01098</i>	(IBM Personal Computer) Farsi
<i>Code Page 01112</i>	(EBCDIC) Baltic, Multilingual
<i>Code Page 01122</i>	(EBCDIC) Estonian
<i>Code Page 01123</i>	(EBCDIC) Cyrillic Ukraine
<i>Code Page 01114</i>	Traditional Chinese (Big5)
<i>Code Page 01115</i>	Simplified Chinese (GB)
<i>Code Page 01250</i>	(Windows) Latin 2
<i>Code Page 01252</i>	(Windows) Latin 1
<i>Code Page 01253</i>	(Windows) Greek
<i>Code Page 01254</i>	(Windows) Turkish
<i>Code Page 01255</i>	(Windows) Hebrew
<i>Code Page 01256</i>	(Windows) Arabic
<i>Code Page 01257</i>	(Windows) Baltic Rim

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## Glossary

### ABAP

ABAP is a proprietary programming language created by the software company SAP. In its syntax it resembles the programming language COBOL, whereas it additionally includes SQL statements (e.g. SELECT statements). The ABAP programming language is flexible and has constantly been expanded, e.g. by object oriented transactions. ABAP is an Interpreter (not a Compiler).

ABAP stands for *Advanced Business Application Programming*. In the beginning it was called *Allgemeiner Berichtsaufbereitungsprozessor*.

### AES

AES stands for *Advanced Encryption Standard*. This encryption standard was developed in the USA and succeeded DES. It satisfies the following basic requirements:

1. block size of 128 bits.
2. variable key lengths of 128, 192 and 256 bits.
3. at least as fast and secure as Triple DES.

### AFPDSLNE

AFPDSLNE is a mixed data stream containing both LINE files and AFPDS files. AFPDSLNE includes specification information for print placement and presentation.

### AS2

AS2 stands for *Applicability Statement 2* and is a specification on secure data transport over the Internet. A detailed description is to be found in RFC 4130.

Usually, the transported data are Electronic Data Interchange (EDI) messages, but this does not exclude other data types.

AS2 specifies how to connect and how to validate, send and verify messages. It generates an envelope for the message in order to send it securely over the Internet. Security is guaranteed by digital signatures and encryption.

<b>ASCII</b>	<p>ASCII stands for <i>American Standard Code for Information Interchange</i>. Originally, it was a 7-bit code where a number ,being representable by 7 bits (0 bis 127), was assigned to capital and lower case letters, numbers and some special characters .</p> <p>The first 32 codes are functional characters (line feed, tabulator etc.). German umlauts and other national special characters were not considered.</p> <p>These are included in the extended ASCII code based on a 8-bit structure.</p>	<b>EDI</b>	<p>EDI means <i>Electronic Data Interchange</i>.</p> <p>It is a communication service to exchange structured business data, especially sensitive data such as orders, invoices, payment processes, etc.</p> <p>Data can be processed directly in the sender's and the receiver's application.</p>
<b>AFP</b>	<p>AFP stands for <i>Advanced Function Presentation</i>. It is a print data stream presentation in the context of large-scale print production. IBM uses the abbreviation AFP for <i>Advanced Function Printing</i>, too. In 1995 it was renamed <i>Advanced Function Presentation</i>.</p>	<b>EDIINT AS2</b>	<p>EDIINT AS2 is a special form of B2B data transmission. Files and data sets can be defined according to the business partners' specific needs. The transmission of data is effected over HTTP. Both communication partners have to identify, an asymmetrical method of data encryption is used.</p>
<b>AFPDS</b>	<p>A <i>AFP data stream</i> consists of compound documents (MO:DCA mixed object document content architecture) including text, graphical contents, fonts and bar codes.</p>	<b>EDIFACT</b>	<p>UN/EDIFACT stands for <i>United Nations Electronic Data Interchange For Administration, Commerce and Transport</i>. EDIFACT is an intersectoral, international standard format for the exchange of electronic routine business documents, managed by a UN organisation called CEFACT, affiliated to the UNECE. It is just one of several international EDI standards.</p> <p>Attention: EDIFACT is a standard for the data format, the way of transmission is not concerned. EDIFACT is independent from the transmission protocol, and theoretically, EDIFACT messages can be sent by any electronic data exchange medium.</p>
<b>CCSID</b>	<p>CCSID stands for <i>Coded Character Set Identifier</i>. It allows to determine country specific character sets and is very important to convert EBCDIC to ASCII.</p>	<b>FTP</b>	<p>FTP stands for <i>File Transfer Protocol</i>. It is based on TCP/IP and describes both a protocol and a program, which is mainly used to send files with FTP servers over the Internet.</p> <p>FTP knows the transmission modes 'binary' for any data and 'ascii' for text. FTP programs are available as clients of different operating systems or in different web browsers.</p> <p>Not least, anonymous FTP is common and the FTP server does not require a particular password. The user ID 'ftp' or 'anonymous' and the personal email address are required to have access.</p>
<b>DB2</b>	<p>DB2 is a native System i database system and file system (physical files, libraries, members).</p>		
<b>DBCS</b>	<p>DBCS stands for <i>Double-Byte Character Set</i>. It is a set of characters in which each character is represented by 2 bytes. The result is a possible representation of 256<sup>2</sup> different characters, maximum 65,536 characters, which allows the representation of Chinese and Japanese characters.</p>		
<b>EBCDIC</b>	<p>EBCDIC stands for <i>Extended Binary Coded Decimal Interchange Code</i> and is used in IBM mainframes for character encryption.</p>		

<b>GENTRAN(r) DDF</b>	<p>Gentran SAP DDF Utility Tool is a SAP ABAP programm to generate required <i>Gentran Data Definitions Files</i> for Idoc structures. It is essential for SAP EDI projects using converters such as Gentran.</p> <p>i-effect has a Gentran DDF interface to enable i-effect to import these Definition Files.</p>
<b>IXS</b>	<p>IXS stands for <i>Integrated xSeries Server</i> for System i.</p> <p>IXS is a PCI expansion card, that is inserted into the System i i5/AS400.</p> <p>IXS expands the existing System i with the x86 architecture. It uses parts of the mother system's resources (virtual network adaptors and hard drives).</p> <p>Basically, IXS is a computer system which consists of a CPU, a chip set with integrated graphics and network adaptors, as well as its own working memory.</p>
<b>KMU</b>	<p>KMU means <i>Kleine und Mittlere Unternehmen</i> (small and medium businesses).</p>
<b>LINE</b>	<p>LINE data is prepared printing data for line printers. They do not contain every necessary information concerning placement and presentation, which are needed by a page printer. LINE data is generated on System/390 computers.</p>
<b>Mass Signature</b>	<p>Mass signature means that more than one signature can be created with the SmartCard after the PIN has been entered on the card reader.</p> <p>Mass signatures, in conjunction with qualified electronic signatures, can only be generated for invoices by software and hardware that meet the requirements of the signature law and signature ordinances.</p> <p>Signature sessions for mass signatures, in conjunction with qualified electronic signatures, must be limited in their number or in the duration of the signature session.</p>

<b>MD5</b>	<p>MD5 means <i>Message Digest Algorithm 5</i> is a one-way hash function developed by Ronald L. Rivest.</p> <p>MD5 uses 4 (instead of 3 at MD4) modified rounds and generates a hash value of a length of 128 bits. These hash values are typically expressed as a 32-digit hexadecimal number. This may look as follows:</p> <p>34048ce4cd069b624f6e021ba63ecde5</p> <p>Such MD5 checksums are, amongst others, used by PGP and to check integrity of files by comparing a file's current MD5 checksum with a known former checksum in order to find out if the file is changed or damaged.</p>
<b>MDN</b>	<p>MDN means <i>Message Disposition Notification</i>. It is a message informing the sender that the receiver has read the email.</p> <p>MDN is described in RFC 2298.</p>
<b>MIME</b>	<p>MIME stands for <i>Multipurpose Internet Mail Extensions</i>, or BASE64.</p> <p>It is a method that allows to attach binary information (machine-readable data) to emails.</p> <p>When receiving and reading an email, the attachment can be decrypted and filed by the email program.</p>
<b>OCSP</b>	<p>Online Certificate Status Protocol – is used to verify the status of a certificate directly with its originator.</p>
<b>OFTP</b>	<p>OFTP stands for <i>Odette File Transfer Protocol</i> and is a protocol for direct electronic data transmission between two communication partners. It complies with reference 4914/2 by the VDA (German interest group of the German automobile industry) as well as the Odette organisation.</p> <p>Originally developed for EDI in the German automobile industry, OFTP is also applied in other industries, e.g. to exchange position of accounts data and payment transactions data between banks and companies.</p>

<b>OS/400</b>	OS/400 (OS=Operating System) is an operating system for the minicomputers of the IBM iSeries as well as AS/400. It was developed by IBM and introduced in 1988. With the introduction of Version 5 Release 3 (V5R3M0), OS/400 was renamed as i5/OS.
<b>PCL</b>	PCL means <i>Printer Command Language</i> and is a printer language which was developed by Hewlett Packard for laser printers.
<b>PKI</b>	PKI stands for <i>Public Key Infrastructure</i> . It allows users to securely exchange data and information in normally unsecure networks (e.g. Internet)  Therefore public and (secret) private keys are used, i.e. asymmetric encryption. Both keys are created at the same time with the same algorithm, which is based on certain mathematical characteristics of prime numbers.  The best-known program of this kind is PGP.
<b>POP3</b>	POP3 is the third version of the <i>Post Office Protocol</i> .  Because of POP3, a computer is able to retrieve electronic mail from a special POP3 server via an Internet connection (TCP/IP). The email will be stored in a sort of letter box on the server until the user retrieves the email using password identification.  POP3 is described in RFC 1725.  Sending emails is effected by SMTP (see below).
<b>Push Technology</b>	Push Technology is a method that quasi automatically delivers new content to the user's computer, whenever it is available from newgroups, web, etc..  Push channels as well as mailing lists provide up to date information for users having subscribed to it without special requirements. News, stock prices, prices, publicity, as well as pictures, videos, etc. are received in normal web browsers.

**PGP** PGP stands for *Pretty Good Privacy*. It is an encryption program for emails and any data, and it is also used for digital signature.

In contrast to alternative encryption programs, which use the same key for both encryption and decryption, PGP is based on a two key principle (public key/private key).

**Qualified Electronic Signature**

Qualified electronic signatures are signatures, which, in accordance with the German signature law, can only be produced by the appropriate hardware and software with authentication of the owner of the signature key. The signature key is saved on a special SmartCard, which was produced especially for the user. SmartCards and card readers must also be approved by the Federal Network Agency. Software products, which are allowed to generate qualified electronic signatures, must have their manufacturers declaration approved by the Federal Network Agency.

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<b>RSA</b>	<p>RSA stands for the inventors <i>Ron Rivest, Adi Shamir, und Leonard Adleman</i> (Ron Rivest is also the creator of RC4).</p> <p>RSA is a commonly used method of encryption. The RSA algorithm allows to encrypt and decrypt data by using a key pair, whereas one key is public and the other one is private, i.e. secret. Data encrypted by one key can only be decrypted by the other key.</p> <p>Until the invention of RSA, symmetric methods (with just one key, e.g. DES) dominated encoded communication.</p> <p>RSA simplifies the distribution of the keys to the involved partners before encryption can begin. This has an essential significance for the security of Internet transactions.</p> <p>Until today, RSA is the most important representative of asymmetric encryption. It is used worldwide in security protocols such as IPSec and SSL. It is also used with PGP, SSH (Secure Shell) and HBCI (Home Banking Computer Interface) .</p>	<b>Signature Session</b>	<p>A signature session is used to generate signatures with a SmartCard. A signature session is activated by the authentication of the SmartCard's user, and is responsible for generating qualified electronic signatures until its validity expires. The validity is limited either by the number of signatures or by a time limit.</p>
<b>SAVF</b>	<p>SAVF is a special backup file which allows to save System i objects in savefiles, and to recover them at any time.</p>	<b>Signature Ordnonances</b>	<p>i-effect® *SIGG is in accordance with the German ordinances for electronic signatures (Signatureverordnung – SigV) from Nov/16/2001(BGBl. Jahrgang 2001 Teil I Nr. 59) which was changed by SigÄndG. An ordinance is authorized by law and has the same properties as a law. An ordinance is created by an institution, which by law has the right and responsibility to create ordinances. The Signature ordinance is given its power by Signature law. SigV contains further or detailed requirements for the software or hardware which is used to generate qualified electronic signatures.</p>
<b>SHA-1</b>	<p>SHA-1 refers to <i>secure hash algorithm</i>. It is a set of cryptographic hash functions serving to calculate a unique value for any electronic data, mainly messages. It is all but impossible to find two different messages, called collision, having the same SHA value.</p>	<b>SmartCard</b>	<p>A SmartCard (or chip card) is a plastic card with an embedded chip in it. The logic or memory contained in the chip can have several functions. SmartCards are used by i-effect® *SIGG for identification purposes and as a signature creation device only. The SmartCard contains a certificate with the private and public key of a user. A PIN for authentication is also contained on the chip. The card's logic prevents unauthorized use of the card's functions, and locks the card, if an incorrect PIN is entered (usually, the user has three attempts). Depending on the security level, reading or editing of the contents on the card are blocked. A SmartCard, which has been approved by the Federal Network Agency, is required for the creation of qualified electronic signatures. The signature creation device on the SmartCard is a part of the chip. The device uses the key, which is contained in the certificate, to encrypt data.</p>
<b>Signature Law</b>	<p>German Signature law (SigG) governs the basic requirements for electronic signatures. i-effect® *SIGG is in line with the requirements of the version from May/16/2001 and the changes which were made on Jan/4/2005 (BGBl. I S.2). Signature law states that hardware and software, which are used to generate qualified electronic signatures, must meet certain requirements. The Federal Network Agency's website contains information about allowed hardware and software. The manufacturer's declaration must be submitted to the Federal Network Agency in order for the software/hardware to be approved.</p>	<b>Slot</b>	<p>A slot is an interface which allows the user to access the functions and use the information on a SmartCard. A SmartCard can have one or more slots.</p>

<b>SMTP</b>	<p>SMTP stands for <i>Simple Mail Transfer Protocol</i>, a (simple) protocol that is used to transfer emails between two different Internet servers.</p> <p>SMTP is used worldwide in email correspondance, but only in one direction, namely sending emails. It is unsuitable for email retrieval. Other protocols such as POP3 or IMAP4 are used.</p>
<b>SQL</b>	<p>SQL stands for <i>Structured Query Language</i>. It is a database computer language used for data retrieval in relational database management systems. It's syntax is relatively simple and based on the English common speech. SQL describes commands to define database structures according to the relational algebra, to modify datasets (add, edit and delete datasets) and to query available data.</p> <p>Many well-known database systems such as DB2, Microsoft SQL Server, MySQL, Oracle, PostgreSQL and newer versions of Access partly implement SQL language standards.</p>
<b>TELEBOX</b>	<p>Telebox is an artificial term describing the voicemail operated by the Deutsche Telekom (German telecommunication company). The Telebox in combination with suitable hard- and software can be used for data transmission.</p>
<b>Token</b>	<p>A token is a hardware component of a chip card or the chip card itself. The token carries the certificates and their respective keys (private and public). Using the contained hardware, the token can also sign and/or encrypt data.</p>
<b>Triple DES</b>	<p>Triple DES is a variation of DES with a key length of <math>3 * 56 = 168</math> bits.</p>
<b>X.400</b>	<p>X.400 is an older standard for message transmission defined by CCITT. Amongst others, it is important for the transport of emails in a network.</p>

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