

GXS EDI Services



Information Exchange via TCP/IP FTP Gateway User's Guide

Version 1 Release 4

Third Edition (November 2005)

This edition replaces document GC34-2345-01.

© Copyright GXS, Inc. 1998, 2005. All rights reserved.

.Government Users Restricted Rights - Use, duplication, or disclosure restricted.



Contents

- To the reader vii
 - Who should read this book vii
 - What this book covers viii
 - How to use this book viii
 - Related information ix

- Chapter 1. **Introducing the IE/FTP interface** 1
 - The IE/FTP interface protocol stack 2
 - Using the IE/FTP interface 2

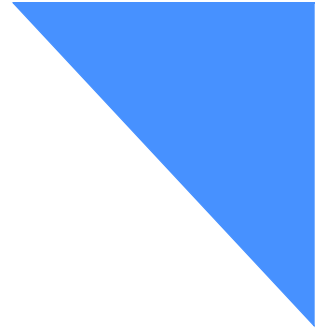
- Chapter 2. **Getting started** 5
 - Your FTP client 5
 - Registering for the IE/FTP service 6
 - Initiating an IE/FTP connection 6
 - Logging on to Information Exchange 7
 - Changing your password 7
 - Closing the IE/FTP connection 8
 - Handling errors 9

- Chapter 3. **Using the cd command** 11
 - Command format 12
 - Using composite addressing 13

- Chapter 4. **Listing messages and library members** 15
 - File name format 15

Listing format	20
Listing library members	22
Chapter 5. Transferring files	25
Sending files	25
Receiving files	38
Data translation	49
PASV support	52
Deleting files	55
Chapter 6. Parsing EDI data	59
Parsing EDIFACT formatted data	59
Parsing UN/TDI formatted data	60
Parsing ANSI X.12 formatted data	61
Parsing UCS formatted data	61
Chapter 7. Using site commands	63
Site commands for FTP session control	64
Site commands for Information Exchange session control	68
Site commands for message control	70
Site commands for Information Exchange functions	77
Site commands for EDI data control	81
Site commands for option storage	85
Chapter 8. Site passthru processing	87
Issuing the site passthru command	88
Receiving the site passthru responses	91
Appendix A. FTP commands supported	93
FTP user commands	93
FTP commands	96
Client equivalents of native FTP commands	100
Appendix B. FTP replies from the Information Exchange/FTP interface	101
Appendix C. Writing an application	129
Writing your own client	129

Using scripts	131
Processing FTP replies from the IE/FTP interface	132
Sample scripts	132
Appendix D. Message-arrival notification	133
Configuration for message-arrival notification	133
Receiving message-arrival notifications	139
Sample message-notification application	147
Appendix E. Translation tables	149
ASCII to EBCDIC	149
EBCDIC to ASCII	150
Appendix F. Registration for IE/FTP over the Internet	151
Registration	151
Distribution of certificate	151
Revocation of private key	152
Appendix G. Problems	153
Reporting a problem	153
Frequently asked questions	154
Appendix H. Support files	157
Glossary	159
Index	167



To the reader

This book provides information about how to use your FTP client to communicate with Information Exchange via the TCP/IP FTP gateway. The gateway allows you to use FTP commands to send and receive data files and messages to and from Information Exchange. You can establish a TCP/IP session with the gateway either by connecting to a closed secure IP network, as specified, or by connecting to the Internet.

- For connection via the secure network, your FTP client should conform to RFC 959.
- For connection via the Internet, your FTP client should conform to the Internet draft for FTP and SSL, draft-murray-auth-ftp-ssl-05.txt, available from the Internet Engineering Task Force (IETF).

Network is used in this book to refer to the worldwide communications network infrastructure provided by *AT&T Global Network Services*.

Internet is used in this book to refer to the suite of network and application protocols based upon the Transmission Control Protocol/Internet Protocol (TCP/IP) standards published in Request for Comment (RFC) 2400 by the Internet Architecture Board (IAB).

Marketing representative is used in this book to refer to your GXS sales representative.

Who should read this book

This book is written for users, administrators, and developers of systems connected to Information Exchange and communicating via FTP over TCP/IP.

What this book covers

This book describes how to use FTP commands and how to manage sessions with Information Exchange using the IE/FTP interface.

How to use this book

This book uses the following typographic conventions:

- Italics are used to represent parameters or user-defined data, and to indicate the name of a manual, such as the *Information Exchange Interface Programming Guide*.
- The non-proportional typeface Courier is used to indicate a screen representation or a sample session, where the input is **bold** and the reply is normal type.
- Boldface is used to highlight FTP user commands, for example: “Use the **cd** command prior to issuing the **get** or **mget** command.” When a command is on a line by itself, no boldface is used.
- Boldface and all uppercase characters are used to indicate FTP commands.
- Boldface is used to indicate user interface components, such as fields, buttons, or check boxes in a window. For example, bold is used to indicate a field name in the following sentence: “In the **Message priority** field, specify whether you want to be notified for all messages or just high-priority messages.”

This book contains several examples that demonstrate how the user communicates with Information Exchange using commands entered at the computer console. The phrase “issue a command” indicates that the user types the related command and then submits it by pressing the Enter key.

Related information

In addition to this manual, documentation for the IE/FTP interface includes:

- Quick reference card
- README files
- Online help

The publications listed below contain information that may be helpful to you when you are developing EDI applications.

Information Exchange

Information Exchange Administration Services Supplement, GC34-4073

Information Exchange Administration Services User's Guide, GC34-2221

Information Exchange Interface Programming Guide, GC34-2222

Introducing EDI Services, GC34-2211

RFC information

Applicable Standards

Access Methods

	Internet	Network
RFC 793	✓	✓
RFC 959	✓	✓
RFC 854	✓	✓
SSL (see page vii)	✓	

For information about Requests for Comments (RFCs), go to the following URL: <http://www.faqs.org/rfc>.

For information about Internet drafts, go to the following URL: <http://www.ietf.org/>

Introducing the IE/FTP interface

This chapter discusses the File Transfer Protocol (FTP) interface to Information Exchange and the subset of FTP functions that it supports.

Information Exchange, the mailbox component of GXS, formerly IBM EDI Services, allows trading partners to exchange EDI data, files, and e-mail. Each user on Information Exchange has a mailbox that is addressed using the format ***account.userid***.

The *Information Exchange/File Transfer Protocol (IE/FTP)* interface simulates a standard FTP server. Using an FTP client, you connect to the IE/FTP interface via TCP/IP and submit FTP commands. The IE/FTP interface converts your FTP commands to the appropriate Information Exchange commands and sends them to Information Exchange via SNA LU 6.2 for processing.

The IE/FTP interface uses standard FTP commands to communicate with Information Exchange. See Appendix A, “FTP commands supported,” for descriptions of the supported commands.

The IE/FTP interface provides access to messages in your Information Exchange mailbox as if they were files on a remote file system. The IE/FTP interface differs from the standard FTP interface in two ways:

- After you log on to the IE/FTP interface, you use the **cd** command to specify the user with whom you want to communicate.
- After you download a file via the IE/FTP interface, Information Exchange deletes the file from your mailbox.



NOTE: The IE/FTP interface supports only FTP. It does not support e-mail (SMTP) or Telnet. However, you can use 3270 access via Telnet to access Information Exchange Administration Services.

The IE/FTP interface protocol stack

The following figure illustrates the IE/FTP interface protocol stack, starting from the user and ending with Information Exchange (IE).

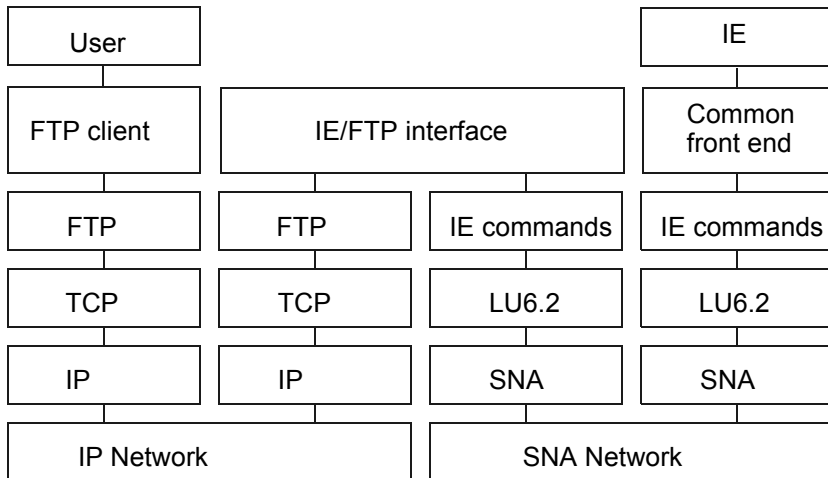


Figure 1. The IE/FTP interface protocol stack

Using the IE/FTP interface

Whether you are connected via a secure network or via the Internet, you must first be registered to use Information Exchange. Upon registering, you are provided with an Information Exchange mailbox address consisting of an account ID, a user ID, and an initial password value. When you connect to the IE/FTP interface, the standard Information Exchange mailbox security module compares the password you are asked to provide with the password associated with your mailbox address.

If you intend to connect to the IE/FTP interface via a secure network, you must be registered to use that network. However, no additional registration is required to use the IE/FTP interface.

If your Information Exchange center offers connection via the Internet, you must be registered to use this service. You also need a secure client that is compliant with the Internet draft for FTP and SSL security extensions **draft-murray-auth-ftp-ssl-05.txt** and a certificate issued specifically for use with the IE/FTP interface.

The IE/FTP interface is designed from the viewpoint of an FTP user, providing access to Information Exchange via standard FTP commands. Refer to “Writing your own client” on page 129 for details.

Getting started

This chapter explains:

- Your FTP client
- Registering for the IE/FTP service
- Initiating an IE/FTP connection
- Logging on to Information Exchange
- Changing your password
- Closing the IE/FTP connection
- Handling errors

A sample session on page 8 illustrates these functions.

Your FTP client

If you connect via the network, you must have a client that is compliant with RFC 793 and RFC 959. See “RFC information” on page ix.

If your Information Exchange center offers connection via the Internet, you need a secure client that is compliant with Internet draft for FTP security extensions **draft-murray-auth-ftp-ssl-05.txt** and a certificate issued specifically for use with the IE/FTP interface.

If you connect via the Automotive Network Exchange (ANX), you must have a client that is compliant with RFC 793 and RFC 959. See “RFC information” on page ix.

Registering for the IE/FTP service

To use the IE/FTP interface, you must first be registered to use Information Exchange. Upon registering, you are provided with an Information Exchange mailbox address consisting of an account ID, a user ID, and an initial password value.

To use the IE/FTP interface via a secure IP network, you must be authorized to use the network. Authorization to use the IE/FTP interface is granted automatically along with network authorization. No additional registration is required.

You can also use IE/FTP over the Internet. To provide secure communication over the Internet, the IE/FTP gateway authenticates clients by exchanging X.509 certificates. To connect to an IE/FTP Internet gateway, you need a certificate for each Information Exchange sys/account/user ID. For further details, refer to Appendix F, "Registration for IE/FTP over the Internet," on page 151.

Before using the IE/FTP interface, you must register your machine through a standard TCP/IP secure network. For more details about registration and certificates, refer to Appendix F, "Registration for IE/FTP over the Internet," on page 151.

Initiating an IE/FTP connection

From your FTP client prompt, issue the **open** command to initiate the connection. The format of the command is typically:

```
open a.a.a
```

or

```
open x.x.x.x
```

The parameters are as follows:

- *a.a.a* is the domain name of the IE/FTP interface to which you want to connect (for example, *xmplgw.inedi.com*).
- *x.x.x.x* is the IP address of the IE/FTP interface to which you want to connect (for example, *nnn.nnn.nnn.nnn*).

Logging on to Information Exchange

Issue the **user** command to log on to your Information Exchange mailbox. The format of the command is:

```
user account.userid [password[/newpass]]
```

The parameters are as follows:

- *account* is your account identifier
- *userid* is your individual user identifier
- *password* is the security identifier associated with the mailbox
- *newpass* is a new password that you wish to use to replace your current password.

If you issue this command while in session, the existing Information Exchange session ends and a new session begins.

If your password contains a slash (/) or is the same as your user ID, you should change it before you can use the IE/FTP interface. Contact GXS Community Support .

Changing your password

You can change your password when you log on (when you issue the **user** command) or you can change it during the session using the **pass** command. The format of the command is:

```
pass oldpassword/newpassword
```

If you specify a new password with the **user** command and the logon fails, the password change was unsuccessful. If the logon succeeds, the FTP reply indicates the password was successfully changed.

Password encryption

To send passwords to the IE/FTP interface in a scrambled format, use the standard encryption routines with the encryption key made up as a function of the IP address from which the password is sent. A password is decoded only if it is 16 characters long. Users who do not wish to scramble their passwords are unaffected. A sample C-language program is available via the support directory to enable the encrypted password to be generated.

Security

If you have three consecutive password failures when attempting to log on, the system drops your TCP/IP control connection and disallows all subsequent logon attempts until a system-defined timer expires.

Closing the IE/FTP connection

You can terminate the IE/FTP connection by issuing the **bye** or **quit** command.

Your session also ends if there is no activity on the control connection for three minutes. When this timeout occurs, Information Exchange closes the control connection and displays the message:

```
421 Control connection closed due to inactivity.
```

Example: Opening and closing a session

The following sample session signs you onto Information Exchange via the IE/FTP interface and immediately ends the session.

Step	FTP session input and reply
1	<pre>open xmplgw.inedi.com 220 xmplgw.inedi.com IE-FTP server (v2r2m0.x) ready on system IE1.</pre>
2	<pre>user acct1.user1 mypass 331 Enter Password. 230 Ready.</pre>
3	<pre>bye 221 Goodbye. Thank you for using EDI Services.</pre>

To repeat the steps above, do the following:

1. Issue the **open** command to start the session with the IE/FTP interface.
2. Issue the **user** command to identify yourself to the IE/FTP interface. The format for the user ID is **account.userid**. In this case, the password is included in the user command; you could, instead, issue a separate **pass** command.
3. Issue the **bye** command to end the session. This ends both the FTP session with the IE/FTP interface and the session with Information Exchange.

Handling errors

When the IE/FTP interface encounters an error that prevents it from continuing the session, it first sends a 421 reply indicating the error, and then closes any open data connection for the user.

Error conditions include:

- Receiving an SDIERR response from Information Exchange.
- Encountering unrecoverable communication errors between the IE/FTP interface and Information Exchange.
- Experiencing an internal error in the IE/FTP interface.

In such cases, a synopsis of the error is appended to an error file and sent to Information Exchange as part of the housekeeping activity. All errors are investigated and any corrective procedures, actions, or code changes are implemented.

If a problem persists, GXS can trace all sessions between your host and the IE/FTP interface. Contact GXS Community Support and inform them of your IP address so that tracing can be enabled. A trace file is generated for every subsequent session and held on the IE/FTP interface host for access by the Customer Care staff.

Using the `cd` command

In many systems, `cd` is the diminutive form of the change directory command, which is used for navigating through file systems. In the IE/FTP interface, however, it is used to identify the types of files you wish to process, the trading partner with whom you wish to communicate, the class of messages you wish to send or receive, and various other qualifiers. It helps you target your communication to a particular subset of the entire Information Exchange network.

The information supplied with the `cd` command is used to:

- Specify a partner
- Send EDI data

For more information, refer to “Sending an EDI file” on page 28.

- Receive support files, library members, and system messages

For more information, see “Retrieving support files” on page 47.



NOTE: The value you set in the `cd` command governs all subsequent commands until you issue the next `cd` command.

Command format

The format of the **cd** command is:

```
cd [destination][/class]
```

The parameters for this command are:

- *destination*, which can be one of the following:
 - *account.userid* - A trading partner on your local Information Exchange system.
 - *sysid.account.userid* - A trading partner on another Information Exchange system or interconnected peer system (IPS). Each system has a unique system ID such as BRA, EUR, JPN, USA, USQ, SRV, ADV, MQS, and IMX.
 - (*gxxx*).*aliasname* - Global alias table.
 - (*oxxx*).*aliasname* - Organizational alias table.
 - (*pxxx*).*aliasname* - Private alias table.
 - (*list*).*listname* - Central list.
 - (*libr*).*libacct.libname* - Library.
 - *.*/* - All users and all message user classes (valid only for a receive request and mailbox list).
 - **system**.**errmsg** - A system messages selection (for receiving).
 - *support* - A special repository for support files.
- *class* is the message class (1-8 alphanumeric characters). When sending a file, this value is the classification you assign to the file. When receiving a file, this value is used to select from your mailbox messages that are stored with this message classification. This can also be specified as an asterisk (to request all classes) or a question mark (used as a *wildcard* substitute for any character or characters).



NOTE: You can use the question mark only as a prefix or a suffix. For example, **IN?** selects messages with a user classification that begins with IN (such as INVOICE or INVENT). Similarly, **?ASE** selects all messages that end with ASE (such as PURCHASE or INCASE).

Using composite addressing

A **cd** command can be issued implicitly by using a composite address in place of the standard file name for **get**, **put**, or **ls** operations.

The format of a composite address can be segmented into consecutive fields, as follows:

- The composite tag **ie:./**
- The destination address and/or message user class (as it would normally appear in the **cd** command)
- An optional delimiter (such as /) followed by the file name to be placed in the message CDH

The following command:

```
put invoices.970101 ie:./acme.user1/invoice/invoices.970101
```

is equivalent to the two following commands:

```
cd acme.user1/invoice
put invoices.970101
```

Composite addressing overrides the details specified in the previous **cd** command, and is effective only for the current command.

All destination types can be used with composite addresses, including EDI.

Listing messages and library members

This chapter explains how to list the messages deposited in your mailbox and the files in a library. It also provides the list format options.

File name format

To view the list of file names (messages) in your mailbox, issue an **ls** command.

The resulting list contains only those messages that match the criteria specified in the previous **cd** command you issued. If you wish to view all the messages in your mailbox, issue the command **cd *.*/*** before issuing the **ls** command.

The format of the file names depends on the system type specified by the **site system** command. System types are described in the following sections.

System types 3 and 6

For system types 3 (DOS, OS/2, FAT) and 6 (VM), file names are formatted as:

msgpos._IE

The parameter *msgpos* is an 8-digit number corresponding to the position of the message within the mailbox.

A message retains its assigned file name for the duration of the Information Exchange session. Messages arriving during the session are assigned a unique file name within the current session.



NOTE: To reference a message by its shortened file name, you must first issue an **ls** or **ls -l** command to display the name allocated.

Example: Listing messages for system types 3 and 6

The following table is an extract from a sample session using a system type of 3 (DOS, OS/2, FAT) or 6 (VM).

Step	FTP session input and reply
1	<pre>cd *.*/* 250 Currently to user *.* with class *. </pre>
2	<pre>ls 200 Port command OK. 150 Data connection ready to open. 00000001._IE 00000002._IE 00000003._IE 00000004._IE 226 List for user () *.* , class * transferred O.K. </pre>
3	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. filename (MSGKEY) Sender Class Size Date Time 00000001._IE ACCT2 USER03 INVOIC 0000006444 960126 170600 00000002._IE ACCT2 USER03 INVOIC 0000000564 960126 170608 00000003._IE ACCT2 USER03 INVOIC 0000000878 960126 171107 00000004._IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class * transferred O.K. </pre>
4	<pre>cd /orders 250 Currently to user *.* with class ORDERS </pre>
5	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. filename (MSGKEY) Sender Class Size Date Time 00000004._IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class ORDERS transferred O.K. </pre>

To repeat the steps in the example, do the following:

1. Issue the command **cd *.*/*** to list all the files in your mailbox, regardless of originator or message user class. This is the default setting at the beginning of the session.

2. Issue the **ls** command to display the names of the files in your mailbox that meet the criteria of the last **cd** command. For this system type, the file names are displayed as unique 8-character file names corresponding to their positions within the mailbox for this session.
3. Issue the **ls -l** command to display additional information for each message. For details, refer to Appendix B, “FTP replies from the Information Exchange/FTP interface.”
4. Issue the **cd /orders** command to list, receive, or send files with a user class of ORDERS.
5. Issue the next **ls** command to display only the messages in your mailbox with a user class of ORDERS.

System type 5

For system type 5 (MVS client), file names are formatted as:

```
m0000001.IE
m0000002.IE
```

This format conforms with the MVS data set naming convention, where the name must be specified as 1 to 8 alphanumeric qualifiers.

Example: Listing messages for system type 5

The following table is an extract from a sample session using a system type 5 (MVS).

Step	FTP session input and reply
1	cd *.*/* 250 Currently to user *.* with class *.
2	ls 200 Port command OK. 150 Data connection ready to open. M0000001.IE M0000002.IE M0000003.IE M0000004.IE 226 List for user () *.* , class * transferred O.K.

continued ➔

Step	FTP session input and reply
3	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time M0000001.IE ACCT2 USER03 INVOIC 0000006444 960126 170600 M0000002.IE ACCT2 USER03 INVOIC 0000000564 960126 170608 M0000003.IE ACCT2 USER03 INVOIC 0000000878 960126 171107 M0000004.IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class * transferred O.K.</pre>
4	<pre>cd /orders 250 Currently to user *.* with class ORDERS</pre>
5	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time M0000001.IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class ORDERS transferred O.K.</pre>

System types other than 3, 5, and 6

For system types 0, 1, 2, 4, and 7, file names are formatted as:

msgkey._IE

The parameter *msgkey* is the unique 20-character identifier assigned by Information Exchange for the lifetime of the message.

The first two characters represent the message priority and can be:

- 80 Emergency priority system messages
- 81 Immediate priority system error messages
- A7 Immediate priority
- A8 High priority system error messages
- CF High priority messages
- D0 Normal priority system error messages
- FF Normal priority

They appear in file listings, such as:

```
CFB2FC85E359A221C5F1._IE ACCOUNT HIGH01
DOB2FD16B137939AC5F1._IE *SYSTEM* *ERRMSG*
FFB2FD157C3D21B7C5F1._IE ACCOUNT USER01
```

Example: Listing messages for system types other than 3, 5, and 6

The following table is an extract from a sample session using a system type other than 3 (DOS, OS/2, FAT), 5 (MVS), or 6 (VM).

Step	FTP session
1	<pre>cd *.*/* 250 Currently to user *.* with class *.</pre>
2	<pre>ls 200 Port command OK. 150 Data connection ready to open. FFAC548751C78008C5F1._IE FFAC54875A1CDE7EC5F1._IE FFAC54887729E6B2C5F1._IE FFAC548890700E6CC5F1._IE 226 List for user () *.* , class * transferred O.K.</pre>
3	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time FFAC548751C78008C5F1._IE ACCT2 USER03 INVOIC 0000006444 960126 170600 FFAC54875A1CDE7EC5F1._IE ACCT2 USER03 INVOIC 0000000564 960126 170608 FFAC54887729E6B2C5F1._IE ACCT2 USER03 INVOIC 0000000878 960126 171107 FFAC548890700E6CC5F1._IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class * transferred O.K.</pre>
4	<pre>cd /orders 250 Currently to user *.* with class ORDERS</pre>
5	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time FFAC548890700E6CC5F1._IE ACCT3 USER01 ORDERS 0000008590 960126 172334 226 List for user () *.* , class ORDERS transferred O.K.</pre>

To repeat the steps in the example, do the following:

1. Issue the command **cd *.*/*** to list all the files in your mailbox, regardless of originator or message user class. This is the default at the beginning of the session.
2. Issue the **ls** command to display the names of the files in your mailbox that meet the criteria of the last **cd** command. For this system type, the file names are displayed as the message key assigned to each message by Information Exchange.
3. Issue the **ls -l** command to display additional information for each message. Refer to Appendix B, “FTP replies from the Information Exchange/FTP interface.”
4. Issue the command **cd /orders** to list, receive, or send files with a user class of orders.

5. Issue the next **ls** command to display only the messages in your mailbox with a user class of orders.

Listing format

The information provided in response to an **ls -l** command depends on the setting of the **site liststyle** option. For details of **site** commands, refer to Chapter 7, “Using site commands.”

Each line in the listing contains the file name in the format detailed above. Any additional information about the file is based on the **liststyle** setting. The three liststyle settings are described in the following sections.

liststyle long

The following information is provided for each message:

- File name
- Information Exchange account and user ID of the message originator
- Information Exchange user class of the message
- Message size
- Date and time the message was sent

This information is provided in a header at the beginning of the file list. For example:

```
Filename (MSGKEY)      Sender   Class Size   Date   Time
FFAD0BBFA00993FFBA65._IE ACCT1  USER1  ORDERS 00006501 960620 102309
```

liststyle short

Only the file name is given for each message. Using this setting, the **ls -l** command gives the same response as the **ls** command. For example:

```
FFAD0BBFA00993FFBA65._IE
```

liststyle filename

The following information is given for each message:

- Current file name
- Original file name from the Information Exchange message header

For example:

```
FFAD0BBFA00993FFBA65._IE orders.001
```

This enables you to rename your received files to their original file names.



NOTE: If no file name was specified when the message was sent to Information Exchange, the original file name field is blank.

Example: Viewing and changing the listing format

The following example shows the list formats available. In this case, file names are in message key format rather than shortened file names.

Step	FTP session input and reply
1	<pre>site liststyle 200 List Style currently LONG. ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time FFAD59A3FB10054AC5F1._IE ACCT1 USER1 ORDERS 0000006501 960821 092357 FFAD59A4041C2114C5F1._IE ACCT1 USER1 ORDERS 0000000534 960821 092406 FFAD59A414815558C5F1._IE ACCT1 USER2 INVOIC 0000000076 960821 092424 226 List for user ().*.*, class * transferred O.K.</pre>
2	<pre>site liststyle short 200 List Style currently SHORT. ls -l 200 Port command OK. 150 Data connection ready to open. FFAD59A3FB10054AC5F1._IE FFAD59A4041C2114C5F1._IE FFAD59A414815558C5F1._IE 226 List for user ().*.*, class * transferred O.K.</pre>
3	<pre>site liststyle filename 200 List Style currently FILENAME. ls -l 200 Port command OK. 150 Data connection ready to open. FFAD59A3FB10054AC5F1._IE order.001 FFAD59A4041C2114C5F1._IE order.002 FFAD59A414815558C5F1._IE invoice.d960818 226 List for user ().*.*, class * transferred O.K.</pre>

To repeat the steps in the example, do the following:

1. Issue the **site liststyle** command to return the current **liststyle** setting. In this case, the default value is **long**. Issuing the **ls -l** command with this setting returns a mailbox listing in the format shown in the previous section.
2. Issue the **site liststyle short** and the **ls -l** commands to return a mailbox listing in the same format as the **ls** command.
3. Issue the **site liststyle filename** and the **ls -l** commands to return a two-column list of messages. The first column shows the message key and the second column shows the file name specified when the file was sent to Information Exchange.

Listing library members

If the **cd** command specified an Information Exchange library, then the **ls** command returns a list of members in the library. Library member names are a maximum of eight characters, and are uppercase.

The **ls -l** command returns a detailed list of library members as:

Access	Owner	Account	Size	Last updated	Name
-rw-r-----	LIBADMIN	ACME	2966	97/06/24 15:33:57	README
-rw-r-----	LIBADMIN	ACME	143	97/04/11 11:21:45	README
-rw-r-----	LIBADMIN	ACME	122311	97/06/24 15:12:11	README

The details given for each library member are described in the following table.

Field	Description																
Access	The library access permissions configured for this library, in UNIX format. <table border="1"> <thead> <tr> <th>Flag</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>This is always a hyphen (-).</td> </tr> <tr> <td>2-3</td> <td>Indicate the access permitted to the library owner; r- is read-only, rw is read and write.</td> </tr> <tr> <td>4</td> <td>This is always a hyphen (-).</td> </tr> <tr> <td>5-6</td> <td>Indicate the access permitted to users in the library owning account; r- is read-only, rw is read and write.</td> </tr> <tr> <td>7</td> <td>This is always a hyphen (-).</td> </tr> <tr> <td>8-9</td> <td>Indicate the access permitted to all Information Exchange users; r- is read-only, rw is read and write.</td> </tr> <tr> <td>10</td> <td>This is always a hyphen (-).</td> </tr> </tbody> </table>	Flag	Definition	1	This is always a hyphen (-).	2-3	Indicate the access permitted to the library owner; r- is read-only, rw is read and write.	4	This is always a hyphen (-).	5-6	Indicate the access permitted to users in the library owning account; r- is read-only, rw is read and write.	7	This is always a hyphen (-).	8-9	Indicate the access permitted to all Information Exchange users; r- is read-only, rw is read and write.	10	This is always a hyphen (-).
Flag	Definition																
1	This is always a hyphen (-).																
2-3	Indicate the access permitted to the library owner; r- is read-only, rw is read and write.																
4	This is always a hyphen (-).																
5-6	Indicate the access permitted to users in the library owning account; r- is read-only, rw is read and write.																
7	This is always a hyphen (-).																
8-9	Indicate the access permitted to all Information Exchange users; r- is read-only, rw is read and write.																
10	This is always a hyphen (-).																
Owner	The user ID that owns the library.																
Account	The account that owns the library.																
Size	The size (in bytes) of the member.																
Last updated	The date and time when the member was created or last updated.																
Name	The member name.																

Transferring files

This chapter describes the file transfer options available to IE/FTP interface users.

Sending files

This section describes the procedures for sending the following types of files to the IE/FTP interface:

- Non-EDI files
- EDI files
- Library members

Sending a non-EDI file

To send a non-EDI file to an Information Exchange mailbox or library, you must specify the Information Exchange destination and then send the file.

There are two methods for specifying the destination:

- Issue a **cd** command prior to the **put** or **mput** command.

```
cd acme.user1/invoice
put invoices.970101
```

- Use composite addressing to specify the full destination within the file name on the **put** command.

```
put invoices.970101 ie::/acme.user1/invoice/invoices.970101
```

For details of the **cd** command parameters, refer to Chapter 3, “Using the **cd** command.”

Example: Sending a single non-EDI file using the cd command

The following example illustrates sending two files: one in binary mode and one in ASCII mode.

Step	FTP session input and reply
1	cd acct.user02/text 250 Currently to user ().ACCT.USER02 with class TEXT.
2	put testtext 200 Port command OK 150 Data connection open 226 File transferred to ().ACCT.USER02 with class TEXT. O.K.
3	binary 200 Type now set to I.
4	cd /cadfile 250 Currently to user ().ACCT.USER02 with class CADFILE.
5	put testfile 200 Port command OK. 150 Data connection open. 226 File transferred to ().ACCT.USER02 with class CADFILE O.K.

To repeat the steps in the example, do the following:

1. Issue the **cd** command to specify the Information Exchange account and user ID to which you wish to send subsequent messages. You also specify the user class of the messages. In this case, the next file is sent to mailbox acct.user02 with a user class of TEXT.
2. Issue the **put** command to send the contents of the local file as an Information Exchange message to user acct.user02 with a message user class of TEXT.
3. Issue the **BINARY** command, so the data sent to the IE/FTP interface no longer undergoes ASCII-to-EBCDIC conversion before being stored by Information Exchange.
4. Issue the **cd /cadfile** command, which retains the same destination mailbox (specified by the previous **cd** command), but changes the message user class for subsequent messages to CADFILE.
5. Issue the **put** command to send the contents of the local file as a binary Information Exchange message to user acct.user02, with a message user class of CADFILE.

Example: Sending files using composite addressing

You can use composite addressing as an alternative to the normal **cd** command followed by a **put** or **mput** command.

Step	FTP session
1	<pre>open ieftpl 220 ieftpl IE-FTP server (v3r0mf.I) ready on system IE1. user acct.user1 pass1 331 Enter Password. 230 Ready.</pre>
2	<pre>ls ie::*./orders 200 Port command OK. 150 Data connection ready to open. FFAEE607053613FEC5F1._IE FFAEE60706F13D78C5F1._IE</pre>
3	<pre>ls ie::*./orders/-l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time FFAEE607053613FEC5F1._IE ACME USER01 ORDERS 0000006523 970702 153415 FFAEE60706F13D78C5F1._IE XYZC USER3 ORDERS 0000001311 970702 155537 226 List for user ().*.*, class ORDERS transferred O.K.</pre>
4	<pre>put /ie/outbasket/xyzco/invoice.005 ie::/xyzco.user3/invoice 200 Port command OK. 150 Data connection ready to open. 226 File transferred to ().XYZCO.USER3 with class INVOICE. O.K.</pre>
5	<pre>put /ie/docs/newsletter ie::/(list).supplier/news 200 Port command OK. 150 Data connection ready to open. 226 File transferred to (LIST).SUPPLIER with class NEWS. O.K.</pre>

To repeat the steps in the example, do the following:

1. Initiate the connection and log on to the mailbox.
2. Issue an **ls** command with a composite address of **ie::*./orders**. This lists messages from all users with a message user class of **ORDERS**.
3. Issue an **ls** command with a composite address of **ie::*./orders/-l**. Information Exchange returns a long listing of messages from all users with a message user class of **ORDERS**.
4. Issue the following command to send the local file **/ie/outbasket/xyzco/invoice.005** to the Information Exchange user **XYZCO.USER3** with a message class of **INVOICE**:

```
put /ie/outbasket/xyzco/invoice.005 ie::/xyzco.user3/invoice
```

5. Issue the following command to send the local file **/ie/docs/newsletter** to the distribution list **SUPPLIER** with a message:

```
put /ie/docs/newsletter ie::/(list).suppliers/news
```

Sending an EDI file

There are two methods for sending an EDI file:

- Issue a **cd edi** command and then issue a **put** command.
- Use composite addressing to specify the EDI format option within the file name in the **put** command.

The format of the **cd edi** command is:

```
cd edi/(tiii)
```

The parameter for this command is:

- (- Open parenthesis to indicate the start of the parameter.
- *t* - The value **G** (global), **O** (organizational), or **P** (private) to describe the type of alias table to use for resolution of the aliases for the EDI data.
- *iii* - The 3-character alias table name used by Information Exchange to resolve the aliases for the EDI data.
-) - Close parenthesis to indicate the end of the parameter.

This command supersedes the **cd [edifact|unt|di|x12|ucs]** command and provides additional EDI processing functions, such as multiple EDI interchanges in a single file. The IE/FTP interface automatically determines the EDI format, which can be one of the following:

- EDIFACT
- UN/TDI
- X.12
- UCS

Each file sent can contain multiple EDI envelopes, but each file must consist of only one EDI format. The IE/FTP interface does not support mixed-format EDI data files.

The following common data header fields are extracted from the EDI data when sending a file:

- EDISQUAL
- EDISENDER
- EDIRQUAL
- EDIRECVR
- EDICNTLN

The following fields are also extracted from the EDI data and placed in the Information Exchange **SDISNDM** command:

- Recipient address
- Message user class
- Message name

The following examples illustrate the use of alias tables to resolve EDI addresses.

This command...	Resolves aliases from...
cd edi(gxs)	A global alias table named GXS
cd edi(od99)	An organizational (account) alias table named D99
cd edi(pjoe)	A private alias table named JOE

FTP replies when sending an EDI file

When you issue the FTP user command **put** or **mput**, the client issues the FTP command **STOR** (store). This requests the FTP server to receive a file. If you send an EDI file, the IE/FTP interface returns a multiline FTP reply indicating the progress of each individual EDI envelope.

The reply is in the following format:

```
226-EDI processing started
  Subreply 1
  Subreply 2
  .
  .
  .
  Subreply n
226 0 Sxxxxx Exxxxx EDI processing complete
```

or

```
226 1 Sxxxxx Exxxxx EDI processing terminated
```

The parameters for this reply are:

- *Sxxxxx* indicates the number of envelopes successfully sent.
- *Exxxxx* indicates the number of envelopes in error.

You can control the format of EDI replies using the **site edireplies** setting.

- 0 With **site edireplies** set to 0, the IE/FTP interface returns only the 226 end reply; thereby, making it a single-line reply.
- 1 With **site edireplies** set to 1, the IE/FTP interface returns a 226 start reply, followed by a subreply for each EDI envelope in the file, followed by a 226 end reply.
- 2 With **site edireplies** set to 2, the IE/FTP interface returns a 226 start reply, followed by a subreply for each EDI envelope in error, followed by a 226 end reply.

The subreply format for each envelope is as follows.

Field	Column	Name	Description
1	1	MSGNO	Message number. Contains the value 226. This response indicates that the file has been sent successfully to Information Exchange.
2	4	fill1	Blank.
3	5	SUBCODE	Code of reply. 00 = No error (EDI interchange sent). 01 = User ID detected is in invalid format. 02 = Not authorized to send to user ID. 03 = User ID does not exist. 11 = EDI format error. 12 = Cannot determine EDI type. 13 = Error with Information Exchange/ Communications. 14 = X.12 Binary or Security segment and not TYPE I. 15 = Mixed EDI types detected. 16 = EDI header error. 17 = EDI control number mismatch. You receive the response 02 or 03 only if site probe is enabled, and the probe command indicates an error.
4	7	fill2	Blank.
5	31	EDITYPE	Identifies the EDI data type for this interchange and contains one of the following values: E = EDIFACT T = UN/TDI X = X.12 U = UCS
6	32	fill3	Blank.

continued ➡

Field	Column	Name	Description
7	35	OFFSET	Offset to start of EDI interchange. The offset is the byte counter as seen by the IE/FTP interface. Because of CR/LF manipulation carried out by both your client application and the IE/FTP interface, it might not correspond directly with your file.
8	36	fill4	Blank.
9	44	COUNT	Length of EDI interchange. The length is the byte counter as seen by the IE/FTP interface. Because of CR/LF manipulation carried out by both your client application and the IE/FTP interface, it might not correspond directly with your file.
10	45	fill5	Blank.
11	53	ADDRESS	Addressing information determined from the previous cd command and the recipient address details extracted from the EDI interchange. The format is described in the following section.
12		fill6	Blank.
13		MSGUCLS	Message user class. Contains the sender's classification. It is extracted from the EDI data or is the default.
14		fill7	Blank.
15		EDICNTLN	The EDI control number extracted from the EDI data. It is left-justified and padded on the right with blanks.
16		fill8	Blank.
17	60	DESCR	Sub-code description. Message text that describes the SUBCODE generated for this EDI interchange.

All text fields are left-justified and padded on the right with blanks, unless otherwise stated. All numeric fields are right-justified and padded on the left with zeros.

Format of the ADDRESS field in the 226 response

There are three types of addresses that can be returned in the subreply.

- Single destination user ID
- Information Exchange alias
- Information Exchange list

Address format in EDI subreplies for a single user ID

These addresses are described in the following table.

Field	Column	Name	Description
1	25	DTBLID	Destination system. A 3-character system ID (such as USA or JPN) of the system the EDI interchange was sent to, or blanks if the destination was your local Information Exchange system.
2	28	fill1	Blank.
3	29	DESTACCT	Destination account. The destination account code and, in conjunction with DESTUID (field 5), identifies the message recipient. The format is right-justified and padded on the left with blanks.
4	37	fill2	A period.
5	38	DESTUID	Destination user ID. In conjunction with DESTACCT (field 3), identifies the message recipient. The format is right-justified and padded on the left with blanks.

Address format in EDI subreplies for an alias

These addresses are described in the following table.

Field	Column	Name	Description
1	25	DTBLTYP	Alias table type for Information Exchange to use for address resolution of the alias. G = Global alias table. O = Organizational (account) alias table. P = Identifies a private (user ID) alias table.
2	26	DTBLID	Alias table name for Information Exchange to use for address resolution of the alias.
3	29	fill1	A period.
4	30	ALIAS	Destination alias name. Information Exchange resolves the alias address from the table identified by DTBLTYP and DTBLID. The format is left-justified and padded on the right with blanks.

Address format in EDI subreplies for a list

These addresses are described in the following table.

Field	Column	Name	Description
1	25	TEXT	"LIST."
2	29	fill1	Blank.
3	30	LISTNAME	Destination list name. The list from which Information Exchange resolves the recipient addresses.
4	38	fill2	Blanks.

Example: Sending an EDI file using the `cd edi` command

The following table provides an extract from a sample session that illustrates how to send an EDI file to Information Exchange via the IE/FTP interface. Full EDI validation is shown, including the use of the **site probe** function for EDI destination validation.

Step	FTP session input and reply
1	<pre>site probe 1 214 PROBE set ON for future commands</pre>
2	<pre>cd edi 250 EDI data.</pre>
3	<pre>put orders 226-EDI processing started. 01 E 0000000 012345 SEND_IT_TO_FRED ORDER 4235467235695 Bad user 00 E 0012345 003524 ACCT.USER01 INVOICE 4321473265789 Sent O.K. 00 E 0015869 031415 USA ATAP.MARY DELIV 4327564783965 Sent O.K. 00 E 0047284 092654 USA ATAP.MUNGO ROUTE 5438728561547 Sent O.K. 00 E 0139938 027182 USA ATAP.MIDGE SUPPLY 4321756479113 Sent O.K. 00 E 0167120 081812 PXYZ.MYBESTMATE ORDER 4321476789124 Sent O.K. 02 E 0248932 021736 GITT.7367564732057FGD INVOICE 4321674896327 Not Auth 00 E 0270668 004817 OIBM.GNORDERS ORDER 4321647396217 Sent O.K. 03 E 0275485 006245 NO.USER RUBBISH 4321467382198 No user 00 E 0281730 049865 ACCT.USER02 INVOICE 4321467389123 Sent O.K. 226 0 S00007 E00003 EDI processing complete.</pre>

To repeat the steps in the example, do the following:

1. Issue the **site probe 1** command to enable destination address checking when sending files to the IE/FTP interface.
2. Issue the **cd edi** command to specify that all files subsequently sent to the IE/FTP interface are EDI data in one of the supported formats. In this case, the data is in EDIFACT format.

3. Replies received after the **put** command is issued indicate various EDI processing results, summarized by the final column in each subreply:

SENT O.K. All interchanges were processed successfully.

BAD USER The destination address in the UNB segment was in an invalid format.

NOT AUTH The user in session is not authorized to send to the destination address in the UNB segment (this error can occur only when **site probe** is set to **ON**).

NO USER The destination address in the UNB segment does not exist (this error can occur only when **site probe** is set to **ON**).

The end reply indicates that seven interchanges from the file were sent successfully while three were in error. For details on all the replies shown, refer to Appendix B, “FTP replies from the Information Exchange/FTP interface.”

Example: Sending an EDI file using composite addressing

You can use composite addressing instead of issuing the **cd edi** command. For details on composite addressing, refer to “Using composite addressing” on page 13.

Step	FTP session input and reply
1	<pre>open ieftpl 220 ieftpl IE-FTP server (v3r0mf.I) ready on system IE1. user acct.user1 pass1 331 Enter Password. 230 Ready.</pre>
2	<pre>put /ie/outbasket/orders.x12 ie::/edi 200 Port command OK. 150 Data connection ready to open. 226-EDI processing started. 00 X 0000001 002253 GX12.ACMEORDERS #E2 000022223 Sent O.K. 00 X 0002253 004301 GX12.XYZINVOICES #E2 000022224 Sent O.K. 226 0 S00002 E00000 EDI processing complete.</pre>

To repeat the steps in the example, do the following:

1. Initiate the connection and log on to the mailbox.
2. Issue the following command to send the local file `/ie/outbasket/orders.x12` to the IE/FTP interface for EDI processing:

```
put /ie/outbasket/orders.x12 ie::/edi
```

Message sequence number

Information Exchange maintains a counter for all EDI interchanges sent during a session. It begins at 00001 and rolls over after 99999. The value of this counter is placed in the **MSGSEQN** field of the Information Exchange **SDISNDM** command for each EDI envelope processed.

Sending X.12 Binary and Security segments

X.12 Binary and Security segments can be reliably transmitted only when the file type is set to BINARY. If the file type is set to ASCII and the EDI data contains X.12 Binary and Security segments, the processing of the interchange halts and the remainder of the file is not processed.

The IE/FTP interface processes X.12 data as follows:

- No translation or CR/LF processing is performed on data within the Binary or Security segments.
- Normal translation and CR/LF processing occurs for the rest of the X.12 data.



NOTE: This processing is valid only if you use the **cd edi** command.

Storing a library member

To store a file as a library member, use the **cd** command to specify the library name and then issue the **put** command.

The member name is set to the file name specified in the **put** command. If necessary, IE/FTP truncates the name to eight characters and converts it to uppercase.

Example: Storing library members

The following sample session illustrates how to interact with Information Exchange libraries via the IE/FTP interface.

Step	FTP session input and reply
1	<pre>open ieftpl 220 ieftpl IE-FTP server (v3r0m0.a) ready on system IE1. user acct1.libadmin pass1 331 Enter Password. 230 Ready. cd (libr).acct1.softlib 250 Currently to library ACCT1.SOFTLIB.</pre>
2	<pre>ls 200 Port command OK. 150 Data connection ready to open. ACME.EXE DOCS.EPS README TEMPFILE 226 List for library ACCT1.SOFTLIB transferred 0.K.</pre>

Step	FTP session input and reply
3	bin 200 Type now set to 1.
4	put contacts 200 Port command OK. 150 Data connection ready to open. 226 File transferred to (LIBR).ACCT1.SOFTLIB with class O.K.
5	quit 221 Goodbye. Thank you for using EDI Services.

To repeat the steps in the example, do the following:

1. After initiating the connection and logging on to the mailbox, issue a **cd** command to work with the library ACCT1.SOFTLIB. All subsequent commands are applied to members within this library.
2. Issue an **ls** command. The IE/FTP interface returns a list containing the names of all members within this library.
3. Issue the **bin** command to specify binary mode for storage in this library. The user in this example is permitted to do this, as indicated by the access flags. Any user of the owning account can read members from this library, but only the owning user ID can write new members or overwrite existing members.
4. The user sends the file CONTACTS in binary mode for storage in this library.

Receiving files

To receive files from Information Exchange, you must specify the source mailbox (and, optionally, the message class) and then request the file.

There are two methods for specifying the source:

- Issue a **cd** command prior to issuing the **get** or **mget** command.

```
cd acct1.user1/invoice
get invoices.001
```

- Use composite addressing to specify the full destination within the file name in the **get** or **mget** command.

```
get invoices.001 ie::/acct1.user1/invoice/invoices.001
```


To receive a single file, use the **get** command followed by a file name.

- If the file name you specify matches the name of a file in your mailbox, that designated file is transferred to your local machine.
- If you specify any other file name, you receive the next available file in your mailbox having the attributes defined by the last **cd** command issued. The file is saved on your local machine using the file name you specified.
- If you specify a file name in the form of a composite address, this overrides the attributes specified in the last **cd** command.

To receive multiple files, use the **mget** command. The FTP client responds by issuing an **NLST** command to list all the files that can be received. The FTP client then uses this list to transfer each file, one by one.



NOTE: Some FTP client implementations request confirmation from the user for each file received during **mget** processing. You can disable this confirmation function by issuing the client command **prompt off**.

The **mget** command is valid only if the last issued **cd** command supports mailbox list.

For details on file name formats when exchanging files via Information Exchange, refer to Chapter 4, “Listing messages and library members” on page 15.

Information Exchange message files have **_IE** as the file extension. Some file systems, however, do not allow the underscore character (**_**) as part of the file name. Refer to “Site commands for FTP session control” on page 64 for details on how you can identify your system type to the IE/FTP interface.

FTP replies when receiving a file by message key

When you issue the FTP user command **get** or **mget**, the client issues the FTP command **RETR** (retrieve). If you specify a message key with the **get** or **mget** command, the 226 reply message is in the following format:

Field	Column	Name	Description
1	1	MSGNO	Message number. Contains the value 226. This response indicates that the file has been sent successfully and the data connection is being closed.

Field	Column	Name	Description
2	4	fill1	Blank.
3	5	MSGKEY	Message key. The message identifier assigned by Information Exchange. It is a hexadecimal representation of the message delivery class and a unique identifier.

continued ➡

4	25	from	“ from ” (includes leading and trailing blanks).
5	31	DTBLTYP	System type. Contains one of the following values: I (intersystem) indicates the message originated from a user on a different Information Exchange system. b (local) indicates the message originated from a local system.
6	32	DTBLID	System name. Contains the 3-character system ID (such as USA or JPN) if the DTBLTYP contains “I”; otherwise, it contains blanks.
7	35	fill2	A period.
8	36	DESTACC T	Account code of sender. This field in conjunction with DESTUID (field 9) identifies the message sender. If the value in this field is *SYSTEM*, the message was generated by Information Exchange. The format is alphanumeric, right-justified, and padded on the left with blanks.
9	44	fill3	A period.
10	45	DESTUID	User ID of sender. This field in conjunction with DESTACCT identifies the message sender. The format is alphanumeric, left-justified, and padded on the right with blanks.

Field	Column	Name	Description
11	53	class	“ class ” (includes leading and trailing blanks).

continued ➡

12	60	MSGUCLS	Message user class. Contains the sender's classification. It is not referenced by Information Exchange, but can be specified in the cd command to select messages from your mailbox. You can use this classification to indicate the type of message (for example, INVOICE or ORDER) agreed upon with your Information Exchange trading partners. The format is alphanumeric, left-justified, and padded on the right with blanks.
13	68	OK	“ O.K. ” (includes a leading blank).

Examples of receiving a single file

The following examples show two methods for receiving a single file:

- Receiving the first file in your mailbox listing
- Receiving a specific file by message key (or shortened file name)

The first example illustrates procedures for system types 3 and 6. The second example illustrates the procedure used for all other system types.

Example: Receiving a single file (system type 3 or 6)

The following is an extract from a sample session where the system type is set to 3 (DOS, OS/2 FAT) or 6 (VM).

Step	FTP session input and reply																								
1	cd /invoic 250 Currently to user *.* with class INVOIC.																								
2	ls -l 200 Port command OK. 150 Data connection ready to open. <table border="1"> <thead> <tr> <th>Filename (MSGKEY)</th> <th>Sender</th> <th>Class</th> <th>Size</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>00000001._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>000006444</td> <td>960126</td> <td>170600</td> </tr> <tr> <td>00000002._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000564</td> <td>960126</td> <td>170608</td> </tr> <tr> <td>00000003._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000878</td> <td>960126</td> <td>171107</td> </tr> </tbody> </table> 226 List for user () *.* , class * transferred O.K.	Filename (MSGKEY)	Sender	Class	Size	Date	Time	00000001._IE	ACCT2 USER03	INVOIC	000006444	960126	170600	00000002._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608	00000003._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107
Filename (MSGKEY)	Sender	Class	Size	Date	Time																				
00000001._IE	ACCT2 USER03	INVOIC	000006444	960126	170600																				
00000002._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608																				
00000003._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107																				
3	get invoic.001 200 Port command OK. 150 Data connection ready to open. 226 File transferred from ().ACCT2 .USER03 with class INVOIC O.K.																								
4	ls 200 Port command OK. 150 Data connection ready to open. 00000002._IE 00000003._IE 226 List for user () *.* , class INVOIC transferred O.K.																								
5	get 00000003._ie 200 Port command OK. 150 Data connection ready to open. 226 00000003 from .ACCT2 .USER03 class INVOIC O.K.																								

To repeat the steps in the example, do the following:

1. Issue the **cd /invoic** command to list and receive only messages with a user class of INVOIC.
2. Issue the **get invoic.001** command to transfer the first message in your mailbox with a user class of INVOIC to your local machine as file name **invoic.001**.
3. Issue the **ls** command to illustrate that the file name displayed in the listing prior to the **get** operation is no longer in the mailbox.
4. Issue the next **get** command to specify one of the file names displayed in the last mailbox list. This causes that specific message (the second item in the listing) to be transferred to the local machine. In this case, no other file name is provided. The file name on the local machine is the file name displayed in the listing.

Example: Receiving a single file (system type other than 3, 5, and 6)

The following is an extract from a sample session where the system type is set to a value other than 3, 5, and 6.

Step	FTP session input and reply																								
1	cd /invoic 250 Currently to user *.* with class INVOIC																								
2	ls -l 200 Port command OK. 150 Data connection ready to open. <table border="1"> <thead> <tr> <th>Filename (MSGKEY)</th> <th>Sender</th> <th>Class</th> <th>Size</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>FFAC548751C78008C5F1._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000006444</td> <td>960126</td> <td>170600</td> </tr> <tr> <td>FFAC54875A1CDE7EC5F1._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000564</td> <td>960126</td> <td>170608</td> </tr> <tr> <td>FFAC54887729E6B2C5F1._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000878</td> <td>960126</td> <td>171107</td> </tr> </tbody> </table> 226 List for user () *.* , class * transferred O.K.	Filename (MSGKEY)	Sender	Class	Size	Date	Time	FFAC548751C78008C5F1._IE	ACCT2 USER03	INVOIC	0000006444	960126	170600	FFAC54875A1CDE7EC5F1._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608	FFAC54887729E6B2C5F1._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107
Filename (MSGKEY)	Sender	Class	Size	Date	Time																				
FFAC548751C78008C5F1._IE	ACCT2 USER03	INVOIC	0000006444	960126	170600																				
FFAC54875A1CDE7EC5F1._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608																				
FFAC54887729E6B2C5F1._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107																				
3	get invoic.001 200 Port command OK. 150 Data connection ready to open. 226 File transferred from () .ACCT2 .USER03 with class INVOIC O.K.																								
4	ls 200 Port command OK. 150 Data connection ready to open. FFAC54875A1CDE7EC5F1._IE FFAC54887729E6B2C5F1._IE 226 List for user () *.* , class INVOIC transferred O.K.																								
5	get ffac54887729e6b2c5f1._ie 200 Port command OK. 150 Data connection ready to open. 226 FFAC54887729E6B2C5F1 from .ACCT2 .USER03 class INVOIC O.K.																								

To repeat the steps in the example, do the following:

1. Issue the **cd /invoic** command to list and receive only messages with a user class of INVOIC.
2. Issue the **ls -l** command to display information for each message. Refer to Chapter 4, “Listing messages and library members,” for details.
3. Issue the **get invoic.001** command to transfer the first message in your mailbox, with a user class of INVOIC, to your local machine as file name `invoic.001`.
4. Issue the **ls** command to illustrate that the message key displayed in the listing prior to the **get** operation is no longer in the mailbox.

- Issue the next **get** command to specify one of the message keys displayed in the last mailbox list. This causes that specific message (the second item in the listing) to be transferred to the local machine. In this case, no other file name is provided. The file name on the local machine is the full message key.

Receiving multiple files

To receive multiple files, issue an **mget** command.

Example: Receiving multiple files

The following example illustrates the use of multiple **mget** commands with two types of message user classes.

Step	FTP session input and reply																														
1	site system 3 200 System type now set to 3 (DOS, OS/2 FAT).																														
2	prompt																														
3	cd *.*/* 250 Currently to user *.* with class *.																														
4	ls -l 200 Port command OK. 150 Data connection ready to open. <table border="1"> <thead> <tr> <th>Filename (MSGKEY)</th> <th>Sender</th> <th>Class</th> <th>Size</th> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr> <td>00000001._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000006444</td> <td>960126</td> <td>170600</td> </tr> <tr> <td>00000002._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000564</td> <td>960126</td> <td>170608</td> </tr> <tr> <td>00000003._IE</td> <td>ACCT2 USER03</td> <td>INVOIC</td> <td>0000000878</td> <td>960126</td> <td>171107</td> </tr> <tr> <td>00000004._IE</td> <td>ACCT3 USER01</td> <td>ORDERS</td> <td>0000008590</td> <td>960126</td> <td>172334</td> </tr> </tbody> </table> 226 List for user () *.* , class * transferred O.K.	Filename (MSGKEY)	Sender	Class	Size	Date	Time	00000001._IE	ACCT2 USER03	INVOIC	0000006444	960126	170600	00000002._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608	00000003._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107	00000004._IE	ACCT3 USER01	ORDERS	0000008590	960126	172334
Filename (MSGKEY)	Sender	Class	Size	Date	Time																										
00000001._IE	ACCT2 USER03	INVOIC	0000006444	960126	170600																										
00000002._IE	ACCT2 USER03	INVOIC	0000000564	960126	170608																										
00000003._IE	ACCT2 USER03	INVOIC	0000000878	960126	171107																										
00000004._IE	ACCT3 USER01	ORDERS	0000008590	960126	172334																										
5	lcd d:\edi\orders																														
6	cd /orders 250 Currently to user *.* with class ORDERS.																														
7	mget * 200 Port command OK. 150 Data connection ready to open. 226 00000004 from .ACCT3 .USER01 class ORDERS O.K.																														
8	lcd d:\edi\invoices																														
9	cd /invoic 250 Currently to user *.* with class INVOIC.																														
10	mget * 200 Port command OK. 150 Data connection ready to open. 226 00000001 from .ACCT2 .USER03 class INVOIC O.K. 200 Port command OK. 150 Data connection ready to open. 226 00000002 from .ACCT2 .USER03 class INVOIC O.K. 200 Port command OK. 150 Data connection ready to open. 226 00000003 from .ACCT2 .USER03 class INVOIC O.K.																														

To repeat the steps in the example, do the following:

1. Set the system type to 3 so that short file names are used.
2. If necessary, issue the **prompt** command to toggle client confirmation prompts off for each file retrieved by the **mget** command.
3. Issue the **cd *.*/*** command to list or receive all files in your mailbox regardless of originator or message user class.
4. Issue the **ls -l** command to display the four messages in the mailbox for this example.
5. Issue the **lcd** command to force the next **get** command to use `d:\edi\orders` as the local directory in which to store the received files.
6. Issue the **cd /orders** command to list or receive only messages with a user class of ORDERS.
7. Issue the **mget** command to receive all the messages in your mailbox, with a user class of ORDERS, and store them as files in local directory `d:\edi\orders`, using the file names displayed in the mailbox listing.
8. Issue the **lcd** command to cause the next **mget** command to use `d:\edi\invoices` as the local directory in which to store received files.
9. Issue the **cd /invoic** command to list or receive only messages with a user class of INVOIC.
10. Issue the **mget** command to receive all the messages in your mailbox with a user class of INVOIC and store them as files in local directory `d:\edi\invoices`, using the file names displayed in the mailbox listing.

Retrieving files using composite addressing

You can use composite addressing as an alternative to the normal **cd** command followed by a **get** or **mget** command.

Example: Retrieving files using composite addressing

The following example illustrates the use of multiple **mget** commands with two types of message user classes.

Step	FTP session input and reply
1	<pre>ls ie:;/*./orders 200 Port command OK. 150 Data connection ready to open. FFAEE607053613FEC5F1._IE FFAEE60706F13D78C5F1._IE</pre>
2	<pre>ls ie:;/*./orders/-l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time FFAEE607053613FEC5F1._IE Acme USER01 ORDERS 0000006523 970702 153415 FFAEE60706F13D78C5F1._IE XYZC USER3 ORDERS 0000001311 970702 155537 226 List for user ().*.*, class ORDERS transferred O.K.</pre>
3	<pre>mget ie:;/*./orders 200 Port command OK. 150 data connection ready to open. 226 FFAEE607053613FEC5F1 from .ACME .USER01 class ORDERS O.K. 200 Port command OK. 150 Data connection ready to open. 226 FFAEE60706F13D78C5F1 from .XYZC .USER3 class ORDERS O.K.</pre>
4	<pre>get ie://acct2.user5/invoice /ie/invoices/acct2/invoice.001 200 Port command OK. 150 data connection ready to open. 226 File transferred from ().ACCT2 .USER5 with class INVOICE. O.K.</pre>

To repeat the steps in the example, do the following:

1. Issue an **ls** command with a composite address of `ie:;/*./orders` to list all messages with a message user class of ORDERS received from all users.
2. Issue an **ls** command with a composite address of `ie:;/*./orders/-l` to return a long listing of messages having a message user class of ORDERS received from all users.
3. Issue the command **mget** `ie:;/*./orders` to download all messages with a message user class of ORDERS from all users.
4. Issue the following command to retrieve the next available message from user ACCT2.USER5 with a user class of INVOICE and store it locally as `/ie/invoices/acct2/invoice.001`:

```
get ie://acct2.user5/invoice /ie/invoices/acct2/invoice.001
```


Retrieving support files

You can retrieve sample scripts, C-language modules, and files containing detailed information about certain features of Information Exchange and the IE/FTP interface. To request a support file from the IE/FTP interface, follow these steps:

1. Log on to your mailbox.
2. Issue a **cd support** command.
3. Use **ls** to see which files are available. Download the **README** file for more detailed information on each file.
4. Change to binary mode if downloading a **tar** or **zip** file.
5. Use the **get** command to receive the file.

When you receive files from support, they remain on the IE/FTP interface.



NOTE: Download the **README** file for detailed information about each file.

Retrieving a library member

To retrieve a file from a library, use the **cd** command to specify the library name, and then issue the **get** command.

Example: Retrieving a library member

The following sample session illustrates how to interact with Information Exchange libraries via the IE/FTP interface.

Step	FTP session input and reply
1	<pre> open ieftpl 220 ieftpl IE-FTP server (v3r0m0.a) ready on system IE1. user acct1.libadmin pass1 331 Enter Password. 230 Ready. </pre>
2	<pre> cd (libr).acct1.softlib 250 Currently to library ACCT1.SOFTLIB. </pre>
3	<pre> ls 200 Port command OK. 150 Data connection ready to open. ACME.EXE DOCS.EPS README TEMPFILE 226 List for library ACCT1.SOFTLIB transferred O.K. </pre>
4	<pre> ls -l 200 Port command OK. 150 Data connection ready to open. Access Owner Size Last updated Name -rw-r----- LIBADMIN ACCT1 720045 97/06/24 12:06:54 ACME.EXE -rw-r----- LIBADMIN ACCT1 43244 97/06/24 12:10:34 DOCS.EPS -rw-r----- LIBADMIN ACCT1 110 97/06/24 12:33:57 README -rw-r----- LIBADMIN ACCT1 1225 97/06/24 13:10:01 TEMPFILE 226 List for library CHRISTIA.FTPLIB transferred O.K. </pre>
5	<pre> get readme 200 Port command OK. 150 Data connection ready to open. 226 Library member ACCT1.SOFTLIB.README. transferred O.K. </pre>
6	<pre> del tempfile 250 Member deleted. </pre>
7	<pre> quit 221 Goodbye. Thank you for using EDI Services. </pre>

To repeat the steps in the example, do the following:

1. Initiate the connection and log on to the mailbox.
2. Issue a **cd** command to work with library ACCT1.SOFTLIB. All subsequent commands are applied to members within this library.
3. Issue an **ls** command. The IE/FTP interface returns a list containing the names of all members within this library.

4. Issue the **ls -l** command to return more detailed information on each member.
5. Issue the **get** command to download the library member README.
6. Delete the member TEMPFILE from the library by issuing the **del** command. This is permitted only if the user has write access to the library.

Receiving EDI files

Issue the **site edionly** command to receive only Information Exchange messages that are formatted as EDI data (as indicated by their common data headers). Non-EDI messages are left in your mailbox; subsequent **ls** or **ls -l** commands display only EDI messages. For more information, refer to “Site commands for EDI data control” on page 81.

The processing of carriage returns and line feeds in files you receive is determined by the **site edicrlf** command. When **edicrlf** is disabled (the default), the IE/FTP interface does not insert carriage returns and line feeds in the EDI data received from your mailbox.

When **edicrlf** is enabled and the transfer type is set to ASCII, the IE/FTP interface inserts carriage returns and line feeds between EDI segments where they are not already present. The **site edicrlf** command is described in “Site commands for EDI data control” on page 81.

Data translation

Data translation is governed by the file type you choose (set with **ASCII** and **binary** commands).

If a file is sent in binary mode, it must be received in binary mode; otherwise, the data could be corrupted.



CAUTION: X.12 Binary and Security segments can be transmitted only when the type is set to **binary**. If the type is set to ASCII before receiving data containing X.12 Binary and Security segments, the data could be corrupted upon receipt by the the destination’s FTP client.

Sending non-EDI files

When you send a file as the file type ASCII, record delimiters are standardized as carriage-return and line-feed (CR/LF) by the IE/FTP gateway (CR, CR/LF, and LF are all translated to CR/LF) and the data is translated from ASCII to EBCDIC for storage in Information Exchange. By default, the IE/FTP interface uses the ASCII/EBCDIC translation tables shown in Appendix E.

When you send a file as type binary, the data is sent “as is”, that is, record delimiters are ignored and the data is not translated.

Sending EDI files

When you send an EDI file as file type ASCII, the data is translated from ASCII to EBCDIC, all CR/LF characters are removed before transmission to Information Exchange, and the CDH is set to indicate EBCDIC EDI data. However, if an X.12 Binary or Security segment is detected, processing of the interchange is halted. By default, the IE/FTP interface uses the ASCII/EBCDIC translation tables shown in Appendix E.

When you send an EDI file as file-type binary, any non-binary data in the message is translated to EBCDIC, all CR/LFs are removed before transmission to Information Exchange. Any binary segments contained within the data are not translated and are transmitted unchanged.

Receiving non-EDI files

When you receive a file as file type ASCII (using the **get** or **mget** command), it is translated from EBCDIC to ASCII if either the Information Exchange CDH indicates the data is EBCDIC format or there is no CDH. By default, the IE/FTP interface uses the ASCII/EBCDIC translation table shown in Appendix E to perform this translation.

When you receive a file as binary, or if the CDH indicates that the file is binary data, the file is received without record separators or translation.

Receiving EDI files

If the CDH indicates that the data is EDI and in EBCDIC format, the data is translated to ASCII. For data that is translated, the IE/FTP interface uses the ASCII/EBCDIC translation table shown in Appendix E as its default trans-

lation table. The exception to this is X.12 Binary and Security segments, which are not translated. If **edicrlf** is enabled, CR/LFs are inserted between EDI segments.

Selecting a translation table

By default, the IE/FTP interface uses the ASCII/EBCDIC translation tables shown in Appendix E to perform ASCII to EBCDIC and EBCDIC to ASCII translation. However, you can select a different translation table using the **site xlate** command, as follows:

- **site xlate *ttttttt*** selects *ttttttt* as the translation table to be used for all subsequent conversions.

To select the default translation table, or to revert to using the default translation table, use the **site xlate** command, as follows:

- **site xlate ie**

Use the same translation table for both sending and receiving so that the translation applied is a one-to-one mapping, ensuring that the data received is the same as the data sent.



NOTE: Due to the CR/LF manipulation, the files can be altered if the file type is ASCII.

Refer to “Site commands for Information Exchange session control” on page 68 for a full description of the **site xlate** command.

Refer to Appendix H, “Support files,” for a list of available translation tables used by the IE/FTP interface.

Refer to Appendix E, “Translation tables,” for a description of the default translation tables used by the IE/FTP interface.

PASV support

The IE/FTP interface supports file transfer as the passive party in a proxy FTP session. This enables an FTP client to transfer files directly between the IE/FTP interface and another FTP server.

Example: Transferring files in passive mode

The following is an extract from a sample session that illustrates how to send and receive files using the PASV support offered by the IE/FTP interface.

Step	FTP session input and reply
1	open host1 220 HOST1 IBM TCP/IP for OS/2-FTP Server ver 09:39:01 Mar 03 1995 ready.
2	USER ADMIN1 PASS1 331 Password required for admin1. 230 User admin1 logged in.
3	proxy open ieprod 220 ieprod IE-FTP server (v2r1m0.z) ready on system IE1. proxy user acct1.user1 pass1 ieprod:331 Enter Password. ieprod:230 Ready
4	proxy site system 3 ieprod:200 System type now set to 3 (DOS, OS/2 FAT).
5	cd c:\workout 250 CWD command successful.
6	proxy cd acct1.admin1/workout ieprod:250 Currently to user ACCT1.ADMIN1 with class WORKOUT.
7	proxy mget * ieprod:227 Entering Passive Mode (9,180,213,32,4,1) host1: 200 PORT command successful. host1: 150 Opening ASCII mode data connection for WORK.001. ieprod:150 Data connection ready to open. ieprod:226 File transferred to ().ACCT1 .ADMIN1 with class WORKOUT. O.K. host1: 226 Transfer complete. ieprod:227 Entering Passive Mode (9,180,213,32,4,2). host1: 200 PORT command successful. host1: 150 Opening ASCII mode data connection for WORK.002. ieprod:150 Data connection ready to open. ieprod:226 File transferred to ().ACCT1 .ADMIN1 with class WORKOUT. O.K. host1: 226 Transfer complete.
8	cd c:\workin host1: 250 CWD command successful.
9	proxy cd /workin ieprod:250 Currently to user ACCT1.ADMIN1 with class WORKIN.
10	proxy mput * ieprod:227 Entering Passive Mode (9,180,213,32,4,3). host1: 200 PORT command successful. host1: 150 Opening ASCII mode data connection for 00000001._IE. ieprod:150 Data connection ready to open. ieprod:226 00000001 from .ACCT1 .ADMIN1 class WORKIN O.K. host1: 226 Transfer complete. ieprod:227 Entering Passive Mode (9,180,213,32,4,4). host1: 200 PORT command successful. host1: 150 Opening ASCII mode data connection for 00000002._IE. ieprod:150 Data connection ready to open. ieprod:226 00000002 from .ACCT1 .ADMIN1 class WORKIN O.K. host1: 226 Transfer complete.
11	bye host1: 221 Goodbye. ieprod:221 Goodbye. Thank you for using EDI Services.

To repeat the steps in the example, do the following:

1. Issue the **open host1** command to open the primary session with the FTP server on host1. In this case, it is an OS/2 machine.
2. Log on.
3. Issue the **proxy open ieprod** command to open the proxy session with the IE/FTP interface. All FTP commands to the IE/FTP interface are prefixed with the command **proxy**.
4. Prefix each FTP reply with the host name of the server from which the reply came.
5. Issue the **proxy site system 3** command to set the system flag to 3 (DOS, OS/2 FAT) to use shortened file names.
6. Enter the **cd c:\workout** command to change the working directory on the OS/2 server to C:\WORKOUT.
7. Enter the **proxy cd acct1.admin1/workout** command so that subsequent files are sent to user ACCT1.ADMIN1 with a message user class of WORKOUT.
8. Issue the **proxy mget *** command to send all the files in directory c:\workout on the OS/2 server to the Information Exchange mailbox ACCT1.ADMIN1 with a user class of WORKOUT.
9. The client administers the PASV commands. No user intervention is required.
10. Enter the **cd c:\workin** command to change the working directory on the OS/2 server to C:\WORKIN.
11. Enter the **proxy cd /workin** command so that only files with a message user class of WORKIN are received on the next **get**. The originator remains ACCT1.ADMIN1.
12. Issue the **proxy mput *** command to receive all files in the Information Exchange mailbox with originator ACCT1.ADMIN1 and message user class WORKIN and store them in directory C:\WORKIN on the OS/2 server.
13. Issue the **bye** command to close the FTP session with both the OS/2 server and the IE/FTP interface.

Deleting files

When you delete a file, the IE/FTP interface differentiates between two types of files:

- Messages
- Library members

Deleting messages

To delete a message from your Information Exchange mailbox, use the **cd** command to specify the user and class, and then issue the **del** command. Deletion is permitted only if the **use purge message command** flag in your Information Exchange profile is set to **Y**.

Example: Deleting a message from your mailbox

The following sample session illustrates how to delete a message from your mailbox, using a system type of 3 (DOS, OS/2 FAT) or 6 (VM).

Step	FTP session input and reply
1	<pre>open ieftpl 220 ieftpl IE-FTP server (v3r0m0.a) ready on system IE1. user acct1.user1 pass1 331 Enter Password. 230 Ready.</pre>
2	<pre>cd *.*/* 250 Currently to user *.* with class *.</pre>
3	<pre>ls -l 200 Port command OK. 150 Data connection ready to open. Filename (MSGKEY) Sender Class Size Date Time 00000001._IE ACCT2 USER03 INVOIC 000006444 960126 170600 00000002._IE ACCT2 USER03 INVOIC 000000564 960126 170608 00000003._IE ACCT2 USER03 INVOIC 000000878 960126 171107 226 List for user ().*.*, class * transferred O.K.</pre>
4	<pre>del 00000002._IE 250 Message deleted.</pre>

To repeat the steps in the example, do the following:

1. Initiate the connection and log on to the mailbox.
2. Issue a **cd** command. The argument ***.*/*** specifies that you wish to list all files in your mailbox, regardless of originator or message user class.
3. Issue an **ls -l** command. The IE/FTP interface returns a list of the files in your mailbox.

4. Delete the message 00000002._IE from your mailbox.

Deleting library members

To delete a file from a library, use the **cd** command to specify the library name and then issue the **del** command. Deletion is permitted only if you have write access to the library.

Example: Deleting library members

The following sample session illustrates how to interact with Information Exchange libraries via the IE/FTP interface.

Step	FTP session input and reply
1	<pre> open ieftpl 220 ieftpl IE-FTP server (v3r0m0.a) ready on system IE1. user acct1.libadmin pass1 331 Enter Password. 230 Ready. </pre>
2	<pre> cd (libr).acct1.softlib 250 Currently to library ACCT1.SOFTLIB. </pre>
3	<pre> ls 200 Port command OK. 150 Data connection ready to open. ACME.EXE DOCS.EPS README TEMPFILE 226 List for library ACCT1.SOFTLIB transferred O.K. </pre>
4	<pre> del readme 250 Member deleted. quit 221 Goodbye. Thank you for using the EDI Services. </pre>

To repeat the steps in the example, do the following:

1. Initiate the connection and log on to the mailbox.
2. Issue a **cd** command to work with the library ACCT1.SOFTLIB. All subsequent commands are applied to members within this library.
3. Issue an **ls** command. The IE/FTP interface returns a list containing the names of all members within this library.
4. Delete the member README from the library.

Parsing EDI data

This chapter describes how the IE/FTP interface resolves EDI addresses for each of the four supported EDI data formats:

- EDIFACT
- UN/TDI
- ANSI X.12
- UCS

Parsing EDIFACT formatted data

The first subelement (0010) of composite element S003 (interchange recipient) in the UNB segment is extracted and used as the recipient address. The second subelement (0007) of composite element S003 is extracted and used as the EDI qualifier.

The Information Exchange destination is resolved from these values using the following logic:

- If the qualifier is either ZZ or bb (two blanks), and EDIALIASONLY is OFF, the recipient address is treated as an Information Exchange destination.

- If the qualifier is not ZZ or bb (two blanks), or EDIALIASONLY is ON, or if the recipient could not be resolved as an Information Exchange destination, the recipient address is treated as an alias. The Information Exchange alias table to be used is determined using the following logic:
 - If the last **cd** command specified an alias table, then the table type and table ID are taken from the **cd** command. The alias name is set to the recipient ID.
 - If the last **cd** command did not specify an alias table, then the table type is set to G (Global). The table ID is set to *Eqq* where *qq* is the qualifier. The alias name is set to the recipient ID.

If the data element 0026 (application reference field) is provided, the IE/FTP interface extracts the first eight characters and uses them as the Information Exchange MSGUCLS. Otherwise, the MSGUCLS defaults to #EE. The derived or default MSGUCLS can be overridden using the **site ediclass** command. Refer to page 83 for information about the **site ediclass** command.

Parsing UN/TDI formatted data

The first subelement of the composite element UNTO (0004) in the STX segment is the recipient code address, and the second subelement is the recipient clear address.

The code address is treated as an alias to be resolved from the table specified in the **cd** command or, if the **cd** command did not specify a table, from the global alias table GUTD.

If the code address is blank, the clear address is interpreted as an Information Exchange destination address, regardless of the table specified in the **cd** command. That is, sysid.account.userid is used for an Information Exchange intersystem destination and account.userid is used for your local Information Exchange system.

If the data element 0008 (sender's transmission reference) is provided, the IE/FTP interface extracts the first eight characters for use as the Information Exchange MSGNAME.

If data element 0012 (application reference field) is provided, the IE/FTP interface extracts the first eight characters and uses them as the Information Exchange MSGUCLS. Otherwise, the MSGUCLS defaults to #EU. The derived or default MSGUCLS can be overridden using the **site ediclass** command. Refer to page 83 for information about the **site ediclass** command.

Parsing ANSI X.12 formatted data

The value in positions 55 to 69 of the ISA segment, the interchange receiver element (ISA08), is the recipient's address. The value in positions 52 and 53, the EDI qualifier element (ISA07), is the EDI qualifier.

The destination Information Exchange address is resolved from the EDI destination using the following logic:

- If the qualifier is either ZZ or bb (two blanks), and EDIALIASONLY is OFF, the destination is treated as an Information Exchange account and user ID, delimited after the first seven characters or by one or more space characters, whichever comes first.
- If the qualifier is not ZZ or bb (two blanks), or EDIALIASONLY is ON, the EDI recipient is treated as an alias. The alias table to be used is determined using the following logic:
 - If the last **cd** command specified an alias table, then the table type and table ID are taken from **cd** command. The alias name is set to the recipient ID.
 - If the last **cd** command did not specify an alias table, then the table type is set to G (Global). The table ID is set to *Xqq* where *qq* is the qualifier. The alias name is set to the recipient ID.

The MSGUCLS is #E2. The default MSGUCLS can be overridden using the **site ediclass** command.

Parsing UCS formatted data

The value in the application receiver's code element (BG04) from the BG is used as the recipient address. It is interpreted as an alias from one of the following alias tables:

- The table specified in the **cd** command.
- The global alias table, GUCS, if the table was not specified in the **cd** command.

The MSGUCLS is #EC. The default MSGUCLS can be overridden using the **site ediclass** command.

Using site commands

You can use **site** commands to change or view certain processing options associated with your Information Exchange user session. This chapter contains information about the **site** commands grouped by functional area that can be issued to the IE/FTP interface.

Several site commands require you to include a parameter that indicates you want to enable or disable the related function. Use either **1** or **ON** to enable the function. Use **0** or **OFF** to disable the function. For brevity, site command descriptions in this chapter use the [1|0] notation. An underscored parameter indicates the default.

If your FTP client does not support multiple **site** command parameters, you can use one of the following alternatives:

- Use the **quote** command. For example:

```
quote site getaudit 940101-941231 local all recv
```

- Use double quotation marks around the body of the **site** command. For example:

```
site "getaudit 940101-941231 local all recv"
```

- Use a parameter delimiter other than a space. However, do not use a delimiting character that could appear in the parameter text. The IE/FTP interface uses the character following the first **site** command parameter as the delimiter for the remaining parameters. Any delimiting character can be used. For example:

```
site getaudit_940101-941231_local_all_recv
```

or

```
site getaudit.940101-941231.local.all.recv
```

Site commands for FTP session control

The following commands relate to the FTP session with the IE/FTP interface.

site help

This command requests general help on the **site** command.

site idle

After you issue this command, the IE/FTP interface returns a message indicating the idle timeout on the control connection (see “Closing the IE/FTP connection” on page 8). Idle timeout is the maximum time, in seconds, that the control connection remains inactive. Once this time is exceeded, the IE/FTP interface automatically ends your Information Exchange session and closes the FTP control connection.

site system [0|n]

This command allows you to identify your system type to the IE/FTP interface, which can modify its behavior to accommodate different systems.

Type	System	Description
0	UNKNOWN	The default (start-up) setting for the system type. The IE/FTP interface acts in a standard manner.
1	UNIX	The setting if the remote system is a UNIX-type system. This setting acts the same as system 0 (unknown).

continued ➡

Type	System	Description
2	OS/2 HPFS	The setting if the remote system is an OS/2 system running HPFS on the target drive. This acts the same as system 0 (unknown).
3	DOS,OS/2 FAT	The setting for a remote DOS or OS/2 system running the FAT file system on the target drive (standard 8.3 file specifications). The difference between system 0 (unknown) and this setting is that each file name generated by the IE/FTP interface in response to the LIST and NLST is shorter. (Refer to “Example: Listing messages for system types 3 and 6” on page 16 for details.)
4	AS/400	The setting if the remote system is an AS/400 system. The difference between system 0 (unknown) and this setting is that when generating file names for the response to the LIST or NLST commands, the extension used is .IE and not ._IE, which is unacceptable for the AS/400.
5	MVS	The difference between system 0 (unknown) and this setting is that each filename generated by the IE/FTP interface in response to the LIST and NLST conforms to the MVS data set naming convention. (Refer to “Example: Listing messages for system type 5” on page 17 for details.)
6	VM	The difference between system 0 (unknown) and this setting is that each file name generated by the IE/FTP interface in response to the LIST and NLST is shorter. (Refer to “Example: Listing messages for system types 3 and 6” on page 16 for details.)
7	FTP/PM	The setting if the remote system is running FTP/PM from OS/2 TCP/IP version 2.0 or above. The difference between system 0 (unknown) and this setting is that when replying to the PWD command, only the selected information is sent.
8	MQ-GW	This system type is reserved for use by GXS.

site liststyle [*long|short|filename*]

This command determines the format in which files are listed in response to your **ls -l** command. For details of the available formats, refer to Chapter 4, “Listing messages and library members.”

site resp226 [*normal|filename*]

This command determines the format of the 226 response on file receive.

When the **resp226 site** option is set to **filename**, a multiline 226 response is returned each time a message is received. The first line of the response is the standard 226 reply. The second line contains the original file name from the Information Exchange message header.

The method by which the information is received determines the format of the information:

- By mailbox file name

If the message is received by a specific **_IE** file name (for example, during **mget** processing), the second line of the 226 response contains the mailbox file name and the original file name, as follows:

```
226-FFAD0BD608C7595EC5F1 from ( ) .ACCT1 .USER01 class ORDERS O.K.  
226 FFAD0BD608C7595EC5F1._IE orders.001
```

If there is no original file name contained in the Information Exchange message header, the second line repeats the mailbox file name:

```
226-FFAD0BD608C7595EC5F1 from ( ) .ACCT1 .USER01 class ORDERS O.K.  
226 FFAD0BD608C7595EC5F1._IE FFAD0BD608C7595EC5F1._IE
```

- By local file name

If the message is received by local file name, the second line of the 226 response only contains the original file name, as follows:

```
226-File transferred from ( ) .ACCT1 .USER01 with class ORDERS. O.K.  
226 Original name was orders.001
```

If there is no original file name contained in the Information Exchange message header, the second line is as follows:

```
226-File transferred from ( ) .ACCT1 .USER01 with class ORDERS. O.K.  
226 There was no original filename for this file
```

site showopts

This command displays a list of the **site** settings for the current session.

site resetopts

This command resets the following **site** settings to their default value for the current session:

arcrcfid	edialiasprobe	edionly	msgchrg	resp226
autogetopts*	edicdhonly	edireplies	msgrepts	system
cdhlist	edicheck	edireplybuf	msgretn	uniqueid
compress	ediclass	libreplace	probe	xlate
confirm	edicrlf	liststyle	ptrespname	

* when profile services are enabled

site edireplybuf [*1*|*0*]

This command enables or disables buffering of multiline replies during EDI file processing.

When buffering is enabled, the IE/FTP interface waits until EDI processing is complete before sending the entire multiline reply. This avoids buffer contention problems when using certain clients to send EDI files with a large number of envelopes.

When buffering is disabled, the IE/FTP interface returns subreplies as it processes the file being sent.

If you issue the **site edireplybuf** command with no parameters, the IE/FTP interface returns the current setting.

site edireplies [*0*|*1*|*2*]

This command changes the current setting for filtering FTP replies during EDI file processing.

Parameter	Function
<i>0</i>	The IE/FTP interface returns only the end 226 reply, thereby making it a single-line reply.
<i>1</i>	The IE/FTP interface returns a 226 start reply, followed by a subreply for each EDI envelope in the file, followed by a 226 end reply. This is the default setting.
<i>2</i>	The IE/FTP interface returns a 226 start reply, followed by a subreply for each EDI envelope in error, followed by a 226 end reply.

Site commands for Information Exchange session control

Use the following commands to control your session with Information Exchange.

`site confirm [1|2]`

This command enables or disables the next command confirmation function.

When confirmation is enabled, a file is committed into Information Exchange when the next FTP command is received on the control connection. If no additional commands are received on the control connection following a file transfer, the IE/FTP interface assumes that the remote user session is lost and does not commit the file to (or from) Information Exchange. Therefore, if you initiate a file transfer and then let the session time out, your transfer is unsuccessful.



NOTE: A **NOOP** command can be used for confirmation. You might need to issue **quote NOOP**.

When confirmation is disabled, a file is committed into Information Exchange as soon as the 226 FTP reply is sent. Technical limitations of the FTP protocol can cause:

- Partial messages to be sent (if you disconnect before the end of the file is sent).
- Partially received messages to be deleted from the user's mailbox (if the user disconnects during the receive operation).

If a user's session times out, the last transfer is committed to Information Exchange.

If you issue the **site confirm** command without a parameter, the current status of the flag is returned.

For more information on Information Exchange message commit logic, refer to the *Information Exchange Interface Programming Guide* referenced under "Related information" on page ix.

site probe [*I|Q*]

This command enables or disables probe on **cd**, **put**, and **mput**. The value specified remains in effect until you end the session, log on with a new user ID, or issue another **site probe** command.

With probe enabled, the IE/FTP interface performs two checks on user commands. The **first** check does not allow you to issue a **cd** command to:

- A non-existent account/user ID
- A non-existent alias
- A non-existent distribution list

The **second** check does not allow you to send data to:

- A non-existent account/user ID
- A non-existent alias
- A non-existent distribution list
- An account/user ID or alias requiring a different Information Exchange message charge code
- A library member that already exists when the **site libreplace** setting is zero.

When enabled, **probe** is in effect for all data transfers, including EDI data.

If you issue the **site probe** command with no parameters, the current setting is returned.

site sesskey

In response to this command, the IE/FTP interface returns the Information Exchange session-access key for the current session.

site xlate [*list|ie|xtable*]

This command specifies the ASCII-EBCDIC conversion table to be used when exchanging data with Information Exchange. These tables are held by the IE/FTP interface. The table specified is used until you end the session, log on with a new user ID, or specify another **site xlate xtable**.

The parameters of the command are as follows.

Parameter	Function
<i>list</i>	Lists the translation tables currently available.
<i>ie</i>	Requests the IE/FTP interface to use the standard Information Exchange translation table for subsequent data transfer.
<i>xtable</i>	Specifies the name of a translation table to be used for subsequent data transfer. In the list given in response to the site xlate list command, you can specify the name of any available translation table.

If you issue the **site xlate** command with no parameters, the IE/FTP interface returns the name of the translation table currently being used.

Copies of the available translation tables are in the IE/FTP interface support directory. Refer to “Retrieving support files” on page 47 for details about how to access these. In addition, the standard Information Exchange translation tables used to perform ASCII - EBCDIC conversion on data are shown in Appendix E on page 149.

Site commands for message control

Use the following commands to set various attributes for Information Exchange message transfer.

site cdhlist [**none**|*always*|*upload*|*download*]

This command allows you to retrieve the contents of the CDH when receiving a message from or sending a message to Information Exchange, or when listing the contents of an Information Exchange mailbox. The command also works with library members.

Parameter	Function
<i>*none*</i>	Returns CDHLIST to its default value. CDH contents are not returned for subsequent send, receive, or list operations.

continued ➡

Parameter	Function
<i>always</i>	CDH contents are returned for messages sent to and messages received from Information Exchange, and also in response to an ls or ls -l command.
<i>upload</i>	Returns CDH contents for messages sent to Information Exchange.
<i>download</i>	Returns CDH contents for messages received from Information Exchange. Also returns CDH contents, along with message details, in response to an ls or ls -l command.

The chosen option is used until the end of the current session, or until another option is chosen, or until a **site cdhlist*none*** or **site resetopts** command is issued.

If you issue the **site cdhlist** command with no parameters, the current setting is returned.

When requested in response to messages sent to or received from Information Exchange, the CDH contents are returned to your client in the form of a series of extended 226 replies. CDH values are written in the 226 replies in the form:

```
226-param =[value]
```

where *parm* is the name of a field in the CDH, and *value* is the value assigned to that field. The value is enclosed within square brackets and is presented in text format.

When requested in response to a list command, the CDH contents for each message listed is returned to your client in a series of replies in the following format:

```
parm =[value]
```

where *parm* is the name of a field in the CDH, and *value* is the value assigned to that field. The field name in *parm* is preceded by a single space. The value is enclosed within square brackets and is presented in text format. The CDH contents for a message are returned following the message details for the message.

CDH fields which contain no value are not reported.

A list of CDH field names with the maximum lengths of the corresponding values that may be provided in the reply is shown below. This list, along with a detailed description of each CDH field, is available in the *Information Exchange Interface Programming Guide*.

The following log shows a sample session in which the user asks to receive the contents of the CDH for one received message, and then asks not to receive the contents of the CDH for the next received message.

```
ftp> site cdhlist download
200 CDHLIST set to DOWNLOAD
ftp> get FFB0F5C6B5097582C5F1.IE /dev/null
200 Port command O.K.
150 Data connection ready to open.
226 Common Data Header Values.
226 Filename = [ .PROFILE]
226 Location = [/U/MJC/]
226 SysType = [22]
226 Version = [3]
226 CrlfEof = [0d 0a 1a]
226 OrgLen = [0]
226 End of CDH Values.
226 FFB0F5C6B5097582C5F1 from . MJC.USER01 class O.K.
825 bytes received in 1.336 seconds (0.6028 Kbytes/s)
local: /dev/null remote: FFB0F5C6B5097582C5F1.IE
ftp> site cdhlist *none*
200 CHDLIST SET TO *NONE*
ftp> get FFB0F5C735BE3EDAC5F1.IE /dev/null
200 Port command O.K.
150 Data connection ready to open.
226 FFB0F5C735BE3EDAC5F1 from . MJC.USER01 class O.K.
825 bytes received in 0.9677 seconds (0.8325 Kbytes/s)
local: /dev/null remote: FFB0F5C735BE3EDAC5F1.IE
ftp
```

The following log shows a sample session in which the user wants to receive a list of the messages currently in the user's Information Exchange mailbox, and wants to see the contents of the CDH for each message.

```

ftp> site cdhlist download
200 CDHLIST set to DOWNLOAD
ftp> ls -l
200 Port command OK.
150 Data connection ready to open.
  Filename (MSGKEY)      Sender      Class  Size      Date      Time
FFB181553EFA9B21D74.IE  ATAP ATAP001  IFTSTA 0000000358 000222 155453
  Filename = [.PROFILE]
  Location = [/U/MJC/]
  SysType = [22]
  Version = [3]
  CrlfEof = [0d 0a 1a]
  OrgLen = [0]
  Filename (MSGKEY)      Sender      Class  Size      Date      Time
FFB181554158D47DD74.IE  ATAP ATAP001  IFTSTA 0000000358 000222 155453
  Filename = [.PROFILE]
  Location = [/U/MJC/]
  SysType = [22]
  Version = [3]
  CrlfEof = [0d 0a 1a]
  OrgLen = [0]
226 List for user ( ) *.* , class * transferred O.K.
825 bytes received in 1.336 seconds (0.6028 Kbytes/s)
ftp

```

site compress [0/1]

The IE/FTP gateway supports only compressed non-EDI data sent by the Comm-Press client. The IE/FTP gateway examines the data passed to it, and, if the data is in the correct format, extracts the compression software type and version and populates the relevant CDH fields.

IE/FTP compression support does not involve the IE/FTP gateway performing any compression or decompression. It allows the CDH to indicate that the data is compressed and provides the appropriate details.

Set the SITE COMPRESS value to 1 to enable the support of compressed non-EDI data. If the SITE COMPRESS value is 0, then compression is not supported.

If compressed non-EDI data is passed with this value set, then the IE/FTP gateway locates the compression header and extracts the appropriate fields to set the CDH values. These are:

- COMPSOFT (software compression type)
- COMPSVER (software version)
- COMPFNAME (filename of original file taken from the put command)

If EDI data is sent with this value set, the data is sent to Information Exchange, and no extraction of data from the compression header is performed. If uncompressed non-EDI data is sent with this value set, the data is also processed as normal.

site msgchrg [*1|2|3|4|5|6*]

This command specifies how message charging is applied for subsequent transmissions. This setting remains in effect until the session ends, you log on with a new user ID, or you send another **site msgchrg**.

This command has the following parameters.

Parameter	Function
<i>1</i>	Receiver pays all message charges.
<i>2</i>	Receiver pays all message charges if agreed to; otherwise, charges are split.
<i>3</i>	Receiver pays all message charges if agreed to, or charges are split if agreed to by receiver; otherwise, sender pays all charges.
<i>4</i>	Charges are split if agreed to by receiver; otherwise, sender pays all charges.
<i>5</i>	Charges are split.
<i>6</i>	Sender pays all message charges.



NOTE: When a message cannot be delivered due to message charging incompatibility, then:

- If **probe** is disabled, the sender is notified by a system message (a mail item from account *SYSTEM* and user ID *ERRMSG*) and not by an FTP file send failure.
- If **probe** is enabled, the FTP transfer is prevented.

site msgrcpts [*n*|*r*|*d*|*b*|*a*|*c*|*e*|*f*]

This command specifies which system acknowledgments you want for subsequent sends until the session ends, you log on with a new user ID, or you send another **site msgrcpts** command. This command has the following parameters.

Parameter	Receipt (to I.E.)	Delivery (to Receiver)	Purge
<i>n</i>	N	N	N
<i>r</i>	Y	N	N
<i>d</i>	N	Y	N
<i>a</i>	N	N	Y
<i>b</i>	Y	Y	N
<i>c</i>	Y	N	Y
<i>e</i>	N	Y	Y
<i>f</i>	Y	Y	Y

System acknowledgments are placed in your mailbox with a sending account of *SYSTEM* and a sending user ID of *ERRMSG*.

site msgretn [*n*]

This command specifies the Information Exchange message retention period, in days, for files sent via the IE/FTP interface. The parameter specified must be a numeric value ranging from 0 to 180.

If no parameter or an invalid parameter is specified, the IE/FTP interface returns to the current setting of **msgretn**.

With **site msgretn 0**, Information Exchange uses the system default of 30 days.

site msgname [*name*]

This command specifies the value to be used in the Information Exchange **msgname** field for all files sent to the IE/FTP interface. The value must be a maximum of eight alphanumeric characters. This value is overridden during EDI processing.

If you issue the **site msgname** command with no parameters, the IE/FTP interface returns the current setting for **msgname**.

The default (start-up) setting for **msgname** is bbbbbbbb (blanks).

site msgseqn [*sequence*]

This command specifies the value to be used in the Information Exchange **msgseqn** field for all files subsequently sent to the IE/FTP interface. The value specified must be a maximum of five alphanumeric characters.



NOTE: This value overrides the **msgseqn** mechanism used during EDI processing for the duration of the Information Exchange session.

If you issue the **site msgseqn** command with no parameters, the IE/FTP interface returns the current setting for **msgseqn**.

The default (start-up) setting for **msgseqn** is bbbbb (blanks).

site libreplace [*I|Q*]

This command enables or disables the library member replacement on **put**.

If **site libreplace** is disabled, and **site probe** is enabled, the IE/FTP interface prevents you from overwriting an existing library member.

If **site libreplace** and **site probe** are both disabled, Information Exchange places a *SYSTEM*.ERRMSG* message in your mailbox if you attempt to overwrite an existing library member.

If **site libreplace** is enabled, the IE/FTP interface allows you to overwrite existing library members by sending a file specifying the same member name.

site uniqueid [*I|Q*]

The IE/FTP gateway assigns a unique message identifier to all messages it transfers to Information Exchange. The unique identifier is an eight-character value derived from the gateway's system clock. It is passed to Information Exchange in the UNIQUEID field of the CDH that the gateway creates for the message. Information Exchange includes the UNIQUEID in any acknowledgments it returns to the message sender. Therefore, you are able to uniquely identify to which message an acknowledgment relates.

The message sender can optionally request to be notified of the UNIQUEID assigned to a message by using the **site uniqueid** command. Notification, if requested, takes the form of a 226 reply as shown below:

```
226 File transferred to ( ).MJC.USER01 with class *Message ID xxxxxxxx.  
O.K.
```

where `xxxxxxxx` is the eight-character UNIQUEID assigned by the IE/FTP gateway.

When **uniqueid** is enabled, it specifies that you wish to be notified of the UNIQUEID assigned to each message sent to Information Exchange. You are notified of the assigned UNIQUEIDs either until the end of the current session or until a **site uniqueid 0** or **site resetopts** command is issued.

When **uniqueid** is disabled, it specifies that you do not wish to be notified of the UNIQUEID assigned to each message sent to Information Exchange. This is the default setting. Users do not receive notification of the UNIQUEID unless they specifically issue the **site uniqueid 1** command.

If you issue the **site uniqueid** command with no parameters, the current setting is returned.

Site commands for Information Exchange functions

Use the following commands to perform Information Exchange functions:

`site arcmsgid [*today* *session* *none* | archivename]`

This command specifies an Information Exchange archive to be used when receiving messages from your mailbox. Received messages are stored in your archive for the period specified in your Information Exchange user profile. If your Information Exchange profile has the number of archive days set to 0 (zero), messages are not archived.

You can hold several different archives, each identified by a unique archive reference ID. If you specify an existing archive reference ID, received messages are added to that archive. Specifying a new reference ID creates a new archive for subsequent received messages.

The archive reference ID remains in effect until you end the session, log on with a new user ID, or issue another **site arcmsgid** command. The value for the reference ID is specified as follows.

Parameter	Function
<code>*today*</code>	All subsequent messages received from your mailbox are archived with the reference ID set to the current date, in the format ARyymmdd.

Parameter	Function
<i>*session*</i>	All subsequent messages received from your mailbox are archived with the reference ID set to the current Information Exchange session access key.
<i>archivename</i>	All subsequent messages received from your mailbox are archived with the reference ID specified. Archive reference IDs can consist of up to eight alphanumeric characters.
<i>*none*</i>	All subsequent messages received from your mailbox are not archived. Disables archiving.



NOTE: If your Information Exchange user profile has **Forced Archiving** set to **Y**, received messages are by default stored in an archive, with the reference ID set to the current Information Exchange session access key. This is equivalent to issuing the **site arcrefid *session*** command.

If the **site arcrefid** command is issued with no parameters, the current **arcrefid** setting is returned.

site getarchive *arcrefid*

This command transfers messages from an archive into your Information Exchange mailbox.

When you issue the command, all the messages contained in the archive referenced by **arcrefid** are retrieved into your mailbox. If the archive specified does not exist, an FTP 200 reply is returned, indicating that no messages are retrieved.


```
site getaudit [[datefrom]-[dateto]] [sent|recv|both]
[local|gmt][all|undelivered|delivered|purged][expansion indicator]
```

This command retrieves a message into your mailbox containing your Information Exchange audit trail. Use the following parameters to specify the range of messages for which you want audit information.

Parameter	Function
<i>datefrom-dateto</i>	<p>Specifies the date range for the audit.</p> <p><i>datefrom</i> retrieves audits for messages sent from this date. The default date is January 1, 1950.</p> <p><i>datefrom-dateto</i> retrieves audits for messages sent between <i>datefrom</i> and <i>dateto</i>.</p> <p><i>dateto</i> retrieves audits for messages sent up to this date. The default date is December 31, 2099.</p> <p>The hyphen character (-) must be included in all date ranges. Valid date formats are:</p> <ul style="list-style-type: none"> • YYMMDD (for example 940321) • YYYYMMDD (for example 19940321) • CYYMMDD (for example 0940321, where C represents the Information Exchange century: 0 for 19yy or 1 for 20yy)
<i>sent recv both</i>	<p>You can specify only one of these values:</p> <p><i>sent</i> retrieves audits for messages you have sent.</p> <p><i>recv</i> retrieves audits for messages you have in your mailbox, messages you have received, or messages you have purged before receipt.</p> <p><i>both</i> retrieves audits for both categories listed above (<i>send</i> and <i>recv</i>).</p>

continued ➤ {

Parameter	Function
<i>local gmt</i>	<p>You can specify only one of these values:</p> <p><i>local</i> when the dates specified for <i>datefrom-dateto</i> are in the local time zone, as specified by the Information Exchange center with which you are in session. This is the default value.</p> <p><i>gmt</i> when the dates specified for <i>datefrom-dateto</i> are Greenwich mean time (GMT).</p>
<i>all undelivered delivered purged</i>	<p>You can specify only one of these values to indicate the status of messages for audit:</p> <p><i>all</i> for all messages, regardless of their current status.</p> <p><i>undelivered</i> for messages that have not yet been received.</p> <p><i>delivered</i> for messages that have been received.</p> <p><i>purged</i> for messages that have been purged before receipt.</p>
<i>expansion indicator</i>	<p>If omitted, a default expansion indicator of 2 is used.</p> <p>You can specify any numeric value. If the value provided is not supported by Information Exchange, you receive a system error message in your Information Exchange mailbox and Information Exchange defaults to the expansion indicator value. Refer to the <i>Information Exchange Interface Programming Guide</i> for acceptable values for the expansion indicator.</p>

If the **site getaudit** command is issued with no parameters, the selection values for the audit default to:

19500101-20991231 both local all 2

The message containing the audit trail is sent to your mailbox from user *SYSTEM*.*AUDITS* with a MSGUCLS of #SAUDIT.

site passthru *s|a* *command* '*body*'

This command sends certain native Information Exchange interface commands directly to Information Exchange without the intervention of the IE/FTP interface. The parameters are defined as follows.

Parameter	Function
<i>s a</i>	Specifies the method for delivering the Information Exchange command response, as follows: <i>s</i> to return the response synchronously via the FTP reply to the site passthru command. <i>a</i> to return the response asynchronously via a file to be received after the site passthru command has completed.
<i>command</i>	Specifies the Information Exchange interface command name (“SDI...”) you wish to issue.
<i>body</i>	Specifies the command text you wish to send.

For further details on **site passthru** processing, refer to Chapter 8, “Site passthru processing.”

site ptrespname [*PASSTHRU.RSP*]*filename*

This command sets the file name to be used when receiving an asynchronous response to a **site passthru** command.

The file name used should be between 1 and 12 characters long.

Site commands for EDI data control

Use the following commands to control EDI data processing when transferring Information Exchange messages.

site edialiasprobe [*I|Q*]

This command allows users to send a file containing more than one EDI interchange with a mixture of alias destinations and Information Exchange account and user ID destinations specified in the interchange envelopes. Regardless of what EDI recipient qualifiers are used in the envelopes, the IE/FTP gateway conducts a two-stage probe process to identify whether the destination address for an interchange is an alias or an Information Exchange account and user ID. Before sending an interchange to Information Exchange, the gateway first

issues a probe request to Information Exchange to ask if the specified recipient EDI address is an alias name already known by Information Exchange. If the response from Information Exchange is positive, then the interchange is sent using alias address processing. If the response is negative, then the gateway issues a further probe to ask if the recipient EDI address is a valid Information Exchange account and user ID. Again, if the response is positive, the interchange is sent using clear account and user ID addressing. However, if the response is negative, then the interchange cannot be sent, and an error message is returned to the user.

Use of **site edialiasprobe** overrides the current setting of **site edialiasonly** and **site probe**.

When **edialiasprobe** is enabled, it instructs the IE/FTP gateway to validate recipient EDI addresses for all EDI interchanges with Information Exchange prior to sending the interchange. The processes performed by the gateway are:

1. Issue a probe request to Information Exchange to check if the EDI recipient address is a valid alias name.
2. Issue a probe request to Information Exchange to check if the EDI recipient address is a valid Information Exchange account and user ID.

Step 2 is only performed if step 1 shows that the address is not a valid alias name.

After the **site edialiasprobe 1** command is issued, the above checks are made for all interchanges sent during the current session until either a **site edialiasprobe 0** or **site resetopts** command is issued.

When **edialiasprobe** is disabled, it instructs the IE/FTP gateway to stop validating recipient EDI addresses before sending EDI interchanges to Information Exchange. Any current setting for **site edialiasonly** becomes active again once a **site edialiasprobe 0** is issued.

The default setting for **site edialiasprobe** is 0.

site ediclass [**none**|*class*]

This command overrides the message user class derived from an EDI message. By default, the message user class assigned to EDI messages sent to Information Exchange is derived from the message content by the IE/FTP gateway.

Parameter	Function
<i>*none*</i>	Instructs the IE/FTP gateway to derive the message user class from the contents of subsequent EDI messages sent to Information Exchange. This is the default setting for site ediclass .
<i>class</i>	An alphanumeric string 1 to 8 characters in length. It is assigned as the message user class to all messages containing X12, EDIFACT, UN/TDI, or UCS data sent to Information Exchange during the current session until either another class is assigned or a site ediclass *none* or site resetopts command is used.

If you issue the **site ediclass** command with no parameters, the current setting is returned.

site edicrlf [*1|0*]

This command enables and disables carriage-return and line-feed (CR/LF) when receiving EDI data from Information Exchange. The value specified remains in effect until you end the session, log on with a new user ID, or issue another **site edicrlf** command.

When **edicrlf** is enabled, ASCII CR/LFs (hexadecimal 0D and 0A) are inserted between EDI segments of files being received. This only occurs when the Information Exchange common data header (CDH) of the message being received indicates that the message is EDI data, and the transfer type is set to ASCII.

CR/LFs are not inserted between segments where a CR/LF is already present.

If you issue the **site edicrlf** command with no parameters, the current setting is returned.

site edionly [*1|0*]

This command specifies whether subsequent **list** and **receive** commands should handle only EDI files. The value specified remains in effect until you end the session, log on with a new user ID, or issue another **site edionly** command.

When **edionly** is enabled, **ls** commands issued to the IE/FTP interface display only those messages containing EDI data. Similarly, **get** commands receive only messages containing EDI data. If a message does not have a CDH, then the **edicdonly** setting (described on page 84) determines how the message is handled.

If you issue the **site edionly** command with no parameters, the current setting is returned.

[site edicdonly \[1|0\]](#)

This command changes the effect to the **site edionly** setting for Information Exchange messages with no Common Date Header (CDH).

If **edicdonly** is enabled, files without a CDH are regarded as non-EDI and are excluded by the **edionly** setting.

If **edicdonly** is disabled, files without a CDH are regarded as EDI and are not affected by the **edionly** setting.

If the **site edicdonly** command is issued with no parameters, the current setting is returned.

[site edialiasonly \[1|0\]](#)

This command enables or disables EDIALIASONLY processing when sending X.12 and EDIFACT files to the IE/FTP interface. Refer to Chapter 6, "Parsing EDI data," for details.

If you issue the **site edialiasonly** command with no parameters, the IE/FTP interface returns the current setting for **edialiasonly**.

Site commands for option storage

Use the following commands to store and retrieve preferred settings for various site options.



NOTE: These commands are available only from Information Exchange centers offering Profile Services functions.

`site autogetopts [I|O]`

This command enables or disables the automatic option retrieval function. If enabled, site settings are retrieved automatically at session start for the Information Exchange user ID currently in session.

You must issue a **site putopts** command to store the new setting of this flag for it to be in effect at the next session start. If you issue the **site autogetopts** command with no parameters, the IE/FTP interface returns to the current setting.

`site forceopts`

Use this command to terminate the FTP session if errors have been encountered while retrieving site settings during the session.

If errors have been encountered, the IE/FTP interface sends the following reply before terminating the session:

421 Service disconnected - errors retrieving user options

If no errors have been encountered, the IE/FTP interface sends the following reply and keeps the session open:

200 No errors encountered while retrieving user options

`site getopts`

This command restores the session site settings to the values saved by the last **site putopts** command for the Information Exchange user ID currently in session.

site putopts

Stores the following site settings for the Information Exchange user ID currently in session:

- ARCREFID
- AUTOGETOPTS
- CDHLIST
- COMPRESS
- CONFIRM
- EDIALIASPROBE
- EDICDHONLY
- EDICHECK
- EDICLASS
- EDICRLF
- EDIONLY
- EDIREPLIES
- EDIREPLYBUF
- LIBREPLACE
- LISTSTYLE
- MSGCHRG
- MSGRCPTS
- MSGRETN
- PROBE
- PTRESPNAME
- RESP226
- SYSTEM
- UNIQUEID
- XLATE

For details on option retrieval, see **site getopts** and **site autogetopts** in the following sections.

Site passthru processing

This chapter describes how to use the **site passthru** command for direct communication with Information Exchange.

To make full use of this command, you need to understand the Information Exchange command interface as detailed in the *Information Exchange Interface Programming Guide*. See “Related information” on page ix.

When you use the site passthru command, the parameters include part of the Information Exchange command. All values in the Information Exchange command are position dependent; however, some FTP clients remove redundant spaces (that is, more than one space becomes just one space) making the Information Exchange data invalid. To overcome this problem, you can specify the **site spacechr** command to select a special character that is interpreted by the IE/FTP gateway as a space. This character can then be used by your client as a space, and the IE/FTP gateway substitutes a space for this character before sending the command to Information Exchange.

You should be careful not to specify a character that can be part of the Information Exchange command data.

The format of the command is:

site spacechr [char] *none*

You specify one character (not a string) to be a space character. Any alphanumeric character is permissible. The **site spacechr** command is only applicable to the **site passthru** command. The option remains set for the remainder of the session, but can be changed by issuing another command or turned off using the ***none*** parameter.

Issuing the `site passthru` command

The **site passthru** command consists of four elements:

- The command (**site passthru**)
- The response mode (*a* or *s*)
- The Information Exchange command name
- The Information Exchange command body, enclosed by single quotation marks

An example command is:

```
site passthru s sdiinqs 'RESPINQ S1'
```

Response mode

Information Exchange issues a response to most Information Exchange interface commands. How you receive this response depends on the response mode (synchronous or asynchronous), which is specified in the **passthru** command.

Information Exchange command name

This field of the **site passthru** command specifies the name of the Information Exchange interface command to be passed to Information Exchange. The following Information Exchange interface commands are *not* available via the **site passthru** command:

- SDISSTA
- SDISEND
- SDISNDM
- SDIRCVM
- SDICMIT
- SDIPACE
- SDICRSP
- SDIPRSP

Information Exchange command body

This is the command text to be appended to the Information Exchange command. This text must be enclosed by single quotation marks. The IE/FTP interface builds the complete Information Exchange command by taking:

- The **COMMAND** field from the **site passthru** command. (See above section.)
- The **ACCNTNO** and **USERID** fields from the Information Exchange user currently logged on.
- The **SESSKEY** field from the current Information Exchange session.
- The body text specified in the **site passthru** command (the parameters to the specified Information Exchange command).

The user needs only to supply the Information Exchange command name and the command body text in the **site passthru** command.

The IE/FTP interface acquires the ACCNTNO, USERID, and SESSKEY automatically. More details about these fields can be found in the *Information Exchange Interface Programming Guide*.

Example: Site passthru processing

The following is an extract from a sample session that illustrates how to issue native Information Exchange commands via **site passthru** processing.

Step	FTP session input and reply
1	<pre>site passthru s sdiinqm 'rspinqm 1' 200 RSPINQM '9608210915480.....0019608210914590003330000011'</pre>
2	<pre>site passthru a sdiinqm 'rspinqm 1' 200 PASSTHRU command sent: get PASSTHRU.RSP for the response. get passthru.rsp 200 Port command OK. 150 Data connection ready to open. 226 Passthru response transferred O.K.</pre>
3	<pre>site passthru s sdidals 'otabaa10001acmesupplies dex20 tsodl ' 200 Passthru command submitted.</pre>

To repeat the steps in the example, do the following:

1. Issue the **site passthru** using the following parameters:

S Returns a synchronous response.

SDIINQM Message Inquiry command, which is the Information Exchange command to be executed.

'RSPINQM 1' Information Exchange command body required for the **SDIINQM** command. The parameters are the response name (**RSPINQM**) and level (**1**). This text is appended to the command name, current account, user ID, and session access key to form the complete command as specified in the *Information Exchange Interface Programming Guide*.

Since the command is issued in synchronous mode, the IE/FTP interface returns the response from Information Exchange within an FTP reply, formatted as follows:

RSPINQM The response name specified in the command body within the **site passthru** command.

'960821091...' The body of the response from Information Exchange. The response is as described in the *Information Exchange Interface Programming Guide*. The following four leading fields are removed: **COMMAND**, **ACCTNO**, **USERID**, and **SESSKEY**.

2. Issue the same **site passthru** command in asynchronous mode. The FTP reply to this command gives the file name to use when issuing a **get** command for the response. In this case, it is the default file name **PASSTHRU.RSP**. The downloaded file contains the response from Information Exchange in the format described for the synchronous response.
3. Issue the Information Exchange command **SDIDALS** via **site passthru**. Since this particular command does not return any direct response from Information Exchange, you can issue it only in synchronous mode. The FTP reply confirms that the command was submitted to Information Exchange.

Receiving the site passthru responses

The value you place in the response mode field of the **site passthru** command determines how the IE/FTP response is delivered.

Synchronous response mode

In synchronous mode, the Information Exchange response is returned in the FTP reply to the **site passthru** command.

The reply is formatted as

```
200 rrrrrrrr 'tttttttt.....'
```

The parameters for this reply are:

- *rrrrrrrr* is the name specified in the Information Exchange command body ('RETRSPEC' field).
- *'ttttt...'* is the test of the response body, enclosed in single quotation marks.

An example response is:

```
200 RESPINQ
'S9606211509099606211509080000010000000000000000000001'
```

The response body is taken from the Information Exchange response text, with the leading command code, account/user ID, and session access key text removed.

Asynchronous response mode

In asynchronous mode, the response from Information Exchange to the **site passthru** command is stored by the IE/FTP interface for subsequent retrieval as a file. A sample FTP reply to an asynchronous **passthru** command is as follows:

```
200 PASSTHRU command sent, get PASSTHRU.RSP for the response.
```

To receive the file containing the response from Information Exchange, issue a **get passthru.rsp** command.



NOTE: The response is lost if you issue another **site passthru** command or end the session.

The name of the response file is, by default, PASSTHRU.RSP. You can change this by using the **site ptespname** command. Refer to “Site commands for Information Exchange session control” on page 68.

Commands with no response

Certain Information Exchange commands such as **SDIDALS** (define alias) do not receive a response from Information Exchange. Refer to the *Information Exchange Interface Programming Guide*, referenced under “Related information” on page ix.

You can issue commands with no response only in synchronous mode. Upon successful completion, the IE/FTP interface returns the following reply:

```
200 Passthru command submitted.
```

If you attempt to send such a command in asynchronous mode, the IE/FTP interface does not process the command, and sends the following reply:

```
501 That PASSTHRU command has no reply so cannot have Async response set.
```

Error responses

If Information Exchange detects an error in your Information Exchange interface command, it returns an error message beginning with **SDIERR**.

In these cases, the FTP reply to the **site passthru** command contains the error message. For example:

```
501 SDIERR 'The following command was not executed because 00002SDIINQS...'
```

The reply consists of the error indicator **SDIERR**, followed by the error text enclosed in single quote characters.

In asynchronous mode, the error text is available as a file for subsequent retrieval.

For Information Exchange commands where there is no response, a message from the address ***SYSTEM*.ERRMSG*** is placed in your mailbox. The format of system error messages is described in the *Information Exchange Interface Programming Guide*.

FTP commands supported

This appendix describes the FTP user commands supported by the IE/FTP interface. The FTP commands defined in RFC 959 are also described. The exact syntax of these commands can vary from your FTP user interface.

If you use an unsupported FTP command, the IE/FTP interface sends the following reply:

502 Command not implemented.

FTP user commands

This section describes the user commands supported by the IE/FTP interface. The commands given are examples of typical client commands.

`ascii`

Sets the file type to ASCII.

`binary`

Sets the file type to binary. In some FTP implementations, this command is **image**.

`bye`

Disconnects your session with Information Exchange.

cd [partner]/[class]

Selects the partner mailbox with whom you wish to exchange data and the message user class you wish to use. For details on how to specify your trading partner, refer to Chapter 3, “Using the cd command.”

cd edi [(aliastable)]

Selects EDI data and the alias table to be used for address resolution. Any files sent after issuing the **cd edi** command are interpreted as EDI files in one of the following formats: EDIFACT, UN/TDI, X12, or UCS.

The format is determined automatically by the IE/FTP interface.

For details on how to send EDI formatted data, refer to “Using composite addressing” on page 13.

cd editype [(aliastable)]

Selects the EDI data type and the alias table to be used for address resolution. Any files sent after issuing this command are interpreted as EDI files in the format specified by **editype**. The formats supported are EDIFACT, UN/TDI, X12, or UCS.

EDI processing should be performed using the **cd edi** command, which supersedes this command.

dele filename

Deletes a specific item from your mailbox. *filename* is the file name that displays when you use **ls -l**. If your Information Exchange profile does not allow you to purge messages from your mailbox, you cannot use this command.

get filename

Receives the next matching file from your mailbox. The last **cd** command governs the criteria for the match.

ls [-l]

Provides a list of matching files in your mailbox. The last **cd** command governs the criteria for the match.

mdelete

Deletes multiple items from your mailbox. The last **cd** command governs the criteria for the match. If your Information Exchange profile does not allow you to purge messages from your mailbox, you cannot use this command.

mget

Receives all matching files from your mailbox. The last **cd** command governs the criteria for the match.

mode S

Sets the transmission mode to S, the default value. S is stream mode, where the data is transmitted as a stream of bytes. Block mode and compressed mode are not supported by the IE/FTP interface.

mput filespec

Sends a group of files through the IE/FTP interface to Information Exchange.

open a.a.a or open x.x.x.x

Initiates the connection to an IE/FTP interface, where:

- *a.a.a* is the domain name of the IE/FTP interface you want to connect to (for example, *xmplgw.inedi.com*).
- *x.x.x.x* is the IP address of the IE/FTP interface you want to connect to (for example, *nnn.nnn.nnn.nnn*).

As prompted, enter your account code, user ID, and password.

Multiple IP addresses can be used for capacity and backup purposes. Contact your marketing representative to determine the IP address you should use.

pass password [/newpass]

Changes your password. The system prompts you for, and then sends, your password if it is not provided as part of the **user** command. In some FTP implementations, you might need to begin this command with **quote**.

put filename

Sends a file, through the IE/FTP interface, to Information Exchange.

remotehelp

Requests basic help from the IE/FTP interface.

site option

Either sets or displays session specific values for the user on the IE/FTP interface. For more information, refer to Chapter 7, "Using site commands."

stru F

Sets the data structure to F, the default value. F is file structure, where there is no internal structure and the file is considered to be a continuous sequence of data bytes. Record structure and page structure are not supported by the IE/FTP interface.

user account.userid [password[/newpass]]

Logs into your Information Exchange mailbox.

If you issue this command while in session, the existing Information Exchange session ends and a new session begins.

If your password contains a slash (/) or is the same as your user ID, you must change it before you can use the IE/FTP interface. Contact GXS Community Support.

FTP commands

This section describes the FTP commands defined in RFC 959. The Required column indicates which commands must be supported according to RFC 959. The Supported column indicates which commands the IE/FTP interface supports.

Command	Function	Required	Supported
ABOR	Causes the server to abort the current data operation and close the data connection. The control connection should remain active.		✓ ⁶
ACCT	Specifies an account for the user.		1

continued ➡

Command	Function	Required	Supported
ALLO	Specifies the amount of space that the server must allocate in its file system for the file to be received.		✓ ³
APPE	Requests the server to receive a file from the client and append it to the existing file, if one exists.		1
CDUP	Moves up one directory level of the file system.		1
CWD	Navigates around the file system.		✓
DELE	Deletes the specified file.	✓	✓
HELP	Allows the client to request help information from the server.		✓
LIST	Displays the contents of the directory.		✓ ⁴
MKD	Creates the specified directory.		1
MODE	Indicates the file mode. Valid parameters are S, B, and C.	✓	✓ ²
NLST	Displays the contents of the directory.		✓ ⁵
NOOP	Requests that the server return an OK reply.	✓	✓
PASS	States the password for the account/user ID.	✓	✓
PASV	Asks the server to act as a client for the next data transfer. This allows you to transfer data between two remote servers.		✓
PORT	Specifies the data port number for the transfer of data.	✓	✓
PWD	Displays the current directory to the client.		✓

continued ↪

Command	Function	Required	Supported
QUIT	Terminates the user and disconnects the control connection.	✓	✓
REIN	Terminates the user, resets all parameters to defaults, and maintains the control connection.		
REST	Passes a restart value for the resumption of a file transfer.		
RETR	Requests the server to send the file to the client.	✓	✓
RMD	Deletes the specified directory.		1
RNFR	Specifies original name of a file being renamed.		1
RNTO	Specifies new name of a file being renamed.		1
SITE	Allows site-specific parameters to be set in the server.		✓
SMNT	Allows the user to mount a different file system.		1
STAT	Allows the client to request the status of the server.		
STOR	Requests the server to receive a file from the client.	✓	✓
STOU	Requests the server to receive a file from the client and store it under a unique file name in the directory.		1
STRU	Indicates the file structure. Valid parameters are <i>F</i> , <i>R</i> , and <i>P</i> .	✓	✓ ²
SYST	Requests that the server identify its operating system.		
TYPE	Indicates the file type. Valid parameters are <i>A</i> , <i>E</i> , <i>I</i> , and <i>L</i> .	✓	✓ ²
USER	Specifies the account and user ID to use.	✓	✓

1. This command does not map to any feature of Information Exchange and is not implemented.
2. Not all values of the parameters for this command are supported (this is acceptable in RFC 959).
3. This command is treated as if it were a **NOOP** command, as defined in RFC 959.
4. This command is implemented by treating it as an **NLST -L** command.
5. This command provides the list of mailbox items for input to the multiple get command (**mget**); this allows you to clear your mailbox.
6. The **ABOR** command also closes the control connection.

The following table describes the FTP commands supported by the IE/FTP interface for session security, as specified in RFC 2228, “FTP Security Extension,” and supported by Internet draft (**draft-murray-auth-ftp-ssl-02.txt**).

Command	Function
AUTH	Declares the authentication mechanism to use.
PBSZ	Declares the protection buffer size to use.
PROT	Declares the protection level to use for the data connection.

Client equivalents of native FTP commands

The following table illustrates the relationship between typical client commands and native FTP commands.

Client command	FTP command (per RFC959)
ascii	TYPE A
bin	TYPE I
bye	QUIT
cd	CWD
del	DELE
get	PORT followed by RETR
ls	PORT followed by NLST
pass	PASS
put	PORT followed by STOR
user	USER

FTP replies from the Information Exchange/FTP interface

This appendix describes the messages that you might receive from the IE/FTP interface.



NOTE: The IE/FTP interface sometimes has multiple text messages for the same code.

150 Data connection open.

This text is sent when a data connection is opened to the client.

150 Data connection ready to be secured.

This text is sent when a data connection is opened to the client during a secured session.

200 Arcrefid set to *rrrrrrrr*.

This text is sent as the response to **site arcrefid**.

rrrrrrrr = The current setting of **arcrefid**.

200 Audit being retrieved with errors - see *SYSTEM*. *ERRMSG*.

This text is sent when audits are retrieved and errors are indicated by Information Exchange.

200 Audit being retrieved.

This text is sent when audits are retrieved without errors.

200 Autogetopts is set [*on/off*]. Changes must be stored to be in effect.

This text is sent when a **site autogetopts** command is processed.

- 200 CWD command completed.**
This text is sent when a **CWD** command is processed.
- 200 Data protection level now set to 'C' (Unprotected).**
This text is sent in response to an FTP **PROT** command with a parameter of *C*.
- 200 Data protection level now set to 'P' (Protected).**
This text is sent in response to an FTP **PROT** command with a parameter of *P*.
- 200 EDI checking is set [on|off].**
This text is sent when a **site edicheck** command is processed. The ON or OFF status is derived from ReplyOn and ReplyOff fields in the configuration file.
- 200 Edialiasonly is now set to [on|off].**
This text is sent when a **site edialiasonly** command is processed.
- 200 Edicdhonly set value for future receives/lists.**
This text is sent in response to a **site edicdhonly** command.
value = the current value of edireplybuf.
- 200 Edicrlf set for future receives.**
This text is sent when a **site edicrlf** command is processed.
e = The current value to which edicrlf is set.
- 200 Edionly set e for future receives/lists.**
This text is sent when a **site edionly** command is processed.
e = The current value to which edionly is set.
- 200 Edireplies set to value for future sends.**
This text is sent when a **site edireplies** command is processed. The parameter on this reply is:
value = the current value of edireplies.
- 200 Edireplybuf set to value for future sends.**
This text is sent when a **site edireplybuf** command is processed.
value = the current value of edireplybuf.
- 200 End of site settings.**
This text is sent at the end of the multi-line response to a **site showopts** command.

- 200 End of translation table list.**
This text is sent at the end of a list of valid translation tables.
- 200 File now committed in information exchange.**
This text is sent when a **NOOP** command is processed to commit a file into Information Exchange.
- 200 Get SITE.README from support directory for usage information.**
This text is sent when the list of **site** commands is finished.
- 200 Idle timeout is set to *nnn* seconds.**
This text is sent when a **site timeout** command is processed.
nnn = The time, in seconds, that you are idle before being disconnected.
- 200 Liststyle currently *ssssss*.**
This text is sent when a **site liststyle** command is processed.
ssssss = The current value of liststyle.
- 200 Mode now set to *mode*.**
This text is sent when a successful **mode** command is processed.
mode = The file transfer mode that is now being used.
- 200 Msgchrg set to *c* for future send commands.**
This text is sent when a **site msgchrg** command is processed.
c = The current value of msgchrg.
- 200 Msgname for next send is *nnnnnnnn*.**
This text is sent when a **site msgname** command is processed.
nnnnnnnn = The text that is placed in the msgname field for all files sent to the IE/FTP interface.
- 200 Msgrcpts set to *m* for future send commands.**
This text is sent when a **site msgrcpts** command is processed.
m = The current value of msgrcpts.
- 200 MsGREtn set to *nn* for future send commands.**
This text is sent when a **site msGREtn** command is processed.
nn = The current value to which msGREtn is set.
- 200 Msgseqn for next send is *nnnnnnnn*.**
This text is sent when a **site msgseqn** command is processed.
nnnnnnnn = The text that is placed in the msgseqn field of the Information Exchange message for all files subsequently sent to the IE/FTP interface.

- 200 Nnn messages retrieved.**
This text is sent as the response for the archive retrieve command.
nnn = The number of messages placed in your mailbox.
- 200 No errors encountered while retrieving user options.**
This text is sent in response to a **site forceopts** command, if no errors were detected while retrieving user options during the current session.
- 200 NOOP command completed successfully.**
This text is sent when a **NOOP** (or **allo**) command is processed successfully.
- 200 NOOP confirmation is set [on|off].**
This text is sent when a **site confirm** command is processed. The ON or OFF status is derived from ReplyOn and ReplyOff fields in the configuration file.
- 200 Passthru caused sdierr - not able to receive it yet - (sorry).**
This text is sent when you issue a **site passthru** command that has caused Information Exchange to send a ***SYSTEM**ERRMSG*** to your mailbox.
- 200 Passthru command sent, get filename for the response.**
This text is sent when a **site passthru** command is processed with an asynchronous response.
filename = The name of the file containing the response from Information Exchange to the **passthru** command. Issue a **get** command to receive this file.
- 200 Passthru command submitted.**
This text is sent when you submit a **site passthru** command for which there is no response from Information Exchange.
- 200 Port command OK.**
This text is sent when a **port** command is processed successfully.
- 200 Probe set p for future commands.**
This text is sent when a **site probe** command is processed.
p = The current value to which probe is set.
- 200 Protection buffer size successfully set.**
This text is sent in response to an FTP **PBSZ** command.

200 Respname resp_{text}.

This text is sent when a **site passthru** command is processed with a synchronous response.

respname = the response name specified in the body of the **passthru** command.

resp_{text} = the text of the response from Information Exchange to the **passthru** command.

200 Response 226 format currently *fffff*.

This text is sent when a **site resp226** command is processed.

fffff = The current value of resp226.

200 Site info is available on the following:

This text is sent when a **site help** command is processed successfully.

200 Site option settings as follows:

This text is sent at the start of the multi-line response to a **site showopts** command.

200 Site-params

This text is sent when a list of valid **site** commands is sent.

site-params = The valid site parameters.

200 Ssssssss is the session access key for this session.

This text is sent when a **site sesskey** command is processed.

ssssssss = The Information Exchange session access key for the current session.

200 Structure now set to *structure*.

This text is sent when a successful **STRU** command is processed.

structure = The file structure type that is being used.

200 System type now set to *n* (*ttttttt*).

This text is sent when a **site system** command is processed.

n = The system type (in numeric format).

ttttttt = The system type (in text).

200 Translation now *ttttttt*.

This text is sent to confirm the current translation table in use.

ttttttt = The translation table name.

- 200 Type now set to *type*.**
This text is sent when a successful **TYPE** command is processed.
type = The file transfer type that is now being used.
- 200 User options reset.**
This text is sent when a **site resetopts** command is processed.
- 200 User options successfully retrieved.**
This text is sent when a **site getopts** command is processed.
- 200 User options successfully stored.**
This text is sent when a **site putopts** command is processed.
- 200 Using standard Information Exchange translation.**
This text is sent when the default Information Exchange translation table is selected.
- 200 Valid translation files are:**
This text is sent at the start of a list of valid translation tables.
- 214 ===== Start of Help text =====**
This text is sent when a multiple line help response is started.
- 214 ===== End of Help text =====**
This text is sent when a multiple line help response is ended.
- 214 Text.**
This text is sent when a single line of help is sent.
text = The line of text from the help file.
- 220 Hhhhhhhh IE-FTP server (vvrrrr mm.s) ready on system iii (with SSL).**
This text is sent when you connect to a gateway using native SSL.
hhhhhhhh = The host-name on which the IE/FTP interface is running.
v = The version of the IE/FTP interface.
rr = The release level of the IE/FTP interface.
i = The modification level of the IE/FTP interface.
s = The sub-modification level (fix level) of the IE/FTP interface.
iii = The Information Exchange system to which you are connected.

- 220 Hhhhhhhh IE-FTP server (VvRrrMmm.s) ready on system iii.**
This text is sent when you connect to the IE/FTP interface.
hhhhhhhh = The host-name on which the IE/FTP interface is running.
v = The version of the IE/FTP interface.
rr = The release level of the IE/FTP interface.
mm = The modification level of the IE/FTP interface.
s = The sub-modification level (fix level) of the IE/FTP interface.
iii = The Information Exchange system to which you are connected.
- 221 Goodbye. Thank you for using EDI Services.**
This text is sent when a **QUIT** command is processed successfully.
- 221 Information Exchange session traced and completed. ID is tttttt.**
This text is sent when a **QUIT** command is processed successfully and the session has been traced by GXS.
tttttt = The ID of the trace file on the IE/FTP interface host. Quote this ID when reporting any errors to GXS Community Support.
- 226 0 ssssss eeeee EDI processing complete.**
This text is sent when EDI processing is completed without a terminal error (the whole file was processed successfully).
sssss = The number of EDI interchanges successfully sent.
eeee = The number of EDI interchanges processed with errors.
- 226 1 ssssss eeeee EDI processing terminated.**
This text is sent when EDI processing is completed with a terminal error (the whole file was not processed successfully).
sssss = The number of EDI interchanges successfully sent.
eeee = The number of EDI interchanges processed with errors.
- 226 EDI processing started.**
This text is sent when an EDI file has been sent to you.

226 Empty file transferred to (tiii).aaaaaaaa. uuuuuuuu with class cccccccc. O.K.

This text is sent when an empty file has been successfully sent to Information Exchange.

t = The DTBLTYP to which the file was sent.

iii = The DTBLID to which the file was sent.

aaaaaaaa = The DESTACCT to which the file was sent.

uuuuuuuu = The DESTUID to which the file was sent.

ccccccc = The MSGUCLS with which the file was sent.

226 Error detected in EDI receive processing.

Data transferred okay but an error occurred during the processing of the EDI file.

226 File transferred from (tiii).aaaaaaaa.uuuuuuuu with class cccccccc. O.K.

This text is sent when the **get** command specified a local rather than **._IE** file name and a file has been successfully received from Information Exchange.

t = The DTBLTYP from which the file was received.

iii = The DTBLID from which the file was received.

aaaaaaaa = The DESTACCT from which the file was received.

uuuuuuuu = The DESTUID from which the file was received.

ccccccc = The MSGUCLS with which the file was stored.

226 File transferred to (tiii).aaaaaaaa.uuuuuuuu with class cccccccc. O.K.

This text is sent when a file has been successfully sent to Information Exchange.

t = The DTBLTYP to which the file was sent.

iii = The DTBLID to which the file was sent.

aaaaaaaa = The DESTACCT to which the file was sent.

uuuuuuuu = The DESTUID to which the file was sent.

ccccccc = The MSGUCLS with which the file was sent.

226 kkkkkkkkkkkkkkkkkkk from *tiii.aaaaaaa.uuuuuuuu* class cccccc. O.K.

This text is sent when a file has been requested by message key, then successfully received from Information Exchange and sent to you.

kkkkkkkkkkkkkkkkkkkkkk = The MSGKEY assigned to the received file.

t = The DTBLTYP from which the file was received.

iii = The DTBLID from which the file was received.

aaaaaaa = The DESTACCT from which the file was received.

uuuuuuuu = The DESTUID from which the file was received.

ccccc = The MSGUCLS with which the file was stored.

226 kkkkkkkkkkkkkkkkkkkk._IE filename.

This text is sent as a 226 subreply when the **RESP226 site** option is set to *filename* and the message was received by message key.

kkkkkkkkkkkkkkkkkkkkkk = The Information Exchange file name (message key or eight-character file name).

filename = The original file name from the Information Exchange message header or the Information Exchange file name (if there is no original file name in the Information Exchange message header).

226 List for user (*tiii.aaaaaaa.uuuuuuuu*), class cccccc transferred. O.K.

This text is sent when a list of files has been successfully received from Information Exchange and sent to you.

t = The DTBLTYP on which the list is selected.

iii = The DTBLID on which the list is selected.

aaaaaaa = The DESTACCT on which the list is selected.

uuuuuuuu = The DESTUID on which the list is selected.

ccccc = The MSGUCLS on which the list is selected.

226 Original file name was *filename*.

This text is sent as a 226 subreply when the **RESP226 site** option is set to *filename*, and the **get** command specified a local rather than *._IE* file name.

filename = The original file name from the Information Exchange message header.

226 Passthru response transferred O.K.

This text is sent when the file containing the Information Exchange response to the previous **site passthru** command has been successfully transferred to you.

226 subreplies

Various subreplies are sent during EDI processing, indicating the progress of the interchanges detected. The format of these sub-replies is:

code format offset size destination class control status

where:

code = Return code for this interchange.

format = One-character code specifying the format of the EDI data, where E is EDIFACT, T is UN/TDI, X is ANSI X.12, and U is UCS.

offset = Start of interchange (byte offset from the beginning of the file).

size = Interchange byte count.

destination = Interchange destination address.

class = Interchange message user class.

control = Interchange control number (where found).

status = Interchange status text.

226 subreplies (continued)

The individual 226 subreplies are as follows:

Code	Status	Description
00	SENT O.K.	An interchange has been processed successfully.
01	BAD USER.	Destination address extracted from the EDI data is in an invalid format.
02	NOT AUTH.	SITE PROBE is ON and an Information Exchange probe detected that you are not authorized to send to the destination address extracted from the EDI data.
03	NO USER.	SITE PROBE is ON and an Information Exchange probe detected that the destination address extracted from the EDI data does not exist.
11	EDI FORMAT.	EDI format error detected; processing halts.
12	BAD TYPE.	EDI format cannot be determined; processing halts.
13	COMMS ERROR.	A communications error with Information Exchange is encountered; processing halts.
14	BIN/TYPE ERR.	An X.12 Binary or Security segment is detected with TYPE not set to I.
15	MIX EDI ERR.	More than one EDI format is detected in the same file; processing halts.
16	EDI HEADER.	An error is detected in the EDI header segment.
17	EDI CTRLNUM.	Leading and trailing EDI control numbers do not match.

226 Support file transferred O.K.

This text is sent when a support file has been sent to you.

226 There was no original filename for this file.

This text is sent as a 226 subreply when the **RESP226 site** option is set to *filename*, and the **get** command specifies a local rather than **_IE** file name. This reply indicates that there was no original file name in the Information Exchange message header.

- 227 Entering passive mode *iiiiiii*.**
This text is sent in response to a **PASV** command.
iiiiiii = The IP address and port number used for the PASV session.
- 227 Entering secured passive mode (*iiiiiii*)**
This text is sent in response to a **PASV** command during a secured FTP session.
iiiiiii = The IP address and port number to be used for the PASV session.
- 230 Ready - options not retrieved.**
This text is sent when the IE/FTP interface successfully started a session with Information Exchange but encountered communication errors when attempting to retrieve user site settings. Issuing a **site forceopts** command after this reply causes the IE/FTP interface to terminate the session.
- 230 Ready - options retrieved.**
This text is sent when the IE/FTP interface successfully started a session with Information Exchange and user options were automatically restored to the settings last stored with a **site putopts** command. For this to occur, the stored user site settings must have the **autogetopts** flag set to ON.
- 230 Ready - password changed.**
This text is sent when the IE/FTP interface successfully started a session with Information Exchange and successfully changed the password. You are able to execute FTP commands.
- 230 Ready - password not changed.**
This text is sent when the IE/FTP interface successfully started a session start with Information Exchange but the password change request failed. You are able to execute FTP commands.
- 230 Ready.**
This text is sent when the IE/FTP interface successfully started a session start with Information Exchange. You are able to execute FTP commands.
- 230 WARNING - previous session on this gateway has been terminated.**
This text is sent when you successfully start an Information Exchange session while a previous session with the same user ID is still active via this gateway.
- 234 AUTH command accepted - proceed with Negotiation.**
This text is sent in response to a valid FTP **AUTH** command.

250 aaaaaaaa.uuuuuuuu/ccccccc.

This text is sent in response to a **CWD** command when DESTACCT and DESTUID points to a user on the local system and the *site system* parameter is set to 7.

aaaaaaaa = The selected DESTACCT.

uuuuuuuu = The selected DESTUID.

ccccccc = The selected MSGUCLS.

250 Currently to alias aaaaaaaaaaaaaaa in table tiii with class ccccccc.

This text is sent in response to a **CWD** command when DESTACCT and DESTUID points to an alias.

aaaaaaaaaaaaaaa = The alias name selected.

t = The selected DTBLTYP.

iii = The selected DTBLID.

ccccccc = The selected MSGUCLS.

250 Currently to list lllllll with class ccccccc.

This text is sent in response to a **CWD** command when DESTACCT points to a list of users.

lllllll = The selected list name.

ccccccc = The selected MSGUCLS.

250 Currently to user aaaaaaaa.uuuuuuuu with class ccccccc.

This text is sent in response to a **CWD** command when DESTACCT and DESTUID point to a user on the local system (or all users).

aaaaaaaa = The selected DESTACCT.

uuuuuuuu = The selected DESTUID.

ccccccc = The selected MSGUCLS.

250 Currently to user iii.aaaaaaa.uuuuuuuu with class ccccccc.

This text is sent in response to a **CWD** command when DESTACCT and DESTUID point to a user on a remote system.

iii = The selected DTBLID (DTBLTYP is I).

aaaaaaaa = The selected DESTACCT.

uuuuuuuu = The selected DESTUID.

ccccccc = The selected MSGUCLS.

250 Eeeeeeee data, alias from table *tiii*.

This text is sent in response to a **CWD** command when you selected EDI data and specified the alias table from which to resolve the alias.

eeeeeeee = EDIFACT, UN/TDI, X12, or UCS.

t = The selected DTBLTYP.

iii = The selected DTBLID.

250 Eeeeeeee data.

This text is sent in response to a **CWD** command when you have selected EDI data.

eeeeeeee = EDIFACT, UN/TDI, X12, or UCS.

250 Member deleted.

This text is sent when you successfully delete a library member.

250 Message deleted.

This text is sent when a mailbox item is successfully purged.

250 *Tiii.aaaaaaa.uuuuuuu/ccccc*.

This text is sent in response to a **CWD** command when DESTACCT and DESTUID do not point to a user on the local system and the *site system* parameter is set to 7.

t = The selected DTBLTYP.

iii = The selected DTBLID.

aaaaaaa = The selected DESTACCT.

uuuuuuu = The selected DESTUID.

ccccc = The selected MSGUCLS.

257 “(List)////////cccccc” is the current directory.

The text sent in response to a **PWD** command when DESTACCT lists users.

//////// = The selected list name.

cccccc = The selected MSGUCLS.

- 257 “aaaaaaaa.uuuuuuuu/ccccccc” is the current directory.**
This text is sent in response to a **PWD** command when DESTACCT and DESTUID point to a user on the local system (or all users).
aaaaaaaa = The selected DESTACCT.
uuuuuuuu = The selected DESTUID.
ccccccc = The selected MSGUCLS.
- 257 “aaaaaaaa.uuuuuuuu/ccccccc”.**
This text is sent in response to a **PWD** command when DESTACCT and DESTUID point to a user on the local system and the SITE SYSTEM parameter is set to 7.
aaaaaaaa = The selected DESTACCT.
uuuuuuuu = The selected DESTUID.
ccccccc = The selected MSGUCLS.
- 257 “aaaaaaaaaaaaaaaa.tiii/ccccccc” is the current directory.**
This text is sent in response to a **PWD** command when DESTACCT and DESTUID point to an alias.
aaaaaaaaaaaaaaaa = The selected alias name.
t = The selected DTBLTYP.
iii = The selected DTBLID.
ccccccc = The selected MSGUCLS.
- 257 “iii.aaaaaaaa.uuuuuuuu/ccccccc” is the current directory.**
This text is sent in response to a **PWD** command when DESTACCT and DESTUID point to a user on a remote system.
iii = The selected DTBLID (DTBLTYP is I).
aaaaaaaa = The selected DESTACCT.
uuuuuuuu = The selected DESTUID.
ccccccc = The selected MSGUCLS.

257 “*tiii.aaaaaaaa.uuuuuuuu/cccccccc*”.

This text is sent in response to a **PWD** command when DESTACCT and DESTUID do not point to a user on the local system and the SITE SYSTEM parameter is set to 7.

t = The selected DTBLTYP.

iii = The selected DTBLID.

aaaaaaaa = The selected DESTACCT.

uuuuuuuu = The selected DESTUID.

cccccccc = The selected MSGUCLS.

257 *eeeeeeee* data.

This text is sent in response to a **PWD** command when you have selected EDI data.

eeeeeeee = The word EDIFACT, UN/TDI, X12, or UCS.

257 *eeeeeeee* from table *tiii*.

This text is sent in response to a **PWD** command when you have selected EDI data and specified the alias table from which the alias is to be resolved.

eeeeeeee = EDIFACT, UN/TDI, X12, or UCS.

t = The selected DTBLTYP.

iii = The selected DTBLID.

257 Message deleted.

This text is sent when you successfully delete a message from your mailbox.

331 Enter password.

This text is sent when a **user** command is processed successfully; it effectively requests the password.

421 Communications dropped to Information Exchange - session terminated.

This text is sent when you try to send, receive, or list files in your mailbox, but Information Exchange has closed the connection. This usually happens if you are performing lots of commands on the IE/FTP interface that do not require interaction with Information Exchange, such as SITE or HELP.

- 421 Connection refused - gateway inactive - try *ttttttt*.**
This text is sent when you are refused a connection because the IE/FTP interface has become inactive.
ttttttt = The text from the ALTERNATE field in the configuration file.
- 421 Connection refused - gateway is overloaded.**
This text is sent when you are refused a connection because the IE/FTP interface is fully used.
- 421 Connection refused - no control connection.**
This text is sent when an internal error is encountered while communicating with your client.
- 421 Connection refused - please try again later (no EDI Services connection).**
This text is sent when you are refused a connection because the relay cannot be contacted.
- 421 Host denied access for *nnn* seconds for security violation.**
This text is sent when you are refused a connection because the host attempting the connection has caused the IE/FTP interface to refuse it due to excessive invalid session start attempts.
nnn = The number of seconds the host is to be denied access.
- 421 Information Exchange input command *ssssssss* not processed.**
Retry. If the problem persists then contact GXS Community Support.
- 421 Invalid session access key - someone else is using your ID.**
This text is sent when you are disconnected after an invalid session access key error has been detected by Information Exchange or the IE/FTP interface.
- 421 Service disconnected - authorization services error.**
This text is sent if there is an internal error communicating with the Authentication Server during SSL negotiation.
- 421 Service disconnected - bad client certificate.**
This text is sent if the X.509 certificate presented by the client during SSL negotiation is in an invalid format.
- 421 Service disconnected - certificate invalid for user.**
This text is sent when you attempt to start a session with Information Exchange using a *system.account.userid* other than the one that appears in the X.509 certificate supplied during SSL negotiation.

- 421 Service disconnected - certificate not authorized.**
This text is sent when you present an X.509 certificate during SSL negotiation that is not registered as valid for use with the IE/FTP interface.
- 421 Service disconnected - client SSL coding error.**
This text is sent if the gateway encounters an error in the client logic during SSL negotiation.
- 421 Service disconnected - closing control connection.**
This text is sent when you are disconnected for having too many consecutive unsuccessful session starts.
- 421 Service disconnected - control/data certificate conflict.**
This text is sent if the certificate presented by the client on making the control connection is not the same as that presented on opening a data connection.
- 421 Service disconnected - error retrieving user options.**
This text is sent when you issue a **site forceopts** command when the IE/FTP interface has encountered errors retrieving user options during this session.
- 421 Service disconnected - host has hit maximum usage.**
This text is sent when you try to make a connection to the IE/FTP interface while already using the maximum number of sessions permitted for your host. If this problem persists, contact GXS Community Support.
- 421 Service disconnected - no matching ciphersuites.**
This text is sent if the gateway does not support any of the ciphers in the ciphersuite you present during SSL negotiation.
- 421 Service disconnected - server SSL coding error.**
This text is sent if the gateway encounters an internal logic error during SSL negotiation.
- 421 Service disconnected - server SSL resource error.**
This text is sent if the gateway encounters an internal error during SSL negotiation.
- 421 Service disconnected - SSL negotiation failure timeout.**
This text is sent if the gateway times out while waiting for a response during SSL negotiation.

- 421 Service disconnected - timed out.**
This text is sent when you are disconnected for being inactive for the period of time determined by the timeout parameter in the configuration file.
- 421 Service disconnected - unknown SSL error.**
This text is sent if an unexpected error occurs during SSL negotiation.
- 421 Session terminated - more than one EDI interchange detected.**
This text is sent when you are disconnected after an invalid EDI send. There was more than one interchange in the file sent.
- 425 Cannot open data connection.**
This text is sent when the requested data connection could not be opened.
- 426 Data connection failed - authorization services error.**
This text is sent if there is an internal error communicating with the Authentication Server during SSL negotiation.
- 426 Data connection failed - bad client certificate.**
This text is sent if the X.509 certificate presented by the client during SSL negotiation for a data connection is in an invalid format.
- 426 Data connection failed - certificate not authorized.**
This text is sent when you present an X.509 certificate during SSL negotiation on a data connection that is not registered for use with the Information Exchange.
- 426 Data connection failed - client SSL coding error.**
This text is sent if the gateway encounters an error in the client logic during SSL negotiation for a data connection.
- 426 Data connection failed - no matching ciphersuites.**
This text is sent if the gateway does not support any of the ciphers in the ciphersuite presented by the client when a data connection is opened.
- 426 Data connection failed - server SSL coding error.**
This text is sent if the gateway encounters an internal logic error during SSL negotiation for a data connection.
- 426 Data connection failed - server SSL resource error.**
This text is sent if the gateway encounters an internal error during SSL negotiation for a data connection.
- 426 Data connection failed - SSL negotiation failure timeout.**
This text is sent if the gateway times out while waiting for a response during SSL negotiation for a data connection.

- 426 Data connection failed - unknown SSL error.**
This text is sent if an unexpected error occurs during SSL negotiation for a data connection.
- 426 File transfer failed - cannot overwrite existing member.**
This text is sent when a user attempts to overwrite a library member with a new file, and the current SITE REPLACE setting is OFF.
- 426 File transfer failed - control/data certificate conflict.**
This text is sent if the certificate presented by the client on making the data connection is not the same as that presented on opening a control connection.
- 426 File transfer failed - internal error while searching library.**
This text is sent when an unexpected error is encountered while processing a library **STOR** or **RETR** command.
- 501 Audit retrieve failed.**
This text is sent if an error is detected by Information Exchange; the audit retrieve command has not been executed.
- 501 Communications error during passthru processing.**
This text is in response to a **site passthru** command when there is a communications error during processing.
- 501 Invalid value for site parameter.**
This text is sent when an invalid value for a parameter is detected on the FTP **site** command.
- 501 New password cannot be the same as user ID - login/change failed.**
This text is sent if you attempt a logon with a password change and the new password is the same as your user ID.
- 501 New password is invalid syntactically - login/change failed.**
This text is sent if you attempt a logon with a password change and the new password is syntactically invalid.
- 501 No user options stored.**
This text is sent if you issue a **site getopts** command and there are no options stored for the Information Exchange user ID currently in session.
- 501 Old password is incorrect - change failed.**
This text is sent if you attempt a logon with a password change and the old password is incorrect.

- 501 Passthru command disabled.**
This text is sent in response to a **site passthru** command when the Information Exchange center with which you are in session does not support the **site passthru** command.
- 501 Passthru command not allowed from this host.**
This text is sent in response to a **site passthru** command when the **site passthru** command is restricted by the Information Exchange center with which you are in session.
- 501 Passthru command not recognized.**
This text is sent in response to a **site passthru** command containing an Information Exchange command that is not recognized.
- 501 Passthru command requires parameters.**
This text is sent in response to a **site passthru** command with no parameters.
- 501 Passthru internal memory error.**
This text is sent in response to a **site passthru** command when there has been an internal error in the IE/FTP interface.
- 501 Passthru syntax error.**
This text is sent in response to a **site passthru** command with invalid parameters.
- 501 Password cannot be blank - login/change failed.**
This text is sent if you attempt a logon with a blank password.
- 501 Password cannot be the same as user ID - login/change failed.**
This text is sent if you attempt a logon with a password that is the same as your user ID. To use Information Exchange via the IE/FTP interface, you must change the password at logon. Enter your PASSWORD/NEWPASSWORD when prompted.
- 501 Password is invalid syntactically - login/change failed.**
This text is sent if you attempt a logon with a password that is syntactically invalid.
- 501 rrrrrrr 'tttttttttt'**
This text is sent in response to a **site passthru** command requesting a synchronous response to an Information Exchange command, when Information Exchange has returned an error.

rrrrrrrr = The response name SDIERR.

tttttttttt = The error response text returned by Information Exchange.

- 501 Syntax error - Duplicate parameter for getaudit: 'ppppppppp'.**
This text is sent if a **site getaudit** command had an invalid duplicate parameter.
ppppppppp = The invalid parameter.
- 501 Syntax error - getaudit parameter error.**
This text is sent if a site **getaudit** parameter contains a syntax error.
- 501 Syntax error - Invalid date range for getaudit: 'dddddd'.**
This text is sent if a **site getaudit** command had an invalid date as a parameter.
dddddd = The invalid date.
- 501 Syntax error - Invalid parameter for getaudit: 'ppppppppp'.**
This text is sent if a **site getaudit** command had an invalid parameter.
ppppppppp = The invalid parameter.
- 501 Syntax error - liststyle parameter error.**
This text is sent if you issue a **site liststyle** command with a parameter other than LONG, SHORT, or filename.
- 501 Syntax error - RESP226 parameter error.**
This text is sent if you issue a **site resp226** command with a parameter other than NORMAL or filename.
- 501 Syntax error - too many parameters for GETAUDIT.**
This text is sent if a **site getaudit** command had too many parameters.
- 501 Syntax error on arcrefid parameter.**
This text is sent if you issue a **site arcrefid** command with an invalid archive reference name.
- 501 Syntax error on getarchive parameter.**
This text is sent if a **site getarchive** command had an invalid parameter.
- 501 Syntax error on msgname parameter.**
This text is sent if you issue a **site msgname** command with an invalid MSGNAME value.
- 501 Syntax error on msgseqn parameter.**
This text is sent if you issue a **site msgseqn** command with an invalid MSGSEQN value.
- 501 Syntax error on ptespname parameter.**
This text is sent in response to a **site ptespname** command specifying an invalid file name.

- 501 That passthru command has no reply so cannot have async response yet.**
This text is sent in response to a **site passthru** command requesting an asynchronous response to an Information Exchange command that has no response from Information Exchange.
- 501 Translation table error.**
This text is sent if the translation table specified is an invalid table.
- 501 Translation table not found.**
This text is sent if a translation table is not found.
- 501 User options could not be retrieved.**
This text is sent if you issue a **site getopts** command and the stored user options have been corrupted, or a communications error prevented retrieval of user options. Issuing a **site forceopts** command after this reply causes the IE/FTP interface to terminate the session.
- 501 User options could not be stored.**
This text is sent if you issue a **site getopts** command and a communications error prevented storage of user options.
- 502 Command not supported.**
This text is sent when a command is received on the control connection that is valid, as specified by RFC 959, but is not supported by the IE/FTP interface.
- 503 PBSZ not supported on insecure control connection.**
This text is sent when you issue an FTP **PBSZ** command without having issued an **AUTH** command.
- 503 PROT not supported on insecure control connection.**
This text is sent when a user issues an FTP **PROT** command without having issued an **AUTH** command.
- 504 PROT parameter missing.**
This text is sent in response to an FTP **PROT** command with no parameters.
- 504 PROT parameter not understood.**
This text is sent in response to an FTP **PROT** command with a parameter other than P or C.
- 522 Cannot list files in Information Exchange on insecure data connection.**
This text is sent when a user requests a list of files via a data connection that is not secured when the control connection is secure.

522 Cannot receive files from Information Exchange on insecure data connection.

This text is sent when a user attempts to use **RETR** to receive a file via a data connection that is not secured when the control connection is secure.

522 Cannot send files to Information Exchange on insecure data connection.

This text is sent when you attempt to use **STOR** to send a file via a data connection that is not secured when the control connection is secure.

530 Account/userid unknown.

This text is sent when you attempt a session start with an invalid account/user ID.

530 An error occurred during password change. Contact your Help desk.

This text is sent when you attempt a password change and the IE/FTP interface cannot establish if the password was changed or not.

530 Command failed to Information Exchange.

This text is sent when a command fails to be processed correctly with Information Exchange. This usually occurs because Information Exchange is not connected to the relay.

530 Extended Security Option (ESO) userid is revoked.

This text is sent when you attempt a log on to an ESO mailbox and the ESO mailbox has been revoked.

530 Invalid password.

This text is sent when you start a session with an invalid password.

530 PASS command not allowed before successful USER command.

This text is sent when a user issues an FTP **PASS** command before issuing a **USER** command.

530 Please log on first.

This text is sent when you issue a command that requires you to be logged on, and you are not currently logged on.

530 USER command not allowed on insecure connection - use AUTH command.

This text is sent when a user attempts to sign onto Information Exchange before issuing a valid **AUTH** command on a connection defined in the PortList file as secure.

- 530 User is not the same as specified in the X.509 certificate.**
This text is sent when you attempt to sign on to Information Exchange using an Information Exchange mailbox that does not match the *system.account.userid* from the X.509 certificate presented during SSL negotiation.
- 530 You cannot enter a password when you are already logged on!**
This text is sent when you attempt to send a **PASS** command without a password change when you are already logged on.
- 530 You must specify a new password for Extended Security Option (ESO).**
This text is sent when you attempt a logon to an ESO mailbox without a new password and the ESO mailbox requires the password to be changed. There are no parameters on this reply.
- 530 Your new password is invalid for Extended Security Option (ESO).**
This text is sent when you attempt a password change and are an ESO user, but the new password does not conform to ESO requirements.
- 536 Unsupported PROT level (only 'P' and 'C' are allowed).**
This text is sent when you issue a **PROT** command with a value other than P or C.
- 550 Delete failed - file is being received.**
This text is sent when you attempt to delete a file while Information Exchange is receiving a file.
- 550 Delete failed - message key is incorrect.**
This text is sent when you attempt to delete a message by message key, but Information Exchange says there is no message with that key in the mailbox.
- 550 Delete failed - profile does not allow purge.**
This text is sent when you attempt to delete a file and the Information Exchange profile does not allow this action.
- 550 Destination address does not exist.**
This text is sent when you attempt to change directory with **PROBE** set to **ON** and Information Exchange detects that the specified address does not exist.
- 550 File transfer failed - requested file not in support directory.**
This text is sent when you request a file from the support directory and that file cannot be found.

550 File transfer failed - requested file not in the mailbox.

This text is sent under one of the following circumstances:

- When you request a file from your mailbox and no file can be received.
- When you request a file by message key (format msgkey._IE), and there is no message with that key in the mailbox.
- When you request a file by a shortened file name (nnnnnnnnn._IE), and there is no message in the mailbox with that file name or you have not issued a **LIST** or **NLST** command prior to requesting the file.

550 File transfer failed - requested support file name invalid.

This text is sent when the file you requested from the support directory has a syntactically incorrect file name.

550 Invalid directory.

This text is sent when a **CWD** command has invalid parameters.

550 Library member not deleted - member does not exist.

This text is sent in response to an FTP **DELE** command specifying a non-existent library member.

550 No passthru response available.

This text is sent when you issue a **get** command specifying the **PTRESPNAME** file name but there is no outstanding **site passthru** command response available.

553 Cannot delete EDI messages only.

This text is sent when you attempt to delete a file when specifying EDI files.

553 Cannot delete member - no library write access.

This text is sent when a user attempts to delete a library member using a composite address, and the user does not have write access to the library.

553 Cannot delete support files.

This text is sent when you attempt to delete a file in the support directory.

553 Cannot list EDI files - use "CD" first.

This text is sent when you attempt to list files after indicating that you want to send EDI files.

553 Cannot list files from a list - use "CD" first.

This text is sent when you attempt to list files after indicating that you want to send to a list. There are no parameters on this reply.

- 553 Cannot list files. This alias is unknown on Information Exchange.**
This text is sent when you attempt to list files from an alias when the alias identity cannot be resolved in Information Exchange.
- 553 Cannot request EDI files specifically - specify acct.user/class.**
This text is sent when you attempt to receive files after indicating that you want to send EDI files.
- 553 EDI data can only be transmitted with type ASCII.**
This text is sent when you attempt to send an EDI file when **TYPE** is not set to A.
- 553 File transfer failed - no library read access.**
This text is sent when a user attempts to retrieve a member from a library to which they do not have read access, using composite addressing.
- 553 Invalid destination system [tiii] Acct[aaaaaaaa] Userid [uuuuuuuu] class [cccccccc].**
This text is sent when you attempt to send a file with invalid destination information, such as DESTACCT = "*" or DESTUID = "*".
- t* = The value of DTBLTYP.
iii = The value of DTBLID.
aaaaaaaa = The value of DESTACCT.
uuuuuuuu = The value of DESTUID.
cccccccc = The value of MSGUCLS.
- 553 Library access control list invalid.**
This text is sent when a user lists the members of a library using a composite address, and the library has been configured with an invalid access list.
- 553 Library access control prevents write access.**
This text is sent when a user attempts to add a library member using a composite address, and the library does not permit the user write access.
- 553 Library account field invalid.**
This text is sent when a user attempts to retrieve a library member using a composite address with a non-existent library owning the account.
- 553 Library member list failed - no library read access.**
This text is sent when a user attempts to list the members of a library to which they do not have read access using composite addressing.

- 553 Library name field invalid.**
This text is sent when a user attempts to retrieve a library member using a composite address with a non-existent library name.
- 553 Message key not specified correctly.**
This text is sent when you attempt to delete a file with a specific message key, but specify the key in an invalid manner.
- 553 Probe failure on composite address.**
This text is sent when site probe is enabled and you attempt to exchange messages with a non-existent or unauthorized mailbox.
- 553 Processing error on composite address.**
This text is sent when the gateway encounters an internal error while parsing a composite address.
- 553 Syntax error in composite address.**
This text is sent when a user specifies a composite address that does not comply with the gateway format.
- 553 You cannot place files in the support directory.**
This text is sent when you attempt to send a file while viewing SUPPORT files.

Writing an application

There are two ways to write an application using Information Exchange via the IE/FTP interface:

- The more complicated method, which is to write the FTP client as a communications layer application.
- The simpler method, which is to create a script for your FTP client to execute. This is the quickest way to start using Information Exchange and can offer a fast, flexible solution.

Writing your own client

A secure FTP client suitable for accessing the IE/FTP gateway from the Internet can be engineered on top of a plain RFC 959-compliant FTP client. The IE/FTP gateway supports the standard RFC 959 commands, as well as a subset of the extensions defined in RFC 2228, “FTP Security Extensions.” This addition to the traditional FTP protocol specifies a means by which a security mechanism can be negotiated dynamically between the client and the server at any time during an FTP session. These commands are also documented in Appendix A, “FTP commands supported.” Note especially those commands that are required and those supported by the IE/FTP interface.

The IE/FTP interface supports TLS as the security mechanism. TLS is the successor to the SSL v3.0 protocol designed by Netscape Communications Corporation. At the time of publication, TLS has not received full approval by the Internet Engineering Task Force (IETF), although it is in last call. Consequently, the best current reference to TLS is the Internet draft **draft-ietf-tls-protocol-04.txt**. The informational Internet draft **draft-murray-auth-ftp-ssl-05.txt**, “Securing FTP Using TLS,” describes the use of TLS in the context of RFC 2228 with FTP.

The IE/FTP registration personnel will issue registered customers with a private key and public certificate for each account/user ID to use the IE/FTP gateway. The private key will be encrypted using the PKCS#12/PFX standard owned by RSADSI Inc. The IETF seems to be gradually adopting the PKCS standards. Public certificates will be distributed in PEM-encoded format. PEM is specified in RFCs 1421-1424.

References

Refer to the following documents for additional information.

Internet drafts

M. Carpenter, P. Ford-Hutchinson, T. Hudson, E. Murray, "Secure FTP Using TLS," **draft-murray-auth-ftp-ssl-05.txt**, July 1997.

T. Dierks, C. Allen, "The TLS Protocol Version 1.0," **draft-ietf-tls-protocol-04.txt**, October 1997.

Requests for comments

D. Mankins, D. Franklin, A. D. Owen, "Directory Oriented FTP Commands", RFC 775, October 1992.

J. Postel, "File Transfer Protocol," RFC 959, October 1985.

R. Braden (ed.), "Requirements for Internet Hosts — Application and Support," RFC 1123, October 1989.

J. Linn, "Privacy Enhancement for Internet Electronic Mail: Part I: Message encryption and Authentication Procedures," RFC 1421, February 1993.

S. Kent, "Privacy Enhancement for Internet Electronic Mail: Part II: Certificate-Based Key Management," RFC 1422, February 1993.

D. Balenson, "Privacy Enhancement for Internet Electronic mail: Part III: Algorithms, Modes, and Identifiers," RFC 1423, February 1993.

B. Kaliski, "Privacy Enhancement for Internet Electronic Mail: Part IV: Key Certification and Related Services," RFC 1424, February 1993.

S. Bellovin, "Fireway-Friendly FTP," RFC 1579, February 1994.

M. Horowitz, S. Lunt, "FTP Security Extensions," RFC 2228, October 1997.

Implementation guidelines

You should also consider the following implementation guidelines:

- The IE/FTP interface sends multiple line responses to some **help**, **site**, and **cd edi** commands.
- When you specify an ASCII file type, Information Exchange translates the data using either:
 - The standard Information Exchange ASCII to EBCDIC translation table (see Appendix E)
 - Any table you specify when you issue the **site xlate** command.
- For ASCII data, solitary line-feed characters are converted to the carriage-return and line-feed (CR/LF) combination. The data is translated on receipt, using the same table, only if the CDH does not indicate binary data in the CTYPE field.
- A file type of binary causes text data to be sent without modification or translation.
- Only stream mode data transfer is supported.
- Only file-structure data transfer is supported.
- FTP restart is not supported.

Using scripts

Execution of the script in batch mode varies from system to system. Therefore, refer to the FTP documentation associated with the products and hardware being used. For example, the AS/400 requires you to write a CL procedure or a REXX program to initiate the batch process. The RISC/6000, on the other hand, allows you to create a script file and pipe it into the FTP process for execution.

Site confirm command

When creating scripts to execute via an FTP client, it is important to issue a **site confirm 1** command at the start of a script. This command ensures that messages are committed to and from your mailbox at the correct time and ensures message integrity. For more information on the **site confirm** command, see Chapter 7, “Using site commands.”

Processing FTP replies from the IE/FTP interface

You can redirect the output of an FTP session to a file, so that you can later examine all messages relating to the file transfer. To capture all FTP user commands, underlying FTP commands, and FTP responses in a file, include the **debug** and/or **verbose** commands in your script. You can then correlate each command with an action taken by the IE/FTP interface and Information Exchange.

In writing your scripts, use the message code to determine what actions or processing options are required. You should not rely on the text of a message, because the text is subject to change. However, there are two exceptions to this rule:

- The 226 reply for the FTP **RETR** command when a message key is specified
- The 226 reply for the FTP **STOR** command for EDI data

Sample scripts

The following four sample scripts written in Perl are available in the support directory of the gateway.

- Sendbinary script
- Sendedi script
- Sendnonedi script
- Get nonedi script

These scripts check return codes for all commands and return any error and the reason it happened (if possible).

For details on how to access files in the support directory, refer to “Retrieving support files” on page 47.

Message-arrival notification

Some Information Exchange centers support notification of message arrival via TCP/IP. When a message arrives at a mailbox defined to use this service, Information Exchange connects to the user-defined TCP/IP host and delivers a notification packet containing extensive details of the message.

This chapter explains how to configure your Information Exchange profile definitions so that you can be notified when new messages arrive in your mailbox. It also describes the process that Information Exchange uses to deliver message-arrival notifications via TCP/IP.

Configuration for message-arrival notification

You must have a leased-line connection to the TCP/IP Network to receive message-arrival notification. When delivering a notification, Information Exchange connects to your TCP/IP host and sends a string containing the message details.

This section describes the Information Exchange profile definitions required to use the notification service. These definitions are made via the Information Exchange Administration Services (IEAS) menu.

Configuration is carried out using the Event Services functions of Information Exchange. Two definitions are required:

- A single dial-out profile definition
- One or more message-arrival definitions

Event services user profile

From the Information Exchange Administration Services (IEAS) menu:

1. Select the following options to access the Add or Change a User's Event Profile - Dial Out window:

Events

>Work with event profiles

>Service type D

>Add a user's event profile

The following window is displayed:

```

aixterm[vamp]
M1461US      Add or Change a User's Event Profile - Dial Out

Account ID / User ID.... ACCT1      / USER1

From - To time allowed for message arrivals 00 : 00 - 23 : 59
Schedule delay..... 00 : 00 (HH : MM)
Archive/system error as msg. arrival? (Y/N) Y / Y
Primary ISO country code / phone number... _ / _____
Alternate ISO country code / phone number.. _ / _____
Dialing retries / retry interval..... _ / _ (minutes)
Modem speed.....
Default access pt? (Y/N) If N, access point Y / ___
Expedite Notification Manager format? (Y/N) Y
User application.....

Application data.....
_____
_____

Command ==>
Enter F1=Help F3=Exit F4=Main Menu F12=Cancel

2B"                                     a:POOL {pght308i 17}

```


2. Complete the fields as follows.

Field	Description
Archive/system error as msg. arrival? (Y/N)	Determines whether or not notifications are created for system messages and messages retrieved from the archive.
Primary ISO country code / phone number	Enter IP as the prefix, then enter the IP address and port number that is to receive notification from Information Exchange. Use the following format: <ol style="list-style-type: none"> 1. Enter the dotted decimal IP address. 2. Enter a colon (no spaces before or after colon). 3. Enter the port number in decimal format. A sample address is: 123.446.789.1:1234 Some Information Exchange centers require you to use a special prefix for IP addresses.
Alternate ISO country code / phone number	An alternate IP address to access if the primary address is unavailable. Use the same format as the primary number.
Dialing retries	The number of times Information Exchange tries to deliver the notification if initial delivery attempts to the addresses specified in the telephone number fields are unsuccessful. The valid range is 00 to 15. With each try, Information Exchange attempts to deliver to both the primary and secondary addresses.
Retry interval	The number of minutes between notification retries. The valid range is 00 to 99.
User application	Free-format text to be included in message-arrival notifications. Refer to “Receiving message-arrival notifications” on page 139 for details.
Application data	Free-format text and substitution variables to be included in message-arrival notifications. For notification details, refer to “Receiving message-arrival notifications” on page 139. For available substitution variables, refer to <i>Information Exchange Administration Services User’s Guide</i> .

Message-arrival definitions

Message arrival definitions determine which messages should generate notifications. They also determine the user data to be contained within the notification for each message type.

From the Information Exchange Administration Services (IEAS) menu:

1. Select the following options to access the Work with Message Arrival Definitions window:

Events

>Work with message arrival definitions

The following window is displayed:

```

axterm[vamp]
M8100US          Work with Message Arrival Definitions

Account ID..... ACCT1   (all actions)
User ID.....     USER1  (all actions)
Sender's system ID.....  _____
Sender's account ID..... _____
Sender's user ID.....    _____
User message class.....  _____
Data format type (A/E/N) -          (actions 2, 3, 4 or 5)
Message priority (A/H).. -          (actions 2, 3, 4 or 5)

Action.....      [ ]  1. List message arrival definitions
                   2. Add a message arrival definition
                   3. Browse a message arrival definition
                   4. Change a message arrival definition
                   5. Delete a message arrival definition

Command ==>
Enter  F1=Help  F3=Exit  F4=Main Menu

2B"                                     a:POOL {pght308i17}

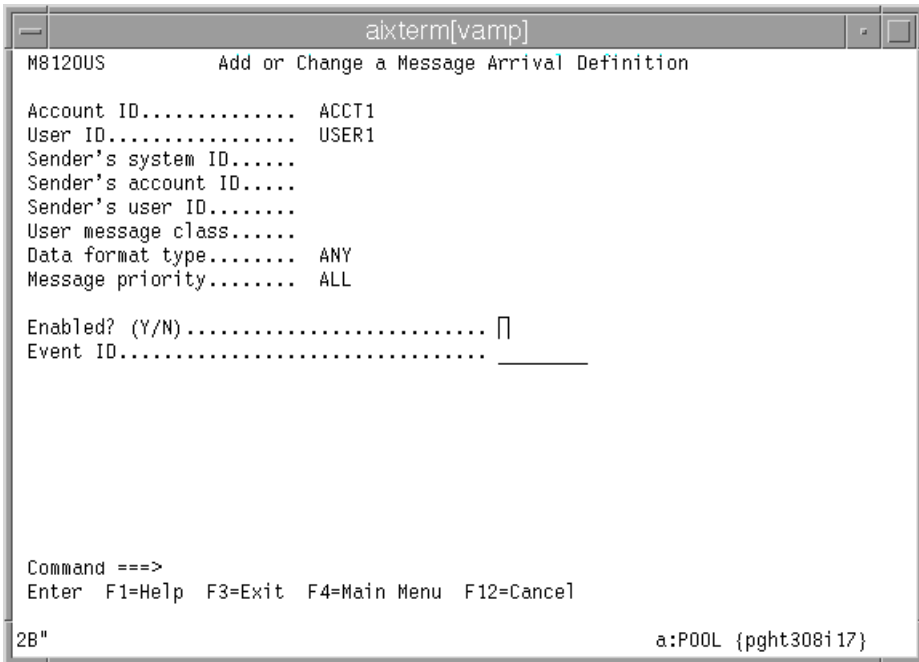
```

2. Complete the fields as follows:

Field	Description
Sender's system ID	Enter the originator details and message user class for which you wish to receive message-arrival notification. Leaving a field blank is equivalent to a wildcard, providing all possible values for that field. Leaving all fields blank, therefore, applies to all messages.
Sender's account ID	
Sender's user ID	
User message class	
Data format type	Enter the type of messages to which this definition is to apply: <ul style="list-style-type: none"> • A for all messages • E for EDI messages only • N for non-EDI messages only
Message priority	Specify whether you want to be notified for all messages or just high-priority messages.

3. Once you have completed the fields on this window, enter 2 to add the message-arrival definition.

The following window is displayed:



4. Complete the fields as follows:

In this field...	Enter...
Enabled	Y
Event ID	The data that should be included in the notification packet sent to your host upon the arrival of a message matching the definition criteria.

You can make multiple message-arrival definitions to cover various message types, or use a single definition covering all messages.

Receiving message-arrival notifications

This section describes the process of receiving message-arrival notifications from Information Exchange via TCP/IP, and details the notification format.

Connection and termination

Upon the arrival of a message for your mailbox, Information Exchange connects to the host address specified in your Event Services profile. Information Exchange closes the connection immediately after delivering the notification.

User confirmation

Once Information Exchange has connected to the specified IP host, it waits for a ready message from the host. This message should be constructed as follows.

Field	Column	Size	Name	Description
1	1	12	Service	“IBM-IE-READY”
2	13	1	Spacer	Blank
3	14	1	Level	Level of notification required (1 to 4)
4	15	1	Spacer	Blank
5	16	5	Status	“READY” (levels 1 to 3) or Detail mask (level 4)
6	21	1-2	End	LF or CR/LF

Notification

Once Information Exchange has received the ready message, it sends the notification packet. The structure of this packet depends on the level of notification requested in the **READY** message.

In the case of all notification levels, all fields are left-justified and padded with spaces to their given lengths.

Level 1

If the **READY** message specified the level as 1, the notification sent by Information Exchange is constructed as follows.

Field	Column	Size	Name	Description
1	1	11	Service	"IBM-IE-CALL"
2	12	1	Spacer	Blank
3	13	1	Level	"1"
4	14	1	Spacer	Blank
5	15	8	Account	Destination account
6	23	1	Delimiter	Blank
7	24	8	Userid	Destination user ID
8	32	1	Spacer	Blank
9	33	8	Session ID	Event services session ID
10	41	2	End	CR/LF

Level 2

If the **READY** message specified the level as 2, the notification sent by Information Exchange is constructed as follows.

Field	Column	Size	Name	Description
1	1	11	Service	“IBM-IE-CALL”
2	12	1	Spacer	Blank
3	13	1	Level	“2”
4	14	1	Spacer	Blank
5	15	8	Account	Destination account
6	23	1	Delimiter	Blank
7	24	8	Userid	Destination user ID
8	32	1	Spacer	Blank
9	33	8	Session ID	Event services session ID
10	41	1	Spacer	Blank
11	42	20	Msgkey	Information Exchange message key
12	62	3	Sndsysid	Originating system ID
13	65	8	Sndacct	Originating account
14	73	8	Snduserid	Originating user ID
15	81	8	Class	Message user class
16	89	10	Length	Message length
17	99	2	End	CR/LF

Level 3

If the **READY** message specified the level as 3, the notification sent by Information Exchange is constructed as follows.

Field	Column	Size	Name	Description
1	1	11	Service	“IBM-IE-CALL”
2	12	1	Spacer	Blank
3	13	1	Level	“3”
4	14	1	Spacer	Blank
5	15	8	Account	Destination account
6	23	1	Delimiter	Blank
7	24	8	Userid	Destination user ID
8	32	1	Spacer	Blank
9	33	8	Event	Event ID
10	41	1	Spacer	Blank
11	42	75	Userappl	Your event profile User application field
12	117	275	Appldata	Your event profile Application data field
13	393	2	End	CR/LF

Level 4

If the **READY** message specified the level as 4, the notification sent by Information Exchange is constructed as follows.

Field	Column	Size	Name	Description
1	1	11	Service	“IBM-IE-CALL”
2	12	1	Spacer	Blank
3	13	1	Level	“4”
4	14	1	Spacer	Blank
5	15	8	Account	Destination account
6	23	1	Delimiter	Blank
7	24	8	Userid	Destination user ID
8	32	1	Spacer	Blank
9	33	8	Session ID	Event services session ID
10	41	1	Spacer	Blank
11	42	n	Msginfo	Requested message information
12	42+n	2	End	CR/LF

The contents of the **Msginfo** field of the notification are determined by the status field of the level 4 **READY** message. The status field should contain a numeric character representation of a decimal integer in the range 0 to 4294967295.

This integer is interpreted as a four-byte binary mask, with each bit corresponding to a message information field: each bit set results in the corresponding field being included in the notification packet.

The bit mask is interpreted as most significant bit first, and the mapping between bits and notification fields is as follows.

Bit	Field	Description	Field Length
31	Reserved	Reserved for future use	-
30	Reserved	Reserved for future use	-
29	Reserved	Reserved for future use	-
28	Reserved	Reserved for future use	-
27	Reserved	Reserved for future use	-
26	Reserved	Reserved for future use	-
25	Session ID	The event services session ID from the message-arrival definition	8
24	Account	The Information Exchange account of the user for whom the event occurred	8
23	Userid	The Information Exchange user ID of the user for whom the event occurred	8
22	Alias	The alias table type and table name of the sender alias	4
21	AliasName	The alias name of the sender	16
20	Cycle	The schedule event cycle definition: D = Daily W = Weekly M = Monthly E = End of the month X = Daily except for Saturday Y = Daily except for Sunday Z = Daily except for Saturday and Sunday N = Monthly except for date specified	1
19	Day	Sum of all scheduled days	3
18	Time	Schedule event time in the format HH:MM	5

Bit	Field	Description	Field Length
continued ➔			
17	Offset	Schedule event offset from GMT in the format EHHMM or WHHMM	5
16	Baud	Baud rate specified in Event Profile	5
15	Event	Type of event: M = Message arrival A = Administrator initiated event S = Scheduled event	1
14	Sndsysid	Originating system ID	3
13	Sndaccount	Originating account	8
12	Snduserid	Originating user ID	8
11	Senderref	Originator's EDI reference	35
10	Class	Message user class	8
9	Priority	Message priority assigned on send	1
8	Msgname	Message name	8
7	Length	Length of message in bytes	10
6	Mode	Network message class: Blank = Normal (no CDH) T = Test (no CDH) S = Normal (CDH attached) R = Test (CDH attached)	1
5	Datatype	Data format: E = EDI data N = Non-EDI data A = Any data	1
4	Msgkey	The 20-character unique message key	20
3	Phone	The contents of the primary telephone number field of your event services dial out profile	30

Bit	Field	Description	Field Length
continued ➔			
2	Altphone	The contents of the alternate telephone number field of your event services dial out profile	30
1	Userappl	The contents of the user application field of your event services dial out profile	75
0	Appldata	The contents of the application data field of your event services dial out profile	275

Example 1

A sample level 4 **READY** message is as follows:

```
IBM-IE-READY 4 16
```

This specifies a bit mask with a bit 4 set. The notification returned contains only the message key in the MsgInfo field. For example:

```
IBM-IE-CALL 4 ACCT1 USER1 IPSESS
FFA9F6334B1C6FFA4810
```

Example 2

The following **READY** message specifies a bit mask 13312, which in binary representation is 1101000000000:

```
IBM-IE-READY 4 13312
```

Since bits 13, 12 and 10 are set, the resulting notification contains the sender account, user ID and message user class. For example:

```
IBM-IE-CALL 4 ACCT1 USER1 IPSESS ACCT15 USER2
ORDERS
```

Sample message-notification application

Applications to receive message-arrival notifications range from very simple (such as a minimal UNIX shell script) to very complex (such as a sockets-enabled custom application that performs an FTP session with Information Exchange upon receiving a notification).

This section provides one simple example of a Korn shell script running on a UNIX platform under the **inetd** superdaemon. It is written specifically for the IBM AIX operating system. However, if you are using another type of UNIX system, you can probably use this example by making a few minor modifications.

The following script issues the **READY** message when started, receives the notification from Information Exchange, writes the notification to a log file, and terminates.

```
#!/usr/bin/ksh
#

# Script to receive notifications from Information Exchange.

# This should run under inetd.

# Constants
logfile="/usr/local/ie/ienotify.log"

# Send the READY message to IE
print - "IBM-IE-READY 2 READY"

# Now receive the notification
read command level destacct destuser sessid msgdetails
# Split the message details into individual fields
print - "$msgdetails" | cut -c1-20 | read msgkey
print - "$msgdetails" | cut -c21-23 | read origsys
print - "$msgdetails" | cut -c24-31 | read origacct
print - "$msgdetails" | cut -c32-39 | read origuser
print - "$msgdetails" | cut -c40-47 | read class
print - "$msgdetails" | cut -c48-57 | read size

# Now write details to log
exec 1>>$logfile
print "`date` Message arrival notification received"
print "To: $destacct.$destuser From: $origsys.$origacct.$origuser"
# And finish
exit 0
```

In this example, the file name of the script is **/usr/local/bin/ienotify**.

Ensure that the script is executable.

Allocating a service

The next step is to allocate a port and service name for the script. To do so, add a line to the `/etc/services` file using an unused port. For example:

```
ienotify    9999/tcp          # For IE notification connections
```

Adding the service to inetd

The final step is to add an entry to the `/etc/inetd.conf` configuration file to enable the notification service. For this example, the new entry would be as follows:

```
ienotify    stream    tcp    nowait    user1    /usr/local/bin/ienotify
```

The script runs with the authority of **user1**.

Ensure that **user1** has write access to the log file and execute access to the script. Once the change has been made, issue the **refresh -s inetd** command for the service to come into effect.

Configuration test

To test your configuration, telnet to your host on the port used for the new service. For example:

```
telnet localhost 9999
```

You should see the **READY** message from the script. If you type any text and press Enter, the connection should close. In this example, the log file `/usr/local/ie/ienotify.log` should be appended with a message-arrival record (although the message details will be inaccurate).

Updating your Information Exchange profile

You update your Information Exchange event profile with your host IP address and port number.

Translation tables

This appendix presents the default Information Exchange translation tables used to perform ASCII/EBCDIC conversion on data transferred in ASCII mode. For details on using specific translation tables, refer to “Selecting a translation table” on page 52.

ASCII to EBCDIC

	-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-A	-B	-C	-D	-E	-F
0-	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1-	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2-	40	5A	7F	7B	5B	6C	50	7D	4D	5D	5C	4E	6B	60	4B	61
3-	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	7A	5E	4C	7E	6E	6F
4-	7C	C1	C2	C3	C4	C5	C6	C7	C8	C9	D1	D2	D3	D4	D5	D6
5-	D7	D8	D9	E2	E3	E4	E5	E6	E7	E8	E9	AD	E0	BD	5F	6D
6-	79	81	82	83	84	85	86	87	88	89	91	92	93	94	95	96
7-	97	98	99	A2	A3	A4	A5	A6	A7	A8	A9	C0	4F	D0	A1	2F
8-	20	21	22	23	24	3D	2E	26	28	29	2A	2B	2C	2D	25	27
9-	30	31	3F	33	34	35	36	32	38	39	3A	3B	37	3C	3E	E1
A-	41	42	43	44	45	46	47	48	49	51	52	53	54	55	56	57
B-	58	59	62	63	64	65	66	67	68	69	70	71	72	73	74	75
C-	76	77	78	80	8A	8B	8C	8D	8E	8F	90	9A	9B	9C	9D	9E
D-	9F	A0	AA	AB	AC	4A	AE	AF	B0	B1	B2	B3	B4	B5	B6	B7
E-	B8	B9	BA	BB	BC	6A	BE	BF	CA	CB	CC	CD	CE	CF	DA	DB
F-	DC	DD	DE	DF	EA	EB	EC	ED	EE	EF	FA	FB	FC	FD	FE	FF

EBCDIC to ASCII

	-0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-A	-B	-C	-D	-E	-F
0-	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1-	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2-	80	81	82	83	84	8E	87	8F	88	89	8A	8B	8C	8D	86	7F
3-	90	91	97	93	94	95	96	9C	98	99	9A	9B	9D	85	9E	92
4-	20	A0	A1	A2	A3	A4	A5	A6	A7	A8	D5	2E	3C	28	2B	7C
5-	26	A9	AA	AB	AC	AD	AE	AF	B0	B1	21	24	2A	29	3B	5E
6-	2D	2F	B2	B3	B4	B5	B6	B7	B8	B9	E5	2C	25	5F	3E	3F
7-	BA	BB	BC	BD	BE	BF	C0	C1	C2	60	3A	23	40	27	3D	22
8-	C3	61	62	63	64	65	66	67	68	69	C4	C5	C6	C7	C8	C9
9-	CA	6A	6B	6C	6D	6E	6F	70	71	72	CB	CC	CD	CE	CF	D0
A-	D1	7E	73	74	75	76	77	78	79	7A	D2	D3	D4	5B	D6	D7
B-	D8	D9	DA	DB	DC	DD	DE	DF	E0	E1	E2	E3	E4	5D	E6	E7
C-	7B	41	42	43	44	45	46	47	48	49	E8	E9	EA	EB	EC	ED
D-	7D	4A	4B	4C	4D	4E	4F	50	51	52	EE	EF	F0	F1	F2	F3
E-	5C	9F	53	54	55	56	57	58	59	5A	F4	F5	F6	F7	F8	F9
F-	30	31	32	33	34	35	36	37	38	39	FA	FB	FC	FD	FE	FF

Registration for IE/FTP over the Internet

It is possible to use IE/FTP over the Internet. To provide secure communication over the Internet, the IE/FTP gateway authenticates clients by exchanging X.509 certificates. To connect to an IE/FTP Internet gateway, you need a certificate for each Information Exchange sys/account/user ID.

Registration

To use IE/FTP over the Internet, you must register with the service. The following information is required for registration:

- Information Exchange account and user ID
- Contact information

Distribution of certificate

The IE/FTP 1.4.1 service features a certificate self-registration process.

New certificates

New customers using the IE/FTP 1.4.1 service will not receive their certificates directly from GXS. Instead, they will receive a pair of identification tokens and directions on how to request a certificate via the registration interface on the registration website (<https://pki.services.ibm.com>). Customers using the IE/FTP 1.4.0 service who wish to use the new IE/FTP 1.4.1 service or Information Exchange customers who wish to try the new IE/FTP 1.4.1

Internet service can use the self-registration process to obtain their identification tokens. Details of this process can be found on the registration website (<https://pki.services.ibm.com>).

IE/FTP 1.4.1 customers will be notified of when their certificate is scheduled to expire. They will receive a 60-day notification via e-mail or via their Information Exchange mailbox. Customers who still have their original identification tokens can use these tokens to obtain new certificates from the registration website (<https://pki.services.ibm.com>). Customers who no longer have their original identification tokens can use the self-registration service to obtain new tokens, which they can subsequently use with the registration website.

Revocation of private key

If the key is compromised in any way, your certificate must be revoked and a new one issued to ensure no unauthorized use of your account. To revoke the certificate and receive a new one, contact your country help desk with the following information:

- Information Exchange account and user ID
- Serial number of certificate (if known)

You should also have your certificate revoked if you are no longer using the service.

Problems

This appendix explains what you should do when reporting a problem through Customer Care. It also contains frequently asked questions that supply tips you can use in determining problems.

Reporting a problem

Before contacting GXS, check that there are no problems with your own system and network. If you still experience the problem, please supply as much of the following information as possible when reporting the problem to GXS.

- Your Information Exchange account and user ID
- Your operating system
- Your FTP client software
- Any error messages
- Date and time of any problem
- Detailed description of the problem

If your client has a debugging mode, enable it and supply GXS with a log.

Frequently asked questions

- Q** My FTP client usually tells me how long a file will take to download. It doesn't work with the IE/FTP gateway. Why?
- A** Many graphical FTP clients assume that the output produced from an **ls-l** command will be in the format produced by a Berkley Unix FTP server. The responses produced by the IE/FTP gateway contain different information and, therefore, the client is unable to parse the replies from the server.
- Q** Can I be informed when a new message is placed in my Information Exchange mailbox so that I don't have to keep connecting to find out.
- A** Yes, this service is available via IP Notification Manager (IPNM). However, this service is only suitable for customers with leased-line connections. Refer to "Message-arrival notification" on page 133 for more details.
- Q** I can log on to the gateway, but it fails if I send an **ls** command or try to **get** a file. Why?
- A** You may have a firewall set up that is preventing the server from setting up another connection from itself back to your machine. Try using passive transfer mode on a client that supports the PASV command.
- Q** Yesterday, I could connect to the gateway, but today I cannot reach it at all. Why?
- A** This is usually due to something being changed on the local network. Ask your network administrator if there have been any changes (e.g., a new firewall being put in place).
- Q** Why does the data I receive from a certain Trading Partner appear corrupted?
- A** This could be due to the translate table being used by you or the Trading Partner. There are sample translate tables in the support directory. Details on how to receive files from the support directory are in "Retrieving support files" on page 47.
- This could also be due to the file being sent and received in a different way. For example, if the file was sent in ASCII mode and received in BINARY mode.

Q Where can I find help and information?

A The support directory contains information files, technical specifications, sample scripts, and translate tables. Details on how to receive files from the support directory are on “Retrieving support files” on page 47.

Q What are the password rules when using the IE/FTP gateway?

A The rules are the same as those specified for Information Exchange in the document *Information Exchange Administration Services User's Guide*. You should never use your user ID as a password.

Internet gateway

Q How do I use the Internet IE/FTP gateway?

A You need to register to use this service. You also need a secure FTP client. GXS provides you with your own private key and public certificate to use with the service. Refer to “Registration for IE/FTP over the Internet” on page 151 for more details.

Q How do I use my key/certificate?

A This depends entirely on the client software that you are using. Refer to your manual or contact your product vendor.

Q Occasionally, my transfers fail. What should I do?

A If your transfers usually complete successfully, occasional failures could simply be due to network problems on the Internet. Try to connect again. If you have an automated script which connects for you, then it is a good idea to implement retry logic.

Support files

The files listed below can be found in the support directory. Details on how to receive these files can be found in the “Retrieving support files” on page 47.

File	Description
437037.xlt	Translate table
850037.xlt	Translate table
ibm3270.xlt	Translate table
ie.xlt	Translate table
noxlate.xlt	Translate table
uptolow.xlt	Translate table
chiyoda.xlt	Translate table
697273.xlt	Translate table
850277.xlt	Translate table
README	Support files README (a guide to the support files)
app.README	Contains useful hints and tips for users writing an application to use the IE/FTP gateway
cd.README	Describes how to specify addresses in the cd command
edi.README	Describes edi processing in detail

continued ➡

File	Description
oldedi.README	
messages.README	
passthru.README	Describes how to use the SITE PASSTHRU command to interact directly with Information Exchange
site.README	Describes the parameters that can be passed to the site command and how they affect the session with Information Exchange and/or the IE/FTP gateway
xlate.README	Describes the ASCII-EBCDIC translation facilities offered by IE/FTP gateway
system.README	
password.c	Simple c program to allow an encrypted password to be sent to the gateway instead of plaintext
rfc959.txt	A copy of RFC 959
rfc775.txt	A copy of RFC 775
rfc2228.txt	A copy of RFC 2228
rfc1123.txt	Requirements for Internet hosts - application and support
rfc1421.txt	Privacy Enhancement for Internet Electronic Mail Part I
rfc1422.txt	Privacy Enhancement for Internet Electronic Mail Part II
rfc1423.txt	Privacy Enhancement for Internet Electronic Mail Part III
rfc1424.txt	Privacy Enhancement for Internet Electronic Mail Part IV
rfc1579.txt	Firewall Friendly FTP
samples.tar.Z	Sample FTP scripts
xlatetables.tar.Z	Textual representations of the translate tables available



Glossary

This glossary defines words as they are used in this book. It includes terms and definitions from the Dictionary of Computing (SC20-1699). If you are looking for a term and cannot find it here, reference this book for additional definitions.

A

account. A unique identifier assigned to a group of users who work for the same company, or in a related area of a company.

account ID. A name that identifies an account to a program, device, or system.

acknowledgment. A response from Information Exchange that confirms whether files were delivered, received, purged, or any combination of these actions.

address. (1) A unique code assigned to a user connected to each device, workstation, user, or multicast group connected to a network. (2) The location in the computer where data is stored.

alias. A alternate name used in place of an account and user ID. This is used with an alias table and alias table type.

alias table. A permanent file list of alternate names that resides in Information Exchange.

alias table type. A single character access level indicator used with an alias table name to identify an alias table. Values are G for global access, P for private (owner) access, and O for organizational (account) access.

alphanumeric. Pertaining to data that consists of letters, digits, and usually other characters, such as punctuation marks.

American National Standards Code for Information Interchange (ASCII). The standard code using a coded character set consisting of 7-bit coded characters (8 bits including parity check) used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters.

American National Standards Institute (ANSI). An organization consisting of producers, consumers, and general interest groups that establishes the procedures by which accredited organizations create and maintain voluntary industry standards in the United States.

ANSI. American National Standards Institute.

ANSI X12. EDI standard for transmission of business data.

ANX. Automotive Network Exchange.

application. A collection of software components used to perform specific types of user-oriented work on a computer.

application data. The actual data in a transaction.

archive. A place in Information Exchange to store messages you receive from Information Exchange.

ASCII. American National Standard Code for Information Interchange.

asynchronous. A protocol that enables a communication device to operate in an unsynchronized and unpredictable manner with respect to the start of program instructions. This type of communication is used for modems and low-speed ASCII terminals (PCs).

attribute. A property or characteristic of one or more entities; for example, length, value, color, or intensity.

audit. A way of tracking and verifying basic information about the status of messages.

authentication. In computer security: (1) verification of the identity of a user or the user's eligibility to access an object, (2) verification that a message has not been altered or corrupted, (3) a process used to verify the user of an information system or protected resources.

Automotive Network Exchange (ANX). A private Transmission Control Protocol / Internet Protocol (TCP/IP) network developed by the Automotive Industry Action Group (AIAG) for secure electronic communications among its subscribers. ANX is based upon standard TCP/IP network technologies as published in Request for Comments (RFC) 2400 by the Internet Architecture Board (IAB).

B

binary. Machine instructions that a person cannot read or enter from a computer keyboard.

C

carriage-return and line-feed (CRLF) characters. A word processing formatting control that moves the printing or display point to the first position of the next line.

CDH. Common data header.

character. A letter, digit, or other symbol used a part of the organization, control, or representation of data.

command. A character or group of characters you enter that tells the system to perform some task.

commit. The point at which a message is either delivered, canceled, or purged. When a session fails, all uncommitted messages are lost.

common data header. Used by Information Exchange interfaces to provide an additional description of a message group.

CRLF. Carriage-return and line-feed characters.

D

default. A value an application program automatically uses until you specify a different value.

delimiter. A character used to separate data elements within a message. The delimiter is part of the character string that it delimits.

delivery class. Specifies how messages and files are delivered; senders can choose from high-priority, normal-priority, and express-priority delivery.

destination. The final Information Exchange address to which a message is to be delivered.

distribution list. A list of the addresses of users with whom a certain user communicates; used to send messages to several people without having to type their addresses.

E

EBCDIC. Extended binary-coded decimal interchange code. A coded character set consisting of 8-bit coded characters.

EDI. Electronic data interchange.

EDIFACT. Electronic data interchange for administration, commerce, and transportation.

Electronic Data Interchange (EDI). The process of sending specially formatted business documents directly from one computer to another electronically.

Electronic Data Interchange For Administration, Commerce, And Transportation (EDIFACT). An EDI standard for the fields of administration, commerce, and transportation.

electronic mail. The process of sending free-formatted messages from one computer to another.

envelope. Information Exchange's electronic envelope contains the text of a message, together with a message header. See also "message header."

ESO. Extended Security Option.

Extended Binary-coded Decimal Interchange Code (EBCDIC). A coded character set consisting of 256 8-bit coded characters.

Extended Security Option (ESO). An option that can be specified on the user profile, for users who require stricter security of data (extended security users).

F

field. An area of a command reserved for data of a certain type or length.

file. A document that you can send or receive using your interface.

File Transfer Protocol (FTP). In the Internet suite of protocols, an application layer protocol that uses TCP and Telnet services to transfer bulk-data files between machines or hosts.

G

gateway. (1) A functional unit that interconnects two computer networks with different network architectures. A gateway connects networks or systems of different architectures. A bridge interconnects networks or systems with the same or similar architectures. (2) A functional unit that connects two networks or subnetworks having different characteristics, such as different protocols or different policies concerning security or transmission priority.

global alias. An alias that can be used by any Information Exchange user on a particular system.

global alias table. (1) A system-wide alias table. (2) An alias table set up within a system.

Greenwich mean time. The mean solar time at the prime meridian (0 degrees longitude) of Greenwich, England. Because the second is no longer defined in terms of astronomical phenomena, the preferred name for this time scale is coordinated universal time (UTC).

H

header. (1) System-defined control information that precedes user data. (2) The portion of a message that contains control information for the message, such as one or more destination fields, name of the originating station, input sequence number, character string indicating the type of message, and priority level for the message.

high-priority message. Messages that move to the front of the queue when they are received into Information Exchange; normal-priority messages enter the queue in the order that they are received into Information Exchange.

I

G International EDI Services. A communication service that permits users to send and receive information electronically within their business or with other enterprises.

Information Exchange. A communication service that enables users to send and receive information electronically to and from trading partners.

Information Exchange address. A combination of a user's account ID and user ID; used to route messages.

Information Exchange mailbox. Information Exchange's electronic mailbox. See also "electronic mailbox."

interchange. The exchange of information between trading partners.

internet. A collection of interconnected networks that uses the Internet suite of protocols. The internet that allows universal access is referred to as the Internet (with a capital “I”). An internet that provides restricted access (for example, to a particular enterprise or organization) is frequently called an intranet, whether or not it also connects to the public Internet.

Internet. The worldwide collection of interconnected networks that uses the Internet suite of protocols and permits public access.

L

library. A place to store data for an extended period of time.

M

mailbox. In Information Exchange, a database that contains records that represent orders and receipts for processed orders.

member. The text of a message or document that is stored in a library.

message. (1) Any piece of data that users send or receive. (2) The smallest subdivision of information that can be sent from one user to another. (3) An instruction or explanation on the screen that tells you what the system is doing or warns you that the system has detected an error.

message acknowledgment. A response from Information Exchange or another EDI Services component indicating that a message was delivered, received, purged, or various combinations of the three.

message class. A category used to group mail, agreed on among trading partners.

message header. The leading part of a message that contains information, such as the source or destination code of the message. See also header.

message sequence. The order of messages within a group of messages.

MVS. Multiple virtual storage.

N

network. A configuration of data processing devices and software connected for information interchange.

non EDI data. Rules defined by NIST to enable X.400 users to exchange binary files through the 1984 X.400 InterPersonal Messaging Services.

notify. An online service for reporting problems to the network.

O

organizational alias. (1) An alias that can be used by any user in an account. (2) A company-wide alias table.

organizational alias table. An alias table set up within an account.

owning account. The account that owns a library.

P

parameter. (1) A variable that is given a constant value for a specified application and that may denote the application. (2) An item in a menu for which you specify a value or for which the system provides a value when the menu is interpreted. (3) The data passed between programs or procedures.

password. A combination of characters you enter when you log on, designed to be secret to prevent unauthorized access of your data.

peer system. An Information Exchange peer system is another EDI system for customers requiring special processing options

private alias. (1) An alias that can be used only by the user who created it. (2) An individual user's alias table.

private alias table. An alias table set up for an individual user.

protocol. A prearranged procedure for communication.

R

receiver. The user or users to whose mailboxes you are sending, or retrieving information.

response. Information Exchange's reply to certain commands (known as response-mode commands).

S

session. The period of time during which you can communicate with a computer system or one of its programs; usually, the elapsed time between logon and logoff.

SNA. Systems Network Architecture.

synchronous. A process that is completed within a regular or predictable time frame.

system ID. A unique identifier assigned to a unique Information Exchange system.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operating sequences for transmitting information units through, and controlling the configuration and operation of, networks.

T

TCP/IP. Transmission Control Protocol/Internet Protocol.

TCP/IP FTP gateway for the Internet. A communication service that permits users to connect to Information Exchange via TCP/IP and submit FTP commands to exchange EDI data, files, and e-mail with trading partners.

trading partner. A business associate, such as a manufacturer or a supplier, who agrees to exchange business information using electronic data interchange.

U

UCS. Uniform Communication Standard.

Uniform Communication Standard (UCS). A standard EDI format used in the grocery industry.

United Nations/trade Data Interchange (UN/TDI). An EDI standard for administration, commerce, and transportation fields developed by the United Nations Economic Commission for Europe.

UN/TDI. United Nations/Trade Data Interchange.

user classification. A short description that users can assign to their documents to identify their documents to their trading partners.

user identification (user ID). A name that identifies a user to Information Exchange within an account.

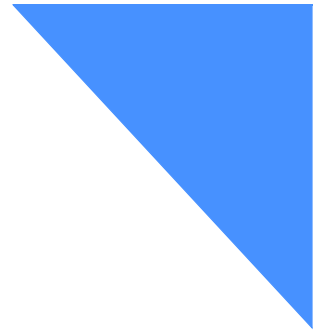
user profile. A list of the characteristics of how a user works with Information Exchange.

V

validation. The checking of data for correctness or for compliance with applicable standards, rules, and conventions.

X

X12. A specially formatted data stream.



Index

A

alias table 12, 29
ANSI X.12 61
ASCII 49
ASCII mode 50
asynchronous response mode 91

B

bin command 38
binary 49, 131
bye command 8

C

cd *.*/* command 15
cd command 11, 12, 25
cd command specification 11
cd edi command 28, 37
cd support command 47
certificate 151
class 12
closing IE/FTP connection 8
Command
 site spacechr 87
Commands
 bin 38

bye 8
cd 12
cd edi 28
cd support 47
del 55
edicdonly 84
ls 15
ls -l 43
open 6, 7, 8
pass 7, 8
quote 63
site arcrefid 77
site autogetopts 85
site cdhlist 70
site compress 73
site confirm 68, 131
site edialiasonly 84
site edialiasprobe 81
site edicdonly 84
site ediclass 83
site edicrlf 49, 83
site edionly 49
site edireplies 67
site edireplybuf 67
site forceopts 85
site getarchive 78
site getaudit 79
site getopts 85

- site help 64
- site idle 64
- site libreplace 76
- site liststyle 66
- site msgchrg 74
- site msgname 75
- site msgrcpts 75
- site msgretn 75
- site msgseqn 76
- site passthru 81
- site prespname 81
- site probe 69
- site ptespname 81, 92
- site putopts 86
- site resetopts 67
- site resp226 66
- site sesskey 69
- site showopts 66
- site system 15, 64
- site uniqueid 76
- site xlate 52, 69, 131
- user 8

commands 93

composite addressing 13

D

- data translation 49
- del command 55
- destination 12

E

- EDIFACT formatted data 59
- error responses 92
- event services 133
- event services user profile 134
- Examples
 - Deleting a message from your mailbox 55
 - Deleting library members 57
 - Listing messages for system type 5 17

- Listing messages for system types 3 and 6 16
- Listing messages for system types other than 3 and 6 19
- Opening and closing a session 8
- Receiving a single file 41
- Receiving multiple files 44
- Retrieving a library member 48
- Retrieving files using composite addressing 46
- Sending a single non-EDI file using cd command 26
- Sending an EDI file using composite addressing 36
- Sending an EDI file using the cd edi command 35
- Sending files using composite addressing 27
- Site passthru processing 89
- Transferring files in passive mode 53
- Viewing and changing the listing format 21

F

- FTP replies 132
- FTP user commands 93

I

- Information Exchange Administration Services 133
- Internet 3, 5
- Internet drafts 130

L

- leased-line connection 133
- library 12
- library members 22, 48
- listing messages 15

liststyle filename 20
liststyle site option 20
ls command 15
ls -l command 43
LU 6.2 1

M

message arrival 133
message-arrival
 definitions 136
 notification 133
mput command 25
MSGSEQN 36

O

open command 6, 8

P

parameter delimiter 64
pass command 7, 8
password 7
password encryption 7
PASV support 52
private key 152
probe 69
protocol stack 2
put command 25

Q

quote command 63

R

Receiving files 38
references 130
registration 151
response mode 88

REXX 131
RFCs 130
RSPINQM 90

S

scripts 131
SDIINQM 90
SDISNDM 36
site arcrefid command 77
site autogetopts command 85
site cdhlist command 70
site commands 63
site compress command 73
site confirm command 68, 131
site edialiasonly command 84
site edialiasprobe command 81
site edicdhonly command 84
site ediclass command 83
site edicrlf command 49, 83
site edionly command 49, 83
site edireplies command 67
site edireplybuf command 67
site forceopts command 85
site getarchive command 78
site getaudit command 79
site getopts command 85
site help command 64
site idle command 64
site libreplace command 76
site liststyle command 66
site msgchrg command 74
site msgname command 75
site msgrcpts command 75
site msgretn command 75
site msgseqn command 76
site passthru command 81, 87
site probe command 69
site ptespname command 81, 92
site putopts command 86
site resetopts command 67
site resp226 command 66

site sesskey command 69
site showopts command 66
site spacechr command 87
site system command 15, 64
site uniqueid command 76
site xlate command 52, 69, 131
support directory 157
support files 47, 157
synchronous response mode 91
system type 5 17
system types 3 and 6 15

T

TCP/IP 133
TCP/IP restart 131
Telnet 2
trace file 9

U

UCS 61
UN/TDI 60
user command 7, 8

W

writing a client 129
writing an application 129

X

X12 Binary and Security 37