



GXS EDI Services

Expedite/CICS Display Application User's

Guide

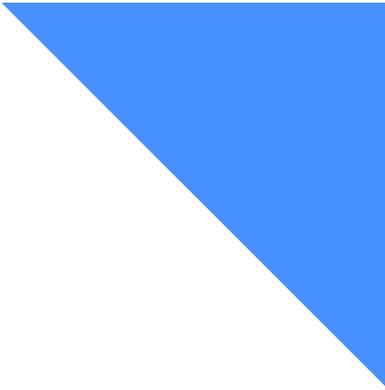
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This document (GC34-3303-06) contains revisions for MVS only. VSE users should continue to refer to document GC34-3303-04.

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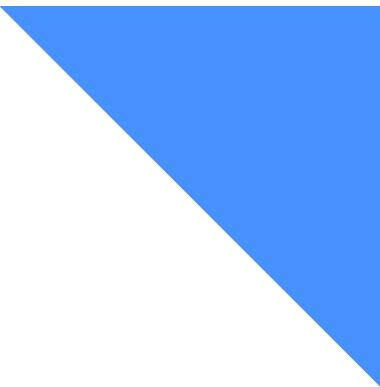
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To the reader

This book provides information about using the Expedite/CICS Display Application in the OS/390 environment.

Who should read this book

This book is for people who use Expedite/CICS and Information Exchange to communicate electronically with business associates. It describes the panels, functions, and features of the Expedite/CICS Display Application. More explicitly, this book is for:

- Users who will use the Display Application panels to send and receive data or to work with data in libraries
- Administrative and support personnel who will use the Display Application to perform user administration and system administration tasks by working with system options, user profiles, and EDI destination translate tables

As you read this book, keep in mind that the term, service administrator, unless otherwise indicated, refers to a person who performs Expedite/CICS administrative tasks, not Information Exchange administrative tasks.

If you are a service administrator and want to perform only setup or customization tasks, you will be interested primarily in the following:

- “Performing initial administration functions” on page 35
- Chapter 7, “Working with user administration options”
- Chapter 8, “Working with system administration options”

How to use this book

To use this book effectively, it is necessary to understand the following type conventions.

In step-by-step procedures, information that you type is shown in boldface type. For example:

At the prompt, type **LG01**

Other type conventions are as follows:

Item	Convention	Example
Commands	SMALL UPPERCASE LETTERS	SDISSTA
Field names and values	Boldface	Log Trace field; option set to Y
Default values in command formats	Underlined	The default is <u>blank</u>
Words in the glossary, first time used in body text	Italics	<i>asynchronous</i>



NOTE: When blank is listed as a value, it refers to a blank space and not the actual typed word.

Related Expedite/CICS books

The following books contain information related to the topics covered in this book. For your convenience, these documents can be viewed on the EDI Services Web site at:

http://www.gxsolc.com/edi_bes.html.

- *Customizing and Developing Applications with Expedite/CICS*, GC34-3304, provides a reference for CICS programmers who want to write application programs that will use Expedite/CICS to communicate with Information Exchange. This book explains how to customize Expedite/CICS after it has been installed and how to develop an application to interface with Expedite/CICS.
- *Expedite/CICS Messages*, GC34-2331, explains the Expedite/CICS messages that are used to communicate processing errors and information. Each entry includes the complete text of the message and any actions that you can take to resolve the error.
- *Expedite/CICS Program Directory* provides instructions for installing Expedite/CICS on your CICS region.
- *Information Exchange Administration Services User's Guide*, GC34-2221, provides step-by-step procedures for performing Information Exchange administrative tasks (defining users and trading partners, viewing mailboxes, and so on). This book is designed for Information Exchange service administrators who coordinate the use of Information Exchange in their companies.

- *Information Exchange Interface Programming Guide*, GC34-2222, describes the programming interface that Expedite/CICS uses to communicate with Information Exchange. This technical reference also provides information about accessing and controlling an Information Exchange session and how to transfer data.
- *Information Exchange Messages and Formats*, GC34-2324, provides response codes and messages that may occur while programming Information Exchange interfaces. This book is useful in correcting programming errors during development and in performing other problem determination tasks.

Other related books

- *CICS/ESA 4.1 Application Programming Guide*, SC33-1169
- *CICS for MVS/ESA 4.1 Application Programming Reference*, SC33-1170
- *CICS for MVS/ESA 4.1 Resource Definition Guide*, SC33-1166
- *IP CICS Sockets Guide*, SC31-8518
- *MVS/ESA SP V5 JCL Reference*, GC28-1654
- *MVS/ESA SP V5 JCL Reference*, GC28-1479
- *Introducing EDI Services*, GC34-2211
- *Information Exchange Administration Mailbox Command Reference*, GC34-2260
- *Network Services Planning Guide*, GC34-2232
- *ServiceLink Overview*, SH52-0302

Introducing Information Exchange and Expedite/CICS

Information Exchange, the mailbox component of EDI Services, is an electronic data storage-and-retrieval service that enables you to exchange data, such as electronic data interchange (EDI) data, with your business associates. Information Exchange is an intermediate system that enables communication between dissimilar computer systems. When a user sends a message, Information Exchange stores the message in a message database until the recipient, who may be logged on to a different Information Exchange system, is ready to receive it. When the recipient asks to receive messages, Information Exchange transmits the messages according to instructions provided by the user's receive application.

The following major topics are presented:

Using Information Exchange communications	12
Using Expedite/CICS to communicate with Information Exchange	13
Managing data	20
Receiving acknowledgments	21
Using problem determination tools	22
Providing security	23

Information Exchange controls communication through the commands summarized below.

Command:	Description:
Alias Inquiry	View information in an existing alias table.
Audit Browse	Retrieve audit information regarding message flow.
Cancel	Cancel messages.
Commit	Receive checkpoint messages from a specified Information Exchange address.
Define Alias	Define a nickname that corresponds to an Information Exchange address.

Command:	Description:
Inquiry	Get information about the status of messages or an Information Exchange session.
Library	Provide controlled access to permanently stored data.
List Define	Define a list of Information Exchange users.
List Verify	Verify that each user in a list is known to Information Exchange.
Load Test Messages	Load Information Exchange messages provided to test your application.
Probe	Determine if an intended destination is valid for sending messages with a particular payment method or authorization level, or if the address itself is valid.
Query	Request information about a specific query (for example, an Archive Query or Message Queue Query).
Receive Message	Receive a message sent by another user or users.
Retrievals	Move information, such as archived messages, audit information, session traces, and library members, into your Information Exchange mailbox.
Send Message	Send a message to another user or users.
Session End	End an Information Exchange session.
Session Start	Start an Information Exchange session.

Using Information Exchange communications

A unit of information (mail) sent from one Information Exchange user to another may be a short message or an entire file of data. Information Exchange stores mail in a database and, when the recipient is ready, Information Exchange transmits the mail according to instructions specified by the receiver's application.

The network assigns each Information Exchange user a unique address consisting of an account ID and a user ID. This is the address of the user's Information Exchange mailbox. The time you spend communicating with an Information Exchange address is called a session. You start a session by issuing a Session Start command which identifies you to the system by your Information Exchange address. The Session Start command is issued automatically when you use the Expedite/CICS Display Application logon panel. Once an Information Exchange session is started, the account ID and user ID provided by the user are used in all subsequent commands issued to Information Exchange during the session. A user session with Information Exchange starts when the user logs on to the Expedite/CICS Display Application or when a session start is issued from a user program interface.

In some commands, another user's address is included; for example:

- To send data to a trading partner, you must include the address of that trading partner in the send command.
- To receive data that was sent by a specific user to your Information Exchange mailbox, you may include the address of that user in the receive command.

- To communicate with a trading partner using electronic data interchange (EDI) addresses, you must use the Expedite/CICS translate table and Information Exchange alias tables to translate the EDI addresses into Information Exchange addresses.

You may establish concurrent sessions with different mailboxes and, within each session, you may issue multiple send and receive commands.

Before you continue, you should know that there are references in this book to Information Exchange Administration Services and supporting documentation. Information Exchange Administration Services is an Information Exchange application you can use to help you manage Information Exchange within your company. Information Exchange Administration Services is used to manage Information Exchange account and user profiles, charge options, trading partners, distribution lists, and alias tables. It also includes features such as audit trails, session traces, functions for managing mail, and library features. For more information, you can refer to the *Information Exchange Administration Services User's Guide* or to *Customizing and Developing Applications with Expedite/CICS*.

Using Expedite/CICS to communicate with Information Exchange

Expedite/CICS is a communications package that runs in the OS/390 environment and is used to exchange electronic data with trading partners by way of Information Exchange. To connect to Information Exchange from Expedite/CICS, you must have an Information Exchange account ID and user ID. Expedite/CICS is used to manage your Information Exchange sessions; that is, you use Expedite/CICS to give instructions to Information Exchange.

Figure 1 illustrates how your CICS system communicates with Information Exchange using Expedite/CICS.

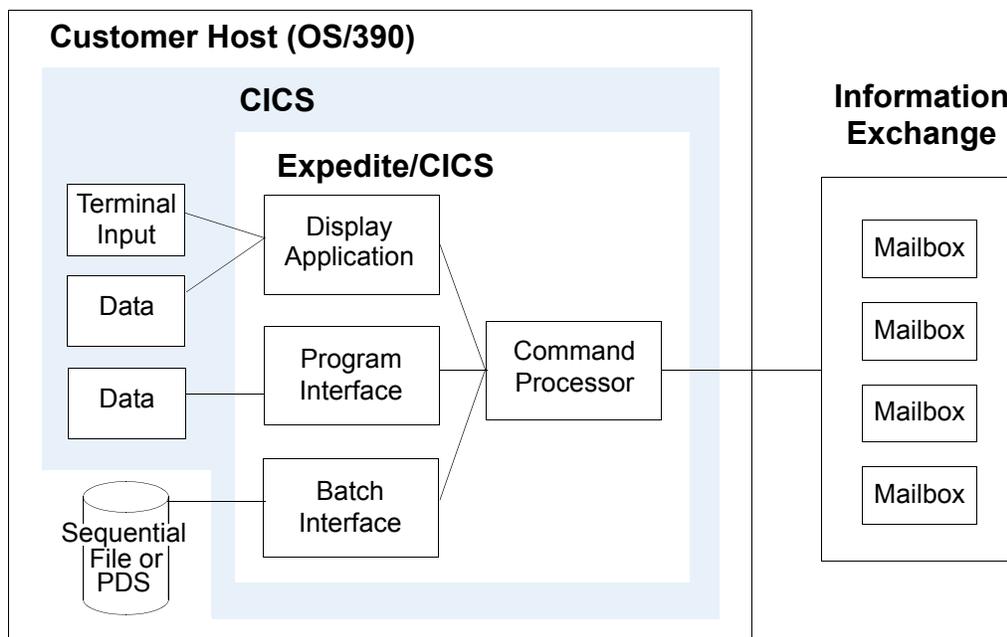


Figure 1. Where Expedite/CICS fits in the Information Exchange picture

Expedite/CICS communicates with Information Exchange through a leased-line LU 6.2 inter-system communication link or through TCP/IP communication. Commands and messages are sent and received in blocks of data ranging from 3700 - 26000 characters. You can set the data transmission size on the Display Application Define System Options panel.

Major Expedite/CICS components include:

- Display Application
- Program Interface
- Command Processor
- Batch Interface
- Activity Monitor (not shown in Figure 1)

Display Application overview

The Expedite/CICS Display Application is a panel-driven interactive application that helps you tailor and use Expedite/CICS to perform the tasks described in this overview.



NOTE: After Expedite/CICS has been installed, you can continue to use the Display Application or you can create your own application to automatically link to Expedite/CICS for communicating with Information Exchange.

General session and communication tasks

With Expedite/CICS, you can perform the tasks listed below:

- Start, restart, or end an Information Exchange session using Expedite/CICS.
- Send messages and files to Information Exchange.
- Receive messages and files from Information Exchange either through a single request or by using a continuous receive request.
- Query your Information Exchange mailbox.
- Receive or purge a specific message or messages.
- View the status of Expedite/CICS send and receive requests (in-process and completed).
- View the status of your session and reset it if necessary.
- Work with temporary distribution lists (create, verify, and inquire).
- Verify destination addresses by issuing a probe command.
- Retrieve audit information into your mailbox.
- View log trace alerts.
- Issue Expedite/CICS pass-through commands to Information Exchange.
- Return to CICS temporarily without ending your Information Exchange session.
- Use batch receive and electronic service delivery functions.
- Define and view your user administration profile that identifies user session options between Expedite/CICS and Information Exchange.

- Define alias tables.
- View information in existing alias tables.

General library tasks

Depending on their Information Exchange and Expedite/CICS authorizations, users can perform the tasks listed below:

- Add, change, and delete libraries and library members.
- Retrieve library members.
- Search libraries for text strings.
- View a list of libraries.
- View a list of library members and library member text.

System administration tasks

If you are a system administrator, you can perform the tasks listed previously on behalf of any user and can also do the following:

- Define and view administration options (user and system).
- Add, change, or delete user session profiles that identify user session options for all users.
- Define EDI translate table definitions that correlate EDI addresses to Information Exchange addresses.
- Set alternate transaction names.
- List user session status and reset user sessions for all users.
- View the status of messages for another user.
- Define problem determination trace options.
- Purge or release a stuck receive message.



NOTE: An Expedite/CICS service administrator is **not** the same as an Information Exchange service administrator. Expedite/CICS service administrators perform administrative tasks for user profiles only on the Expedite/CICS system. To manage Information Exchange user profiles, you must have Information Exchange service administrator authority and you must use Information Exchange Administration Services.

Command Processor overview

The Expedite/CICS Command Processor processes all commands sent to Information Exchange. The command processor receives input from one of the sources shown in Figure 1 on page 13, reformats the input into the proper Information Exchange format, and forwards the reformatted command to Information Exchange. Expedite/CICS provides a single path into the command processor through which your application, or the Expedite/CICS Display Application, passes all commands.

The command processor supports most of the Information Exchange commands published in the *Information Exchange Interface Programming Guide*. The commands are either directly supported by the Expedite/CICS command processor or through the Expedite/CICS pass-through facility as shown in the following table.

Command	Description	Command Processor Support?
EXPADMN	Set Administrative Response File	No. EXPADMN is an Expedite/CICS command only; it does not have an associated Information Exchange command.
EXPPUTM	Library PutMember	Yes. Expedite/CICS converts EXPPUTM commands to Information Exchange SDISNDM commands.
EXPSNDF	Send File	Yes. Expedite/CICS converts EXPSNDF commands to Information Exchange SDISNDM commands.
SDIARTV	Archive Retrieve	Pass-through only
SDIAUDR	Audit Retrieve	Yes
SDICNCL	Cancel	Pass-through only
SDIDALS	Define Alias	Yes, see Note
SDIINQA	Alias Inquiry	Yes, see Note
SDIINQM	Message Inquiry	Pass-through only
SDIINQS	Session Inquiry	Yes
SDILBRW	Browse Library Member	Yes
SDILCDH	Retrieve Library Member CDH	Yes
SDILDEF	Define Library	Yes
SDILDEL	Delete Library	Yes
SDILDLM	Delete Library Member	Yes
SDILLST	List Library	Yes
SDILMBR	Library Member List	Yes
SDILRTV	Retrieve Library Member	Yes
SDILSCH	Library Search	Yes
SDILSTD	List Define	Yes
SDILSTV	List Verify	Yes
SDILTST	Load Test Messages	Pass-through only
SDIPRGM	Purge Message	Yes
SDIPROB	Probe	Yes

Command	Description	Command Processor Support?
SDIQUMS	Message Queue Query	Yes
SDIRCVM	Receive Message	Yes
SDISEND	Session End	Yes
SDISSTA	Session Start	Yes
SDITRLB	Session Trace Browse	Pass-through only
SDITRLR	Session Trace Retrieve	Pass-through only



NOTE: The Alias Inquiry (SDIINQA) and Define Alias (SDIDALS) commands are supported by the command processor, and can be issued from the Display Application. Because this was not true in earlier Expedite/CICS versions, provision has been made so these commands can still be issued using the Pass-through option. Existing applications that use them this way are not affected.

Expedite/CICS communication area (COMMAREA)

The data structure used to pass information from an application to the command processor is called the communication area, usually referred to as the COMMAREA. Data required to format an Expedite/CICS command is placed in the COMMAREA, and the EXEC CICS LINK command is used to transfer program control to the command processor. The command processor returns a response to the calling program, whether that program is the Display Application or a user application.

Receiving data from Information Exchange

Expedite/CICS provides two types of Receive Message commands to tell the command processor to receive data from an Information Exchange mailbox:

Single Receive	Receives all items in the mailbox that meet the receive criteria at the time of issue. The request terminates when the receive is complete.
Continuous Receive	Receives all items from the mailbox that meet the receive criteria at the time of issue, but remains active after all mail in the mailbox is processed, continuing to receive new mail as it arrives in the Information Exchange mailbox.

An application can receive the following Information Exchange responses and messages:

- Immediate responses, resulting from response-oriented commands issued to Information Exchange.
- Mailbox responses, resulting from commands issued to Information Exchange.
- Messages and files from another Information Exchange user.

Receiving immediate responses: Information Exchange commands that generate immediate responses to indicate transaction status are called response-oriented commands. For example, when Expedite/CICS sends a Session Start command, Information Exchange immediately

returns a Session Start response. A list of all response-oriented commands is provided in the *Information Exchange Interface Programming Guide*. The response-oriented commands that you can send to Information Exchange with Expedite/CICS include the following:

- Session Start (SDISSTA)
- Session End (SDISEND)
- Session Inquiry (SDIINQS)
- Define Library (SDILDEF)
- List Library (SDILLST)
- Audit Retrieve (SDIAUDR)

Immediate command responses are returned to your application in the COMMAREA. If your own application issues a command that results in an immediate response, you are responsible for making sure that it checks the responses to locate and correct errors. However, if such a command is issued from the Display Application, the Display Application checks the responses and informs you of any problems.

Receiving mailbox responses: Messages that result from commands are placed in your Information Exchange mailbox. Your application must issue a command to receive them. Listed below are examples of commands that can result in a response in your mailbox depending on the options you have chosen:

- Cancel (SDICNCL)
- Probe (SDIPROB)
- List Verify (SDILSTV)
- Retrieve Library Member (SDILRTV)
- Load Test Messages (SDILTST)
- Audit Retrieve (SDIAUDR)

Receiving messages and files: Messages and files that another Information Exchange user sends to you are placed in your Information Exchange mailbox. Your application must issue a Receive Message command to receive these messages and files.

Sending data to Information Exchange

The command processor recognizes the commands listed below as requests to send data to Information Exchange:

- | | |
|-----------------------------|--|
| Send file (EXPSNDF) | Sends a file to Information Exchange. |
| Library putmember (EXPPUTM) | Sends a file to be added as a member of an Information Exchange library. |

Program Interface overview

With the Expedite/CICS Program Interface, you can:

- Create applications that automatically send and receive data to and from Information Exchange using Expedite/CICS commands.
- Control application communication to Information Exchange and the network.

With the Program Interface, you can write customized and completely automated electronic data exchange applications in CICS. For example, you may have an application that creates purchase orders to be written to a VSAM data set, a transient data queue (TDQ), or a temporary storage queue (TSQ). When a purchase order is ready for delivery to Information Exchange, your application can invoke an Expedite/CICS send file command by linking to the command processor. Your application may send multiple purchase orders (EDI envelopes, for example) within a single message.

You can issue continuous receive requests that link to a program that processes received data whenever messages are received from your Information Exchange mailbox. Continuous receive processing is event driven; an Expedite/CICS transaction is started on your CICS system after completed messages are received into your Information Exchange mailbox. A continuous receive request remains active until ended by you or your application.

Continuous receive requests may be used to select subsets of data from a mailbox, based on criteria such as user message class. Multiple continuous receive requests can be issued against the same mailbox.

You can set up a continuous receive request that invokes your program to process data automatically, or to receive the data to a VSAM file, TSQ, or a TDQ.

Another alternative is for your application to issue a single receive command and receive all mail in the mailbox that matches the selection criteria at the time of the request.



NOTE: Programs can be written in any language supported by your CICS system. Expedite/CICS Versions 4.2 and 4.3 programs are written in COBOL II. Expedite/CICS Versions 4.4 and 4.5 programs are compiled using the COBOL for MVS compiler. For more information, refer to *Customizing and Developing Applications with Expedite/CICS*.

Batch Interface overview

The Expedite/CICS Batch Interface enables you to send data to Information Exchange that was previously created in a batch environment or to receive data from Information Exchange that can be processed later in a batch environment. For more information, refer to *Customizing and Developing Applications with Expedite/CICS*.



NOTE: If batch processing is a primary requirement for your organization, it is recommended you install Expedite Base/MVS.

Activity Monitor overview

The Expedite/CICS Activity Monitor is a background CICS transaction that runs regardless of the process method used (Display Application, user programs, or batch) and performs automatic restart and recovery. It runs periodically at an interval specified on the Define System Options panel. For more information, see Chapter 12, “Understanding automated restart and recovery.”

Managing data

Expedite/CICS supports sending from the following CICS storage types:

- VSAM/ESDS
- Temporary storage queue
- Transient data queue, extrapartition or intrapartition
- Sequential file, using the batch interface

Expedite/CICS supports receiving into the following destinations:

- Application program
- VSAM/ESDS
- Temporary storage queue
- Transient data queue, extrapartition or intrapartition
- Sequential file, using the batch interface (Display Application only)

With the exception of non-recoverable temporary storage and MVS sequential files, CICS storage must be appropriately defined to CICS as in the following:

- File control table (FCT)
- Destination control table (DCT)
- Startup job control language (JCL)

This is standard procedure for applications installed on CICS.

You can specify how Expedite/CICS is to manage files or messages that you send or receive by means of the data types you specify in send or receive commands. The types of data that you can define include:

Data type:	Description:										
EDI	Electronic data interchange, which can be one of the following formats: <table> <tbody> <tr> <td>This data:</td> <td>Conforms to the standards of:</td> </tr> <tr> <td>X12</td> <td>American National Standards Institute, X12 Committee</td> </tr> <tr> <td>EDIFACT</td> <td>Electronic Data Interchange for Administration, Commerce, and Transportation</td> </tr> <tr> <td>UCS</td> <td>Uniform Communication Standard</td> </tr> <tr> <td>UN/TDI</td> <td>United Nations Trade Data Interchange</td> </tr> </tbody> </table>	This data:	Conforms to the standards of:	X12	American National Standards Institute, X12 Committee	EDIFACT	Electronic Data Interchange for Administration, Commerce, and Transportation	UCS	Uniform Communication Standard	UN/TDI	United Nations Trade Data Interchange
This data:	Conforms to the standards of:										
X12	American National Standards Institute, X12 Committee										
EDIFACT	Electronic Data Interchange for Administration, Commerce, and Transportation										
UCS	Uniform Communication Standard										
UN/TDI	United Nations Trade Data Interchange										
CRLF	Carriage return line feed, which defines a logical record as the data between the X '0D0A' strings or by the delimiter specified in the common data header.										
LL	Logical length, which defines a logical record as data prefixed by a two-byte, logical-length indicator field.										
OTHER	Defines a logical record as free-format data with no delimiters.										

Receiving acknowledgments

Information Exchange acknowledgments are sent from the same address (*SYSTEM* *ERRMSG*) as Information Exchange errors. They can be placed in a sender's Information Exchange mailbox at various times during processing, such as when the message being sent is:

- Received into the mailbox
- Delivered to the recipient destination
- Purged

Other acknowledgment options include:

- Expedite/CICS completion notification, where a notification that a request has completed is received and processed by a user program.
- Application acknowledgments, where beginning and ending application programs exchange acknowledgments through Information Exchange to ensure that beginning and ending processes have completed processing.

For more information, refer to *Customizing and Developing Applications with Expedite/CICS*.

Using problem determination tools

The Expedite/CICS trace facility provides the following trace destinations for problem determination:

- Internal trace temporary storage queues, EXPDTRCA and EXPDTRCB, store input and output commands and data.
- Exception reporting transient data queue, EXPM, logs only errors with a severity level of 08 or above. Your installation may route or process this queue to a destination of your choice. The default destination is the sequential file EXALERT.
- Log destination transient data queue, EXPL, logs system messages, errors with a severity level of 08 or above, and optionally, command traces. The default destination is the sequential file EXPLOG1.
- TCP/IP transient data queue, EXPT, records TCP/IP failures, Expedite/CICS listener errors, and errors resulting from communication with the TCP Relay. The default destination is the sequential file EXPTCPIP.

Various information can be written to each trace destination; however, errors are always written to the trace destinations in use.

When developing and testing Expedite/CICS applications, the trace function is useful for tracing Expedite/CICS commands and responses to and from:

- User written applications
- The Display Application
- The Expedite/CICS Command Processor
- TCP/IP Relay
- Information Exchange

Overall message flow between each of the systems is traced and severe errors are identified. For more information about the trace facility, see “Using Expedite/CICS problem determination facilities” on page 249.

Providing security

The network provides security at the network-access level, the application-selection level, and the data-access level.

Because security features operate within a widely used data processing environment, Information Exchange can protect users only if they observe security controls, including the following:

- Changing passwords periodically
- Using authorization levels to control user access to specific functions

Extended Security Option

The Extended Security Option (ESO) provides additional password security, which can be activated by an Information Exchange service administrator. For information on setting ESO, see the *Information Exchange Administration Services User's Guide*.

ESO contains the following security features:

- Your ESO password may not be the same as your user ID. If you or an Information Exchange service administrator fail to provide a new password, you cannot start a session with Information Exchange.
- Your ESO password must conform to the rules listed below, or you cannot start a session with Information Exchange. New passwords:
 - Must not contain the user ID as any part
 - Must be at least six characters in length
 - Must contain at least three different characters
 - Must contain a non-numeric first and last character
 - Must contain at least one non-alphabetic character
 - Must contain at least one alphabetic character
 - Must contain only the valid characters A-Z, 0-9, and special characters #, @, and \$
 - Must be different from the current and five previous passwords
 - Must not contain more than two identical consecutive characters
 - Must not contain more than three identical, consecutive characters from the previous passwords
- Information Exchange revokes your ESO user ID if you make three consecutive attempts to start an Information Exchange session with an invalid password. All further attempts to start an Information Exchange session will be unsuccessful until your user ID is resumed by your Information Exchange service administrator.

Getting started with Expedite/CICS

This chapter provides background information and step-by-step instructions to help you get started. The instructions describe how to begin and end a session, and how to perform some common session tasks.

The following major topics are presented:

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Logging on to Expedite/CICS	27
Choosing Expedite/CICS Display Application options	31
Logging off Expedite/CICS	33
Restarting a session	35
Performing initial administration functions	35

Before you begin

To use Information Exchange, you must first have an account and an Information Exchange user profile created for you by Information Exchange Administration Services. An account is usually associated with a group of users who work in a related area of a company. Your company may have one or many accounts. A user ID identifies only a single user. For more information about creating and maintaining Information Exchange profiles, refer to the *Information Exchange Administration Services User's Guide*.

After an Information Exchange account ID and user ID are established, an Expedite/CICS user profile can be created and a session can be started with Information Exchange. Expedite/CICS has two types of users:

General user	Performs tasks and changes options that affect only their own user ID.
Service administrator	Performs tasks and changes options that affect all Expedite/CICS users. This includes adding and deleting users, changing user profiles, and changing system options.

Expedite/CICS provides a default Account/Userid, SYSTEM/DEFAULT, which may be used to perform administrative functions only; that is, it does not communicate with Information Exchange. This user ID is used as a model when new user profiles are created.

For more information about logging onto Expedite/CICS for the first time using the SYSTEM/DEFAULT user ID, see “Performing initial administration functions” on page 35.



NOTE: An Expedite/CICS service administrator is **not** the same as an Information Exchange service administrator. Expedite/CICS service administrators perform administrative tasks for user profiles only on the Expedite/CICS system. To manage Information Exchange user profiles, you must have Information Exchange service administrator authority and you must use Information Exchange Administration Services.

Logging on to Expedite/CICS

To log on to Expedite/CICS and start a session with Information Exchange, begin in native CICS.

1. Clear the screen.
2. At the top left corner of the screen, type **LGO1**.
3. Press Enter.
Expedite/CICS displays the Expedite/CICS logon panel.

```

EXPMLG1

      @@@@
      @@
      @@  @@  @@  @@@@  @@@@  @@@@@@  @@  @@@@@@@@  @@@@
      @@@  @@  @@  @@  @  @@  @  @  @@  @@  @@  /  @@  @@  @@  @@@@
      @@  @@  @@@@  @@@  @  @  @@  @@  @@@@  /  @@  @@  @@  @@
      @@  @@  @@  @@  @@  @  @  @@  @@  @@  /  @@@@  @@  @@@@  @  @@
      @@@@  @@  @@  @@  @@@@  @@@@@@  @@  @@  @@@@@@/  @@@  @@  @@@  @@@

                                     Version 4.5.0
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                                     * Expedite is a trademark of GXS

      Account    <          >    Userid    <          >

HI202 TYPE YOUR INFORMATION EXCHANGE ACCOUNT AND USERID, THEN PRESS ENTER.
Command ===>
PF1=Help  PF3=End

```

If you are the primary service administrator for your Expedite/CICS system and this is the first time you have logged on, skip to “Performing initial administration functions” on page 35; otherwise, proceed as described below.

The steps that follow assume that your primary service administrator has already logged onto the system to perform initial customization tasks. If this is not true, contact your primary service administrator before proceeding. If this is true, proceed as described below:

4. Next to **Account**, type your Information Exchange account ID.
5. Next to **Userid**, type your Information Exchange user ID.

6. Press Enter.
Expedite/CICS displays the Information Exchange Session Start panel.

```

EXPMMN1          Expedite/CICS  Information Exchange Session Start

Account          ACCT1
Userid           USER01

Current Information Exchange password:

  Password          <          >

New password (optional):

  New password      <          >

  Verify new password <          >

HI209 TYPE YOUR INFORMATION EXCHANGE PASSWORD, THEN PRESS ENTER.

Command ===>
PF1=Help  PF3=End  PF12=CANCEL
    
```

7. Next to **Password**, type your Information Exchange password. Your password will not be visible when you type it.



CAUTION: If you are an Extended Security Option (ESO) user logging on for the first time, you must change your password as described in “Changing your password” on page 29. If you are not an ESO user, changing your password at the first log on is optional, but advisable.

8. Press Enter.

Expedite/CICS checks the information you typed and, if it is valid, issues a session start command to Information Exchange. If Information Exchange verifies your account ID, user ID, and password, Expedite/CICS displays the Main Selection Menu shown on page 31.

If Information Exchange finds an error, it sends an error message for display on your terminal. Some common errors are described in “Common logon errors” below.

Common logon errors

This topic lists some common logon errors. For a complete list of error messages and recommended actions, see *Expedite/CICS Messages*.

This value:	Indicates:
HI288	The issued session start request resulted in a non-zero response code. For response code explanations, refer to the <i>Information Exchange Interface Programming Guide</i> .
HI210	The values you typed next to New password and Verify password on the Expedite/CICS logon panel do not match.

This value:	Indicates:
HI348	The new password you specified was invalid. If you are an ESO user, the password: <ul style="list-style-type: none"> ■ Must not contain the user ID as any part ■ Must be at least six characters in length ■ Must contain at least three different characters ■ Must contain a non-numeric first and last character ■ Must contain at least one non-alphabetic character ■ Must contain at least one alphabetic character ■ Must contain only the valid characters A-Z, 0-9, and special characters #, @, and \$ ■ Must be different from the current and five previous passwords ■ Must not contain more than two identical consecutive characters ■ Must not contain more than three identical, consecutive characters from the previous passwords
HI349	The restart recovery level differs from that of original session start.
HI350	The password specified on the session start request is incorrect. Correct the password and try again.
HI351	The user ID is not known to Information Exchange.
HI352	The Information Exchange user ID has been revoked. Contact your service administrator.
HI353	A new password is required. Enter a valid ESO password.

Changing your password

The first time you log on to Information Exchange, your password is the same as your user ID. Change your password during your first session and periodically thereafter.

To change your password, begin on the Expedite/CICS logon panel.

1. Next to **Password**, type your current password.
2. Next to **New Password**, type your new password.



NOTE: If you are an ESO user, the following restrictions apply on the Information Exchange passwords you can use. Your password:

- Must not contain the user ID as any part
- Must be at least six characters in length
- Must contain at least three different characters
- Must contain a non-numeric first and last character
- Must contain at least one non-alphabetic character
- Must contain at least one alphabetic character
- Must contain only the valid characters A-Z, 0-9, and special characters #, @, and \$
- Must be different from the current and five previous passwords
- Must not contain more than two identical consecutive characters
- Must not contain more than three identical, consecutive characters from the previous passwords

If you are not an ESO user, these restrictions do not apply. Check with your Information Exchange service administrator to find out whether ESO is in use.

3. Next to **Verify New Password**, type the same password again.
4. Press Enter.

If Information Exchange accepts the information you typed, your password is changed, and your session is started.

If Information Exchange does not accept the new password, Expedite/CICS displays the panel again with an error message displayed.

After Information Exchange verifies your account ID, user ID, and password, Expedite/CICS displays the Main Selection Menu shown in “Choosing Expedite/CICS Display Application options” on page 31.

Choosing Expedite/CICS Display Application options

When using the Expedite/CICS Display Application, you choose options and fill in information on panels. The first panel you see is the Main Selection Menu, illustrated below. Each option is described in detail later in this book.

```

EXPMMMS          Expedite/CICS Main Selection Menu

Account          ACCT
Userid           USER01

Select the desired function:

1  RECEive       Work with receive data
2  SEND          Work with send data
3  LIBraries    Work with libraries and members
4  LIST         Work with distribution lists
5  USErs        Work with user administration
6  SYStem       Work with system administration
7  PASSs-through Pass-through command(s) to Information Exchange
8  ALIas        Work with alias tables
E  ESCape       Leave session ACTIVE and return to CICS
S  STArt       Restart session with Information Exchange
X  LOGoff       End session with Information Exchange

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End

```

Panel navigation and options

This topic provides general information that will help you move among the panels and functions in Expedite/CICS.

Selecting an option:

To choose an Expedite/CICS panel option, on the command line, type the entire command, an abbreviation of the command, or a letter or number corresponding to a command. For example, to Work with send data (Option 2 on the Expedite/CICS Main Selection Menu, illustrated above), on the command line, type one of the following and press Enter:

- 2
- SEN
- SEND

Moving between functions:

To move from one function directly to another, enter an equal sign plus the name of the command or option number of the function you want to use. You can bypass panels by stringing commands together, separated by a period or by one or more blank spaces. Examples of moving between functions include the following:

Type:	To do this:
=1.1	Jump to the Single Receive panel.
=S	Restart session with Information Exchange.
=2.FIL	Invoke the Send File command.
=1 3	Pass to the Stop Continuous Receive panel.



NOTE: When you use the equal sign to jump from one panel to another, any information you typed on the first panel is not saved.

Using program function (PF) keys:

The program function keys shown on a panel perform the indicated functions on that panel only. For example, on a panel with PF5=Receive and PF12=Cancel, PF5 and PF12 perform the Receive and Cancel tasks, respectively. On a different panel, these keys may perform different tasks.

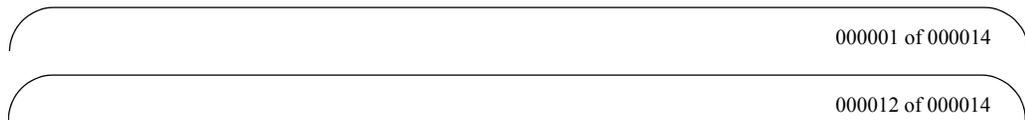
Changing your mind:

On many panels, you can restart or cancel a task as described below.

- To restart a task, use the Clear key to erase information you typed on a panel (this works until you press Enter or another PF key).
- To cancel a task, type the CANCEL command or press the Cancel PF key displayed on the panel (usually PF12). The information you typed on the current panel is not saved and Expedite/CICS displays the previous panel.

Changing the start of a list:

Some panels display lists of items for you to view or process, with the start of the list shown in the top right corner of the panel. To change the start of a list, you can type over the starting number, and then press Enter. For example, to see item 12 in a list of 14, type 12 over the numbers 01, in 000001, and then press Enter.



Logging off Expedite/CICS

There are two ways to leave Expedite/CICS. You can:

- Escape from Expedite/CICS temporarily, leaving your Information Exchange session active.
- Log off Expedite/CICS, ending your Information Exchange session.

Leaving Expedite/CICS temporarily

Use the Escape option to return to CICS temporarily, without ending your Information Exchange session. This option lets you leave Expedite/CICS to work in native CICS while Expedite/CICS keeps working for you, completing tasks already in progress. For example, a continuous receive request will remain active and continue to receive mail as it arrives in your mailbox, until you end the continuous receive or end your Information Exchange session.

You can use this option from any Expedite/CICS panel as described below.

1. On the command line, type **ESC** or **=E**.
2. Press Enter. The screen is displayed again with the message, "NATIVE CICS ENTERED - PRESS CLEAR KEY."
3. Press Clear. A blank CICS screen is displayed. You can now work in native CICS while your Information Exchange session remains active.
4. To return to Expedite/CICS and resume your Information Exchange session, follow the usual procedure for starting a session. When you log on to Expedite/CICS, you will either begin a new session with Information Exchange or be returned to your previous one. Expedite/CICS keeps track of your sessions and knows when to return to an active session and when to begin a new one.

The information in your user profile determines whether you need to type your Information Exchange password to return to Expedite/CICS.

- If your user session option for **Force user to log on** is set to **No**, you do not need to type your password and you will be returned to the Expedite/CICS session that you left active.
- If your user session option for **Force user to log on** is set to **Yes**, Expedite/CICS displays the Information Exchange Session Start panel. After you type your Information Exchange password, Expedite/CICS will start a new Information Exchange session.

For more information, see Chapter 7, "Working with user administration options."

Leaving Expedite/CICS by ending your Information Exchange session

You can use the **Logoff** option from any panel to end an Information Exchange session as described below.

1. On the command line, type **=LOGOFF** or **=X**.
2. Press Enter.

Expedite/CICS displays the Session End Confirmation panel. If any send or receive command is in progress, Expedite/CICS highlights that fact as illustrated on the panel below. The functions bracketed by arrows on the panel may be highlighted, depending on what is active when you log off. In the sample panel below, both Continuous Receive and Send Msg/File are active.

```

EXPML01          Information Exchange - Session End Confirmation

Account          ACCT
Userid           USER01

Press  ENTER    to  CONFIRM  Session End request
Press  CANCEL   to  CANCEL   Session End request

Please note that you currently have the following functions active:
      ---> Continuous Receive <---
      --->  Single Receive  <---
      --->  Send Msg/File  <---

Confirming your session end request will terminate your
interactive session. The active functions, highlighted
above, will be terminated when the activity has completed.

Command ==>
PF1=Help  PF12=Cancel

```

3. Do one of the following:
 - To cancel the logoff request and return to the Main Selection Menu, press PF12.
 - To end your session, press Enter.

Expedite/CICS attempts to end your Information Exchange session and displays the Expedite/CICS logon panel. Expedite/CICS delays submission of the session end command to Information Exchange until all in-process send and receive requests are completed. When all active requests are completed, the session end command is sent and all continuous receives are terminated.

4. If you pressed Enter to end your session, press PF3.

Expedite/CICS displays the screen again with the message, "NATIVE CICS ENTERED - PRESS CLEAR KEY."

Restarting a session

This option is provided for the times when you want to:

- Activate user session options you modified.
- Perform a restart or reset to the last commit between Expedite/CICS and Information Exchange.
- Restart in-process asynchronous send and receive requests.

To start a new session with Information Exchange, begin on the Expedite/CICS Main Selection Menu panel.

1. Select Option S, **Restart session with Information Exchange**.
2. Press Enter.

Expedite/CICS displays the Information Exchange Session Start panel.

A new session is started. You should now be able to log on to Expedite/CICS as described in “Logging on to Expedite/CICS” on page 27.

Performing initial administration functions

The first time Expedite/CICS starts up, the user profile for SYSTEM/DEFAULT is created with Expedite/CICS default values; it is assigned Expedite/CICS service administrator authority and the initial password is DEFAULT. This profile is used as a model for all new profiles created.

When Expedite/CICS is running, the primary service administrator should use the Display Application to log on as SYSTEM/DEFAULT and perform the initial administrative functions described in the procedure below.



CAUTION: The Define User Session Options panel shown in the following procedure allows you to set a number of user session options. This procedure, however, provides direction for setting only the values for the **Force user to logon** and the **Auto create user** fields. These fields should be defined soon after your system is installed; the other fields can be done later at your convenience. If you prefer to evaluate *all* the possible field entries, refer to “Getting started with user session options” on page 126, “Adding or changing user session options” on page 128, and “Working with system options” on page 168.

To perform initial administrative tasks, begin on the Expedite/CICS Main Menu Selection panel.

1. Select Option 5.2, **Changing an existing user.**

Expedite/CICS displays the Define User Session Options panel, with the SYSTEM/DEFAULT account ID and user ID already filled in, as well as the Expedite/CICS user session profile default values.

```

EXP5AD5                      Define User Session Options
For:
Account    < SYSTEM  >
Userid     < DEFAULT >

OPTIONS:

Force user to logon... < N >      Y - yes  N - no
Auto create user..... < Y >      Y - yes  N - no
Type user.....        < SA >      GA - General, SA - Service admin
Time zone.....        < W0500 >   (See Display Application manual)
Message group size... < 02 >      0 - 99
Auto logon.....       < N >      Y - yes  N - no
Send file retention... < 01 >      0 - 30 days
Receive retention.... < 01 >      0 - 30 days
Response file
  File name.....      < EXPDRE1 >  File or Program name
  File management.... < TS >      TS, TD, VS, or PG
  Process send data.... < A >      A - Asynchronously  S - Synchronously

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES

Command ==>
PF1=Help  PF3=End  PF8=Forward  PF12=Cancel
    
```

2. Set the **Force user to logon** option to specify whether a user, having left Expedite/CICS temporarily using the Escape option, must provide an Information Exchange password and restart the Information Exchange session when re-entering the Display Application.

This code: Means:

- N An Information Exchange password and session start is required only when a session does not exist. If an active session exists, Expedite/CICS bypasses the Information Exchange Session Start panel and displays the Main Selection Menu. The user logs back on to the active session and a session start is **not** performed. **N** is the recommended value.
- Y A password is required and a new session start is always performed at logon. When a new session is started, the session access key changes and Information Exchange begins archiving received messages under a new group.

3. Set the **Auto create user** option to specify whether new user profiles are created automatically using the options set in the SYSTEM/DEFAULT model user profile.

This code: Means:

Y Any valid Information Exchange user can start a session with Information Exchange using Expedite/CICS. Even if they already have an Expedite/CICS profile, a general user profile will automatically be created for the user ID, using the SYSTEM/DEFAULT model.

N Only users defined to Expedite/CICS can start a session with Information Exchange using Expedite/CICS. An Expedite/CICS service administrator must define all Expedite/CICS user profiles using the **Add** option. A user who has no Expedite/CICS profile will get an error when attempting to log on and no session start will be performed. The **N** option can be used to ensure that production IDs are not used in the test region.

4. To save your changes, press PF3.
5. To prevent these initial settings from being changed by other service administrators, change the password from DEFAULT, as described in “Changing your password” on page 29.



CAUTION: If the same user ID is used to start a session from two different systems, the second session overrides the first session and Information Exchange proceeds with the later session. This may cause a *checkpoint* failure because the counters between Expedite/CICS and Information Exchange are not the same. In addition, a session access key error may occur and messages may be delivered to a system other than the one intended. For these reasons, you should not share user IDs across systems.

Working with receive options

This chapter explains how to work with each of the options on the Expedite/CICS Receive Selection Menu panel.

The following major topics are presented:

Receiving mail overview	40
Archiving mail	41
Holding mail for later viewing	41
Issuing a single receive	41
Starting a continuous receive	54
Stopping a continuous receive	57
Viewing a list of in-process receives	59
Viewing a list of completed receives	64
Querying the Information Exchange mailbox	69
Receiving specific messages	71
Purging specific messages	72
Receiving Information Exchange system messages	73
Issuing a receive to process batch data	77
Issuing a receive for Electronic Service Delivery (ESD)	79

Receiving mail overview

You can receive mail three ways using Expedite/CICS:

- Expedite/CICS Display Application to receive data interactively
- Program interface to receive data automatically
- Batch interface for data that originates in a batch environment

For information about the program interface, refer to *Customizing and Developing Applications with Expedite/CICS*.

You can use the Expedite/CICS Display Application to issue two types of receive requests:

Single receive	A one-time request to receive mail. When all mail items matching the receive request are sent to Expedite/CICS, the receive ends.
Continuous receive	Receives mail as it arrives in your mailbox and remains active until you ask to end it or until you end your session.

Both single and continuous receive requests may be issued by any user or program to receive mail and pass it to a program, a CICS transient data queue (TDQ), a temporary storage queue (TSQ), or to a VSAM sequential data set. To increase your multiprocessing capability, you can use multiple user IDs, each actively receiving at the same time.

You can use any combination of the following criteria to select the type of mail you want to receive:

- From a specified source, which can be:
 - A single user, specified as Account/Userid or alias name
 - A list of users
 - Any (all) users
- By selecting a particular user class
- By selecting messages that are EDI only, non-EDI only, or both

You can receive all the mail in your mailbox at one time. However, receiving more than one mail type or format into a single file may complicate data management. For example, the program used to process a file containing mixed mail types would have to determine which application should process each kind of data.

If you receive all the mail in your mailbox at one time, Information Exchange automatically delivers all system messages. If you receive mail only from a specific user class or from a selected user, you must ask for system messages separately.

For more information, see “Receiving Information Exchange system messages” on page 73.

Archiving mail

Information Exchange provides a user-controlled archiving facility that causes mail to be archived when it is received. Archived mail is held in Information Exchange for the number of days specified in your Information Exchange profile.

Although there is a charge for archiving, this function should be enabled in case you need to reprocess received data. The procedure for enabling the archive service is explained in the *Information Exchange Administration Services User's Guide*. If you need help with this task, see your Information Exchange service administrator.

Holding mail for later viewing

When receiving mail item, you can request that the messages be placed on hold. You can then view them later at your convenience.

After a message is viewed, it can be released and delivered to its destination as specified by options entered on the receive panel. For information about looking at these messages, see “Viewing a list of in-process receives” on page 59.

Issuing a single receive

You can send a one-time request to Information Exchange to receive mail. When all mail items matching the receive request are sent to Expedite/CICS, the receive ends. For more information, see “Receive processing” on page 275 or refer to *Customizing and Developing Applications with Expedite/CICS*.

To receive mail from your Information Exchange mailbox, begin on the Main Selection Menu.

1. Select Option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu panel.

```

EXPMRSM          Expedite/CICS Receive Selection Menu

Account          ACCT
Userid           USER01

Select the desired function:

      1  SINGle      Issue single receive
      2  STArt      Start continuous receive
      3  STOp       Stop continuous receive
      4  PROcess    View a list of receives in process
      5  VIEw       View list of completed receives
      6  QUERy     Query the Information Exchange mailbox

      B  BATCh      Issue receive to process batch data
      S  SERvice    Issue receive for Electronic Customer Service

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End

```

2. Select Option 1, **Issue single receive.**

Expedite/CICS displays the Issue Single Receive panel. Your account ID and user ID are already filled in together with the default values from your user profile. .

```

EXPMSI1                Issue Single Receive
For:
  Account  ACCT      From: System ID..... <      >
  Userid   USER01   Account / Userid <      > <      >
                    -or- List name..... <      >
                    -or- Alias name..... <      >

                          User class..... <      > (Optional)

To:
  File name..... <      > (File or Receive program name)
  File management..... <      > (TS, TD, VS=VSAM, or PG=Program)
  File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
  File disposition..... < N > (H=Hold, N=Normal process)
  Retain header data.... < Y > (Y - Keep IE headers / N - Discard)
                               (E - Use CDH and discard IE headers)
                               (F - Use CDH and retain IE headers)
  Receive EDI..... <      > (Y - EDI only / N - NON-EDI, Blank=Both)
  Handle records as..... < V > (S-Split / W-Wrap / V-Variable data)
  Max record length..... < 00000 > (00000 - 28000 Characters)

HI308 ENTER FIELD INFORMATION AND PRESS PF5 TO RECEIVE MESSAGE(S).

Command ==>
PF1=Help  PF5=Receive  PF12=Cancel
    
```

On the Issue Single Receive panel, you describe the data you want to receive and the file in which it is to be stored or the program to which it is to be passed. Proceed as follows:

1. Type entries in the fields as needed. Field descriptions are provided in “Receive request field descriptions” on page 43. You can also refer to “Receive processing options and considerations” on page 48.
2. When you finish filling in the panel, press PF5.
Expedite/CICS informs Information Exchange that you want to start receiving mail. All data in your mailbox that satisfies the receive criteria will be received and written to the specified destination or will be passed to your user receive program. Expedite/CICS displays the message, Single receive command has been issued.
3. To return to the Receive Selection Menu panel, press PF12.
A task-completion message is displayed on whichever Display Application panel you are working on when the receive request has completed.

- To return to the Main Selection Menu, press PF3.



NOTES:

- Expedite/CICS saves the information that you type on the Issue Single Receive panel to display again if you return to the panel during the same session. The values are saved only until they are replaced by a new single receive request or you start a new session. When you start a new session, the session defaults in your user profile are used.
- You can view any mail you receive before releasing it for delivery to its receive destination by specifying **H** (Hold) in the **File disposition** field. Held mail can then be viewed from the **Process** option on the Receive Selection Menu, as described under “Viewing a list of in-process receives” on page 59. After viewing, you can purge the data or release it for delivery to the data destination that was specified in the receive request.
- You can issue as many receive requests as you want. However, Expedite/CICS issues only one single receive request to Information Exchange at a time. Subsequent requests are queued and processed one at a time. When you queue single receive requests, a task-completion message is displayed on your current panel only after all single receive requests have completed. The result of all requests can be viewed as described in “Viewing a list of completed receives” on page 64.

Receive request field descriptions

The receive request panel fields are described below.

From

Use this group of fields only if you want to receive mail sent by a specific sender or list of senders. Fill in only one of the following fields:

- Account/Userid, plus System ID if the sender is on another system
- Alias name, including alias table type and table name
- Distribution list name

To receive all messages in your mailbox, leave these fields blank.



NOTE: Starting with Information Exchange 4.4, messages marked for Forced Receive are not retrieved when these fields are left blank.

System ID	Use this field only if the sender is on a different system. The field entry consists of four characters; the letter I (Intersystem) followed by a 3-character system ID. Examples of system identifiers include EUR (Europe), IMX (Mail Exchange), USA (U.S.A.), and JPN (Japan).
Account / Userid	The account ID and user ID of the single Information Exchange user from whom you want to receive.
List name	The name of a distribution list previously defined in Information Exchange for receiving from a list of users.

Alias name An alias, which is a nickname used in place of an account ID and user ID (Information Exchange address). Alias names are maintained in alias tables, which are described in the *Information Exchange Administration Services User's Guide*.

An alias table is identified by a table type (one character) and table name (three characters). Each entry in the table consists of an alias name (up to 16 characters) and its associated Information Exchange address. The first character in an alias table definition must be one of the following table types:

This code: Is used for this alias table type:

- G Global, accessible to all Information Exchange users
- O Organizational, accessible only to members of a specific account
- P Private, accessible only by the table owner

The alias table type is followed by a 3-character alias table name and up to 16 characters for the alias name entry.

To receive mail from an account ID and user ID identified by an alias, type the alias name; for example, in the alias name GA01PARTNER, G is the table type, A01 is the table name, and PARTNER is the alias nickname.



NOTE: An alias table must be defined to Information Exchange before it can be used. If you need an alias table created or changed, ask your Information Exchange service administrator for assistance.

User class

A user class name, which is chosen by you and your trading partners to identify the kind of information contained in the files and messages that you exchange. A user class identifier is alphanumeric, left-justified, and not longer than eight characters. Examples of valid names include: PAYROLL, INVOICES, and PROGRAM1.

User classes can be used to categorize mail from different trading partners. For example, customers might send mail identified as user class CUSTOMER; while vendors might identify their mail with user class VENDOR.

You can also use this field to set an additional limitation on the kind of mail you receive by using a question mark (?) as a wild-card character. For example, typing AB2? selects all items of mail in your mailbox with a user classification beginning with AB2, and typing ?XYZ selects all mail with a user classification ending with XYZ.

File name

The name of the file in which to store your mail or of a user receive program to be called when you receive data. The following rules apply:

- If you receive mail into an extrapartition transient data queue (TDQ) or sequential VSAM file, the file must exist outside Expedite/CICS before you can receive mail into the file.
 - The file name for a TDQ is the TDQ DESTID name
 - The file name for a VSAM file is the DD (data definition) name
- When using a TDQ, you must define the TDQ in the CICS destination control table (DCT) and, if it is an extrapartition TDQ, it must also be in the CICS startup JCL. Intrapartition TDQs must be defined as logically recoverable.
- If receiving to a non-recoverable TSQ, You do not need to define the queue in CICS because Expedite/CICS will define it dynamically.
- For VSAM files, you must define the data set in the CICS file control table (FCT).

For more information about creating TDQ and VSAM entry sequenced data set (ESDS) files, see your service administrator or CICS systems programmer.

- If you specify a program name, Expedite/CICS links to this program and passes a COMMAREA, which contains the name of the TSQ where the data is stored. After the data is processed, the user receive program must delete the TSQ containing the data and return a response to Expedite/CICS. You must define the program name in the processing program table (PPT).

For more information about receive program requirements, refer to *Customizing and Developing Applications with Expedite/CICS*.

File management

The type of destination where Expedite/CICS will store the data received or the user receive program to which the data should be passed.

This code: Specifies this kind of file management:

TS	Temporary storage
TD	Transient data
VS	VSAM (ESDS only)
PG	The name of a user receive program

File type

Indicates the expected format of the sent data and how you want it handled.

This code: Specifies this file format:

A	Carriage return, line feed (CRLF). Expedite/CICS converts received data into records that are split at the CRLF delimiter, removing delimiters from the data.
B	Logical length (LL). Expedite/CICS converts received data into records that are split based on the value in the LL fields, removing delimiters from the data.

- This code: Specifies this file format:
- E Any combination of EDI data. Each data type must provide a complete message with the appropriate header and trailer.
 - For UCS and X12 data, Expedite/CICS converts received data into records that are split by EDI segment.
 - For EDIFACT and UN/TDI data, Expedite/CICS converts received data into records of 80-bytes each.
 - O Other. Expedite/CICS does not change the format of received data.

File disposition

Indicates how Expedite/CICS should process your file.

- This code: Indicates that data is:
- N Received into the destination specified on the receive panel.
 - H Placed in the hold queue. This means that when data is received, it is not written at once to the user's destination, but is held in the Expedite/CICS receive data (EXPRDAT) file.

This data can be viewed from within Expedite/CICS and, when the user is ready, the data can be released and delivered to the destination specified in the file name when the receive command was first issued. For information about how to view and release, see "Viewing a list of in-process receives" on page 59.

Retain header data

Indicates how Expedite/CICS should handle the message header that identifies the source of the data. When you receive data with a file type of LL, CRLF, or OTHER, you can specify whether or not the Information Exchange long-format message headers are to be passed to the specified destination data set or to a user receive program. If the headers are passed to the receive destination, the first Information Exchange long-format header for each mail item is written at the beginning of the data and the last Information Exchange ENDDATA header is written when the receive has ended.

Information Exchange uses the common data header (CDH) to provide additional message descriptions; for example, the record length as it was stored on the sender's system, whether the data is in binary format, or whether a record delimiter is present.

- This code: Tells Expedite/CICS to:
- Y Pass the Information Exchange long-format message headers to the file management destination for each message or file.
 - N Discard any long-format message header; do not pass to the file management destination.
 - E Use the Information Exchange CDH information to determine how to process and write the data to the file management destination. Discard the headers.

If you receive data with option E that does not contain the Information Exchange CDH, Expedite/CICS discards the header and processes the data as if the **Retain header data** field value is N.

F Use the Information Exchange CDH information to determine how to process and write the data to the file management destination. Pass headers to the file management destination.

If you receive data with option **F** that does not contain the Information Exchange CDH, Expedite/CICS passes headers to the file management destination and processes the data as if the **Retain header data** field value is **Y**.

Receive EDI

Indicates whether you want to receive the messages in your mailbox that contain EDI data, do not contain EDI data, or both.

This code: Specifies that Expedite/CICS should receive:

<u>Y</u>	Only messages that contain a CDH with the DFORMAT field specifying EDI.
N	Only non-EDI messages.
Blank	All messages.

Handle records as

Indicates how received records are to be stored.

This code: Tells Expedite/CICS to:

S	Split each data record into multiple records if it exceeds the maximum record length. Pad any records that are less than the maximum record length up to the maximum record length by adding blanks. If S is used when receiving EDI data with a File type of E , the data is first processed as detailed below, before being split further according to the maximum record length. If the Max record length field value is zero , the data is processed exactly as detailed below. <ul style="list-style-type: none"> • For EDIFACT and UN/TDI, the data is written into 80-byte records. • For X12 and UCS, the data is written split by EDI segment. • For OTHER, data is written according to the specified record length.
W	Write the data to the destination divided into continuous records (wrapped) of the size specified in the Max record length field. Pad the last record by adding blanks up to the maximum record length.
<u>Y</u>	Format the data according to the File type field value. Each record is stored individually with no padding. The maximum record length is ignored. For example, when processing LL data, the data is written based on the length of each record as identified in the two-byte logical-length characters at the beginning of each record. If the value in the File type field is O , the data is stored as it arrives from Information Exchange; thus, the record size will be the Information Exchange segment size minus the Information Exchange headers.

If the value in the **Handle records as** field is set to **S** and you are receiving EDI compressed data, the data is handled as follows:

- If **Max record length** is **0**, data will be decompressed following these rules:
 - For EDIFACT and UN/TDI, the data is split into 80-byte records.
 - For X12 and UCS, the data is split by EDI segments.

- If **Max record length** is greater than **0**, the results are unpredictable because this option is not supported by the Comm-Press product.
- If you are receiving non-EDI data and CRLF was specified on the send command, the decompression program (DCMPCICS) will remove the CRLF delimiters and start each record on column one.

Max record length

Specify the longest record you want to store. Expedite/CICS uses this field and the **Handle records as** field to determine how to pass an incoming file or message to the specified file management destination. The value in this field is numeric and is limited to 28000 bytes. If you specify a record length that is:

- Larger than the destination CICS storage can accept, Expedite/CICS truncates the data.
- Smaller than the CICS destination storage size, there will be no problem writing the record unless the destination is an extrapartition TDQ defined with a fixed record format in the destination control table (DCT).
- Zero, Expedite/CICS writes the data based on the file type.



NOTE: When using CICS/ESA 4.1 and trying to receive data that has a record length longer than the destination file can accept, **the record is not written**.

Receive processing options and considerations

This topic discusses some receive processing considerations, providing general recommendations for using the receive options and explaining how field input conflicts are resolved. Complete field descriptions are provided in “Receive request field descriptions” on page 43.

Four parameters must be considered when you use the Expedite/CICS single or continuous receive functions:

- File type
- Retain header data
- Handle records as
- Max record length

The values assigned to these parameters and the way the parameters interact affect how Expedite/CICS formats the incoming data and the processing speed at which the data is written to the receive destination. Some of these values can be specified in two places; for example, Expedite/CICS can get input for data type from both the **File type** field and from the CDH. The field discussions listed below will help you understand how field input conflicts are resolved.

- The **File type** field value may be **A**, **B**, **E**, or **O**.

Data is formatted according to the **File type** field if the value in the **Retain header data** field is **Y** or **N** and the value in the **Handle records as** field is **V**. (The value in **Max record length** is then ignored.) Using any other values in these fields can further affect how the data is written to the receive destination.

When the **File type** field value is **O**, it is recommended that the value in the **Handle records as** field be set to **S** or **W**, to write the data as continuous fixed records.

Trying to receive data with a **File type** of **A** or **B** when the data does not contain CRLF or LL delimiters will result in an error.

- The **Retain header data** field value may be **Y**, **N**, **E**, or **F**.

If the value in **Retain header data** is **F** or **E**, the information in the CDH takes precedence over all other receive options. For example, if the CDH indicates data was sent with **File type** as **LL**, and you specify receive **File type** as **O** and **Retain header data** as **F**, Expedite/CICS will use the CDH information, strip the delimiters, and receive the data as **File type B** (logical length records).



NOTE: The CDH fields that determine how to process the data are the **Record delimiter**, **Data format**, **Record format**, and **Record length**. The CDH **Record delimiter** field indicates whether data is delimited by CRLF, LLs, or is EDI-delimited. For EDI, the EDI data type is indicated in the **Data format** field.

Retain header data values of **Y** and **F** are similar to values **N** and **E**, respectively, except that with values **Y** and **F**, the Information Exchange headers are also written to the receive destination; that is, one long header at the start of a mail item and one ENDDATA header when the receive has ended. However, when data is processed as EDI data, the received Information Exchange headers are not written to the destination.

When data does not have a CDH, specifying **Retain header data** option **E** or **F** gives the same result as if option **Y** or **N**, respectively, were used.

- The **Handle records as** field value may be **S**, **W**, or **V**.

If the value in **Handle records as** is **S** or **W** and the value in the **Max record length** field is not zero, these two values will be used only if the **Retain header data** field has a value of either **Y** or **N**. In this case, the records are handled according to the value in the **Max record length** field.

For example, if data is sent with CRLF at 80 bytes and is received with:

File type = **A**, **Handle records as** = **W**, and **Max record length** = 40, the data will be wrapped at 40-byte records and not 80-byte records.

- The **Max record length** field values may range from 00000 - 28000 bytes.

The value in **Max record length** is ignored when the value in **Handle records as** is set to **V**. Specify **V** in the **Handle records as** field to store individual records when a **File type** field value of **A** or **B** is used.

Processing compressed data

There are no parameters in the receive command to specify data decompression. Expedite/CICS automatically decompresses the data based on the CDH of the data being received.

Expedite/CICS searches for the presence of 'COMM-PRESS' in the CDH. It then reads the compressed data records from the EXPRDAT file, builds a temporary storage queue, and passes this queue to the decompression program (DCMPCICS). Expedite/CICS also checks the CDH to see if this is EDI or non-EDI data and passes this information, along with the maximum record length specified, to the decompression program. DCMPCICS then writes the decompressed data to the destination specified in the receive command. Any File management type currently supported by Expedite/CICS Version 4 Release 5 can be specified when receiving data.

If writing to a temporary storage queue, a user receive program, or a transient data queue, the decompressed data must fit in one queue. Otherwise, DCMPCICS cannot decompress the data and a non-zero return code is returned to Expedite/CICS, which in turn writes a message to the log. The compressed data is held in the receive (EXPRDAT) file until action is taken to correct the problem.

If receiving compressed data, and compression/decompression support is not installed, the data is delivered uncompressed and a message is written to the log and to the trace (if trace options are set).



NOTE: If the fields are not properly set in the CDH, decompression may not take place or other unpredictable results may occur.

Processing EDI data

EDI processing occurs when either **File type** option E is specified or if **Retain Header** option E or F is specified and the CDH indicates EDI data. If data is processed as EDI data, the default processing for EDI data results in the data being written as follows:

- EDIFACT and UN/TDI data is split into 80-byte records.
- X12 and UCS data is split by EDI segment.

If the CDH is used and values have been specified in the **Record format** and **Record length** fields, these values are used to determine how the data is written.

If **File type** option E is used for EDI data and the data being received is not valid EDI data, the data is processed as though a **File type** of O was specified.

If you use an EDI translator, you may also want to consider the following:

- If the EDI translator requires that each EDI segment begin in byte 1 in fixed length records, use **Handle records as** option S (UCS and X12 data only).
- If the EDI translator does not require that each EDI segment begin in byte 1, but fixed length records are required, use the **Handle records as** option W.
- Use **Handle Records as** option ‘ only if the EDI translator supports variable length records.

The following table summarizes how receive options affect incoming data processing. An additional table clarifies the descriptions of the summary table by providing examples.

HR	MRL	FT=A, B, E, or O RH=E	FT=A or B RH=N	FT=E RH=N
Legend: HR=Handle records as, MRL=Max record length, FT=File type, RH=Retain header data				
W	00000	Process data based on CDH only; ignore all other receive options.	Separate and write data by CRLF or LL delimiters and strip delimiters from the data.	Process as EDI data.
V	00000	Process data based on CDH only; ignore all other receive options.	Separate and write data by CRLF or LL delimiters and strip delimiters from the data.	Process as EDI data.
S	00000	Process data based on CDH only; ignore all other receive options.	Separate and write data by CRLF or LL delimiters and strip delimiters from the data.	Process as EDI data. See Case 1a, page 52.

HR	MRL	FT=A, B, E, or O RH=E	FT=A or B RH=N	FT=E RH=N
W	00060	Process data based on CDH only; ignore all other receive options. See Case 1b, page 52.	Strip data delimiters and write into continuous 60-byte records. See Case 7a, page 52.	Write EDI data into continuous 60-byte records. See Case 4, page 52.
V	00060	Process data based on CDH only; ignore all other receive options.	Separate and write data by CRLF or LL delimiters; strip delimiters from the data.	Process as EDI data. See Case 5, page 52.
S	00060	Process data based on CDH only; ignore all other receive options.	Separate data by CRLF or LL and strip delimiters from the data. Split each record again using MRL = 60 and write the data. Pad partial records with blanks up to the MRL.	Format EDIFACT or UN/TDI data in 80-byte records; X12 or UCS data in EDI segments. Split each record again using MRL = 60. Pad partial records with blanks up to the MRL. See Cases 2 and 3, page 52.
W	01000	Process data based on CDH only; ignore all other receive options. See Case 12, page 53.	Strip data delimiters and write into continuous 1000-byte records. See Case 9, page 53.	Write EDI data into continuous 1000-byte records.
V	01000	Process data based on CDH only; ignore all other receive options.	Separate and write data by CRLF or LL delimiters and strip delimiters from the data. See Case 10, page 53.	Process as EDI data.
S	01000	Process data based on CDH only; ignore all other receive options.	Separate data by CRLF or LL and strip data delimiters. Split each record again using MRL = 1000 and write the data. Pad partial records with blanks up to the MRL. See Case 8, page 53.	Format EDIFACT or UN/TDI data in 80-byte records; X12 or UCS data in EDI segments. Split each record again using MRL = 1000. Pad partial records with blanks up to the MRL. Each EDIFACT or UN/TDI record will be 80 bytes of data + 920 blanks.

The following table gives examples to clarify the receive option summary provided in the previous table.

Case	Input file and receive options	Expedite/CICS formatted records
1a	EDIFACT or UN/TDI file; FT=E, RH=N, HR=S, MRL=00000	R1 = 80 bytes R1 = 17 bytes R2 = 15 bytes R3 = 48 bytes R3 = 12 bytes R4 = 60 bytes R5 = 8 bytes R5 = 2 bytes R6 = 21 bytes + 57 blanks
1b	EDIFACT or UN/TDI file; the CDH specifies EDIFACT data, which is EDI-delimited; the record length fields are blank; FT=E, RH=E, HR=W, MRL=00060	Same as 1a
2	EDIFACT or UN/TDI file; FT=E, RH=N, HR=S, MRL=00060	R1 = 60 bytes R1 = 20 bytes + 40 blanks R1 = 17 bytes R2 = 15 bytes R3 = 28 bytes R3 = 20 bytes + 40 blanks R3 = 12 bytes R4 = 48 bytes R4 = 12 bytes R5 = 8 bytes + 40 blanks R5 = 2 bytes R6 = 21 bytes + 37 blanks
3	X12 file; 106-byte header with subsequent records of 80 and 100 bytes; FT=E, RH=N, HR=S, MRL=00060	R1 = 60 bytes R1 = 46 bytes + 14 blanks R2 = 60 bytes R2 = 20 bytes + 40 blanks R3 = 60 bytes R3 = 40 bytes + 20 blanks
4	X12 file; 106-byte header with subsequent records of 80 and 100 bytes; FT=E, RH=N, HR=W, MRL=00060	R1 = 60 bytes R1 = 46 bytes R2 = 14 bytes R2 = 60 bytes R2 = 6 bytes R3 = 54 bytes R3 = 46 bytes with 14 blanks
5	X12 file; 106-byte header with subsequent records of 80 and 100 bytes; FT=E, RH=N, HR=V, MRL=00060 (ignored)	R1 = 106 bytes R2 = 80 bytes R3 = 100 bytes
6	Flat file; 125-byte header with subsequent fixed records of 28000-byte with no record delimiters; data transmission size set at 26000 bytes FT=O, RH=N, HR=V, MRL=00000	R1 = 25875 bytes R1 = 2125 bytes R2 = 23836 bytes R2 = 4164 bytes R3 = 21797 bytes R3 = 6203 bytes
7a	Flat file; fixed 30-byte records delimited by LL characters; FT=B, RH=N, HR=W, MRL=00060	R1 = 30 bytes R2 = 30 bytes R3 = 30 bytes R4 = 30 bytes R5 = 30 bytes R6 = 30 bytes
7b	Flat file, fixed 30-byte records with no record delimiters; FT=O, RH=N, HR=W, MRL=00060	Same as 7a

Case	Input file and receive options	Expedite/CICS formatted records
8	Flat file; variable records from 100 to 2500 bytes delimited by CRLF characters; first four records are 900, 1500, 450 and 2350 bytes; FT=A, RH=N, HR=S, MRL=01000	R1 = 900 bytes + 100 blanks R2 = 1000 bytes R2 = 500 bytes + 500 blanks R3 = 450 bytes + 550 blanks R4 = 1000 bytes R4 = 1000 bytes R4 = 350 bytes + 650 blanks
9	Flat file; variable records from 100 to 1500 bytes delimited by LL characters; first three records are 900, 1500, and 450 bytes; FT=B, RH=N, HR=W, MRL=01000	R1 = 900 bytes R2 = 100 bytes R2 = 1000 bytes R2 = 400 bytes R3 = 450 bytes
10	Flat file; variable records from 100 to 1500 bytes delimited by CRLF characters; first three records are 900, 1500, and 450 bytes; FT=A, RH=N, HR=V, MRL=01000 (ignored)	R1 = 900 bytes R2 = 1500 bytes R3 = 450 bytes
11	Flat file; fixed 1000-byte records with no record delimiters; FT=O, RH=N, HR=W, MRL=01000	R1 = 1000 bytes R2 = 1000 bytes R3 = 1000 bytes
12	Flat file; fixed 120-byte records with no record delimiters; the CDH specifies record format = FB, record length = 00120; FT=O, RH=E, HR=W, MRL=01000	R1 = 120 bytes R2 = 120 bytes R3 = 120 bytes
13	Flat file; fixed 60-byte records with no record delimiters; total of 320 bytes; FT=O, RH=N, HR=S, MRL=00060	R1 = 60 bytes R2 = 60 bytes R3 = 60 bytes R4 = 60 bytes R5 = 60 bytes R6 = 20 + 40 blanks
14	Flat file; fixed 1000-byte records with no record delimiters; total of 1800 bytes; FT=O, RH=N, HR=S, MRL=01000	R1 = 1000 bytes R2 = 800 + 200 blanks

Starting a continuous receive

With Expedite/CICS, you can receive mail continuously during a session; that is, you can specify to receive mail as soon as it arrives in your mailbox. While you are waiting to receive the mail you requested, you can work with other features of Expedite/CICS. For example, you can have Expedite/CICS deliver messages sent to your mailbox from a specific user that arrive during the session. While that request is active, you can use a single receive request or another continuous receive request to receive messages sent to your mailbox from a different user.

You may have more than one continuous receive request active at a time, providing each request is unique; that is, each must ask for mail from a different user or user class. You may even request a continuous receive that is a subset of another continuous receive; however, you must issue such requests in the proper order.

When a message arrives in Information Exchange, the list of active continuous receives is searched and the mail is processed by the first receive request found which specifies criteria that matches the parameters of the incoming mail.

A typical use of this strategy is to request a specific continuous receive followed by a general continuous receive. Incoming data is then processed under the appropriate receive request depending on whether it meets the specific or the general criteria. Processing for that message is then complete. The message is not processed twice.

For example, suppose you issue the following continuous receive (CR) requests:

```
CR1      To FILE1, from any user with user class ABCD
CR2      To FILE2, from ACCT1/USER01 with user class ABCD
```

Mail from ACCT1/USER01 with user class ABCD satisfies the receive criteria for both requests. Because CR1 was issued first, data is received according to the parameters in CR1 and is written to FILE1. FILE2 will not receive any data.



NOTE: Expedite/CICS receive processing is single-threaded, meaning that each user ID may receive only one item at a time. To increase multiprocessing capability, you can set up more than one Information Exchange mailbox, each having a separate Information Exchange session, and have a receive active against each mailbox at the same time. If you use multiple receives, **do not** direct them to the same file; if you do, the data will be intermixed. For more information about multiprocessing, refer to *Customizing and Developing Applications with Expedite/CICS*.

A continuous receive request is terminated only if you stop it or end your session. You can exit Expedite/CICS and CICS but, as long as your Information Exchange session is still active, a continuous receive request can keep on working. For information about leaving Expedite/CICS temporarily, see “Leaving Expedite/CICS temporarily” on page 33.

Previously active continuous receives are automatically restarted following a CICS system initialization. This is accomplished by the CICS PLT program, EXPOSTRT, which ensures all user profiles are read and restored to the position they were in at the time the CICS system shut down.



CAUTION: Continuous-receive request processing has a limitation concerning distribution lists. Expedite/CICS evaluates any inactive continuous receive request by querying your mailbox and comparing the mail in it with the request criteria. If a match is found, the activity monitor restarts the receive. However, because Expedite/CICS cannot query your mailbox at the same time to determine the contents of distribution lists, only account and user IDs that exactly match the account and user IDs defined in the criteria are received.

To receive mail that is currently in your mailbox and mail that arrives during your session, begin on the Receive Selection Menu panel.

1. Select Option 2, **Start continuous receive**.

Expedite/CICS displays the Issue Continuous Receive panel, with your account ID and user ID filled in, along with default values from your user profile.

```

EXPMM01                      Issue Continuous Receive
For:
  Account      ACCT           From: System ID..... <      >
  Userid       USER01        Account / Userid.. <      > <      >
                                     -or- List name..... <      >
                                     -or- Alias name..... <      >
                                     User class..... <      >

To:
  File name..... <      > > (File or Receive program name)
  File management..... <      > (TS, TD, VS=VSAM, or PG=Program)
  File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
  File disposition..... < N > (H=Hold, N=Normal process)
  Retain header data.... < Y > (Y - Keep headers / N - Discard)
                                     (E - Use CDH and discard IE headers)
                                     (E - Use CDH and retain IE headers)
  Receive EDI..... <      > (Y=EDI only, N=NON-EDI, Blank=Both)
  Handle records as..... < V > (S=Split / W=Wrap / V=Variable data)
  Max record length..... < 00000 > (00000 - 28000 Characters)

HI308 ENTER FIELD INFORMATION AND PRESS PF5 TO RECEIVE MESSAGE(S).

Command ==>
PF1=Help  PF5=Receive  PF12=Cancel

```

2. Type entries in the fields as needed. Field descriptions are provided in “Receive request field descriptions” on page 43, and you can also refer to “Receive processing” on page 275.

3. Press PF5.

Expedite/CICS does the following:

- a. Displays the message: CONTINUOUS RECEIVE HAS BEEN ISSUED.
- b. Receives messages currently in your mailbox that match the specified criteria and either writes them to the specified destination or calls a user-receive application. If a user receive application is called, it is linked once for every item of mail that arrives. For

more information, refer to *Customizing and Developing Applications with Expedite/CICS*.

- c. Delivers all messages meeting the specified criteria as they arrive in the mailbox.
4. To return to the Receive Selection Menu panel, press PF12.

**NOTES:**

1. Expedite/CICS saves the information that you type on the Issue Continuous Receive panel to display again if you return to the panel. The values are saved only until they are replaced by a new continuous receive request or until you start a new session. When you start a new session, the session defaults in your user profile are used.
2. After starting a continuous receive request, you can continue your session or use the **Escape** option to temporarily return to native CICS. Your continuous receive request stays active until you issue a Stop Continuous Receive command or until you end your session.

Stopping a continuous receive

You can end a continuous receive request by:

- Issuing a stop request for a specific continuous receive without ending your session.
- Ending your Information Exchange session. Any message or file in process of being received when a session end request is issued will be completed. When all outstanding receives have completed, the end continuous receive request is processed and the session end is issued.

Stopping a continuous receive without ending your session

To end a request to receive mail continuously without ending your Information Exchange session, begin on the Main Selection Menu panel.

1. Select Option 1, **Work with receive data**. Expedite/CICS displays the Receive Selection Menu panel.
2. Select Option 3, **Stop continuous receive**. Expedite/CICS displays the Stop Continuous Receives panel.

Cmd	Status	Source/Destination or Control ID	Message Class	File Type	Date	Time
S	STARTED	ACCT USER01	AFILE	O	19940101	123000
	STOPPED	ACCT USER02	UCLASS	A	19940202	124628

EXPMSCL Stop Continuous Receives Item 0001 OF 0002

Account ACCT Enter an S in the Cmd field
Userid USER01 to stop a continuous receive

HI287 ENTER THE APPROPRIATE COMMAND.

Command ==>
PF1=Help PF3=End PF12=Cancel

3. You can end one or all continuous receive requests as described below:
 - To select a specific request, in the field under **Cmd**, type **S**.
 - To end all continuous receive requests, on the command line, type *****.
4. Press Enter. Expedite/CICS ends the specified continuous receive requests and displays the message: Shut down continuous receive command has been issued. The receive will end once the mail currently being processed has been completely received.
5. To return to the Receive Selection Menu panel, press PF3.

Stopping a continuous receive by ending your session

To end a continuous receive request by ending your Information Exchange session, proceed as described below.

1. On any panel command line, type =X.
2. Press Enter.
Expedite/CICS displays the Session End Confirmation panel. If any send or receive command is in progress, Expedite/CICS highlights that fact as illustrated on the panel below. Any or all of the functions bracketed by arrows on the panel can be highlighted, depending on what is active when you log off. In the sample panel below, both Continuous Receive and Send Msg/File are active.

```
EXPML01          Information Exchange - Session End Confirmation

Account          ACCT
Userid           USER01

Press ENTER to CONFIRM Session End request

Press CANCEL to CANCEL Session End request

Please note that you currently have the following functions active:
      ---> Continuous Receive <---
      --->   Single Receive   <---
      --->   Send Msg/File   <---

Confirming your session end request will terminate your
interactive session. The active functions, highlighted
above, will be terminated when the activity has completed.

Command ===>
PF1=Help   PF12=Cancel
```

3. Do one of the following:
 - To cancel the session end request and return to the Main Selection Menu, press PF12.
 - To end your continuous receive request and your Information Exchange session, press Enter.

Expedite/CICS displays the Expedite/CICS logon panel. Expedite/CICS allows any active send and receive requests to complete and then issues a stop continuous receive request, followed by the session end request.

Viewing a list of in-process receives

The Process option on the Receive Selection Menu panel can be used to check the status of active receives and to view messages and files that other users sent to you. If you are a service administrator, you can view messages or files for all users on your system. If you are a general user, you can view only your own messages or files.

To look at a list of in-process receives, begin on the **Main Selection Menu**.

1. Select Option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu.
2. Select Option 4, **View a list of receives in process**.
Expedite/CICS displays the List of Receives in Process panel, with your account ID and user ID already filled in. All messages that are actively being received are displayed, with the most recent request listed last. To change the beginning item number, either use the scroll keys or type a new item number in the **Item nnnn of nnnn** field and press Enter.

Cmd	Userid	Status	Source/Destination or Control ID	Message Class	File Type	Date	Time
—	USER01	INCOMPLT	C0000005	X12	EDI	19940331	170224
—	USER01	INCOMPLT	ACCT3 USER03	X12	EDI	19940331	170224
—	USER01	HELD	ACCT USER01	RECEIPT	LL	19940331	163843
—	USER01	NODATA	S0000001 USER01	INVOICES	O	19940331	155911

EXPMPRCP List of Receives in Process Item 0001 of 0004

Account < ACCT > CMD Values: V=View, R=Release, H=Hold, P=Purge
 Userid < USER01 > (Values that apply differ based on status)

HI326 ENTER THE APPROPRIATE COMMAND OR A STARTING ITEM NUMBER.

Command ===>
 PF1=Help PF3=End PF5=Refresh PF12=Cancel

There can be any number of INCOMPLT control ID entries for continuous receives that are active and have received data. Also, there can be any number of HELD and NODATA entries. NODATA entries correspond to issued receives that have not yet received any data from Information Exchange.

The panel illustration above shows two examples of control entries:

- C0000005 indicates a continuous receive control ID.
- S0000001 indicates a single receive control ID.

To work on the List of Receives in Process (view) panel, proceed as described below. If you need help interpreting what you see on the panel, refer to “In-process receive status field descriptions” on page 61.

1. If you are a service administrator, type over your displayed Account / Userid with the account ID and user ID with which you want to work. These fields are protected for general users and the **Userid** field next to the **Cmd** field is displayed only for service administrators. Examples of **Account/Userid** field entries you might find useful include the following:

Account ID	User ID	Resultant listing
ACCT1	*	All entries for all users in account ACCT1.
*	*	All entries for all users.

2. In the **Cmd** field, type one of the codes explained below. If you issue a command in the **Cmd** field for a control ID entry, the command can be issued against all files associated with that control ID. If you issue a command in the **Cmd** field for a file entry, the command affects only that entry.

This code: Performs this task:

- V Views messages or files if you received them into Expedite/CICS, using a file disposition of HOLD. For more information, see “Receive request field descriptions” on page 43 and “Holding mail for later viewing” on page 41. When data is put on hold, Expedite/CICS stores it in the receive data (EXPRDAT) file, and it is held until released or purged. Messages are displayed with 79 characters per line.
- R Releases data from the hold state and attempts to deliver it to the destination specified in the receive command. If the release is successful, the status changes to RECEIVED. If an error occurs, an error message is displayed and the status indicates the error code. If you leave and re-enter this panel, the record is not displayed but it can be seen by using the **View** option. The status will be RECEIVED if successful or E-HLxxx if an error occurred.
- P Purges the control records and any data records associated with a file or message that is held or marked in error. Expedite/CICS automatically purges control records for a successfully RECEIVED file or message when the receive retention period (set in the user profile) is reached. Such deletions are done by the activity monitor, which runs periodically, as set by a service administrator. Unless the user purges them sooner, records with a status of HELD, E-HLxxx, or COMPLETE are purged by Expedite/CICS after the number of days specified in the **Not-Sent Not-Received Retention** field on the Define System Options panel. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.



NOTE: You cannot purge an entry associated with an active receive request. An incomplete data record can be purged by a system administrator if enough time has elapsed, as set in the System Options panel. Use caution when purging incomplete data records, and make sure that you understand the consequences before proceeding.

This code: Performs this task:

H Attempts to hold any data not yet received from Information Exchange. If successful, any data arriving will have status HELD and can then be handled as explained above.

The following table shows which command you can use, depending on the status of the file or message.

File Status	Valid commands			
	View	Release	Hold	Purge
HELD	X	X		X
INCOMPLT			X	X*
NODATA			X	X
RECEIVED				X
PURGED				



NOTE: Options marked with an asterisk (*) can be performed only by system administrators. You cannot purge an entry associated with an active receive request. An incomplete data record can only be purged by a system administrator if enough time has elapsed, as set in the System Options panel. Use caution when purging incomplete data records, and be sure that you understand the consequences before proceeding.

- When you finish working with a file or message, press PF3.
- To look at another message, move the cursor next to that message line.

To reset the start of the displayed list items, use the scroll keys to move a full screen, or type over the list start number (in the upper right corner of the panel) with the item number at which you want the list to begin.

In-process receive status field descriptions

The in-process receive status fields are described below. Two types of entries, Source/Destination or Control ID, are displayed as described in “Source/Destination or Control ID” on page 62.

Status

The status of a received file or message, which is valid at the time of your request. To see a status change, other than PURGED, you must leave the panel you are on and re-select it. The status indicators are described below.

This status: Means that Expedite/CICS:

HELD Received the data into the receive data (EXPRDAT) file where it is held until released or purged by the user, or until Expedite/CICS purges it after the number of days specified in the **Not-Sent Not-Received Retention** field on the Define System Options panel. Held data can be viewed.

INCOMPLT Has not completed processing the data; for a continuous receive, this means the receive is still active.

This status:	Means that Expedite/CICS:
NODATA	Issued a receive to Information Exchange but no data has been received. This status may also mean that a receive request you issued is queued to receive data from Information Exchange.
PURGED	Purged data and control records associated with the receive as requested. Control records associated with successful receives are automatically purged by the activity monitor when the receive retention period specified in the user profile is reached. This does not apply to records with status HELD, COMPLETE, OR E-HIxxx. Unless the user purges them sooner, these data and control records are purged by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. To avoid peak processing times, these purges do not take place between the times specified on the Define System Options panel.
RECEIVED	Delivered all data to the specified destination or program.

Source/Destination or Control ID

Contains one of the following:

- If the entry is a file entry, the field contains a source or destination Account/Userid. One file entry is shown for each mail item being received.
- If the entry is a control ID, the field contains an 8-character alphanumeric string; the first character, S (for single receive) or C (for continuous receive) is followed by a unique 7-digit number assigned by Expedite/CICS. Control IDs reference the control information for issued receive requests only; they do not indicate data received.

When the List of Receives in Process panel is displayed, file entries are displayed directly under the corresponding control ID entry.

Message Class

The user class designation of a file or message:

- For a control ID entry, the user class specified in a receive command
- For a file entry, the user class of a file or message received

File Type

The file format used in the receive command.

This code:	Indicates records are in:
EDI	X12, UCS, EDIFACT, or UN/TDI format
EDIFAC	EDIFACT or UN/TDI format
CRLF	CRLF format
UCS	UCS format
X12	X12 format
LL	LL format
OTHER	Some other format

Date

The date the file or message was last processed by Expedite/CICS, including those files or messages that were held and then released. The format is YYYYMMDD (Year, Month, Day); for example, 19981215 corresponds to December 15, 1998.

Time

The time of day that the file or message was last processed, including those that were held and then released. The format is HHMMSS (Hours, Minutes, Seconds); for example, 132534 corresponds to 1:25 and 34 seconds in the afternoon.

Viewing a list of completed receives

This topic describes how to view a list of Information Exchange messages and files you asked to receive and which have completed processing, without leaving Expedite/CICS. From the list, you can see the status of messages or files and can perform a few useful tasks. If you are a service administrator, you can view messages and files of all users on your system. If you are a general user, you can view only your own files and messages.

To look at a list of received mail, begin on the Main Selection Menu.

1. Select Option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu.
2. Select Option 5, **View a list of completed receives**.
Expedite/CICS displays the List of Completed Receives panel, with your account ID and user ID already filled in. All messages and files that have been received are displayed, with the most recently received listed last. To change the beginning item number, use the scroll keys or type a new item number in the **Item nnnn of nnnn** field and press Enter.

Cmd	Userid	Status	Source/Destination or Control ID	Message Class	File Type	Date	Time
—	USER01	PURGED	C0000002			19940330	140510
—	USER01	PURGED	ACCT USER01	ORDERS	EDI	19940330	140012
—	USER01	PURGED	ACCT USER02	ORDERS	EDI	19940330	140016
—	USER01	PURGED	ACCT USER03	ORDERS	EDI	19940330	140020
—	USER01	RECEIVED	S0000001		OTHER	19940330	140010
—	USER01	RECEIVED	ACCT USER01	AFILE	OTHER	19940330	140028
—	USER01	RECEIVED	ACCT2 USER01	INVOICE	OTHER	19940330	140032
—	USER01	E-HI469	S0000003		CRLF	19940330	153310
—	USER01	E-HI469	ACCT USER02	PAYROLL	CRLF	19940330	143400
—	USER01	COMPLETE	ACCT USER01		OTHER	19960722	102330

HI287 ENTER THE APPROPRIATE COMMAND.

Command ==>

PF1=Help PF3=End PF5=Refresh PF12=Cancel

For both single and continuous receives, there can be any number of control ID entries, depending on how much mail satisfying the receive criteria was in the mailbox when the command was issued and, for continuous receive, whether new mail arrives while the receive is active. Only one control ID exists, however, for each receive request issued. A control ID entry with no file entries indicates no data matched the receive criteria.

The panel illustration above shows two examples of control entries:

- C0000005 indicates a continuous receive control ID.
- S0000001 indicates a single receive control ID.

To work on the List of Completed Receives panel, proceed as described below. If you need help interpreting what you see on the panel, refer to “Completed receive status field descriptions” on page 66.

1. If you are a service administrator, type over your displayed Account / Userid with the account ID and user ID with which you want to work. These fields are protected for general users and the **Userid** field next to the **Cmd** field is displayed only for service administrators. Examples of **Account/Userid** field entries you might find useful include the following:

Account ID	User ID	Resultant listing
ACCT1	*	All entries for all users in account ACCT1.
*	*	All entries for all users.

2. In the **Cmd** field next to a field or message line, type one of the codes explained below. If you issue a command in the **Cmd** field for a control ID entry, the command can be issued against **all** files associated with that control ID. If you issue a command in the **Cmd** field for a file entry, the command affects only that entry.

- V Allows you to view only data that was marked in error during the receive and could not be delivered to the receive destination. When data is held in error, Expedite/CICS stores it in the receive data (EXPRDAT) file until it is released or purged. View displays the message with 79 characters per line.
- R Releases data from an error state and attempts to redeliver the data to the destination specified in the receive command. If the release is successful, the status changes to RECEIVED. If an error occurs, an error message is displayed and the status indicates the error code.



NOTES:

1. You cannot release data associated with a failed batch or ESD receive. This data may, however, be retrieved from the Information Exchange archive. As a last alternative, you can manually retrieve the data from the receive data (EXPRDAT) file. For more information, refer to *Customizing and Developing Applications with Expedite/CICS*.
2. A data record with Complete status can be released by a system administrator if enough time has elapsed, as set in the System Options panel. Use this option with caution and be sure that you understand the consequences before proceeding.

- P Purges the control and data records associated with a file or message. Expedite/CICS automatically purges control records for a successfully RECEIVED file or message when the receive retention period (set in the user profile) is reached. Such deletions are done by the activity monitor, which runs periodically, as set by a service administrator unless the user purges them sooner. Records associated with receive requests with status HELD, E-HIxxx, OR COMPLETE will be deleted by Expedite/CICS only after a period of four months. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.
- H Puts a file or message on hold (not valid for this option). This option is not available when viewing received mail.

The following table shows which commands you can use for a given file or message status.

File Status	Valid commands			
	View	Release	Hold	Purge
RECEIVED				X
COMPLETE		X*		X
E-HIxxx	X	X		X
PURGED				



NOTE: Options marked with an asterisk (*) can only be performed only by system administrators. A COMPLETE data record can only be released by a system administrator if enough time has elapsed, as set in the System Options panel.

3. When you finish working with a file or message, press PF3.
4. To look at another message, move the cursor next to that message line.

To reset the start of the displayed list items, use the scroll keys to move a full screen, or type over the list start number (in the upper right corner of the panel) with the item number at which you want the list to begin.

Completed receive status field descriptions

The descriptions below explain the List of Completed Receives panel status fields. Two types of entries, Source/Destination or Control ID, are displayed as described in “Source/Destination or Control ID” on page 67.

Status

The status of a received file or message, which is valid at the time of your request. To see a status change, other than PURGED, you must leave the panel you are on, and then re-select it. The status indicators are described below.

- | | |
|--------------|--|
| This status: | Means that: |
| RECEIVED | Expedite/CICS delivered all data to the specified destination or program and completed processing. |

This status:	Means that:
COMPLETE	All data was received and stored in the receive data (EXPRDAT) file. Information Exchange was notified and the message was marked as RECEIVED in Information Exchange. Expedite/CICS has not necessarily finished writing the data to the user destination. For batch and ESD receives, this status means Expedite/CICS does not yet know the result of the batch job, because the activity monitor changes the status from COMPLETE to RECEIVED or E-HLxxx between the times specified on the Define System Options panel.
E-HLxxx	<p>Error xxx occurred while processing data and the receive request failed. If received data was passed to a user receive program and processing failed in that program, the HLxxx error displayed on the panel could be a user return code returned to Expedite/CICS in the COMMAREA. For more information, refer to <i>Expedite/CICS Messages</i> (return code HI050) or <i>Customizing and Developing Applications with Expedite/CICS</i>.</p> <p>An error message is written to the problem determination log; for example, HI902 VSAM DATASET NOT IN FILE CONTROL TABLE. Data can be viewed and will remain in the receive data (EXPRDAT) file until released and successfully delivered to the receive file destination or purged, either by the user or by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field in the Define System Options panel.</p>
PURGED	Expedite/CICS purged data and control records associated with a receive request. Control records associated with successful receives are automatically purged by the activity monitor when the receive retention period specified in the user profile is reached. This does not apply to records with status HELD, COMPLETE, OR E-HLxxx. These data and control records are purged by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field in the Define System Options panel, unless the user purges them sooner. To avoid peak processing times, Expedite/CICS deletions do not take place between the times specified on the Define System Options panel.

Source/Destination or Control ID

Contains one of the following:

- If the entry is a file entry, the field contains a source or destination Account / Userid. One file entry is shown for each mail item received.
- If the entry is a control ID, the field contains an 8-character alphanumeric string; the first character, S (for single receive) or C (for continuous receive) is followed by a unique 7-digit number assigned by Expedite/CICS. Control IDs reference control information only; they do not indicate data received.

When the List of Completed Receives panel is displayed, file entries are displayed directly under the corresponding control ID entry.

Message Class

The user class designation of a file or message:

- For a control ID entry, the user class specified in a receive command
- For a file entry, user class of the file or message received

File Type

The file format used in the receive command.

This code:	Indicates records are in:
EDI	X12, UCS, EDIFACT, or UN/TDI format
EDIFAC	EDIFACT or UN/TDI format
CRLF	CRLF format
UCS	UCS format
X12	X12 format
LL	LL format
OTHER	Some other format

Date

The date the file or message was last processed by Expedite/CICS, including those files or messages held and then released. The format is YYYYMMDD (Year, Month, Day); for example, 19981215 corresponds to December 15, 1998.

Time

The time of day that the file or message was last processed, including those that were held and then released. The format is HHMMSS (Hours, Minutes, Seconds); for example, 132534 corresponds to 1:25 and 34 seconds in the afternoon.

Querying the Information Exchange mailbox

Use the Query option on the Receive Selection Menu panel to query your Information Exchange mailbox. The response is a list of all items in your mailbox. To issue the query, begin on the Main Selection Menu.

1. Select Option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu panel.
2. Select Option 6, **Query the Information Exchange mailbox**.
Expedite/CICS displays the Query Inbound Mailbox panel, with your account ID and user ID already filled in.

```

EXPMQ01                Query Inbound Mailbox                Item 000001 of 000050

Account / Userid ..... ACCT                USER02
Cmd Values..... (R=Receive Message, P=Purge Message)

--- Cmd Msg -----Sender--ID----- -Message- ---Submitted----- -Message--
  Cmd Stat Stat Sys Account  Userid  Class   Date      Time      Size
    P          ACCT   USER01  FACT3    06/20/96  16:04:10  150
    E          ACCT   USER01  FFMSG001 07/15/96  08:26:26   94
    R          ACCT   USER01          07/15/96  08:26:27   21
              ACCT   USER02  FFMSG001 05/30/96  10:52:15   27
    C          F      ACCT   USER01  FFMSG001 07/16/96  08:46:31   89
              ACCT   USER01          07/16/96  08:48:22  143
              ACCT   USER01          07/16/96  08:48:22  103
              ACCT   USER02  FFMSG001 05/30/96  10:52:15   27
    C          F      ACCT   USER01  FFMSG001 07/16/96  08:46:31   89
              ACCT   USER01          07/16/96  08:48:22  143
              ACCT   USER01          07/16/96  08:48:22  103

HI385 RECEIVE OR PURGE REQUEST HAS BEEN CANCELED.

Command ==>
PF1=Help  PF9=Refresh  PF10=More  PF12=Cancel

```

3. To refresh the list of items, press PF9.
The refreshed list displays beginning with the first item in the list.
4. When you finish viewing the list of items in your Information Exchange mailbox, press PF12.

The following status codes may display in the **Cmd Stat** field:

This code:	Indicates:
C	The command request was canceled.
E	An error occurred while processing the command.
P	The purge request was issued.
R	The receive request was issued.
blank	No command was processed for this item.

The following status codes may display in the **Msg Stat** field:

This code:	Indicates:
F	This is a Force Selective Receive item.
Y	This item is currently being received.
blank	This item is not marked for selective receive and is not currently being received.

When a mailbox query is issued, the number of items displayed depends on the data transmission size in use on the system. The panel indicates the initial number of items. In the illustration, the presence of PF10 (More) indicates there is more data for Expedite/CICS to retrieve from the Information Exchange mailbox. Each time PF10 is pressed, another command is issued and more data is retrieved. The panel item count is increased to indicate the new number of available items. When all items have been retrieved from the mailbox, PF10 is no longer displayed on the panel.

If there is more than one screen of information, the PF8(Forward) and PF7(Backward) keys display, as appropriate.

Receiving specific messages

You can selectively retrieve messages from your Information Exchange Mailbox. To do this, begin on the Query Inbound Mailbox panel.

1. Type an **R** in the **Cmd** field of each item you want to receive.
2. Press Enter.
Expedite/CICS displays the Receive a Specific Message panel.

```

EXPMPRPS                Receive a Specific Message
For:
  Account      ACCT          From: System ID..... <      >
  Userid       USER02       Account / Userid < ACCT      > < USER02      >

                               Message ID..... < FFACF1A01646199AE4E2 >

To:
  File name..... <      > (File or Receive program name)
  File management..... < > (TS, TD, VS=VSAM, or PG=Program)
  File type..... < > (A=CRLF, B=LL, E=EDI, O=Other)
  File disposition..... < > (H=Hold, N=Normal process)
  Retain header data.... < > (Y - Keep IE headers / N - Discard)
                               (E - Use CDH and discard IE headers)
                               (F - Use CDH and retain IE headers)
  Handle records as..... < > (S-Split / W-Wrap / V-Variable data)
  Max record length..... < > (00000 - 28000 Characters)

HI308 ENTER FIELD INFORMATION AND PRESS PF5 TO RECEIVE MESSAGE(S).

Command ==>
PF1=Help  PF5=Receive  PF12=Cancel

```

3. Fill in the fields in the **To** section of the panel, as required.
4. To receive the messages, press PF5.
5. To cancel this action, press PF12.
You are returned to the previous panel.

Purging specific messages

You can delete specific messages from your Information Exchange mailbox without receiving them and without logging on to Information Exchange Administration Services. To use this feature, the **User purge message** option in your Information Exchange profile must be set to **Y**.

To delete specific messages, begin on the Query Inbound Mailbox panel.

1. Type a **P** next to each message you want to purge.
2. Press Enter.
Expedite/CICS displays the Purge a Specific Message panel.

```

EXPMPRG                Purge a Specific Message

Account  ACCT          From: System ID..... <      >
Userid   USER02       Account / Userid < ACCT      > < USER02  >
                               Message ID..... < FFACF1A01646199AE4E2 >

Press  ENTER  to  CONFIRM  Purge Message request

Press  CANCEL to  CANCEL   Purge Message request

Command ==>
PF1=Help  PF12=Cancel
    
```

3. To perform the deletion, press Enter.
4. To cancel the deletion, press PF12.
You are returned to the previous panel.

Receiving Information Exchange system messages

When you ask to receive **all** the mail from your Information Exchange mailbox, you automatically receive system messages from Information Exchange. These messages are placed in the administration response file named in your Expedite/CICS user profile. As with other mail items, you can selectively receive a particular type of system message by specifying the originating account ID and user ID for that message in the receive request. Information Exchange may send you the system messages described below.

This message from Account / Userid:	Indicates this type of message:
SYSTEM *ADMIN**	Responses from commands submitted to the Administration mailbox. User class, depending on the type of response, can be ERROR, WARNING, or POS_ACK. For more information, refer to <i>Information Exchange Administration Services Mailbox Command Reference</i> .
SYSTEM ADMINGET	Responses from a request to retrieve distribution lists or alias tables. For alias table retrieves, user class equals table type plus table name plus 001 (for example, GTBL1001). For distribution lists, user class equals the list name of the distribution list received. These messages are written to the administrative response file, but if the Retain header data field is specified on the receive request, header data is also written to the destination file specified on the receive request.
SYSTEM *AUDITS*	<p>Audit retrieve records; user class equals #SAUDIT. Record size can vary, depending on the expansion level used. Information about the content of these messages is provided in the <i>Information Exchange Interface Programming Guide</i>.</p> <p> NOTE: Although the audit trail is a system message, Expedite/CICS does not write it to the administrative response file, as it does with other Information Exchange system messages, but instead, writes it to the destination specified on the receive panel.</p>
SYSTEM *ERRMSG*	Error messages and acknowledgments; no user class is supplied. Refer to the <i>Information Exchange Interface Programming Guide</i> for the format of these messages.
SYSTEM *EVENTS*	An event trail or session trace; user class will equal #ETRAIL, #STRACE, #SESSION, #RECEIVE, OR #EVENTS, depending on whether you were working with the Event Trail or Session Trace functions. These messages can show session trace data, receive trace data, and event service trails. An event service is an action for Information Exchange to take when a predefined event occurs; for example, initiate a callout. For more information, refer to the <i>Information Exchange Administration Services User's Guide</i> or the <i>Information Exchange Interface Programming Guide</i> .

This message from Account / Userid:	Indicates this type of message:
SYSTEM *LSTRSP*	Response of a list verify command; user class equals LISTS or LISTNAME depending on what type of list verify request was issued. For more information, see "Verifying a distribution list or group" on page 112.
SYSTEM *PRBRSP*	Asynchronous Probe responses; user class equals #SPROBE.
SYSTEM *TSTMSG*	Test messages (5 types); no user class is supplied. The content of these messages is provided in the <i>Information Exchange Interface Programming Guide</i> .

System message storage location

Expedite/CICS puts error, test, probe response, event, and list verify messages in your response file. This file may be a TSQ, a VSAM file, a TDQ, or a program. Audit retrieve records are sent to the file or program you specify on the receive panel. The default response file is TSQ, EXPDRE1, but this may be changed either:

- Permanently, as described in "Response file name" on page 132
- or
- For the duration of your session only, as described in "Specifying a response destination" on page 155

To receive system messages or acknowledgments, begin on the Main Selection Menu.

1. Select Option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu panel.

2. Select Option 1, **Issue single receive**.

Expedite/CICS displays the Issue Single Receive panel, with your account ID and user ID filled in, as well as other defaults from your user profile.

```

EXPMSI1                Issue Single Receive
For:
  Account   ACCT      From: System ID..... <      >
  Userid    USER01      Account / Userid <      > <      >
                    -or- List name..... <      >
                    -or- Alias name..... <      >
                    User class..... <      > (Optional)
To:
  File name..... <      > (File or Receive program name)
  File management..... <      > (TS, TD, VS=VSAM, or PG=Program)
  File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
  File disposition..... < N > (H=Hold, N=Normal process)
  Retain header data.... < Y > (Y - Keep IE headers / N - Discard)
                                (E - Use CDH and discard IE headers)
                                (F - Use CDH and retain IE headers)
  Receive EDI..... <      > (Y - EDI only / N - NON-EDI, Blank=Both)
  Handle records as..... < V > (S-Split / W-Wrap / V-Variable data)
  Max record length..... < 00000 > (00000 - 28000 Characters)

HI308 ENTER FIELD INFORMATION AND PRESS PF5 TO RECEIVE MESSAGE(S) .

Command ==>
PF1=Help  PF5=Receive  PF12=Cancel

```

3. To receive system messages, next to **From: Account / Userid**, type one of the following:

To receive:	Type:
Administration responses	*SYSTEM* *ADMIN*
Retrieve lists reponse	*SYSTEM* ADMINGET
Audit retrieve records	*SYSTEM* *AUDITS*
Error messages	*SYSTEM* *ERRMSG*
Event messages	*SYSTEM* *EVENTS*
List verify responses	*SYSTEM* *LSTRSP*
Probe responses	*SYSTEM* *PRBRSP*
Test messages	*SYSTEM* *TSTMSG*

4. Next to **File name**, type the name of a receive program or the name of a file in which to store the message. The entry in this field is required but applies only to audit records, because the other system messages are written to the response file and not to the file or program specified on the receive panel.
5. Fill in the remainder of the fields, referring to “Receive request field descriptions” on page 43, as needed.

6. Press PF5.
Expedite/CICS delivers system messages to the appropriate destination, depending on the type of system messages you are receiving.
7. To return to the Main Selection Menu, press PF3.



NOTE: All system messages are written to the response file except the audit records. Therefore, the audit system messages are the only ones that are isolated as they are written to the destination specified in the receive request. If you want to single out a particular type of system message, you must selectively receive that type of system message by using the **From: Account / Userid** and **From: User class** (if applicable) fields on the receive request.

Issuing a receive to process batch data

The Expedite/CICS Display Application batch receive function allows you to receive mail into a sequential data set in the batch environment. The batch receive function:

- Writes data received from Information Exchange to the receive data (EXPRDAT) file.
- Submits an MVS job to the JES spool, which runs procedure EXPBSUB to copy the received data into an MVS file. The output file does not have to be known to Expedite/CICS and will be created automatically if it does not already exist.



NOTE: This procedure might have a different name on your system.

Batch receive is recommended for exceptions only; if you expect to use batch processing on a regular basis, you should use Expedite Base/MVS.

The procedure that follows is primarily task-oriented; for more information, see “Batch-receive processing” on page 278.

To receive mail into a batch file, begin on the Main Selection Menu.

1. Select option 1, **Work with receive data**.
Expedite/CICS displays the Receive Selection Menu panel.
2. Select option B, **Issue receive to process batch data**.
Expedite/CICS displays the Issue Batch Receive Parameters panel, with your account ID and user ID filled in.

```

EXPBRCL          Issue Batch Receive Parameters
For:
  Account  ACCT      From: System ID      <      >
  Userid   USER01   Account / Userid <      > <      >
                                -or- List name   <      >
                                -or- Alias name  <      >
                                User class     <      >

To: File type      < O >      (A=CRLF, B=LL, E=EDI, O=Other)
    Data set name  <      >
    Retain header data < Y >      (Y - Keep IE headers / N - Discard)
                                (E - Extend/Discard / F - Extend/Keep)
    Receive EDI    <      >      (Y=EDI only, N=NON-EDI, Blank=Both)
    Handle records as < W >      (S-Split / W-Wrap / V-Variable data)
    Max record length < 00000 > (00000 - 28000 Characters)
< //USER1 JOB (XXX), . >
< //          MSGCLASS=X, CLASS=A >
< // * >
< // * >
JCL procedure name < EXPBSUB >
HI308 ENTER FIELD INFORMATION AND PRESS PF5 TO RECEIVE MESSAGE(S).

Command ==>
PF1=Help  PF5=Receive  PF12=Cancel
  
```

On the Issue Batch Receive Parameters panel, you describe the data you want to receive and the file in which the data is to be stored. Proceed as follows:

1. Type entries in the fields as needed. If you need help, see “Receive request field descriptions” on page 43. Expedite/CICS saves the information that you type on the Issue Batch Receive Parameters panel to display again if you return to the panel during the same session.



NOTE: The data set name must be the name of a sequential data set on MVS.

2. To start receiving the files, press PF5.
Expedite/CICS starts receiving the mail.
3. To return to the Receive Selection Menu panel, press PF12.
Expedite/CICS displays the Receive Selection Menu panel. The first time your display is refreshed (after Expedite/CICS completes the receive request), a message is displayed to let you know the receive from Information Exchange has completed.
4. To see the result of the submitted batch job, use the procedure provided in “Viewing a list of completed receives” on page 64. The MVS batch job output provides details about the job and can be viewed from MVS.

Use the View option to see if batch receive processing was successful. Initially, after the data is received from Information Exchange, a status of COMPLETE is indicated for data successfully received from Information Exchange. Expedite/CICS eventually updates the status to RECEIVED if the job was successful or to E-HIxxx if not. To avoid excessive reads during peak processing times, this status is updated only between the times specified on the Define System Options panel..



NOTES:

1. Expedite/CICS saves the information that you type on the Issue Batch Receive Parameters panel to display again if you return to the panel during the same session.
2. For batch, a single receive request can be written only into a sequential data set. Other alternatives for setting up Expedite/CICS batch processing are discussed in *Customizing and Developing Applications with Expedite/CICS*.

Issuing a receive for Electronic Service Delivery (ESD)

You can access service information online, instead of calling the customer support center. Using ServiceLink, you can:

- Receive notification of critical service information
- Monitor status of Authorized Program Analysis Reports (APARs) and Program Temporary Fixes (PTFs)
- Place hardware calls electronically
- Order Service Request and Delivery (SRD) electronically.

Program service for Expedite/CICS is normally sent by courier, but if you are a licensed MVS user and have a host connection to Information Exchange, you may request electronic service through ServiceLink, a feature of the Link product. Expedite/CICS works with the ServiceLink Service Request and Delivery (SRD) feature, to receive APARs and PTFs on MVS. ServiceLink delivers fixes to your Information Exchange mailbox and Expedite/CICS is used to download them to your MVS environment.

You may order either specific fixes or service packages that bundle fixes according to the system service level you specify. Once the service files are in your mailbox, you use the Electronic Service Delivery option to receive them. Expedite/CICS extracts the PTF from the user message class you specify and submits a batch job to place the requested PTF into either a sequential data set or into a member of a partitioned data set.

The *ServiceLink Overview* (SH52-0302) provides instructions for ordering CLISTS required to expand MVS PTF files. The CLIST, SLDPAC, is used to expand PTFs and to install the decompaction load utility, TRSUNPCK. Both SLDPAC and TRSUNPCK are ordered through ServiceLink.

Sending mail to other users

This chapter explains how to work with each of the options on the Send Selection Menu.

The following major topics are presented.

Sending mail overview	82
Sending files	83
Sending messages	90
Viewing a list of in-process messages and files	91
Viewing a list of completed messages and files	96
Using batch send requests	100

Sending mail overview

You can send mail through either a synchronous or asynchronous process. There are three ways to send mail when using Expedite/CICS:

- Interactive Expedite/CICS Display Application
- Program interface to send automatically
- Batch interface for data that originates in a batch environment

For more information, see *Customizing and Developing Applications with Expedite/CICS*.



NOTE: If you use Expedite/CICS on MVS and use the batch send function on a regular basis, you should consider using Expedite Base/MVS.

You can use the Expedite/CICS Display Application to:

- Send files to a specific user, a distribution list of users, or an alias name.
- Create and send free-format messages.
- Specify different user classes to categorize your data for the receiver; for example, you could specify a user class of INVOICE for invoices or PURCHASE for purchase orders.

Data sent to Information Exchange is single threaded for each user session. To increase throughput, you can set up multiple user IDs to process data in parallel.

The files you send can include unformatted data such as text files or formatted business documents, such as EDI data, purchase orders and invoices.

You can use Expedite/CICS to send data from any of the following CICS storage facilities: VSAM (ESDS) file, TDQ, and TSQ. You can send variable or fixed length data, requesting the insertion of either carriage return line feed (CRLF) for PCs or logical length (LL) delimiters if required.

For more information, see “Send processing” on page 281.

Sending files

To send a file to another user or to a list of users, begin on the Main Selection Menu.

1. Select Option 2, **Work with send data**.
Expedite/CICS displays the Send Selection Menu.
2. Select Option 1, **Prepare to send a file**.
Expedite/CICS displays the Send File Request panel, with your account ID, user ID, and any default values from your user profile already filled in.

```

EXPMFIl                      Send File Request
For:
  Account    ACCT              To:  System ID..... <      >
  Userid     USER01           Account / Userid.. <      > <      >
                                     -or- List name..... <      >
                                     -or- Alias name..... <      >

From:
  File name..... <      >
  File management..... <      > (TS, TD, VS=VSAM)
  File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
  Compression..... <      > (N=No, Y=Yes, T=Table driven)
  File disposition..... <      > (H=Hold, N=Normal process, P=Priority)

Options:
  Acknowledgment..... <      > (Blank, R, or A - F)
  User class..... <      > (Optional)
  Verify before send.... <      > (Y - Yes, N - No, F - Forward)
  Message retention..... <      > (Retain 0 - 180 Days, if undelivered)
  Force Receive Criteria <      > (Y - Yes, N - No)
  File description

<                                     >
HI309 ENTER FIELD INFORMATION AND PRESS PF4 TO SEND MESSAGE(S).

Command ==>
PF1= Help  PF4=Send  PF12=Cancel

```

On the Send File Request panel, describe the file you want to send and the send options you want to use. Proceed as follows:

1. Type entries in the fields as needed. If you need help, see “Send request field descriptions” on page 84.
2. When you finish filling in the panel, press PF4.
When Expedite/CICS successfully writes the file to the send data (EXPSDAT) file, a message is displayed to let you know the file has been sent.



NOTE: If the **Process send data** option in your user profile is set to **A** (Asynchronous), this message does not mean the file has actually been sent to Information Exchange but indicates only that the file is queued for sending.

For more information about asynchronous processing, see “Send processing” on page 281. For more information about file status, see “Viewing a list of in-process messages and files” on page 91 and “Viewing a list of completed messages and files” on page 96.

- To return to the Send Selection Menu, press PF12.



NOTES:

- Expedite/CICS saves the information you type on the Send File Request panel to display again if you return to the panel during the same session. The next time you start a session, the default values from your user profile are displayed.
- If you change your mind after you send a file, you can cancel the send request, as long as the recipient has not yet received the file. For more information, see "Cancel (SDICNCL) pass-through command" on page 223.

Send request field descriptions

Use the following field descriptions as needed.

To

Fill in **only one** of the following choices:

- Account / Userid plus System ID if the receiver is on a different system
- Alias name, including alias table type and table name
- Distribution list name



NOTE: When sending EDI data (**File type = E**), you must leave the **To** fields blank because the recipient's Information Exchange address is determined from both the EDI data and the Expedite/CICS translate table.

System ID	Use this field only if the receiver is on a different system. The field entry consists of four characters; the letter I (intersystem) followed by a three-character system ID. Examples of system identifiers include EUR (Europe), IMX (Mail Exchange), USA (U.S.A.), and JPN (Japan).
Account / Userid	Type the account ID and user ID of the single user to whom you want to send.
List name	To send to a list of users, type the name of a previously created distribution list. For more information, see "Getting started with distribution lists" on page 102.
Alias name	Type an alias, which is a nickname used in place of an account ID and user ID (Information Exchange address). Alias names are maintained in alias tables, which are described in the <i>Information Exchange Administration Services User's Guide</i> . An alias table is identified by a table type (one character) and table name (three characters). Each entry in the table consists of an alias name (up to 16 characters) and its associated Information Exchange address. The first character in an alias table definition must be one of the following table types: This code: Is used for this alias table type: G Global, accessible to all Information Exchange users O Organizational, accessible only to members of a specific account

P Private, accessible only by the table owner

The alias table type is followed by a 3-character alias table name and up to 16 characters for the alias name entry.

To send mail to an account ID and user ID identified by an alias, type the alias name; for example, in the alias name, GA01PARTNER, G is the table type, A01 is the table name and PARTNER is the alias nickname.



NOTE: An alias table must be defined to Information Exchange before it can be used. If you need an alias table created or changed, ask your Information Exchange service administrator for assistance.

File name

Indicates the name of a CICS storage facility from which data will be sent. If you are sending from:

- A temporary storage queue (TSQ), enter the TSQ name.
- A transient data queue (TDQ), enter the TDQ name. This TDQ name must be defined in the CICS destination control table (DCT) and, if it is an extrapartition data set, it must also be entered in the CICS startup JCL.
- A VSAM file, enter the VSAM data set name. This data set name must be defined in the CICS file control table (FCT). T

File management

Indicates the type of location that contains the data you want Expedite/CICS to send to Information Exchange:

This code: Specifies this kind of file management:

TS	Temporary storage
TD	Transient data
VS	VSAM (ESDS only)

File type

Specifies the format of the data records or whether record delimiters should be added.

This code:	Specifies this file format:
A	Carriage return, line feed (CRLF) format. Expedite/CICS delimits each record in the file being sent with CRLF characters.
B	Logical length (LL) format. Expedite/CICS prefixes each record from the file to be sent with LL characters, which contain the length of the record.
E	EDI-formatted data (X12, UCS, EDIFACT, or UN/TDI). The file can contain any combination of X12, EDIFACT, UCS, or UN/TDI data; however, each must be a complete message with the appropriate header and trailer. The recipient destination is determined from the EDI envelope within the data using the Expedite/CICS translate table to resolve the destination if necessary. Therefore, the To fields on the panel must be blank.
O	Other data type. Use this option to send the data without additional formatting; that is, you do not want to add delimiters.

Compression

Specifies whether compression is applied to your data.

This code:	Specifies:
Y	Compress.
N	Do not compress.
T	Use the lookup table. If the sender/receiver pair is found in the table and Compress equals Y , then compress. If Compress equals N or the sender/receiver pair is not found, then do not compress.



NOTES:

1. Logical length format data (**File type** of **B**) is not supported by the Comm-Press product. Expedite/CICS will return a message if it is trying to compress data and this file type is specified.
2. Non-EDI data will be marked as binary data, (**File type** of **O**) in the CDH after compression takes place. Other fields set in the CDH are:
 - COMPSOFT** Software used for compression (COMM-PRESS).
 - COMPSVER** Version of compression software used.
 - COMFNAME** Compressed file name. This is the name of the temporary storage queue where the compression program will write the compressed data.

File disposition

Indicates how Expedite/CICS should process your file.

This code:	Indicates Expedite/CICS should:
<u>N</u>	Put the file in the send queue for normal priority sending to Information Exchange.

This code:	Indicates Expedite/CICS should:
H	Hold the data in the send data (EXPSDAT) file, pending release. This data can be viewed, purged, or released, as described in “Viewing a list of in-process messages and files” on page 91.
P	Put the file in the send queue for immediate processing, ahead of any queued send requests marked N .

Acknowledgment

Indicates what kind of acknowledgment you want placed in your Information Exchange mailbox for a sent file. Your options include:

- Receive no acknowledgment. Leave the field blank.
- Receive a single acknowledgment.

This code: Will send this single acknowledgment when:

R	Data arrives in the Information Exchange mailbox.
A	Information Exchange purges your data from recipient mailbox. If the recipient does not ask to receive it within the specified retention period, Information Exchange purges the data. If this occurs, you might need to resend the data.
D	Information Exchange delivers the data to the recipient.

- Receive a combination of acknowledgments.

This code: Will send this combination of acknowledgments when:

B	Data is received in the Information Exchange mailbox and when Information Exchange delivers the data.
C	Data is received in the Information Exchange mailbox and if Information Exchange purges the data after the specified retention period.
E	Information Exchange either delivers the data to the recipient or purges the data after the specified retention period.
F	Data is received in the Information Exchange mailbox, and when Information Exchange either delivers the data to the recipient or purges the file after the specified retention period. This is a combination of B , C , and E .

User class

Identifies the kind of data you are sending to the recipient.

A user class is a definition chosen by you and your trading partners to identify the kind of information contained in files and messages that you exchange. A user class identifier is alphanumeric, left-justified, and not longer than eight characters. Examples of valid names include: PAYROLL, INVOICES, and PROGRAM1.

User classes can be used to categorize mail sent to different trading partners. For example, customers might send mail identified as user class CUSTOMER, while vendors might identify their mail with user class VENDOR.

**NOTES:**

1. When you send a free format message using the Display Application, user class FFMSG001 is assigned to the message unless you specify a user class name.
2. If a file you send has a **File type** of **E** (EDI data) and you leave the **User class** field blank, Expedite/CICS inspects the EDI data and assigns a user class according to data type (X12, UCS, EDIFACT, or UN/TDI). If the EDI data element containing the user class is longer than eight characters, only the first eight are used.
 - For EDIFACT data, the user class is taken from the **Application Reference** field. If that EDI data element is omitted, #EE is assigned as the user class.
 - For UN/TDI data, the user class is taken from the **Application Reference** field. If the EDI data element is omitted, #EU is assigned as the user class.
 - The user class cannot be derived from within X12 or UCS data. X12 data is assigned user class #E2, and UCS data is assigned user class #EC.

Verify before send

Specifies whether a destination address should be validated before a file is sent to it.

Expedite/CICS issues an Information Exchange Probe command to verify addresses as described below.

- Account IDs, user IDs, and alias names are checked to see if they exist on Information Exchange.
- If a distribution list exists on Expedite/CICS, it is uploaded to Information Exchange and then the file is sent. Because there is no check to verify that IDs in an Expedite/CICS distribution list are valid, it is recommended that you:
 - Use Information Exchange Administration Services to define the list.
 - Do not use the **Verify before send** field for Expedite/CICS distribution lists.

- If a list is a permanent list on Information Exchange, the PROBE command will verify its existence. The IDs included in such a list are usually valid because Information Exchange does not allow creation of an Information Exchange list with invalid values, unless the ID is on another system.

This code: Tells Expedite/CICS to:

- | | |
|----------|---|
| <u>N</u> | Send the file without verifying the address. If the destination is not valid, a system error message will be placed in your mailbox. Expedite/CICS marks the file as SENT. |
| Y | Validate the address. If the address is known to Information Exchange, the file is sent. If the Probe command response is negative or deferred, Expedite/CICS does not send the file, and returns an error message. A deferred response means Information Exchange could not immediately verify the address because, for example, the destination address is on a different system. |
| F | Validate the address. If the Probe command response is deferred, as explained under value Y above, Expedite/CICS still sends the file. |



NOTE: Verifying destination addresses before sending increases processing time. If you consistently send to a destination you have already validated, set the value of the **Verify before send** field to **N** (No).

Message retention

Specifies the number of days (0 - 180) you want Information Exchange to store sent data in a recipient's mailbox. After the specified number of days passes, data that has not been received is purged. A value of zero is converted to 30 days, the Information Exchange default.

Force receive criteria

Indicates whether the recipient must provide specific criteria related to your file in order to receive it. This can be used, for example, to help ensure that your file is not overlooked by the recipient during receives. If you specify **Y** in this field, the file cannot be received until the recipient provides the specific receive criteria that apply to the file.

File description

Describes the Information Exchange CDH control information for this file. You may enter up to 75 characters.

Viewing a list of in-process messages and files

You can check the status of messages and files in the process of being sent. You can also view files that were put on hold before being sent and can change the way some files are handled before being sent. If you are a service administrator, you can check the status of files and messages for all users on your system. If you are a general user, you can only check the status of your own messages and files.

To view the status of your files or messages, begin on the Main Selection Menu.

1. Select Option 2, **Work with send data**.
Expedite/CICS displays the Send Selection Menu.
2. Select Option 3, **View a list of sends in process**.
Expedite/CICS displays the List of Sends in Process panel with your account ID and user ID already filled in. All messages and files that are in the process of being sent are displayed, with the most recent request listed last. To change the beginning item number, use the scroll keys or type a new item number in the **Item nnnn of nnnn** field and press Enter.

EXPMPSEP		List of Sends in Process					Item 0001 of 0005	
Account	< ACCT >	CMD Values: V=View, R=Release, H=Hold, P=Purge						
Userid	< USER01 >	(Values that apply differ based on status)						
Cmd	Userid	Status	Source/Destination or Control ID	Message Class	File Type	Date	Time	
_	USER01	ACTIVE	ACCT USER001	PAYROLL	OTHER	19940330	140010	
_	USER01	PRIORITY	ACCT2 USER005	ORDERS	UN/TDI	19940330	140043	
_	USER01	NORMAL	ACCT4 USER111	INVOICE	X12	19940330	140032	
_	USER01	NORMAL	ACCT10 USER00	INVOICE	CRLF	19940330	140038	
_	USER01	HELD	ACCT USER01	ORDERS	UCS	19940329	120006	
HI326 ENTER THE APPROPRIATE COMMAND OR A STARTING ITEM NUMBER.								
Command ==>								
PF1=Help PF3=End PF5=Refresh PF12=Cancel								

This panel displays information about files or messages that are currently active or are in process. There is only one type of entry on the List of Sends in Process panel and it corresponds to each file being sent. One entry is displayed for each message or file or EDI interchange being sent to Information Exchange.

Because only one item of mail at a time can be sent to Information Exchange for each user, there will be only one item with ACTIVE status on the List of Sends in Process panel. However, there can be any number of NORMAL or PRIORITY entries for send requests that have been issued but are being queued for sending. Likewise, there can be any number of HELD entries listed.

To work on the List of Sends in Process panel, proceed as described below. If you need help interpreting what you see on the panel, see “In-process send status field descriptions” on page 93.

1. If you are a service administrator, type over your displayed Account/Userid with the account ID and user ID with which you want to work. These fields are protected for general users and the **Userid** field next to the **Cmd** field is displayed only for service administrators. Examples of **Account/Userid** field entries you might find useful include the following:

Account ID	User ID	Resultant listing
ACCT1	*	All entries for all users in account ACCT1.
*	*	All entries for all users.

2. In the **Cmd** field adjacent to a file or message line, type one of the codes explained below.

This code: Performs this task:

V Allows you to view only held data (**File disposition** equals **H**). To view records that have been completed, see “Viewing a list of completed messages and files” on page 96. The View option displays messages at 79 characters per line.

R Releases and attempts to send to Information Exchange any data that was held after a send request to Information Exchange.

P Purges queued or held data that is not yet active. That is, Expedite/CICS has not started to send the data but has stored it in the send data (EXPSDAT) file. The send data and control records are removed from the Expedite/CICS data sets. Records with status HELD or E-HIxxx are purged by Expedite/CICS after the number of days specified in the **Not-Sent Not-Received Retention** field in the Define System Options panel. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.

H Puts a message or file on hold. This option holds queued data which has not yet become active; that is, Expedite/CICS has not started to send the data but has queued it in the send data (EXPSDAT) file. Using this option changes the file status to HELD and the file can then be dealt with as explained above. When data is held, Expedite/CICS stores it in the send data (EXPSDAT) file until it is released or purged.

The following table shows which command you can use depending on the status of the file or message.

File Status	Valid commands			
	View	Release	Hold	Purge
ACTIVE				
PRIORITY			X	X
NORMAL			X	X
HELD	X	X		X
INCOMPLT			X	
RELEASED				X
PURGED				

- When you finish working with your files or messages, press PF3. Expedite/CICS displays the Send Selection Menu.
- To look at another message, move the cursor next to that message line.

To reset the start of the displayed list items, use the scroll keys to move a full screen, or type over the list start number in the upper right corner of the panel with the item number at which you want the list to begin.

In-process send status field descriptions

The descriptions below explain the List of Sends in Process panel status fields.

Status

The status of a send file request, which is valid at the time of your request. To see a status change, other than purge, you must leave the panel you are on, and then re-select it. The status indicators are described below.

This status:	Means that:
ACTIVE	An entire file or message was written to the Expedite/CICS send data (EXPSDAT) file, and Expedite/CICS is in the process of sending the data to Information Exchange.
PRIORITY	An entire file or message was written to the Expedite/CICS send data (EXPSDAT) file, and Expedite/CICS has queued the data for sending to Information Exchange. Priority processing was requested.
NORMAL	An entire file or message was written to the Expedite/CICS send data (EXPSDAT) file, and Expedite/CICS has queued the data for sending to Information Exchange. Normal processing was requested.
HELD	An entire file or message was written to the Expedite/CICS send data (EXPSDAT) file. Sending the data to Information Exchange has been suspended. Expedite/CICS will hold the data until the data is released or purged by the user or until Expedite/CICS purges it. Held data can be viewed.

This status:	Means that:
INCOMPLT	Expedite/CICS is moving the file or message to the send data (EXPSDAT) file.
RELEASED	A held file was released and queued for sending to Information Exchange with the priority requested.
PURGED	Expedite/CICS purged data and control records associated with a send request as requested. Control records associated with successful sends are automatically purged by the activity monitor when the retention period specified in the user profile is reached. This does not apply to records with status HELD or E-HLxxx. These data and control records are purged by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field in the Define System Options panel, unless the user purges them sooner. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.

Source/destination or Control ID

The source or destination address of the file being sent. This will be one of the following:

- Account and user ID (with system ID, if appropriate)
- Alias table type, table name, and alias name
- Distribution list name

There will be one file entry for each file or EDI interchange being sent to Information Exchange.

Message Class

The user class designation of a sent message or file.

File Type

The file format used in the send command.

This code:	Indicates records are in:
EDI	X12, UCS, EDIFACT, or UN/TDI format
EDIFAC	EDIFACT or UN/TDI format
CRLF	CRLF format
UCS	UCS format
X12	X12 format
LL	LL format
OTHER	Some other format

Date

The date that the file or message was last processed by Expedite/CICS, including those files or messages that were held and then released. The format is YYYYMMDD (Year, Month, Day); for example, 19981215 corresponds to December 15, 1998.

Time

The time of day that the file or message was last processed, including those that were held and then released. The format is HHMMSS (Hours, Minutes, Seconds); for example, 132534 corresponds to 1:25 and 34 seconds in the afternoon.

Viewing a list of completed messages and files

You can view the status of files and messages that were sent or send requests that resulted in an error. If you are a service administrator, you can look at the list of messages and files for all users on your system. If you are a general user, you can look at only your own messages and files.

To view a list of completed messages and files, begin on the Main Selection Menu.

1. Select Option 2, **Work with send data**.
Expedite/CICS displays the Send Selection Menu.
2. Select Option 4, **View a list of completed sends**.
Expedite/CICS displays the List of Completed Sends panel, with your account ID and user ID already filled in. All messages and files that were sent successfully or which are marked in error are displayed, with the most recently completed request listed last. To change the beginning item number, use the scroll keys or type a new item number in the **Item nnnn of nnnn** field and press Enter.

EXPMSEC		List of Completed Sends					Item 0001 of 0004	
Account	< ACCT >	CMD Values: V=View, R=Release, H=Hold, P=Purge						
Userid	< USER01 >	(Values that apply differ based on status)						
Cmd	Userid	Status	Source/Destination or Control ID	Message Class	File Type	Date	Time	
—	USER01	SENT	ACCT USER001	PAYROLL	OTHER	19940330	140013	
—	USER01	SENT	ACCT2 USER005	ORDERS	UN/TDI	19940330	140048	
—	USER01	PURGED	ACCT4 USER111	INVOICE	LL	19940330	140103	
—	USER01	E-HI508	ACCT10 USER00		X12	19940330	152222	
HI287 ENTER THE APPROPRIATE COMMAND.								
Command ==>								
PF1=Help PF3=End PF5=Refresh PF12=Cancel								

This panel displays information about messages or files that have completed send processing. Only completed send requests are displayed on the List of Completed Sends panel. One entry is displayed for each message or file that you attempted to send to Information Exchange. There can be any number of file entries for each status displayed on the panel.

To work with a file or message on the List of Completed Sends panel, proceed as described below. If you need help interpreting what you see on the panel, see “Completed send status field descriptions” on page 98.

1. If you are a service administrator, type over your displayed Account/Userid with the account ID and user ID with which you want to work. These fields are protected for general users and the **Userid** field adjacent to the **Cmd** field is displayed only for service administrators. Examples of **Account/Userid** field entries you might find useful include the following:

Account ID	User ID	Resultant listing
ACCT1	*	All entries for all users in account ACCT1.
*	*	All entries for all users.

2. In the **Cmd** field next to a file or message line, type one of the codes explained below.

This code: Performs this task:

V Allows you to view only data that is marked in error. To view data that was put on hold, see “Viewing a list of in-process messages and files” on page 91. The View option displays the data at 79 characters per line.

When a send request using asynchronous processing fails, Expedite/CICS stores the data in the send data (EXPSDAT) file where it is marked in error and held until released or purged. When a send request using synchronous processing fails, Expedite/CICS does not keep the data; so, there is no data to be viewed.

R Releases an asynchronous send request that failed because of an unrecoverable error. This option attempts to resend the file or message to Information Exchange.



NOTE: Failed synchronous send requests can not be released using this option. You must reissue the send request.

P Purges control and data records associated with the send request from the Expedite/CICS data sets. Send request control records associated with successful send requests are automatically purged by Expedite/CICS when the send retention period (set in the user’s profile) is reached. Such deletions are done by the activity monitor, which runs periodically as set by a service administrator. Unless the user purges them sooner, records associated with send requests with a status of HELD or E-HLxxx will be deleted by Expedite/CICS after the number of days specified in the **Not-Sent Not-Received Retention** field on the **Define System Options** panel. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.

H Not a valid option for this panel.

The following table shows which commands you can use for each file or message status.

File Status	Valid commands			
	View	Release	Hold	Purge
SENT				X
E-HLXXX	X	X		X
PURGED				
RELEASED				X

- When you finish working with a message, press PF3. You can press PF3 at any time while you are looking at messages.
- To look at another message, move the cursor next to that message line.

To reset the start of the displayed list items, use the scroll keys to move a full screen, or type over the list start number (in the upper right corner of the panel) with the item number at which you want the list to begin.

Completed send status field descriptions

The descriptions below explain the List of Completed Sends panel status fields.

Status

The status of a completed send request, which is valid at the time of your request. To see a status change, other than PURGED or RELEASED, you must leave the panel you are on, and then re-select it. The status indicators are described below.

This status:	Means that Expedite/CICS:
SENT	Successfully sent a message or file to Information Exchange.
E-HLxxx	Encountered error xxx while processing data and the send request failed. Expedite/CICS writes a message to the log; for example, HI508 UNABLE TO ACCESS SEND CONTROL RECORD. For asynchronous processing, Expedite/CICS will retry an issued command that produced a recoverable error; for example, HI462 (see <i>Expedite/CICS Messages</i>). For unrecoverable errors, the file is marked in error and the data in the send data (EXPSDAT) file is not purged. This data can be viewed and will remain in the EXPSDAT file until released and successfully sent to Information Exchange or purged either by the user or by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. For synchronous processing, if an error is encountered, the data is purged from the send data (EXPSDAT) file, the control record is marked in error and kept, until purged by the user or by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. The user must resend the file.
RELEASED	Released a message or file that was held due to an asynchronous send request error, and has been queued for sending to Information Exchange.

This status:	Means that Expedite/CICS:
PURGED	Purged data and control records associated with a send request as requested. Control records associated with successful sends are automatically purged by the activity monitor when the retention period specified in the user profile is reached. This does not apply to records associated with requests with status E-HIxxx or HELD. These data and control records are purged by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field in the Define System Options panel, unless the user purges them sooner. To avoid peak processing times, Expedite/CICS purges do not take place between the times specified on the Define System Options panel.



NOTE: The value in the **Process send data** field on the Define User Session Options panel determines whether send processing is synchronous or asynchronous. This value may be changed as needed. Changing the value will not affect send requests already issued.

Source/Destination or Control ID

The source or destination address of the send file request. This will be one of the following:

- Account and user ID (with system ID, if appropriate)
- Alias table type, table name, and alias name
- Distribution list name

There will be one file entry for each file or EDI interchange sent to Information Exchange.

Message Class

The user class designation of a sent message or file.

File Type

The file format used in the send command.

This code:	Indicates records are in:
EDI	X12, UCS, EDIFACT, or UN/TDI format
EDIFAC	EDIFACT or UN/TDI format
CRLF	CRLF format
UCS	UCS format
X12	X12 format
LL	LL format
OTHER	Some other format

Date

The date the file or message was last processed by Expedite/CICS, including those files or messages that were held and then released. The format is YYYYMMDD (Year, Month, Day); for example, 19981215 corresponds to December 15, 1998.

Time

The time of day that the file or message was last processed, including those that were held and then released. The format is HHMMSS (Hours, Minutes, Seconds); for example, 132534 corresponds to 1:25 and 34 seconds in the afternoon.

Using batch send requests

The Expedite/CICS batch send function enables you to submit a batch job (outside of CICS) that sends a data set to Information Exchange.

1. The batch job submitted calls a batch send program that places the data set to be sent into an Expedite/CICS VSAM file which is defined as read only to CICS.
2. An online CICS transaction, accessible through the Display Application System Options panel, runs at intervals defined by an Expedite/CICS service administrator to pick up the data from this VSAM file and send it to Information Exchange, using the Expedite/CICS send procedure and information found in the user profile. This may be a synchronous or asynchronous process.
3. The online batch send program returns the status of the batch send request to the batch program, and this is displayed in the job output.



NOTES:

1. The final status of the batch send request can be seen using the Display Application View option. For more information about the batch send function including processing details, and how to customize and use the sample batch send JCL, refer to *Customizing and Developing Applications with Expedite/CICS*.
2. Whether or not destination addresses are validated before sending depends on the setting in the **Verify before send** field on the Define Default Send File Parameters panel in the user profile.

Working with distribution lists

This chapter provides procedures for creating, maintaining, and using distribution lists to send and receive messages and files. A distribution list is a list of users to whom mail is sent and from whom mail is received. For example, if you regularly send the same invoice information to various offices of a company, the mail can be sent to all the offices at one time by using a previously created distribution list. You can also receive all mail at one time from the members of a particular list. You use a distribution list to:

- Send mail to all users on the list by using a list name in a send request, instead of an account ID and user ID, or alias name.
- Receive mail from all users on the list by using a list name in a receive request, instead of an account ID and user ID or alias name.

The following major topics are presented:

Getting started with distribution lists	102
Adding or changing a distribution list	103
Deleting entries from a distribution list	107
Erasing a distribution list	108
Copying a distribution list	109
Viewing a distribution list	110
Listing distribution lists	111
Verifying a distribution list or group	112
Uploading a distribution list	114

Getting started with distribution lists

Distribution lists are considered to be either temporary or permanent, depending on where they are maintained. A permanent list, one which is maintained in Information Exchange, can be created only by using Information Exchange Administration Services as explained in the *Information Exchange Administration Services User's Guide*. On the other hand, in Expedite/CICS, you can create distribution lists that are automatically uploaded to Information Exchange the first time you use them in a session. Such lists are temporary with respect to Information Exchange because, when you end your Expedite/CICS session, Information Exchange discards any lists that you uploaded.



NOTE: If you upload a list to Information Exchange and then modify that list in Expedite/CICS during the current session, you must manually upload the modified list to Information Exchange in order for the revisions to be recognized in the current session.

To work with distribution lists, begin on the Main Selection Menu.

1. Select Option 4, **Work with distribution lists**.

Expedite/CICS displays the List Selection Menu, with your account ID and user ID already filled in.

```
EXPMDSM          Expedite/CICS List Selection Menu

Account          ACCT
Userid           USER01

Select the desired function:

      1  ADD           Add entries to a list
      2  DElete       Delete entries from a list
      3  ERase        Erase an existing list
      4  COpy         Copy an existing list
      5  VIEW         View an existing list
      6  LISt         List all distribution lists
      7  VERify       Verify a distribution list or group
      8  UPLoad       Upload a list to Information Exchange

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==> PF1=Help  PF3=End
```

2. Select the option associated with the task you want to perform and press Enter. The procedures that follow provide the details of performing each task.

Adding or changing a distribution list

You can create as many temporary distribution lists in Expedite/CICS as you need, and can then add, delete, or change entries. However, you can upload only 50 lists to Information Exchange in a session. Because there is a limit on the number of temporary lists you can upload during a session and because Information Exchange validates distribution list entries, you may want to use Information Exchange Administration Services to add an often-used list permanently to Information Exchange.

When you add or change entries in a distribution list, Expedite/CICS does not validate account IDs and user IDs. However, when you try to use the list, Information Exchange checks to see that each entry corresponds to a registered user. If your list includes unrecognized IDs, Information Exchange places a system error message in your mailbox.

To verify a distribution list, use the **Verify** option on the List Selection Menu (explained in “Verifying a distribution list or group” on page 112.)

To create or change a distribution list, begin on the List Selection Menu.

1. Do one of the following:
 - Select Option 1, **Add entries to a list**.
 - a. Expedite/CICS displays an intermediate panel (similar to the one shown on page 115) which prompts you for the name of a list.
 - b. Type the name of the list you want to add or change.
 - To bypass the intermediate panel, on the command line, type **ADD/listname**, where *listname* is the name of the list you want to add or change.

If the list entry is for:	In field(s):	Type:
An alias name	Table Type	G, O or P
	Table ID	The 3-character table name
	Account/Userid or Alias Name	The alias name

NOTE: Alias names may be as long as 16 characters. To enter an alias that is longer than eight characters, begin typing in the **Account** field, and then type the rest of the alias name in the **Userid** field.

- When you finish typing list entries, press PF3. Expedite/CICS sorts the entries, saves your list in the EXPDSRC file, and displays the List Selection Menu. During this process your additions, corrections, and deletions are saved.



NOTES:

- To change an entry, type over the information.
- To change the page of a list you are looking at:
 - Scroll forward and backward a page at a time, using PF8 and PF7.
 - Go directly to a page you want, by typing the page number you want over the current page number, and pressing Enter.
- To delete an entry, type **D** in the **Table Type** field.
- If you need more blank fields for your list, press PF8.
- The maximum number of entries allowed in a distribution list is 1,620. If you try to add more entries than this, an error message will be displayed. You must then save the current list and create another list for the additional entries.

Distribution list field descriptions

Use the descriptions below as needed.

Table type

The type of alias table here the account and user ID for this alias are located. If you are entering an Information Exchange:

- Account ID and user ID on your local system, leave this field blank
- Account ID and user ID on another Information Exchange system, type **I**
- Alias name, enter the alias table type of the alias table from which you are taking the user's alias. Information Exchange uses three types of alias tables to distinguish which users can use the tables:

This code:	Indicates:
G	All Information Exchange users can use the aliases in a global alias table.
O	Only users in a specified account can use the aliases in an organizational table set up for that account.
P	Only the owner of a private alias table, or an Information Exchange service administrator, can work with the aliases in the table.

Any user can create a private alias table. Information Exchange service administrators can also create global and organizational alias tables, and can authorize other users to have this privilege.



NOTE: An alias table must be defined in Information Exchange before it can be used. For more information, refer to the *Information Exchange Administration Services User's Guide*.

Table ID

The ID of alias table here the account and user ID for this alias are located If you are entering an Information Exchange:

- Account ID and user ID on your local system, leave this field blank.
- Account ID and user ID on another system, enter the system ID of the other system. Examples of system identifiers include EUR (Europe), IMX (Mail Exchange), USA (U.S.A.), and JPN (Japan).
- Alias name, enter the alias table name of the alias table from which you are taking the alias name. For more information, see the *Information Exchange Administration Services User's Guide*.

4. After you mark all the entries that you want to delete, press PF3. Expedite/CICS deletes the entries you marked, saves the updated list, and displays the List Selection Menu. You cannot delete the only remaining entry of a list. You must delete the list. To do this, see “Erasing a distribution list” below.

Erasing a distribution list

To erase a distribution list, begin on the List Selection Menu.

1. Do one of the following:
 - Select Option 3, **Erase an existing list**.
 - a. Expedite/CICS displays an intermediate panel (similar to the one shown on page 115), which prompts you for the name of a list.
 - b. Type the name of the list you want to erase.
 - To bypass the intermediate panel, on the command line, type **ERASE/listname**, where *listname* is the name of the list you want to erase.
2. Press Enter.

Expedite/CICS displays the Information Exchange - Confirmation panel with your account ID, user ID, and the list name filled in.

```
EXPMLS4                Information Exchange - Confirmation

Account      ACCT
Userid       USER01
List name    ALIST

Press ENTER   to confirm  ERASE   request
Press CANCEL  to confirm  CANCEL  request

HI287 ENTER THE APPROPRIATE COMMAND.

Command ==>
PF1=Help    PF12=Cancel
```

3. Do one of the following:
 - To cancel the erase request and return to the List Selection Menu, press PF12.
 - To erase the list and return to the List Selection Menu, press Enter.

Copying a distribution list

When creating a new distribution list, you can copy a list into the new list. To copy a distribution list, begin on the List Selection Menu.

1. Select Option 4, **Copy a list**.
Expedite/CICS displays the Copy Distribution List panel.

```

EXPMLSC                                Copy Distribution List

From Distribution List name              To Distribution List name
Account      <          >              Account      <          >
Userid       <          >              Userid       <          >
List name    <          >              List name    <          >

HI320 ENTER FROM AND TO LIST NAMES AND PRESS ENTER TO COPY.

Command ==>
PF1=Help   PF3=End   PF12=Cancel

```

2. In the fields under **From Distribution List name**:
 - a. Next to **Account**, type the account ID that owns the list to be copied.
 - b. Next to **Userid**, type the user ID that owns the list to be copied.
 - c. Next to **List name**, type the name of the list to be copied.
3. In the fields under **To Distribution List name**:
 - a. Next to **Account**, type the account ID of the owner of the new list.
 - b. Next to **Userid**, type the user ID of the owner of the new list.
This can be you or any other user.
 - c. Next to **List name**, type the name of the new list.
4. To copy the list, press Enter.
Expedite/CICS stores the new list.
5. To return to the List Selection Menu, press PF3.

Listing distribution lists

To display a list of all distribution lists for a specific user, begin on the List Selection Menu.

1. Select Option 6, **List all distribution lists**.

Expedite/CICS displays the Display of Distribution List Names for a User panel, with the account ID and user ID already filled in. The panel lists all your distribution lists.

```
EXPMLST                Display of Distribution List Names for a User

  Account      ACCT
  Userid       USER01

                                List name(s)

ALIST          NEWLIST

Command ==>
PF1=Help    PF3=End
```

2. When you finish viewing the list of distribution lists, press PF3. Expedite/CICS displays the List Selection Menu.

Verifying a distribution list or group

You can obtain information about Information Exchange distribution lists before sending messages to them. Information Exchange will place the information in your Information Exchange mailbox in the form of messages from *SYSTEM* *LSTRSP*. The user class of the response will be one of the following:

- **LISTS** (if the request was about a list of lists)
- *listname* (if the request was about a specific list)

To use the **Verify** option, begin on the List Selection Menu.

1. **Select Option 7, Verify a distribution list or group.**

Expedite/CICS displays the Verify an Information Exchange Distribution List panel, with your account ID and user ID already filled in.

```

EXPMLSV                               Verify an Information Exchange
                                     Distribution List
Account      < ACCT      >
Userid       < USER01   >
List name    <           > (Required for C, L, R, S, and B)

Select one of the options:
< > A - List of account and group lists
      C - List of users in an account or group list
      D - List a user's permanent lists
      L - List of users in a permanent list
      R - Verify ability to receive from users in the list
      S - Verify ability to send to users in the list
      B - Verify ability to send to and receive from users in the list

Note:
  All responses are returned to your mailbox as *SYSTEM* *LSTRSP*

HI321 ENTER FIELD INFORMATION AND PRESS PF5 TO ISSUE COMMAND.

Command ==>
PF1=Help  PF5=Issue Command  PF12=Cancel

```

2. For options C, L, R, S, or B only (see Step 3), in the **List name** field, type the name of the Information Exchange list to be verified.

3. Choose the task you want Information Exchange to perform.

This code:	Will initiate this task:
A	Generate a list of all account and group lists.
C	Generate a list of users in an account or group level list.
D	Generate a list of all private, permanent lists belonging to the account and user ID.
L	Generate a list of users in a specified private permanent list.
R	Verify you can receive from all users in the list; that is, each user is in the Information Exchange directory and is authorized to send messages to your user ID.

This code:	Will initiate this task:
S	Verify you can send to all users in the list; that is, each user is in the Information Exchange directory and is authorized to receive messages from your user ID.
B	Verify you can both send messages to and receive messages from all users in the list.

- To issue the verification request, press PF5.
The response will be placed in your Information Exchange mailbox.

Viewing a distribution list verification response

You can use Information Exchange Administration Services directly to view *SYSTEM* *LSTRSP*, or you can receive the distribution list verification response to Expedite/CICS. Because the response is a system message, it is received into the Expedite/CICS response file as described in “Receiving Information Exchange system messages” on page 73.

The format of a response message varies depending on the type of request issued.

- For Options **A** and **D**, Information Exchange response messages consist of 8-character list names.
- For Options **L** and **C**, response messages consist of 20-character destination IDs. The format is alphanumeric, left-justified, and padded on the right with blanks. Each destination ID must occupy 20 positions, as follows:
 - Character 1 (coded value):** indicates whether the address is a true Information Exchange address or an alias ID entry:

This code:	Indicates:
G	An alias table reference to a global table
O	An organization (account) alias table
P	A private table
I	An intersystem address
Blank	A reference to a true Information Exchange address
 - Characters 2 through 4 (alphanumeric):** If Character 1 is **G**, **O**, or **P**, this field names the alias table to be used to search for the name given in Characters 5 through 20. If Character 1 is **I**, this field names an intersystem address. If Character 1 is blank, Characters 2 through 4 are not used.
 - Characters 5 through 20 (alphanumeric):** If Character 1 is **G**, **O**, or **P**, this field specifies the 16-character alias name. If Character 1 is blank or **I**, this field specifies the Information Exchange account (Characters 5 through 12) and user ID (Characters 13 through 20) of the desired destination.
- For Options **R**, **S**, or **B**, a system error message is placed in your mailbox for each ID (account or user ID) for which you cannot perform the tested action (send, receive, or both).

Uploading a distribution list

Before you can use a temporary distribution list to send or receive mail, it must be uploaded (copied) to Information Exchange. You can upload a list yourself or allow Expedite/CICS to automatically upload it the first time during a session that you send mail to the list or ask to receive mail from the list. If you change a list that has been uploaded, you must upload it again if you want the revisions to be recognized by Information Exchange.

You can create as many distribution lists in Expedite/CICS as you need, and can then add, delete, or change entries. You may, however, upload only 50 lists to Information Exchange in a session.



NOTE: When you use this method to upload a distribution list to Information Exchange, it is erased from Information Exchange when you end your session. A permanent list, one which is maintained in Information Exchange, can be created only by using Information Exchange Administration Services as explained in the *Information Exchange Administration Services User's Guide*.

1. Do one of the following:
 - Select Option 8, **Upload a list to Information Exchange**.
 - a. Expedite/CICS displays an intermediate panel (shown below) which prompts you for the name of a list.
 - b. Type the name of the list you want to upload.
 - To bypass the intermediate panel, on the command line, type **UPLOAD/listname**, where *listname* is the name of the list you want to upload.
2. Press Enter.

If you selected Option 8 in Step 1, Expedite/CICS displays the Distribution List panel.

If you chose to bypass the intermediate panel, Expedite/CICS refreshes the List Selection Menu with the message, HI276 DISTRIBUTION LIST UPLOAD COMPLETE.

In this example, Expedite/CICS displays the Upload a Distribution List panel, with your account ID and user ID already filled in.

```
EXPMDLU          Upload a Distribution List

Enter - Distribution List name

Account   < ACCT   >
Userid    < USER01 >
List name <         >

HI317 ENTER LIST NAME AND PRESS ENTER TO CONTINUE.

Command ==>
PF1=Help  PF3=End
```

3. Next to List name, type the name of the list you want to upload.
4. Press Enter. Expedite/CICS uploads the list.
5. When you finish uploading your distribution lists, press PF3. Expedite/CICS displays the List Selection Menu.

Working with aliases

This chapter explains how to create and use aliases to simplify the addresses you use when sending and receiving files and messages, and covers these topics:

An alias is a nickname used in place of an account ID and user ID (Information Exchange address). Alias names are maintained in alias tables, which are described in the *Information Exchange Administration Services User's Guide*.

The following major topics are presented:

Adding an alias table	118
Deleting an alias table	121
Changing entries in an alias table	122
Querying an alias table	123

Adding an alias table

To add an alias table, begin on the Main Selection Menu.

1. Select Option 8, **Work with alias tables**.
Expedite/CICS displays the Expedite/CICS Alias Selection Menu.

```

EXPMATM                Expedite/CICS Alias Selection Menu

Account      ACCT
Userid       USER01

Select the desired function:

      1  ADD           Add an alias table
      2  DElete       Delete an alias table
      3  CHange       Change/add/delete entries
      4  INquiry      Alias inquiry

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End
    
```

2. Select Option 1, **Add an alias table**.
Expedite/CICS displays the Add Alias Table panel.

```

EXPMA DF                Add Alias Table

Account ..... ACCT
Userid ..... USER01
Table type..... < >
Table name..... < >
Authorization..... < > (G=Global,A=Account,P=Private)

A - Add entries to new table
---Alias Definition--- or -----Alias Reference--
Code  Alias name      Sys ID  Account  User ID  Typ  Tbl  Name
- - - - -
- - - - -
- - - - -
- - - - -
- - - - -
- - - - -
- - - - -
- - - - -

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF3=End  PF5=Add Table  PF12=Cancel
    
```

3. Fill in the fields as needed. To create an alias that refers directly to a user ID, complete the **Sys ID**, **Account**, and **User ID** fields. To create an alias that refers to another alias, complete the **Typ**, **Tbl** and **Name** fields.
4. If you need help, see “Alias table field descriptions” on page 119.
5. To save the new alias table, press PF5.

You can add entries to the new alias table as you create it, or later.

Alias table field descriptions

Use the following fields as needed.

Table type

Indicating who may use the table.

This code: Indicates:

- | | |
|---|---|
| G | All Information Exchange users can use aliases in a global alias table. |
| O | Only users in a specified account can use aliases in an organizational table set up for that account. |
| P | Only the owner or an Information Exchange service administrator can work with aliases in a private table. |
- Any user can create a private alias table. Information Exchange service administrators can create global and organizational alias tables, and can authorize other users to have this privilege.

Table name

The name of the table you are creating.

Authorization

Indicates who can update the alias table.

This code: Indicates the table can be updated by:

- | | |
|---|--------------------------------|
| G | Any Information Exchange user. |
| A | An account administrator. |
| P | Only the owner of the table. |



NOTE: If you create a global table using global update authorization, users outside your account can add or delete table entries for their own account, but only network support personnel can erase the entire table. Other authorization codes for global tables permit the owner or the account service administrator to make all changes, including erasing the table.

Code

Enter an action code next to the appropriate alias. The available action codes are displayed on the panel, above the alias entry fields.

Alias name

The name of the alias, up to 16 characters.

You can create two kinds of aliases. One kind refers directly to a user ID. The other kind refers to another alias. You can chain up to five aliases.

Sys ID

The system ID of the alias.

If you are entering an:

- Account ID and user ID on your local system, leave this field blank.
- Account ID and user ID on another system, enter the system ID of the other system. Examples of system identifiers include EUR (Europe), IMX (Mail Exchange), USA (U.S.A.), and JPN (Japan).
- Alias name, enter the alias table name of the alias table from which you are taking the alias name. For more information, see the *Information Exchange Administration Services User's Guide*.

Account

The account ID of the user to be associated with this alias.

User ID

The user ID of the user to be associated with this alias.

Typ

Indicates the type of alias table you are referencing.

This code:	Indicates:
G	All Information Exchange users can use aliases in a global alias table.
O	Only users in a specified account can use aliases in an organizational table set up for that account.
P	Only the owner an Information Exchange service administrator can work with aliases in a private table.

Tbl

The ID of the alias table you are referencing.

Name

The name of the alias table you are referencing.

Deleting an alias table

To delete an alias table, begin on the Main Selection Menu.

1. Select Option 8, **Work with alias tables**.
Expedite/CICS displays the Expedite/CICS Alias Selection Menu.

```

EXPMATM          Expedite/CICS Alias Selection Menu

Account          ACCT
Userid           USER01

Select the desired function:

      1  ADD           Add an alias table
      2  DElete       Delete an alias table
      3  CHAnge       Change/add/delete entries
      4  INQuiry      Alias inquiry

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End

```

2. Select Option 2, **Delete an alias table**.
Expedite/CICS displays the Delete an Alias Table panel.

```

EXPMA DT          Delete an Alias Table

Fill in the fields below and press enter.

Account ..... ACCT
Userid ..... USER01
Table type..... < >
Table name..... < >

Type Y to confirm the deletion < >
or press PF12 to cancel.

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel

```

3. Fill in the panel fields as needed.
4. To perform the deletion, press Enter. To cancel the deletion, press PF12.

Changing entries in an alias table

To change the entries in an alias table, begin on the Main Selection Menu.

1. Select Option 8, **Work with alias tables**.
Expedite/CICS displays the Alias Selection Menu.
2. Select Option 3, **Change/add/delete entries**.
Expedite/CICS displays the Alias Table Entries panel.
3. Fill in the panel fields as needed. If you need help, see “Alias table field descriptions” on page 119
4. When you are finished, press Enter to process your changes.

The following example:

- Added a new alias named **MANAGER** that refers to user **KSMITH** on account **ACCT** located on the same system.
- Changed the entry for an alias named **SECRETARY** to refer to the new secretary with user ID **BJONES** on account **ACCT**.
- Added a new alias named **LEGAL** that refers to an alias named **LAWYER** in a table named **DPT**. This table is restricted by organization, as indicated by the **O** in the **Type** field.

```

EXPMDLS                Alias Table Entries

                        Account ..... ACCT
                        Userid ..... USER01
                        Table type..... < P >
                        Table name..... < ORG >

A - Add an entry  C - Change an existing entry  D - Delete an existing entry

                        ---Alias Definition--- or -----Alias Reference--
Code  Alias name      Sys ID Account  User ID      Typ  Tbl  Name
A     MANAGER_____  ___  ACCT___ KSMITH___  -   ___  _____
C     SECRETARY_____  ___  ACCT___ BJONES___  -   ___  _____
A     LEGAL_____     ___  _____  _____  O   DPT  LAWYER_____
-     _____     ___  _____  _____  -   ___  _____
-     _____     ___  _____  _____  -   ___  _____
-     _____     ___  _____  _____  -   ___  _____
-     _____     ___  _____  _____  -   ___  _____

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ===>
F1=Help  F3=End  F5=Issue Command(s)  F12=Cancel
    
```

Querying an alias table

To view the information in an alias table, begin on the Main Selection Menu.

1. Select Option 8, **Work with alias tables**.
Expedite/CICS displays the Alias Selection Menu.
2. Select Option 4, **Alias inquiry**.
Expedite/CICS displays the Issue Alias Inquiry panel.
3. Type the table type, table name, and alias name for the alias that you are interested in.
4. To begin the inquiry, press PF5.

If found, the details for the alias are displayed on the panel.

The following example shows the details of an alias.

```

EXPMAIQ                               Issue Alias Inquiry

Account / Userid ..... ACCT          / USER01
Table type / Table name..... P / ORG
Alias name..... SECRETARY

---Alias Reference---                 ---Alias Definition---
Typ  Tbl  Alias name                 Sys  Account  User ID
                                     ACCT      USER03

HI387 ENTER FIELD INFORMATION AND PRESS PF5 TO PERFORM ALIAS INQUIRY.

Command ==>
PF1=Help  PF3=End  PF5=Inquiry  PF12=Cancel

```


Working with user administration options

To help you administer Expedite/CICS, you can set Expedite/CICS user session options for individual users and for groups of users. Some functions are unavailable to general users. If you have questions about changing these options, ask your service administrator.

The two categories of Expedite/CICS administration are:

- **System administration**

Allows you to set options that affect all Expedite/CICS users. For more information, see Chapter 8, “Working with system administration options.”

- **User administration**

Allows you to set Expedite/CICS session profiles and authorizations for individual users or groups of users. A user profile includes various session options which define how the user will operate within Expedite/CICS and with Information Exchange user sessions. Expedite/CICS user administration options allow you to add, change, and delete user session parameters, some of which are listed below. You can define:

- A user as an Expedite/CICS service administrator or as a general user.
- Whether a user must provide a password each time the Display Application is entered.
- Whether a user’s Information Exchange session starts automatically at system startup.
- The number of days that completed send and receive control records are stored.

The following major topics are presented:

Getting started with user session options	126
Adding or changing user session options	128
Deleting a user profile	142
Listing user session status	143
Issuing a session inquiry	147
Issuing an audit retrieve request	151
Specifying a response destination	155

Getting started with user session options

Before you proceed, it is helpful to understand the general principles listed below.

- Expedite/CICS uses information stored in your user profile to process commands, files, and messages during your Information Exchange session. Your initial user profile is generated based on the SYSTEM DEFAULT model profile (See “Performing initial administration functions” on page 35). You can change most of your own default settings, but only a service administrator can add, delete, or change profiles of other users.



NOTE: Whenever a user profile is created or changed, a session start must be issued before new or changed options can be recognized. This includes user session options and panel defaults.

- Both general users and service administrators use the same panels for performing administrative tasks. If a general user selects an option reserved for administrators (for example, Delete), Expedite/CICS displays an error message on the panel and no action is taken.
- To leave a user session option panel without saving the information you typed, press PF12. Expedite/CICS will not store any of the new information.
- To leave a user session option panel and save the information you typed, press PF3.

To work with user session options, begin on the Main Selection Menu.

1. Select Option 5, **Work with user session options**.

Expedite/CICS displays the Expedite/CICS Administration Selection menu.

```

EXPMUAM      Expedite/CICS User Administration Selection Menu

Account      ACCT
Userid       USER01

Select the desired function:

1  ADD          Add a new user
2  CHAnge      Change an existing user
3  DELeTe      Delete a user and/or all records
4  STAtus      List user session status
5  INQuiry     Issue session inquiry command
6  AUDit       Issue audit retrieve
7  RESponse    Set response destination

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End

```

A brief description of the various options follows, indicating which tasks general users and service administrators can perform.

Use this option: To perform this task:

Add Add a new user profile (service administrators only).



NOTES:

1. If the **Auto create user** option is enabled in the SYSTEM DEFAULT profile, user profiles can be automatically created when a user first starts a session with Information Exchange. If this option is disabled, user profiles must be created manually using the service administrator **Add** option.
2. A user session with Information Exchange starts when the user logs on to the Expedite/CICS Display Application or when a session start is issued from a user program interface.

Change	Modify existing user defaults. If you are a general user, you can change your own defaults. If you are the service administrator, you can change any user's defaults.
Delete	Delete the profile and/or control and data records associated with a user ID (service administrator only). The SYSTEM DEFAULT profile should not be deleted.
Status	View the status of Expedite/CICS users and reset a user session. If you are a general user you can view and reset only your own session. If you are a service administrator, you can view and reset any user session on the system.
Inquiry	View information about your current Information Exchange session. If you are a service administrator, you can inquire about any user's session on your system.
Audit	Instruct Expedite/CICS to perform an audit retrieve of transactions between you and your trading partners. Information Exchange places the audit file in your Information Exchange mailbox. If you are a service administrator, you can view audit files for all users. If you are a general user, you can only view your own audit files.
Response	Change (for the current session) the file name and file type of the destination file in which system messages are stored. To change the destination permanently, you must change the Response file name value in your user session profile. The change will take effect at the next session start.

Adding or changing user session options

All Expedite/CICS users can change their own user session options. The **Add** option, however, is reserved for service administrators. To define user session options, begin on the Expedite/CICS Administration Selection menu.

1. Select one of the following:

- Select Option 1, **Add a new user**.
- Select Option 2, **Change an existing user**.

Expedite/CICS displays the Define User Session Options panel, with your account ID, user ID, and user session profile attributes already filled in.



NOTE: If you are doing this from the SYSTEM DEFAULT account ID and user ID, the attributes of the model profile are displayed.

```

EXPMA05                      Define User Session Options
For:
  Account   < ACCT   >
  Userid    < USER01 >

OPTIONS:

Force user to logon...< N >      Y - yes  N - no
Auto create user.....< N >      Y - yes  N - no
Type user.....< GA >           GA - General, SA - Service admin
Time zone.....< W0500 >        (See Display Application manual)
Message group size...< 02 >     0 - 99
Auto logon.....< N >           Y - yes  N - no
Send file retention...< 01 >    0 - 30 days
Receive retention....< 01 >    0 - 30 days
Response file
  File name.....< EXPDRE1 > File or Program name
  File management....< TS >     TS, TD, VS, or PG
Process send data....< A >     A - Asynchronously  S - Synchronously

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES

Command ==>
PF1=Help  PF3=End  PF8=Forward  PF12=Cancel
    
```

2. If you are a service administrator working with another user's profile, in the **Account** and **Userid** fields, type the account ID and user ID of the user for whom you are adding or changing user session options.
3. Press Enter.
If a profile exists for the typed account ID and user ID, the values from that user profile are displayed; otherwise, Expedite/CICS displays the values from the System Default profile.
4. Fill in the panel fields as needed. If you need help, refer to "User administration field descriptions" on page 129.
5. When you finish typing field entries, do one of the following:
 - To scroll forward to the Define Default Single Receive Parameters panel (see page 135), press PF8.

- To save the information in the user profile and return to the Expedite/CICS Administration Selection menu, press PF3.
- To return to the Expedite/CICS Administration Selection menu without saving the information you typed, press PF12.

User administration field descriptions

The user administration fields are described below.

Force user to logon

Only service administrators can change this option to indicate whether a user, having left Expedite/CICS temporarily using the **Escape** option, must provide an Information Exchange password and restart the Information Exchange session when re-entering the Display Application.

This code:	Means:
<u>N</u>	An Information Exchange password and session start is required only when a session does not exist; if an active session exists, Expedite/CICS bypasses the Information Exchange Session Start panel and displays the Main Selection Menu. The user logs back on to the active session and a session start is not performed. N is the recommended value.
Y	A password is required and a new session start is always performed at logon. When a new session is started, the session access key changes and Information Exchange begins archiving received messages under a new group.



CAUTION: If the same user ID starts a session from two systems, the second session overrides the first and Information Exchange communicates with the later session. This may cause a checkpoint failure because the counters between Expedite/CICS and Information Exchange are not the same. In addition, a session access key error may occur and messages may be delivered to a system other than the system intended. For these reasons, do not share user IDs on more than one system at a time.

Auto create user

Indicates whether user profiles are created automatically from the SYSTEM DEFAULT model user profile, when a user first starts a session with Information Exchange.

This code: Indicates:

Y Any valid Information Exchange user can start a session with Information Exchange using Expedite/CICS; whether they already have an Expedite/CICS profile or not. A general user profile is automatically created for the user ID, using the SYSTEM DEFAULT model.

N Only users defined to Expedite/CICS can start a session with Information Exchange using Expedite/CICS. An Expedite/CICS service administrator must define all Expedite/CICS user profiles using the **Add** option. A user who has no profile receives an error when attempting to sign on to the Display Application or when issuing a Session Start command, and no session start is performed.



NOTE: The N option can be used to ensure that production IDs are not used in the test region.

Type user

Only service administrators can use this field to indicate whether a user is a general user or service administrator, thus controlling access to certain system functions.

This code: Indicates this authority:

GA General users can change only their own user profiles and may perform user session functions only for themselves. All automatically created profiles have general user authority by default.

SA Service administrators can:

- Change any user's profile
- Perform all user session functions for any user
- Change Expedite/CICS system options



CAUTION: Do not set the SYSTEM DEFAULT ID to user type GA (general user). The potential would then exist for there to be **no** service administrators on the system, making it impossible to change any system options.

Time zone

Specifies the time zone for your location. The following table lists the valid time zone codes most commonly used; however, Expedite/CICS will accept any valid offset value. The code letter indicates an east or west offset; the number following the letter indicates the number of hours offset from the Greenwich meridian; and the last two characters indicate the number of minutes and must be zeros. Only whole-hour offsets are supported by Expedite/CICS.

Code	Description	Code	Description
E0000	Greenwich Mean	W0000	Greenwich Mean
E0100	British Summer	W0400	U.S. Eastern Daylight

Code	Description	Code	Description
E0100	Western European Standard	W0400	U.S. Atlantic Standard
E0200	Eastern Mediterranean	W0500	U.S. Eastern Standard
E0200	Western Europe Daylight	W0500	U.S. Central Daylight
E0900	Japan Standard	W0600	U.S. Central Standard
E0100	Western Europe Standard	W0600	U.S. Mountain Daylight
		W0700	U.S. Mountain Standard
		W0700	U.S. Pacific Daylight
		W0800	U.S. Pacific Standard
		W0800	U.S. Alaska Daylight
		W0900	U.S. Alaska Standard
		W1000	U.S. Hawaii Standard

Message group size

Specifies the number of segments contained in a message group when sending data to Information Exchange. Data is sent to Information Exchange in segments, the size of which is set in the **Data transmission size** field on the Define System Options panel. When segments are grouped, the first segment is sent with a long header and remaining segments are sent with a short header. The data is committed only at the end of the file.

A value of zero indicates that no segment grouping is done and all segments following the first are sent with a short header. A value from 1 to 99 specifies that data is to be split into groups of the specified size. For example, if **Data transmission size** is set to 26,000 bytes and **Message group size** is set to 02, data is sent in groups of 52,000 bytes each; the long header occurs after every second segment.

Message grouping is important for receiving systems that use checkpoint level recovery, such as a PC interface. A checkpoint commit is taken for each group of segments.

Setting the transmission size lower than 26,000 bytes can increase the number of checkpoints exchanged with the receiving system. To reduce the number of checkpoints, you may want to increase the message group size.

Auto logon

Specifies whether an Information Exchange session is automatically started for the user when the CICS region starts.

This code: Tells Expedite/CICS to:

- N Do not automatically start an Information Exchange session when the CICS region starts, unless the user was in active session with Information Exchange when the system went down.
- Y Automatically start an Information Exchange session each time the CICS region starts.

Send file retention

Specifies how long Expedite/CICS saves send control records associated with successfully sent data. This value may range from zero to 30 days; the default is one day. Retention applies only to records associated with successfully completed requests, not requests that encountered an error or have a status of HELD. Expired records are periodically deleted by the activity monitor when it runs, according to the time period set in the system options profile.

Control and data records not associated with successfully sent data (for example, E-HLxxx and HELD) are purged by Expedite/CICS after the number of days specified in the **Not-Sent Not-Received Retention** option in the Define System Options panel, unless purged sooner by the user.

To avoid peak processing times, Expedite/CICS does not purge records between the times specified on the Define System Options panel.

Receive retention

Specifies how long Expedite/CICS saves receive control records associated with successfully received data. This value may range from zero to 30 days; the default is one day. Retention applies only to records associated with successfully completed requests, not requests that encountered an error or have a status of HELD. Expired records are periodically deleted by the activity monitor when it runs, according to the time period set in the system options profile.

Control and data records not associated with successfully received data (for example, E-HLxxx, and COMPLETE) are purged by Expedite/CICS after the number of days specified in the **Not-Sent Not-Received Retention** option in the Define System Options panel, unless purged sooner by the user.

To avoid peak processing times, Expedite/CICS does not purge records between the times specified on the Define System Options panel.

Response file name

Specifies the name of a file or program to use for storing or processing Information Exchange system messages. The default storage facility is the TSQ EXPDRE1. The value in this field identifies either the CICS storage facility in which data is stored, or a program to be invoked when you receive Information Exchange system messages. Messages from the following IDs will be written to the response file:

SYSTEM *ADMIN*	*SYSTEM* *LSTRSP*
SYSTEM ADMINGET	*SYSTEM* *PRBRSP*
SYSTEM *ERRMSG*	*SYSTEM* *TSTMSG*
SYSTEM *EVENTS*	

A message from *SYSTEM* *ERRMSG* may be a system error message or an Information Exchange acknowledgment. See *Customizing and Developing Applications with Expedite/CICS* for more information about Information Exchange acknowledgment processing.



NOTES:

1. Except for audit trails, system messages are written to the administrative response file. If the **Retain header data** field has been specified in the receive request, header data for system messages will also be written to the destination specified on the receive panel. Although audit trails are system messages, Expedite/CICS does not write them to the administrative response file, but writes them to the destination file specified on the receive request.
2. The data set should handle variable length records up to a maximum of 26,000 bytes.
3. The response file definition that is set in a user profile is the permanent response destination. If changed, the new value will not be recognized until a session start is issued. To change the response file destination for the duration of a session, you can change the value in the **Set response file destination** field on the Expedite/CICS Administration Selection menu. If you change the response file name, the following considerations apply:
 - If using a VSAM file, the file name must be defined in the CICS FCT.
 - If using a TDQ, the file name must be defined in the CICS destination control table (DCT) and, if it is an extrapartition TDQ, it must also be defined in the CICS startup JCL.
 - If the **File name** field contains a program name, instead of a file name, the program must be defined in the processing program table (PPT).
 - A nonrecoverable TSQ need not be defined.

Response file management

Indicates the type of destination in which received Information Exchange system messages are stored.

This code:	Describes this type of file:
TS	Temporary storage (this is the default)
TD	Transient data
VS	VSAM ESDS (entry sequenced data set) only
PG	A user program. For more information about how the program is invoked and how the data is passed, refer to <i>Customizing and Developing Applications with Expedite/CICS</i> .



NOTE: If you select the wrong file management type, an error may occur when Expedite/CICS writes the data to that destination. If this occurs, an error message is written to the exception log.

Process send data

Data is always sent using the group level commit method of recovery in which data is committed only at the end of the message group. The value in this field indicates whether Expedite/CICS should process send request data synchronously or asynchronously.

This code: Specifies:

A Asynchronous processing

When Expedite/CICS processes asynchronously, it reads the data to be sent, reblocks it into the send data (EXPSDAT) file, and then returns control to the Display Application or user program. Another Expedite/CICS task is started which sends the data to Information Exchange.

Asynchronous processing can improve performance and recoverability because:

- Communication and commits with Information Exchange are done in the background.
- Your CICS session is free to issue additional requests. Because control returns to a user before data is actually sent to Information Exchange, the user can issue multiple send requests, which Expedite/CICS queues and sends to Information Exchange in turn.
- Expedite/CICS initiates restart and recovery procedures to automatically reacquire connections and restart sessions until the connection is made and communication is successful.

If a communication link failure and subsequent recovery occurs, Expedite/CICS retries the send request until the file is sent successfully. If there is an unrecoverable error, the message is marked in error and can be viewed as explained in “Viewing a list of completed messages and files” on page 96. Errors are also logged in the Expedite/CICS trace destinations, including the exception log.

If you issue a request from a user program, you can specify the name of a user exit which will be invoked when asynchronous send requests have completed. For more information about this strategy, refer to *Customizing and Developing Applications with Expedite/CICS*.

S Synchronous processing

Control is not returned to the requester until the data has been sent to Information Exchange.

When Expedite/CICS processes synchronously, it reads the data to be sent, reblocks it into the send data (EXPSDAT) file, and then sends it to Information Exchange. The Display Application or user program waits until the file is sent to Information Exchange before getting a return code, or freeing up the terminal for another request. If the communication link fails or an unrecoverable error occurs, the message is marked in error and the data is purged from the EXPSDAT file. The error code can be viewed as explained in “Viewing a list of completed messages and files” on page 96 or, if a user program is used, an error is returned to the user program.

The user (or user program) is then responsible for reissuing the send request. Using this option can result in decreased system performance.

Defining default single receive parameters

The Define Default Single Receive Parameters panel is used to set the defaults that are displayed each time you use the Issue Single Receive panel. The information on this panel defines how Expedite/CICS processes and stores the data received using the **Single Receive** option.

To work with single receive parameter defaults, begin on the Expedite/CICS Administration Selection menu.

1. Select one of the following:
 - Option 1, **Add a new user.**
 - Option 2, **Change an existing user.**

Expedite/CICS displays the Define User Session Options panel, with your account ID, user ID, and the attributes of your user session profile already filled in.



NOTE: If you are doing this from the SYSTEM DEFAULT account ID and user ID, the attributes of the model profile are displayed.

2. If you are a service administrator working with another user's profile, in the **Account** and **Userid** fields, type the account ID and user ID of the user for whom you are adding or changing the defaults.
3. Press Enter.
If a profile exists for the typed account ID and user ID, the values from that user profile are displayed; otherwise, Expedite/CICS displays the values from the SYSTEM DEFAULT profile.

4. To display the Define Default Single Receive Parameters panel, press PF8. Expedite/CICS displays the panel, with the account ID, user ID, and field defaults already filled in.

```

EXPMA D1          Define Default Single Receive Parameters

For:
  Account      ACCT      From: System ID..... <      >
  Userid       USER01   Account / Userid <      > <      >
                                     -or- List name..... <      >
                                     -or- Alias name..... <      >
                                     User class..... <      >

To:
  File name..... <      > (File or Receive program name)
  File management..... <      > (TS, TD, VS=VSAM, or PG=Program)
  File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
  File disposition..... < N > (H=Hold, N=Normal process)
  Retain header data.... < Y > (Y - Keep IE headers / N - Discard)
                                     (E - Use CDH and discard IE headers)
                                     (F - Use CDH and retain IE headers)
  Receive EDI..... <      > (Y=EDI only, N=NON-EDI, Blank=Both)
  Handle records as..... <      > (S-Split / W-Wrap / V-Variable data)
  Max record length..... <      > (00000 - 28000 Characters)

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES.

Command ==>
PF1=Help PF3=End PF7=Backward PF8=Forward PF12=Cancel
    
```

5. Type entries in the fields as needed.



NOTE: You are not required to enter any information on this panel. It is provided as a convenience so you can save frequently used values.

Detailed field information is provided in “Receive request field descriptions” on page 43.

6. When you finish typing field entries, do one of the following:
 - To scroll backward to the Define User Session Options panel (see page 128), press PF7.
 - To scroll forward to the Define Default Continuous Receive Parameters panel (see page 137), press PF8.
 - To save the default information and return to the Expedite/CICS Administration Selection menu, press PF3.
 - To return to the Expedite/CICS Administration Selection menu without saving the information you typed, press PF12.

Defining default continuous receive parameters

The Define Default Continuous Receive Parameters panel is used to set the defaults displayed each time you use the Issue Continuous Receive panel. The information on this panel defines how Expedite/CICS processes and stores the data received using the **Continuous Receive** option. To work with continuous receive parameter defaults, begin on the Expedite/CICS Administration Selection menu.

1. Select one of the following:
 - Option 1, **Add a new user.**
 - Option 2, **Change an existing user.**

Expedite/CICS displays the Define Default Continuous Receive Parameters panel, with your account ID, user ID, and the attributes of your user session profile already filled in.



NOTE: If you are doing this from the SYSTEM DEFAULT account ID and user ID, the attributes of the model profile are displayed.

2. If you are a service administrator working with another user's profile, in the **Account** and **Userid** fields, type the account ID and user ID of the user for whom you are adding or changing the defaults.
3. Press Enter.
If a profile exists for the typed account ID and user ID, the values from that user profile are displayed; otherwise, Expedite/CICS displays the values from the SYSTEM DEFAULT profile.
4. To display the Define Default Continuous Receive Parameters panel, press PF8 twice.
Expedite/CICS displays the panel, with the account ID, user ID, and field defaults already filled in.

```

EXPMD2          Define Default Continuous Receive Parameters
For:
Account         ACCT          From: System ID..... <      >
Userid          USER01      Account / Userid <      > <      >
                                     -or- List name..... <      >
                                     -or- Alias name..... <      >
                                     User class..... <      >

To:
File name..... <      > (File or Receive program name)
File management..... <      > (TS, TD, VS=VSAM, or PG=Program)
File type..... <      > (A=CRLF, B=LL, E=EDI, O=Other)
File disposition..... < N > (H=Hold, N=Normal process)
Retain header data.... < Y > (Y - Keep IE headers / N - Discard)
                                     (E - Use CDH and discard IE headers)
                                     (F - Use CDH and retain IE headers)
Receive EDI..... <      > (Y=EDI only, N=NON-EDI, Blank=Both)
Handle records as.... <      > (S-Split / W-Wrap / V-Variable data)
Max record length.... <      > (00000 - 28000 Characters)

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF7=Backward  PF8=Forward  PF12=Cancel
  
```

5. Type entries in the fields as needed.



NOTE: You are not required to enter any information on this panel. It is provided as a convenience so you can save frequently used values.

Detailed field information is provided in “Receive request field descriptions” on page 43.

6. When you finish typing field entries, do one of the following:
 - To scroll backward to the Define Default Single Receive Parameters panel (see page 135), press PF7.
 - To scroll forward to the Define Default Send File Parameters panel (see page 138), press PF8.
 - To save the default information and return to the Expedite/CICS Administration Selection menu, press PF3.
 - To return to the Expedite/CICS Administration Selection menu without saving the information you typed, press PF12.

Defining default send file parameters

The Define Default Send File Parameters panel is used to set the defaults displayed each time you use the Send File Request panel. To work with send file parameter defaults, begin on the Expedite/CICS Administration Selection menu.

1. Select one of the following:
 - Option 1, **Add a new user.**
 - Option 2, **Change an existing user.**

Expedite/CICS displays the Define User Session Options panel, with your account ID, user ID, and the attributes of your user session profile already filled in.



NOTE: If you are doing this from the SYSTEM DEFAULT account ID and user ID, the attributes of the model profile are displayed.

2. If you are a service administrator working with another user's profile, in the **Account** and **Userid** fields, type the account ID and user ID of the user for whom you are adding or changing the defaults.
3. Press Enter.

If a profile exists for the typed account ID and user ID, the values from that user profile are displayed; otherwise, Expedite/CICS displays the values from the SYSTEM DEFAULT profile.

4. To display the Define Default Send File Parameters panel, press PF8 three times. Expedite/CICS displays the panel, with the account ID, user ID, and field defaults already filled in.

```

EXPMAD3          Define Default Send File Parameters
For:
  Account      ACCT      From: System ID..... <      >
  Userid       USER01      Account / Userid <      > <      >
                                -or- List name..... <      >
From:
  File name..... <      >
                                -or- Alias name..... <      >
  File management..... <      >      (TS, TD, VS=VSAM)
  File type..... <      >      (A=CRLF, B=LL, E=EDI, O=Other)
  Compression..... < N >      (N=No, Y=Yes, T=Table driven)
  File disposition..... < N >      (H=Hold, N=Normal process, P=Priority)

Options:
  Acknowledgment..... <      >      (Blank, R, or A - F)
  User class..... <      >
  Verify before send... < N >      (Y - Yes, N - No, F - Forward)
  Message retention..... < 30 >      (Retain 0 - 180 Days, if undelivered)
  Force Receive Criteria <      >      (Y - Yes, N - No)

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF7=Backward  PF8=Forward  PF12=Cancel

```

5. Type entries in the fields as needed.



NOTE: You are not required to enter any information on this panel. It is provided as a convenience so you can save frequently used values.

Detailed field information is provided in “Send request field descriptions” on page 84.

6. When you finish typing field entries, do one of the following:
 - To scroll backward to the Define Default Continuous Receive Parameters panel (see page 137), press PF7.
 - To scroll forward to the Define Default Send Message Parameters panel (see page 140), press PF8.
 - To save the default information and return to the Expedite/CICS Administration Selection menu, press PF3.
 - To return to the Expedite/CICS Administration Selection menu without saving the information you typed, press PF12.

Defining default send message parameters

The Define Default Send Message Parameters panel is used to set the defaults displayed each time you use the Send Message(s) panel. To work with send message parameter defaults, begin on the Expedite/CICS Administration Selection menu.

1. Select one of the following:
 - Option 1, **Add a new user.**
 - Option 2, **Change an existing user.**

Expedite/CICS displays the Define User Session Options panel, with your account ID, user ID, and the attributes of your user session profile already filled in.



NOTE: If you are doing this from the SYSTEM DEFAULT account ID and user ID, the attributes of the model profile are displayed.

2. If you are a service administrator working with another user's profile, in the **Account** and **Userid** fields, type the account ID and user ID of the user for whom you are adding or changing the panel defaults.
3. Press Enter.
If a profile exists for the typed account ID and user ID, the values from that user profile are displayed; otherwise, Expedite/CICS displays the values from the SYSTEM DEFAULT profile.
4. To display the Define Default Send Message Parameters panel, press PF8 four times.
Expedite/CICS displays the panel, with the account ID, user ID, and field defaults already filled in.

```

EXP4AD4          Define Default Send Message Parameters
For:
  Account      ACCT
  Userid       USER01

                To: System ID..... <      >
                  Account / Userid <      > <      >
                -or- List name..... <      >
                -or- Alias name..... <      >

                Message retention.... <      >      (0 - 180 Days)

                Acknowledgment..... <      >      (Blank, R, or A - F)

HI310 ENTER FIELD INFORMATION, PRESS PF8/PF7, AND PRESS PF3 TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF7=Backward  PF12=Cancel
    
```

5. Type entries in the fields as needed.



NOTE: You are not required to enter any information on this panel. It is provided as a convenience so you can save frequently used values.

Detailed field information is provided in “Send request field descriptions” on page 84.

6. When you finish typing field entries, do one of the following:
 - To scroll backward to the Define Default Send File Parameters panel (see page 138), press PF7.
 - To save the default information and return to the Expedite/CICS Administration Selection menu, press PF3.
 - To return to the Expedite/CICS Administration Selection menu without saving the information you typed, press PF12.

Deleting a user profile

As a service administrator, you can erase a user's profile record from the Expedite/CICS EXPDSRC file when necessary. You can choose to retain the profile information and delete only the associated records.



NOTES:

1. You can not delete your own profile.
2. You should not erase the SYSTEM DEFAULT model profile.
3. After you use this option, you must restart your Information Exchange session before you can continue.

To delete a user profile, begin on the System Selection Menu.

1. Select Option 3, **Delete a user and/or all records**.

Expedite/CICS displays the Delete User Profile and/or Records panel, with your account ID and user ID already filled in.

```

EXPMD7              Delete User Profile and/or Records

Account   ACCT
Userid    USER01

To delete all profile and data records enter the account, userid and leave
the Records-only field blank. If you just want to delete the data records,
enter a Y in the Records-only field in addition to the account and userid.

Account      <      >
Userid       <      >
Records-only <  >      If you are deleting Records-only,
                        remember to reset this users session
                        in Information Exchange.

HI314 ENTER INFORMATION AND PRESS PF3(END) TO DELETE USERID AND/OR DATA RECORDS

Command ==>
PF1=Help  PF3=End  PF12=Cancel

```

2. Next to **Account**, type the account ID for which the profile and/or records are to be deleted.
3. Next to **Userid**, type the user ID for which the profile and/or records are to be deleted.
4. Next to **Records-only**, type **Y** or leave blank. If you leave this field blank, all profile, send, receive control, and data records associated with the user are deleted.

5. Do one of the following:
 - To cancel and return to the Expedite/CICS Administration Selection menu, press PF12.
 - To delete the profile and/or records, press PF3.
Expedite/CICS erases the profile and/or records for the account ID and user ID and displays the Expedite/CICS Administration Selection menu.

Listing user session status

You can view the status of system users and reset sessions as needed. If you are a general user, you can view and reset only your own session. A service administrator can perform this task for any user. The status of all Expedite/CICS users on the system is displayed. For more information about why you may want to do this, see “Resetting a user session” on page 144.

To list user session status, begin on the Expedite/CICS Administration Selection menu.

1. Select Option 4, **List user session status**.

Expedite/CICS displays the List of Users' Status panel, with your account ID and user ID already filled in. If you are a service administrator, up to ten users on your system are displayed, beginning with your own user ID and continuing in alphabetic order. If you are a general user, only your own status is displayed.

```

EXPMSTS                                List of Users' Status

For:
Account   < ACCT   >   Enter an 'S' in the CMD field to select the
Userid    < USER01 >   account/userid to be reset, and press Enter

Cmd Account   Userid   Sess. #   Last Send   # Rcvs   Last Rcv
          Status Snd    Date     Time      Sng  Cnt   Date     Time
_   ACCT     USER01   ACT   003  11/21/93 05:12:36 000  002  11/20/93 03:23:24
_
_
_
_
_
_
_
_
_
_
_

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help   PF9=Refresh   PF12=Cancel

```

This field:	Provides or indicates:
Cmd	Field for requesting a session reset
Account	Information Exchange account ID
Userid	Information Exchange user ID
Sess. Status	Session status (ACTIVE or INACTIVE)
# Snd	Number of send requests outstanding

This field:	Provides or indicates:
Last Send Date/Time	When mail was last sent to Information Exchange
# Rcvs Sng	Number of single receive requests outstanding
# Rcvs Cnt	Number of continuous receive requests outstanding
Last Rcv Date/Time	When mail was last received from Information Exchange

2. If you are a service administrator and you want to display the status of a user that is not already listed:
 - a. Next to **Account**, type the user's account ID.
 - b. Next to **Userid**, type the user's user ID.
 - c. Press Enter.
Expedite/CICS displays the specified account and user ID at the top of the list. If the user ID you specified is not in the list, the list starts with the next user ID. If the user ID is beyond the end of the list, a message indicating that the starting ID is not valid is displayed.
3. Do one of the following:
 - To refresh the list, press PF9.
 - To leave the list, press PF12.
 - To reset a user's session, proceed to "Resetting a user session" below.

Resetting a user session

You might need to reset a session if a system failure occurs and the session is not recoverable. When a session is reset, Expedite/CICS checks for active send requests. If any are found:

- A session inquiry is performed.
- If the session inquiry idle time (the time since the last message transfer) exceeds one minute, a send purge command is issued to Information Exchange and a fresh send control record is set so the send request can be restarted.
- A cleanup module is linked to perform a reset backout. Because receive requests are backed out to the last commit, any in-process receives are automatically restarted.
- Your active user session profile is purged so that the next time you log on, a new session start is issued.

To reset a user session, proceed as follows:

1. Under **Cmd**, in the field next to each session you want to reset, type **S**.
2. To cancel and return to the Expedite/CICS Administration Selection menu, press PF12.
3. To process the reset command(s), press Enter.
Expedite/CICS displays the Reset Session panel of the first user ID whose session is to be reset with the account and user ID already filled in.

```

EXPRES                      Information Exchange - Reset Session

                               Enter or verify ACCOUNT/USERID to be reset

                               Account   < ACCT1   >
                               Userid    < USER01  >

Press  ENTER   to  CONFIRM  reset request
Press  PF12   to  CANCEL   reset request

Command ==>
PF1=Help  PF12=Cancel

```

4. To cancel the reset request and return to the List of Users' Status panel, press PF12.
5. To confirm the reset request, press Enter.
Expedite/CICS does one of the following:
 - If you are resetting your own session, you are returned to native CICS. A message displays indicating the result of the reset. The next time you log on, the Display Application issues a session start.
 - If you are a service administrator resetting another user's session, you are returned to the List of Users' Status panel where you can issue a new session start or a session restart for the user.
 - If you are a service administrator resetting multiple user sessions, you must confirm each request in turn. As you complete each confirmation, you are returned to the Reset Session panel. When you complete the last reset request, you are returned to the List of Users' Status panel.

Resetting a user session with IDLT

To reset a user session with transaction IDLT, begin in native CICS.

1. Clear the display, and type **IDLTaaaaaaaauuuuuuuuu** where:

aaaaaaa is the 8-character Information Exchange account ID.

uuuuuuuu is the 8-character Information Exchange user ID.

The Reset Session panel is displayed with the account ID and user ID fields already filled in.

2. To cancel the reset request and return to native CICS, press PF12.
3. To confirm the reset request and return to native CICS, press Enter.



NOTE: If you do not type the account ID and user ID with the IDLT command, the Reset Session panel is displayed but the account ID and user ID fields are blank.

Issuing a session inquiry

You can request information about your Information Exchange session. Information Exchange sends you a detailed report which includes the following:

- Session start time and date
- Time elapsed since last session activity
- Number of active send requests and status of current request
- Number of outstanding receive requests and status of current request
- Number of messages you have received

If you are a service administrator, you can issue an inquiry for any system user. If you are a general user, you can inquire only about your own session. For more information about Session Inquiry responses, refer to *Customizing and Developing Applications with Expedite/CICS*.

To issue a session inquiry, begin on the Expedite/CICS Administration Selection menu.

1. Select Option 5, **Issue session inquiry command**.

Expedite/CICS displays the Issue Session Inquiry panel, with your account ID and user ID already filled in. Session information is displayed for all fields as available. If no information is available for a field, zeros are displayed.

```

EXPMSQ1                Issue Session Inquiry

  Account   < ACCT   >                Session start date < 931122 >
  Userid    < USER01 >                Session start time < 073151 >

Number of active receives < 01 >      Receive status < NORMAL   >
Number of segments received < 000000 > Data messages received < 000000 >
*SYSTEM* messages received < 000000 > Other messages received < 000016 >
Last receive checkpoint   < 00000 >
Last data message received < 00000000000000 000000 >

Lapse time - last activity < 022356 > Send status < NOT ACTIVE >
Number of segments sent    < 000000 > Send messages accepted < 000000 >
Total messages processed   < 000000 > Send messages rejected < 000000 >
Last send checkpoint       < 000000 >
Last data message sent     < >

HI311 PRESS PF5 TO PERFORM A SESSION INQUIRY.

Command ==>
PF1=Help  PF3=End  PF5=Inquiry  PF12=Cancel

```

2. To make further inquiries, do one of the following:

- If you are a service administrator inquiring about a session for a user other than the one displayed, type the new account ID and user ID in the **Account** and **Userid** fields, and then press PF5.
- If you are a general user, press PF5.

Expedite/CICS displays information about the current Information Exchange session.

3. To monitor an activity (send and receive requests, elapsed time since the last message transfer, and so on), press PF5 repeatedly. A session inquiry is issued each time you press PF5, and the fields are updated with each response.

If a field value remains constant for a long time when you expected it to change, a problem might exist. For example, you might see the Receive status remain constant while the message: Awaiting Commit is displayed. If the condition persists for several minutes, you can reset and restart the session as described in "Resetting a user session" on page 144. If the problem persists, contact Customer Care.

Session inquiry response field descriptions

Use the following field descriptions as needed.

Session start date

The date the session started. The format is YYMMDD (Year, Month, Day); for example, 981215 corresponds to December 15, 1998.

Session start time

The time the session started. The format is HHMMSS (Hour, Minutes, Seconds); for example, 132534 corresponds to 1:25:34 p.m.

Number of active receives

The number of active receive commands, both single and continuous (SDIRCVM).

Receive status

The current condition of Expedite/CICS receive processing:

This value:	Indicates Information Exchange is:
Awaiting Commit	Waiting for a Commit response (CMTRSPC) for the user ID. This might indicate a session problem (see Step 3 above).
Normal	Not waiting for a Commit response.

Number of segments received

The total number of message segments sent to you during this session as the result of receive message commands. The amount of data in each segment depends on the number of bytes set in the system-wide **Data transmission size** option on the System Selection Menu.

Data messages received

The total number of user data messages sent to you as a result of receive message commands during this session. A user data message is either the group of data segments or the message containing the Common Data Header (CDH).

***SYSTEM* messages received**

The total number of Information Exchange system messages received by Expedite/CICS during this session. System messages can be any of the following:

- System error message or acknowledgment
- Probe response
- Audit trail
- List verify response
- Test message
- System event message

Other messages received

The total number of other messages and commands received by Expedite/CICS during this session. These can be any of the following:

- Commit requests and responses
- Session inquiry responses
- Any command or response that Information Exchange sends to Expedite/CICS other than receive data

Last receive checkpoint

The last receive checkpoint established with Information Exchange during the current session.

Last data message received

The value of the network message identification (an internal control field for Information Exchange) and message sequence out number (in the received message header) for the last message sent in response to a receive message command during the current session.

Lapse time - last activity

The time elapsed since the last message transfer activity in this session; for example, the receipt of a send message command by Information Exchange.

Send status

The current condition of Expedite/CICS send processing:

This value:	Indicates Expedite/CICS is:
Active	Transferring data to Information Exchange.
Not active	The send process is idle.

Number of segments sent

The total number of send message segments received by Information Exchange during this session. The amount of data in each segment depends on the number of bytes set in the system-wide **Data transmission size** option on the System Selection Menu.

Send messages accepted

The total number of send request messages processed and accepted for delivery by Information Exchange for this session. A send request message is either the group of data segments or the message containing the Common Data Header (CDH).

Total messages processed

The total number of send request messages processed by Information Exchange for this session. A send request message is either the group of data segments or the message containing the Common Data Header (CDH). These messages are only processed after they have reached a point of recovery.

Send messages rejected

The total number of send request messages processed but rejected by Information Exchange for this session. A send request message is either the group of data segments or the message containing the Common Data Header (CDH).

Last send checkpoint

The last send checkpoint established with Information Exchange during the current session.

Last data message sent

The values of the items listed below for the last send message command received by Information Exchange during the current session.

- Destination account ID (DESTACCT)
- Destination user ID (DESTUID)
- Message name (MSGNAME)
- Message control number (MSGSEQN)

Issuing an audit retrieve request

Using Expedite/CICS, you can request an audit trail of your transactions with one or all of your trading partners. Information Exchange uses the *SYSTEM* *AUDITS* account ID and user ID to place the audit trail in your Information Exchange mailbox. You can receive an audit trail for processing by using:

- A normal single or continuous receive to a CICS destination
- A batch receive to a file outside of CICS through a sample batch program that can be used to generate an audit report



NOTE: Although the audit trail is a system message, Expedite/CICS does not write it to the response file destination, as it does other Information Exchange system messages, but writes it to the destination specified on the receive panels. For information about Expedite/CICS processing of Information Exchange system messages, see “Receiving Information Exchange system messages” on page 73.

To set up audit retrieve parameters, begin on the Expedite/CICS Administration Selection menu.

1. Select Option 6, **Issue audit retrieve**.

Expedite/CICS displays the Issue Audit Retrieve panel, with your account ID and user ID already filled in.

```

EXPMAR1                Issue Audit Retrieve
For:
Account      ACCT      From:  System ID..... <      >
Userid      USER01    Account / Userid <      > <      >
                -or-
                Alias name..... <      >

Options:
Type of records..... <      >      R=Receive, S=Send, B=Both
From date..... <      >      Format is CYYMMDD where C is 0
To date..... <      >      for 1900 and 1 for 2000
Time zone..... <      >      L=Local, G=GMT
User message class... <      >

Alternate Userid..... <      >      Used by Service Administrator only
Message status..... <      >      U=Undelivered P=Purged
                D=Delivered Blank=All

HI312 ENTER FIELD INFORMATION AND PRESS PF5 TO ISSUE AN AUDIT RETRIEVE.

Command ===>
PF1=Help  PF5=Issue Retrieve  PF12=Cancel

```

2. Type appropriate entries in the fields. If you need help, refer to “Audit retrieve field descriptions” on page 152.
3. When you finish filling in the panel, press PF5. Expedite/CICS issues the Audit Retrieve command to Information Exchange. Information Exchange processes the command and places the requested information in your mailbox. The information will be from account ID *SYSTEM* and user ID *AUDITS*, with user class #SAUDIT.

4. To return to the Expedite/CICS Administration Selection menu, press PF12.
5. When the audit information arrives in your mailbox, you must issue a receive request to receive the data to Expedite/CICS. If you choose to issue a batch receive request to receive and write the audit data to a file outside of CICS, Expedite/CICS provides a sample batch program to process the audit data and produce a report. Details of the audit report preparation are provided in "Preparing an audit trail report" on page 154.

Audit retrieve field descriptions

Use the following field descriptions as needed.

From

Specifies a trading partner for whom you want to produce an audit trail. This may be either a single user or a global retrieve. If requesting an audit trail for all your trading partners, leave these fields blank. Fill in **only one** of the following choices:

- Account/Userid, plus System ID if your trading partner is on another system
- Alias name, including alias table type and table name

System ID	Use this field only if the trading partner is on a different system. The field entry consists of four characters; the letter I (intersystem) followed by with a 3-character system ID. Examples of system identifiers include EUR (Europe), IMX (Mail Exchange), USA (U.S.A.), and JPN (Japan).
Account	Type the account ID of a single Information Exchange user for whom you want to retrieve an audit trail.
Userid	Type the user ID of a single Information Exchange user for whom you want to retrieve an audit trail.
Alias name	An alias is a nickname used in place of an account ID and user ID (Information Exchange address). Alias names are maintained in alias tables, which are Information Exchange nickname files. Alias tables can be defined as described in the <i>Information Exchange Administration Services User's Guide</i> .

An alias table is identified by a table type (1 character) and table name (3 characters). Each entry in the table consists of an alias name (up to 16 characters) and its associated Information Exchange address. The first character in an alias table definition must contain one of the following:

This code:	Is used for this alias table type:
G	Global, accessible to all Information Exchange users
O	Organizational, accessible only to members of a specific account
P	Private, accessible only to the table owner

To retrieve an audit trail for a trading partner identified by an alias, type the alias name; for example, in the alias name GA01PARTNER, G is the table type, A01 is the table name, and PARTNER is the alias nickname.

Type of records

Indicates what records you want to select for the audit.

This code: Asks to audit all files or messages that you:

R	Received
S	Sent
B	Sent or received

From date

Specifies the date at which to start the audit. This field is used with the **To date** field to indicate the range of audit records you want to select. The date format is CYYMMDD, where:

C	Century (0 = 20th, 1 = 21st century)
YY	Year
MM	Month
DD	Day of the month

For example, to select audit trail records for messages sent or received beginning on January 14, 1998, type 0980114.

If no date is entered, the default is provided by Information Exchange.

To date

Specifies the date at which to end the audit. This field is used with the **From date** field to indicate the range of audit records you want to select. The date format is CYYMMDD, where:

C	Century (0 = 20th, 1 = 21st century)
YY	Year
MM	Month
DD	Day of the month

For example, to select audit trail records for messages sent or received ending on January 14, 1998, type 0980114.

If no date is entered, the default is provided by Information Exchange.

Time zone

Specifies the time zone for which the audit trail start and end dates are defined. The audit begins with transactions that start at midnight on the date specified in the From date field.

This code:	Indicates this time zone is:
G	Greenwich Mean Time (GMT)
L	Local

User message class

Specifies the value for the type of mail you want included in the audit. Enter a value in this field to limit the number of audit records that are selected; for example, you can indicate that you want the audit records associated only with a specific user message class.

You can use a question mark (?) as a wild-card character to select more than one user class. For example, AB2? selects all items of mail whose user classification begins with AB2, and ?XYZ selects all those whose user classification ends with XYZ.

Alternate user ID

Only Information Exchange service administrators can use this field. If you are not an Information Exchange service administrator, leave the field blank. Information Exchange will extract only your own audit records. If you are an Information Exchange service administrator auditing records for another user within the same account, type the ID of that user in this field. To extract audit records for all users in the account, enter a question mark. If you are not authorized to extract other users' audit records, this field defaults to blanks and a system error message will be placed in your Information Exchange mailbox.

Message status

Indicates which types of message status to include in an audit.

This code:	Includes:
U	Undelivered messages
P	Purged messages
D	Delivered messages
blank	All messages

Preparing an audit trail report

Expedite/CICS provides a sample program, EXPAUDRP, that processes the audit data and produces a summary report of the details. A printed version and explanation of the sample audit report and program are provided in the *Information Exchange Interface Programming Guide*.

For detailed information about using the sample audit program, refer to *Customizing and Developing Applications with Expedite/CICS*.

To use this program, proceed as described below.

1. Issue an audit retrieve so that the audit trail is placed in your mailbox.
2. Issue a batch receive or a single receive into an extrapartition TDQ to receive the audit data. The data should be received into a batch data set wrapped into 254-byte records. The format of these records is described in *Customizing and Developing Applications with Expedite/CICS*.
3. Run the compiled audit report program against this data set, using INFILE and OUTFILE DD names as the input and output data set names, respectively.

Specifying a response destination

When Expedite/CICS receives system messages from Information Exchange, the information on the Storage Area for Administrative Data panel is used to specify the file where system messages will be stored or the program to which system messages will be passed.

Messages from the following IDs are written to the response file:

```
*SYSTEM* *ADMIN*           *SYSTEM* *LSTRSP*
*SYSTEM* ADMINGET         *SYSTEM* *PRBRSP*
*SYSTEM* *ERRMSG*        *SYSTEM* *TSTMSG*
*SYSTEM* *EVENTS*
```



NOTE: Messages from *SYSTEM* *AUDITS* are written to the receive command destination. For more information about receiving system messages, see “Receiving Information Exchange system messages” on page 73.

The response file is a temporary response destination. If changed during a session, the new value is effective immediately but lasts only for the current session. At the next session start, the permanent response file destination, set on the User Session Options panel, is then substituted into the **Response file** fields. The **File name** default is EXPDRE1; the **File management** default is **TS** (temporary storage).

To set up the response file, begin on the Expedite/CICS Administration Selection menu.

1. Select Option 7, **Set response destination**.

Expedite CICS displays the Storage Area for Administrative Data panel, with your account ID and user ID already filled in.

```

EXPMPRE1           Storage Area for Administrative Data

Account   ACCT
Userid    USER01

Change the response destination for the duration of the current session.

Information Exchange response destination:

File name      < EXPDRE1 > (File or Receive program name)
File management < TS >      (TS, TD, VS=VSAM, or PG=Program)

(Note: If a permanent change is desired then update the
user profile, response file option, and restart the session.)

HI305 ENTER FIELD INFORMATION AND PRESS PF3(END) TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF12=Cancel

```

2. Type appropriate entries in the fields. If you need help, refer to “User administration field descriptions” on page 129.

3. When you finish filling in the panel, press PF3.
Expedite/CICS saves the information and returns you to the Expedite/CICS Administration Selection menu.

Working with system administration options

This chapter explains the tasks involved in administering the Expedite/CICS system.

The two categories of Expedite/CICS administration are as follows:

- **User administration**
Allows you to set Expedite/CICS user-session profiles and authorizations. Information about user administration is provided in Chapter 7, “Working with Expedite/CICS user administration options.”
- **System administration**
Allows you to set options and parameters that affect all Expedite/CICS users. This chapter explains the available Expedite/CICS system options that can be set or changed only by service administrators. General users can view system options but should contact a service administrator if a change is needed.



NOTE: Before setting options, make sure you understand the information in “Getting started with system options” on page 158. System options should be reviewed after the Expedite/CICS installation is complete to ensure they are set to the values that meet your requirements.

The following major topics are presented:

Getting started with system options	158
Working with the EDI translate table	159
Working with system options	168
Defining transaction names	172
Starting or stopping the internal trace	176
Working with the system error log	182

Getting started with system options

Service administrators can set system options for all users on their system. General users can view these options but not change them. To work with system options, begin on the Main Selection Menu.

1. Select Option 6, **Work with system administration.**
Expedite/CICS displays the Expedite/CICS System Administration Selection menu, with your account ID and user ID already filled in.

```

EXPMSAM          Expedite/CICS System Administration Selection Menu

Account          ACCT
Userid           USERID

Select the desired function:

      1  DATatypes   Formatted data translation table
      2  SYSopt     System options
      3  TASK       Set/view transaction names
      4  TRAcE     Start/stop trace facility
      5  VIEw      View system error log

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR =#. # ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End
    
```

System options

Select from the following options:

Use this option:	To perform this task:
DATatypes	Add, change, or delete translate table entries, which are used to convert EDI destinations to Information Exchange addresses. For example, one entry in the table might be used to convert a DUNS number into an Information Exchange account and user ID.
SYSopt	Define Expedite/CICS system-wide options.
TASK	Work with Expedite/CICS transaction names. Service administrators can change system transaction names if, for example, the default names conflict with existing transaction names already used on your system. If you use this option to change a transaction name, you must also change it in the CICS program control table (PCT).
TRAcE	Start or stop the Expedite/CICS internal trace function.
VIEw	Look at and process user files that are marked in error.

Working with the EDI translate table

Before you send EDI data to Information Exchange, you must define the destination address in the Expedite/CICS EDI translate table, which converts EDI destination addresses to Information Exchange destination addresses. This table is used whenever a user sends data and specifies a **File type** of **E** (EDI). The destination address is always taken from the EDI data fields; therefore, when you are sending EDI data, leave the **Account/Userid** fields blank in the Send command.

Use the **Datatypes** option on the Expedite/CICS System Administration Selection menu to access the translate table. If you are a service administrator, you can add, change, or delete table entries. If you are a general user, you can only view the table.

The EDI destination field defines where you want to send the data. This can be any of the following:

- An Information Exchange account ID and user ID, along with system ID if the user is on a different Information Exchange system.
- A nickname in Expedite/CICS can be resolved into an Information Exchange destination address by using the translate table. This resolved destination can be an Information Exchange:
 - Account/Userid on the local system
 - Account/Userid on another system
 - Alias name defined in a centralized Information Exchange alias table
- A distribution list

Destination information contained in the EDI data is parsed into fields used to determine the Information Exchange destination of the data. When you send an EDI file and specify a **File type** of **E** (EDI), Expedite/CICS compares the data fields to entries in the EDI translate table and uses the EDI data type and other information found in the table to determine the Information Exchange destination.



NOTE: An Information Exchange destination (account ID and user ID) can be placed in the EDI data. A special data type qualifier (**ZZ**) can be used to indicate this fact so that, if no entry is found in the translate table, the account ID and user ID contained in the EDI data can be used for the Information Exchange account ID and user ID destination. In EDIFACT and UN/TDI data, an Information Exchange system ID can be included with the account ID and user ID, as needed.

Translate table entries are used to resolve destinations for specific EDI data types, EDI qualifiers, and the EDI nickname from the EDI data. A variable default can be set for any of these fields by leaving the corresponding EDI translate table field blank. A blank entry equates to “any value” for this field. When the translate table is searched, if an entry is found that matches the EDI destination information in the EDI data, that entry is used. If no matching entry is found, but EDI destination field default entries match those in the data, the data is sent to this default destination. Default entries are searched in order, according to the number of blank (default) fields; that is, default entries with one blank field is searched before default entries with two blank fields, and so on.

For more information about the translate table and how EDI processing works, refer to Appendix B, “Sending and receiving EDI data.”

The following table shows the EDI and Information Exchange components defined in the table and used in conversion routines.

EDI address components	
Type	Data type
Qualifier	Conversion algorithm
Nickname	EDI destination
Information Exchange address components	
Type	Alias table type
ID	Alias table name
Account	Account ID
Userid	User ID



NOTE: The Information Exchange alias table **Type** and **ID** fields can be used to specify an intersystem identifier. The **Account** and **Userid** fields can be used together to specify an alias name.

To work with the EDI translate table, begin on the Administration Services Selection Menu.

1. Select Option 1, **Formatted data translation table.**

Expedite/CICS displays the EDI Translate table. The left half of the panel is used for EDI destination addresses; the right half is used for Information Exchange addresses.

```

EXPMTT1                EDI Translate table                Page 01 of 01

      EDI                      Information Network
      Destination address      Information Exchange address
Type  Qualifier      Nickname  Type  ID    Account  Userid
      08              EDIDEST   L           LIST01
      ZZ              EDITEST.USER01           ACCOUNT2  USER02
T     ZZ              EDITEST           ACCOUNT2  USER02
X     02              TP909           G    ALL
T     ABCD            ALIAS1           P    ABC
U     01              ALIAS2           I    EUR  ACCOUNT1  USER01
      12              TP007           P    ABC  ANIEALIA  SNAME

Enter a "D" in the data type field to delete an entry.
HI315 ENTER TRANSLATE TABLE ENTRIES AND PRESS PF3(END) TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF12=Cancel
    
```

2. View or fill in the **EDI Destination address** fields as described below.

Field:	Contains:
Type	The EDI data type or a specific action: This code: Indicates: X X12 data U UCS data T EDIFACT, UN/TDI data D Delete the entry blank Default entry for any EDI data type
Qualifier	Indicates how conversion should occur. EDI qualifiers may vary in X12 and EDIFACT data only. For UN/TDI and UCS data, they must be specified as indicated below. This code: Indicates that EDI qualifier: X12 Can be up to any two characters EDIFACT Can be up to any four characters UCS Must be 01 UN/TDI Must be left blank
Nickname	The name that corresponds to the EDI destination in the data.

3. View or fill in the **Information Exchange address** fields as described below. For guidance on sending specific types of data, refer also to “System option details” on page 169.

Field:	Contains:
Type	The intersystem address (I) or an alias table type: G (global), L (list), O (organizational), or P (private)
ID	A 3-character alias table name or intersystem identifier
Account	The Information Exchange destination account ID
Userid	The Information Exchange destination user ID

The allowed combinations are described below. For detailed information, see “EDI translate table example entries” on page 164.

- a. For an account ID and user ID defined in Information Exchange alias table (see example entries 1 and 2):
 - In the **Type** field, type **G**, **O**, or **P**.
 - In the **ID** field, type the alias table name.
 - Leave the **Account** and **Userid** fields blank.
- b. For an account ID and user ID on the local system (see example entries 3 and 7):
 - In the **Account** field, type an account ID.
 - In the **Userid** field, type a user ID.

- c. For an account ID and user ID on a remote system (see example entry 6):
 - In the **Type** field, type **I**.
 - In the **ID** field, type the Intersystem identifier.
 - In the **Account** field, type an account ID.
 - In the **Userid** field, type a user ID.
 - d. For an alias entry where the EDI destination is the alias name forwarded to Information Exchange (see example entry 5):
 - In the **Type** field, type **G**, **O**, or **P**.
 - In the **ID** field, type the alias table name.
 - Leave the **Account** and **Userid** fields blank.
 - e. If the EDI destination is not to be used as the Information Exchange alias name, the **Account** and **Userid** fields can be used together as the alias name forwarded to Information Exchange (see example entries 4 and 9):
 - In the **Type** field, type **G**, **O**, or **P**.
 - In the **ID** field, type the alias table name.
 - In the **Account** and **Userid** fields, type an Information Exchange alias name; starting in the **Account** field, and then continuing in the **Userid** field.
 - f. For a distribution list (see example entry 8):
 - In the **Type** field, type **G**, **L**, **O**, or **P**.
 - In the **ID** field, type the alias table name or distribution list name.
 - Leave the **Account** and **Userid** fields blank.
4. To delete an entry, in the **EDI data Type** field, type **D**.
 5. To validate your entries without leaving the panel, press **Enter**.
 6. To save your changes, press **PF3**.
Expedite/CICS saves the information and displays the Administration Services Selection Menu.
 7. To discard typed data and return to the Expedite/CICS System Administration Selection menu, press **PF12**.

EDI translate table example

The following table shows an example of an EDI translate table. For more information about EDI processing, see Appendix B, “Sending and receiving EDI data.”

EDI destination address				Information Exchange address				Resolved destination
Entry	Type	Qualifier	Nickname	Type	ID	Account	User ID	(20 bytes)
1				G	X01			GX01?????
2			FRANK	G	X01			GFRANKX01
3	X	AB	FRANK			M1	JONES	M1 JONES
4		12	SARAH	P	ABC	ANIEALI A	SNAME	PABCANIEALIASNAME
5	T			G	T01			GT01?????
6	U	01	JOHN	I	USA	ACCTX	USER01	IUSAACCTX USER01
7	TS	DUNS	012345			YOUR	PARTNER	YOUR PARTNER
8		08	EDIDEST	L		LIST01		
9	X	ZZ	PETER	0	X1X	ALIASON I	E	0X1XALIASONIE



NOTE: The Resolved destination entries are constructed as follows:

These bytes: Contain the:

- 1 Alias table type or I (Intersystem); otherwise, blank
- 2 - 4 Alias table name; otherwise, blank
- 5 - 12 Account ID or the first eight characters of the alias name
- 13 - 20 User ID or the last eight characters of the alias name

EDI translate table example entries

Entry	Explanation
1	Because no data type, qualifier, or nickname is specified, this is a default entry for any EDI destination not found in the translate table. ????? is the nickname from the EDI data (destination address) that follows the alias table type (G) and alias table ID (X01) entries and is forwarded to Information Exchange for delivery to an Information Exchange alias destination. This entry assumes the EDI destination address has been defined to Information Exchange in the GX01 alias table.
2	Because no data type or qualifier is specified, any data with nickname FRANK, is forwarded to Information Exchange for delivery to the Information Exchange alias destination GX01FRANK. This entry assumes the EDI destination address has been defined to Information Exchange in the GX01 alias table.
3	A complete X12 entry; any X12 data with nickname FRANK and qualifier, AB, is sent to the Information Exchange Account/Userid M1 JONES.
4	Because no data type was specified, any data with qualifier 12 and nickname SARAH is forwarded to Information Exchange for delivery to the Information Exchange alias destination PABCANIEALIASNAME.
5	Because a data type but no qualifier or nickname is specified, any EDIFACT or UN/TDI data is forwarded to Information Exchange for delivery to an Information Exchange alias using the nickname from the EDI destination address concatenated with GT01. This entry assumes the EDI destination address has been defined to Information Exchange in the GT01 alias table.
6	A complete UCS entry (qualifier must be 01). Any UCS data with nickname JOHN is forwarded to Information Exchange and delivered to the remote Information Exchange system USA user ACCTX USER01.
7	A complete EDIFACT entry. Any EDIFACT data with qualifier DUNS, and nickname 012345 is sent to the Information Exchange Account/Userid YOUR PARTNER.
8	Sends EDI data containing qualifier 08 and nickname EDIDEST to the destinations contained in the Information Exchange distribution list named LIST01.
9	A complete X12 entry. Any X12 data with qualifier ZZ and nickname PETER is forwarded to Information Exchange for delivery to Information Exchange alias destination OX1XALIASONIE.

EDI send options



NOTE: The methods for sending EDIFACT and UN/TDI data to a distribution list changed starting with Version 4, Release 2 of Expedite/CICS.

Although the translate table works the same for all EDI standard data types, there are varying methods for deciding how or where the resolution to an Information Exchange destination can be achieved. Because the location of the destination address within an EDI envelope depends on the type of EDI data being transmitted, Expedite/CICS determines where to send the EDI data by examining the contents of the envelope. The topics under this header provide brief descriptions of how to send to particular destinations, depending on the type of data you are sending.

It is recommended you resolve addresses using the Expedite/CICS translate table or using Information Exchange. For more information about:

- The EDI destination field location in each data type and how EDI processing works, refer to Appendix B, “Sending and receiving EDI data.”
- Each EDI standard, contact the relevant standards board.

X12 data options

When sending to:

- An account ID and user ID
 - Use the translate table to resolve the destination contained in the EDI data to an Information Exchange account ID and user ID.
 - Specify an Information Exchange account ID and user ID in the EDI header destination field as follows:
 - Enter the account ID in the first seven characters.
 - Enter the user ID in the next eight characters.
 - Use an interchange ID qualifier of ZZ.
 - Make sure that no translate table entry matches these criteria.
- A distribution list
 - Specify the nickname in the EDI destination field (the EDI type and Qualifier may be filled in).
 - Use a **Type of L** in the Information Exchange address.
 - Enter the list name in the Account field of the Information Exchange address.
- An alias

Use the translate table to resolve the destination contained in the EDI data to an Information Exchange alias name.

UCS data options

When sending to:

- An account ID and user ID
 - Use the translate table to resolve the destination contained in the EDI data to an Information Exchange account ID and user ID.
 - Do not specify a real account ID and user ID in the EDI header.
- A distribution list
 - Specify the nickname in the EDI destination field (the EDI type and Qualifier may be filled in).
 - Use a **Type of L** in the Information Exchange address.
 - Enter the list name in the Account field of the Information Exchange address.
- An alias

Use the translate table to resolve the destination contained in the EDI data to an Information Exchange alias name.

EDIFACT data options

When sending to:

- A system ID, account ID, and user ID
 - Use the translate table to resolve the destination contained in the EDI data to an Information Exchange system ID, account ID, and user ID.
 - Specify the real system ID, account ID, and user ID in the EDI header destination field as follows:
 - Separate the system ID, account ID, and user ID by a period (.), slash (/), or one or more blank spaces. System ID is optional for EDIFACT.
 - If you do not use a system ID, enter only the account ID and user ID. Do not enter a period or a blank before the account ID.
 - Use an identification code qualifier of ZZ.
 - Make sure that no translate table entry matches these criteria.
- A distribution list
 - Specify the nickname in the EDI destination field (the EDI type and Qualifier may be filled in).
 - Use a **Type of L** in the Information Exchange address.
 - Enter the list name in the Account field of the Information Exchange address.
- An alias

Use the translate table to resolve the destination contained in the EDI data to an Information Exchange alias name.

UN/TDI data options

When sending to:

- A system ID, account ID, and user ID
 - Use the translate table to resolve the destination contained in the EDI data to an Information Exchange system ID, account ID, and user ID. In this case, the EDI destination must be specified in the first subelement of the UNTO data element.
 - Specify a real system ID, account ID, and user ID in the EDI header destination field in the second subelement of the UNTO data element as follows:
 - Separate the system ID, account ID, and user ID by a period (.), slash (/), or one or more blank spaces.
 - Make sure that the first subelement of the UNTO data element does not exist in the translate table.
 - If you do not use a system ID, enter only the account ID and user ID. Do not enter period or blank before the account ID.

- A distribution list
 - Specify the nickname in the EDI destination field (the EDI type and Qualifier may be filled in).
 - Use a **Type** of **L** in the Information Exchange address.
 - Enter the list name in the Account field of the Information Exchange address.
- An alias

Use the translate table to resolve the destination contained in the EDI data to an Information Exchange alias name.

Working with system options

System options on the Expedite/CICS System Administration Selection menu is provided to help you customize your Expedite/CICS system. If you are a service administrator, you can customize system default values for your organization. If you are a general user, you can view the options.

To view or define system-wide options, begin on the Expedite/CICS System Administration Selection menu.

1. Select Option 2, **System options**.

Expedite/CICS displays the Define System Options panel with your account ID, user ID, and system options (default and current) already filled in.

Account		ACCT		Default Value		Current Value	
Account	Userid	ACCT	USERID	Default Value	Current Value	Default Value	Current Value
EXPMAD9							
Define System Options							
Temporary storage queue prefix..... < S@# > < S@# >							
Exception reporting TDQ..... < EXPM > < EXPM >							
Activity monitor interval...(0500-5959). < 3000 > (MMSS) < 0500 >							
Batch monitor interval....(0000-5959). < 0000 > (MMSS) < 0100 >							
Data transmission size...(03700-26000). < 26000 > < 26000 >							
User information exit program name..... < EXPOUEXT > < EXPOUEXT >							
User info exit active.. (Y=Yes, N=No).. < N > < N >							
Internal reader TDQ..... < IRDR > < IRDR >							
Log TDQ..... < EXPL > < EXPL >							
Internal trace TSQs..... < EXPDTRCA/B > < EXPDTRCA/B >							
LU 6.2 IE connection name..... < INIE > < INIE >							
Information Exchange (IE) level..... < 4.05 > < 4.05 >							
Force purge/release time...(0100-2359). < 0500 > (HHMM) < 0500 >							
Not-Sent Not-Received Retention..... < 40 > (1-40 Days) < 40 >							
Sent/Receive non-delete (HHMM) to HHMM < 0800 - 1600 > < 0800 - 1600 >							
HI305 ENTER FIELD INFORMATION AND PRESS PF3(END) TO SAVE CHANGES.							
Command ==>							
PF1=Help PF3=End PF12=Cancel							

- To change system defaults, see “System option details” on page 169 as needed, and type new values over the displayed current values.
- To save changes and return to the Expedite/CICS System Administration Selection menu, press PF3.
- To discard changes and return to the Expedite/CICS System Administration Selection menu, press PF12.

System option details

The topics under this heading provide information about which system options may be changed, which are protected, and other pertinent details.

Temporary storage queue TSQ prefix

While running, Expedite/CICS uses a number of TSQs with naming prefix default of S@#. You can change the prefix default if, for example, the default characters conflict with prefixes that you already use in your system. When changed, the new prefix takes effect immediately. The following rules apply:

- N may not be used as the first character.
- The first character cannot be numeric.
- All three characters must be entered.
- No blanks are allowed.

Exception reporting TDQ

EXPM is provided, in addition to the Log TDQ (EXPL), to alert systems support personnel to error conditions that interrupt continuous operations and might require attention. The name of this queue can be changed in accordance with “Exception reporting TDQ (EXPM)” on page 251.

Activity monitor interval

Specifies how often the activity monitor runs to perform the various tasks described in Chapter 12, “Understanding automated restart and recovery.” The value in this field determines how often the activity monitor runs. Because it performs many important Expedite/CICS functions, you cannot disable the activity monitor. The field format is MMSS, and valid values range from 0500 - 5959. The default value is 3000 (30 minutes).

When you change the activity monitor interval, the new interval setting takes effect the next time the activity monitor transaction runs.

Batch monitor interval

Specifies how often the batch send function runs to determine if there is batch data to send. If there is data to send, the task starts the background send process in the Expedite/CICS command processor. The field format is MMSS and valid values range from 0000 - 5959. The default value 0000 disables the batch send function.

When you change the batch monitor interval, the new interval setting takes effect the next time the batch send transaction runs. This transaction runs immediately after changing the value. If you use batch send, the recommended interval value is 0015. For more information about the batch send process, refer to the batch send section in *Customizing and Developing Applications with Expedite/CICS*.

Data transmission size

Expedite/CICS data exchanged with Information Exchange is sent or received in segments, the size of which is determined by the value in this field, not by the value in a user’s profile.

Send and receive data segment size can range from 3,700 to 26,000 bytes. The default is 26,000 bytes or the maximum segment size identified by your Information Exchange system. Change values take effect only after a subsequent Information Exchange session start.

User information exit program name

Specifies the program you want to use for logging information about asynchronous send request and receive request processing:

- The send function links to the exit after data is sent to Information Exchange.
- The receive function links to the exit after writing the received data into the receive destination.

If you do not want to use the user information monitor exit program, enter **N** in the **User info exit active** field. If you change the exit program name, the new exit name takes effect as soon as the panel is saved (assuming that the **User info exit active** field is set to **Y**). The first character may not be numeric, and no embedded blanks are allowed.

For more information about the user information monitor exit program, refer to *Customizing and Developing Applications with Expedite/CICS*.

User info exit active

Specifies whether to enable a link to the user information exit program.

This code:	Indicates:
<u>N</u>	The link to the user exit program is disabled.
Y	The link to the user exit program is enabled.

Internal reader TDQ (protected)

The TDQ that defines the internal reader. Expedite/CICS MVS batch receive and Electronic Service Delivery (ESD) receive functions require JCL to be written to the MVS internal reader for submitting a job to MVS. Although the name for the TDQ is protected, you may use another name as the DSCNAME in the DCT. To use another name, you must add an entry in the CICS JCL where the internal reader is defined. The suggested name is BTCHRDR.



NOTE: The extrapartition TDQ must be defined in the destination control table (DCT). Changes to the DCT are not recognized until the CICS region is recycled.

For more information about defining IRDR, refer to the *Expedite/CICS Program Directory*.

Log TDQ (protected)

The TDQ to which all error and informational messages are written. However, whether the Expedite/CICS commands, responses, and data are traced is based on the values specified on the Trace Options panel.

This can be helpful during problem determination when the system needs to be traced for a long time.



NOTE: The extrapartition TDQ must be defined in the destination control table (DCT). Changes to the DCT are not recognized until the CICS region is recycled.

For more information about defining EXPL, see “Log TDQ (EXPL)” on page 250.

Internal trace TSQs (protected)

The two temporary storage queues used with the Expedite/CICS internal trace. Expedite/CICS writes to one of these TSQs until the number of records specified on the Trace Options panel is reached, and then switches to the other TSQ. When the second TSQ contains that same number of records, Expedite/CICS deletes the data in the first TSQ and starts writing to the first TSQ again. The value in this field names the TSQs to which trace information is written.



NOTE:

No definition is required for the internal trace TSQs, because they are created dynamically as needed.

For more information about the internal trace TSQs, refer to “Internal trace queues” on page 234.

LU 6.2 IE connection name (protected)

The connection name used by Expedite/CICS when communicating with Information Exchange. The connection name should be defined in the terminal control table (TCT) definitions for the connection and sessions to Information Exchange. For more information about this definition, refer to *Expedite/CICS Program Directory*.

Information Exchange (IE) level (protected)

The version and release level of the Information Exchange system to which Expedite/CICS is connected.

Force purge/release time

Specifies how soon after a receive data record has become stuck that it can be purged or released. If you are a system administrator, after this amount of time has elapsed, you can purge an INCOMPLETE receive data record or release a COMPLETE receive data record.

The field format is HHMM, and valid values range from 0100 to 2359. The default is 0500 (5 hours).

Not-Sent Not-Received Retention

Specifies how soon send and receive control and data records are purged by the activity monitor if they did not complete successfully. After the specified period, the activity monitor purges send control records with a status of E-HIxxx or HELD as well as receive control records with status E-HIxxx, HELD, or COMPLETE. All records associated with the send or receive are deleted.

This value can range from 01 to 40 days. The default is 40 days.

Sent/Receive non-delete

Specifies the window of time outside of which receive control (RC) records with a status of RECEIVED, and send control (SC) records with a status of SENT, are deleted. System administrators can set this option to accommodate their system’s requirements. Customers upgrading from a previous release must update this field manually. If the default field is left blank or has invalid characters, a default value of 8 a.m. to 4 p.m. is applied. This field is initialized during first-time installation when the customer defines the EXPDERR data set.

The field format is HHMM to HHMM, and valid values range from 0000 to 2359. The default is 0800 to 1600 (8 a.m. to 4 p.m.).

Defining transaction names

Expedite/CICS provides a default transaction ID (TRANSID) to manage various functions that you perform, such as sending a file, restarting a session, or logging off. If you are a service administrator, you can change the name that Expedite/CICS assigns to a transaction if, for example, you already use the default name for another transaction. If you are a general user, you can view the list of transaction IDs.



CAUTION: You can change transaction names during Expedite/CICS installation as needed. If transactions are renamed using the procedure below, the program control table (PCT) definition must also be changed for the transaction to start the appropriate Expedite/CICS program. Conversely, if you change the PCT, the corresponding transaction IDs on the Define Expedite/CICS Transactions panel must be changed as well. These tasks are usually performed by a system programmer.

If you change the name of the transaction name of the Listener (LSTN) transaction, you must also change the TRANSID parameter in the TCP/IP configuration macro (EZACICD).

To work with transaction names, begin on the Expedite/CICS System Administration Selection menu.

1. Select Option 3, **Set/view transaction names.**

Expedite/CICS displays the Define Expedite/CICS Transactions panel, with your account ID, user ID, and transaction IDs (default and current) already filled in. The values in the Current TRANSID column indicate the transaction IDs actually in use on your CICS system.

```

EXP6AD6          Define Expedite/CICS Transactions

Account         ACCT
Userid          USER01

Transaction Description      Default TRANSID      Current TRANSID

Display Application..... < LGO1 >          < LGO1 >
Reset User Session..... < IDLT >          < IDLT >
LU 6.2 Receive data..... < ISC2 >          < ISC2 >
Process Receive 1..... < IMR1 >          < IMR1 >
Process Receive 2..... < IRM2 >          < IRM2 >
Send Data Task..... < IST1 >          < IST1 >
Manage User Logoff..... < ISE2 >          < ISE2 >
Activity Monitor..... < EXPR >          < EXPR >
Batch Monitor..... < EXPS >          < EXPS >
Listener..... < LSTN >          < LSTN >
Child Task..... < TCHD >          < TCHD >

HI313 ENTER TRANSACTION IDS AND PRESS PF3(END) TO SAVE CHANGES.

Command ==>
PF1=Help  PF3=End  PF12=Cancel
    
```

2. Type values in the **Current TRANSID** fields as needed according to the information provided in the following table.

Transaction (default)	Transaction description
Display Application (LGO1)	Invokes the Expedite/CICS Display Application and subsequent panel processing. LGO1 is invoked by the user from a cleared native CICS screen.
Reset User Session (IDLT)	Resets a user's session (a session start must then be issued to enable the user to continue). IDLT can be invoked either from native CICS or through the List user session status option of the User Session Selection Menu (see "Reset a user session" on page 133).
LU 6.2 Receive Data (ISC2)	<p>Invoked when data is sent in an LU 6.2 session from Information Exchange to Expedite/CICS, ISC2 receives data from the session and invokes the Process Receive 1 transaction to start the Expedite/CICS receive process for incoming data.</p> <p> NOTES:</p> <ol style="list-style-type: none"> 1. The transaction must be coded in the terminal control table (TCT) TYPE=MODESET definition for sessions in the TRANSID parameter. With CICS/ESA systems, this parameter is no longer used. 2. Because Information Exchange is a remote facility that invokes ISC2 when receiving data, transaction ISC2 must be defined to your external security package and the TRANSEC value for the PCT definition must have a value that allows remote facilities to access it. <p>Transaction name ISC2 is hard-coded in both Expedite/CICS and Information Exchange. To change this name, you must code a terminal-attach exit to redefine the transaction to be executed. Refer to CICS manuals for detailed procedures.</p>
Process Receive 1 (IMR1)	<p>When Information Exchange sends data to Expedite/CICS, transaction ISC2 is started to read the data from the session. Then transaction IMR1 is started to run Expedite/CICS receive programs which:</p> <ul style="list-style-type: none"> • Receive data to the receive data (EXPRDAT) file and notify Information Exchange the data was received • Write data to a user destination or pass it to a user receive program • Link (optional) to user exit programs • Clean up and delete data when a receive completes successfully
Process Receive 2 (IRM2)	This transaction is reserved for future use.

Transaction (default)	Transaction description
Send Data Task (IST1)	<p>Data being sent to Information Exchange can be sent synchronously or asynchronously, as specified in a user's profile. Synchronous data is sent under the initiating user transaction (or LGO1 if issuing from the Display Application). Control is not returned to the user until the send process is successfully completed and the entire message is sent to Information Exchange.</p> <p>Asynchronous processing returns control to the user as soon as the data to be sent is successfully loaded into the send data (EXPSDAT) file. Then the send data task (IST1) is started to read the data from EXPSDAT and forward it to Information Exchange to complete the send process.</p>
Manage User Logoff (ISE2)	<p>This transaction is used to manage and complete a request to end a user's Information Exchange session.</p>
Activity Monitor (EXPR)	<p>This CICS task runs periodically (default = 30 minutes) to:</p> <ul style="list-style-type: none"> • Monitor connections and sessions and restart as needed: <ul style="list-style-type: none"> • Verify Information Exchange links are in service • Inquire about active users; reset if session problems are detected (indicated by an SDIERR from Information Exchange). • Check active single and continuous receive requests; reset users, and thus receive requests, which are not processing correctly. • Delete expired control records associated with successfully completed send and receive requests. Expiration is controlled by the values set in the Send file retention and Receive retention fields of a user profile. After the number of days specified in the Not-Sent Not-Received Retention option on the Define System Options panel, the activity monitor purges control and data records associated with requests that have a status of E-HIxxx, COMPLETE, or HELD. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel. <p>The activity monitor rest interval is set on the Define System Options panel as described in "Working with system options" on page 155. For more information, see Chapter 12, "Understanding automated restart and recovery."</p>
Batch Monitor (EXPS)	<p>This transaction monitors for batch send activities and sends batch data to Information Exchange. The run interval default is 0000 seconds. This value should be set to 0015 seconds if batch send is going to be used.</p>

Transaction (default)	Transaction description
Listener (LSTN)	This transaction starts at CICS startup when Communication method in the override file (EXPDPRM) is set to TCP. It listens for connection requests from the port number specified in UserPortNumber in the override file. The Listener accepts connection requests and starts a child task (TCHD) to continue communication, and then returns to Listen mode. This transaction is used during the receive process when Information Exchange attempts to connect to Expedite/CICS at the IP address and port specified in the override file.
Child Task (TCHD)	This transaction is started by the Listener transaction after a connection is accepted. It verifies the identity of Information Exchange before beginning the receive process.



NOTE: The batch send monitor and the activity monitor are initially set to run when Expedite/CICS initializes during system startup. During Expedite/CICS initialization, Information Exchange connections are checked and active user sessions are restarted. If, when the activity monitor runs, it detects a problem with the Information Exchange connection, the initialization procedure is invoked again.

3. When you finish typing your transaction ID changes, do one of the following:
 - To save typed values and return to the Expedite/CICS System Administration Selection menu, press PF3.
 - To discard typed values and return to the Expedite/CICS System Administration Selection menu, press PF12.

Starting or stopping the internal trace

Expedite/CICS provides an internal command trace that can be useful in developing and supporting Expedite/CICS applications. For example, you can use this trace facility when testing Expedite/CICS after installation, or when troubleshooting problems, to view all data elements sent to and received from Information Exchange.

Error messages and informational messages are written to the internal trace TSQs when one or more of the trace flags is set to **Y**. If all flags are set to **N**, nothing at all is written to the TSQ. Setting any flag to **Y** activates the writing of error messages and informational messages.

If you are a service administrator, you can start and stop the trace for various elements. If you are a general user, you may view the options to determine if a trace is active for an element.

Before you use the trace function for troubleshooting, you may want to use the **Purge** option on the Trace Options panel to purge the existing trace data and make the current test commands and data easier to find.

On the Trace Options panel, you indicate which elements you want to trace. The trace flags tell Expedite/CICS what kind of data you want written to the Expedite/CICS internal trace temporary storage queues, EXPDTRCA and EXPDTRCB. The first 125 bytes of this data are also written to the Log TDQ, EXPL, if the **Log Trace** field is set to **Y**. To set up the trace options, begin on the Expedite/CICS System Administration Selection menu.

1. Select Option 4, **Start or stop trace facility**.

Expedite/CICS displays the Trace Options panel.

```

EXPMTRI                      Trace Options

Enter Y (yes) or N (no) in the fields

Purge
Purge trace.. < N >

Trace                        TCP/IP Trace Options
Commands..... < Y >          Start up Parm..... < N >
Send..... < Y >                TCP/IP Send..... < N >
Receive..... < Y >            TCP/IP Receive..... < N >
Data..... < N >

Switch trace table at record.... < 20000 >   (00100 - 32760)
                                                (00000 - no switching)

Write Trace to Log EXPLOG1

Log Trace.... < Y >           (Activate trace for EXPL destination)

HI305 ENTER FIELD INFORMATION AND PRESS PF3(END) TO SAVE CHANGES.

Command ==>
PF1=Help   PF3=End   PF12=Cancel

```

2. To purge the current trace information, next to **Purge trace**, type **Y**. Only the internal trace queues (EXPDTRCA and EXPDTRCB) are purged. The Log trace (EXPL) is not purged.



NOTE: Always use the Trace Options panel to purge the trace table. **Do not** purge the TSQ from native CICS.

3. In each of the **Trace** fields, type **Y** or **N** to indicate whether you want to run the trace. The default value is **N**. For more information, see “Trace option field descriptions” on page 177.
4. In each of the **TCP/IP Trace Options** fields, type **Y** or **N** to indicate whether you want to run additional tracing for TCP/IP communications. The default value is **N**. For more information, see “TCP/IP Start up Params” on page 179.
5. In the **Switch trace table at record** field, type the number of records at which you want the trace to switch from one table to the other (EXPDTRCA to EXPDTRCB or EXPDTRCB to EXPDTRCA). Expedite/CICS writes to the first table until the number of records specified is reached, and then switches to the second table. When the second table contains that same number of records, Expedite/CICS deletes the data in the first table and starts writing to the first table again.

Valid values range from 100 to 32,760 (maximum size of a TSQ is 32,767) records. The default is 20,000 records, which means a maximum of 40,000 records can exist at one time. Zeros indicate no switching will be done. In this case, you will need to monitor the record count to ensure that it is less than 32,760.

6. In the **Log Trace** field, type **Y** or **N**.

When this option is set to **Y**, the first 125 bytes of data written to the internal trace TSQs are also written to the log TDQ, EXPL. For more information about how this TDQ is defined and used, refer to “Log TDQ (EXPL)” on page 250.
7. When you finish filling in field values, do one of the following:
 - To save typed values in the user profile and return to the Expedite/CICS System Administration Selection menu, press PF3.
 - To discard typed values and return to the Expedite/CICS System Administration Selection menu, press PF12.

Trace option field descriptions

The descriptions below are provided to help you fill in the trace option fields as needed. For more information about trace destinations and trace output, see “Using Expedite/CICS problem determination facilities” on page 234.

Purge trace

When this option is set to **Y**, the internal trace queues (EXPDTRCA and EXPDTRCB) are purged. However, the Log trace (EXPL) is not purged.

Trace Commands

When this option is set to **Y**, most commands, excluding those that contain data, are written to the trace. This includes the following:

- Commands to the command processor and the response COMMAREA
- Information Exchange commands and responses such as Session Start, Session End, Session Inquiry, and receive requests, including the receive commit response
- List Define, List Verify, Audit Retrieve, Probe, all library commands and all pass-through commands.



NOTE: Expedite/CICS command and response formats are provided in *Customizing and Developing Applications with Expedite/CICS*. Information Exchange command and response formats are provided in the *Information Exchange Interface Programming Guide*.

Trace Send

When this option is set to **Y**, Expedite/CICS writes commands to the trace associated with send requests, including the Expedite/CICS send file command, and the commit request and response from Information Exchange.

If the **Trace Data** option is set to **N**, only the first 300 bytes of each send message command are written to the trace; this is sufficient to hold the command and responses.

If the **Trace Data** option is set to **Y**, all the data is written as well. In most cases, this is not necessary for problem determination.

Trace Receive

When this option is set to **Y**, Expedite/CICS writes commands to the trace associated with the receive data, including the received message header containing the data as it arrives from Information Exchange and the commit request from Information Exchange.

If the **Trace Data** option is set to **N**, only the first 300 bytes of the received message header containing the data are written to the trace; this is sufficient to hold the command and responses.

If the **Trace Data** option is set to **Y**, the message data is written as well. In most cases, this is not necessary for problem determination.

Trace Data

When this option is set to **Y**, all commands and data sent and received are written to the trace.

The size of each record written to the trace depends on the value set in the **Data transmission size** field on the Define System Options panel. The maximum transmission size is 26,000 bytes, which includes data and command headers.

The maximum length of a trace record, which includes the task number, date, and time, is 26,027 bytes.

When this option is set to **N**, only the first 300 bytes of the command and data sent or received is written to the trace. 300 bytes is sufficient to include the commands and responses necessary for problem determination.

It is recommended that data be traced only when there is a particular question about the data being sent or received.

Switch trace table at record?

Specifies the number of records at which you want the trace to switch from one table to the other (EXPDTRCA to EXPDTRCB or EXPDTRCB to EXPDTRCA). Expedite/CICS writes to the first table until the number of records specified is reached, and then switches to the second table. When the second table contains that same number of records, Expedite/CICS deletes the data in the first table and starts writing to the first table again.

Valid values range from 100 to 32,760 (maximum size of a TSQ is 32,767) records. The default is 20,000 records, which means a maximum of 40,000 records can exist at one time. Zeros indicate no switching will be performed. In this case, you will need to monitor the record count to ensure that it is less than 32,760.

Log Trace

When this option is set to **Y**, the first 125 bytes of the data written to the internal trace TSQs are also written to the log TDQ, EXPL. For more information about how this TDQ is defined and used, refer to “Log TDQ (EXPL)” on page 250.

TCP/IP Start up Params

When this option is set to **Y**, Expedite/CICS writes detailed information to the trace queue on the processing of each TCP/IP override parameter in EXPDPRM. If an error occurs when validating any override parameter for which there is no default value, Expedite/CICS does not process the remaining parameters and assume SNA communication is being used. There are no default values for the Information Exchange IP address, Information Exchange port number, user IP address, user port number, and TCPNAME. The default values for the remaining parameters are as follows:

TCP/IP override parameters:	Default values:
Communication Method	SNA
Maximum Sockets	50
Activity Timeout	30 minutes
Receive Timeout	10 minutes
Concurrent Send Sessions	1
Concurrent Receive Sessions	1

This option is useful when you need to find out which parameter is causing Expedite/CICS to assume SNA communication when you have specified TCP/IP communication.

TCP/IP Send

When this option is set to **Y**, all send-related TCP/IP commands sent to, and responses received from, the TCP Relay are written to the trace. Along with the message indicating which command is being sent or received, the complete command is written to the trace log. Although, this is useful when trying to identify a problem relating to communication with Information Exchange,

setting this option to **Y** will fill up the Expedite/CICS trace queues more quickly. We recommend that you set this option to **N** unless there is a specific problem you are trying to trace. These commands include:

TCP/IP command:	Purpose:
TCP-HOST-ASSIGN	Expedite/CICS uses this command to request the address of the next available server. This allows Information Exchange to balance the load on the system and provide better performance and availability.
TCP-HOST-ASSIGNED	This is Information Exchange's response to the TCP-HOST-ASSIGN command. Expedite/CICS uses the address and port number returned in this response to reconnect to Information Exchange.
TCP-START	Expedite/CICS uses this command to establish a conversation with Information Exchange's TCP Relay.
TCP-STARTED	This is Information Exchange's response to the TCP-HOST-START command which indicates that the TCP Relay is ready to start communication.
TCP-SEND	Expedite/CICS uses this command to communicate to the TCP Relay that there is data to be sent to Information Exchange.
TCP-RECEIVED	Information Exchange uses this command to communicate to Expedite/CICS that there is data being sent from Information Exchange.
TCP-END	Expedite/CICS uses this command to indicate the end of the communication between Expedite/CICS and the TCP Relay.
TCP-ENDED	This is Information Exchange's response to the TCP-END command which indicates the end of communication between TCP Relay and Expedite/CICS.

TCP/IP Receive

When this option is set to **Y**, all receive-related TCP/IP commands received from the TCP Relay, and responses sent to the TCP Relay, are written to the trace log. Along with the message indicating which command is being sent or received, the complete command is written to the trace log. Although, this is useful when trying to identify a problem relating to communication with Information Exchange, setting this option to **Y** will fill up the Expedite/CICS trace queues more quickly. We recommend that you set this option to **N** unless there is a specific problem you are trying to trace. These commands include:

TCP/IP command:	Purpose:
TCP-IDENTIFY	This command is sent by the TCP Relay to Expedite/CICS when Information Exchange has data to send to Expedite/CICS in response to a receive command (SDIRCVM) sent to Information Exchange. This command is the first step in the identify validation process.

TCP/IP command:	Purpose:
TCP-IDENTIFIED	Expedite/CICS sends this command to the TCP/IP Relay after confirming the identify of the TCP Relay. Data is only received after the TCP Relay has been successfully identified.
TCP-RECEIVED	This command is used to communicate to Expedite/CICS that data is being sent from Information Exchange.

Working with the system error log

You can view a log of sent and received control records processed with errors. If you could not receive a file or message because of errors, you can view, purge, or release the data. If you are a service administrator, you can use these commands for any user on the system. If you are a general user, you can use the commands only for your own records.

To work with a list of files that have errors, begin on the Expedite/CICS System Administration Selection menu.

1. Select Option 5, **View system error log**.

Expedite/CICS displays the Messages and Files in Error panel, with the account ID and user ID already filled in.

Entries for failed receive requests are listed first, followed by entries for failed send requests.

```

EXPMVEL                Messages and Files in Error                Item 0001 of 0005

  Account  < ACCT  >      CMD Values: V=View, R=Release, P=Purge
  Userid   < USER01 >    (Values that apply differ based on status)

Cmd  Status   Source/Destination   Message   File   Date   Time
      or Control ID   Class    Type
-   RE-HI902  S0000172           00000000  OTHER  19940523  170032
-   RE-HI902  ACCT02  USER01  PAYROLL  OTHER  19940523  170032
-   RE-HI460  C0000180          00000000  LL     19940525  090345
-   RE-HI460  ACCT    USERXX  INVOICE  LL     19940525  090345
-   SE-HI508  ACCT10  USER00  ORDERS   X12    19940521  152222

HI326 ENTER THE APPROPRIATE COMMAND OR A STARTING ITEM NUMBER.

Command ==>
PF1=Help  PF3=End  PF5=Refresh  PF12=Cancel
    
```

2. If you are a service administrator, proceed as described below; otherwise, skip to Step 3.

a. To view a list of all files and messages marked with errors, do one of the following:

- For all users in your account:
 - Next to **Account**, type the account name.
 - Next to **Userid**, type *.
- For all users in all accounts you are authorized to view:
 - Next to **Account**, type *.
 - Next to **Userid**, type *.
- For a specific user in a specific account:
 - Next to **Account**, type the account name.
 - Next to **Userid**, type the user ID.

b. Press Enter.

Expedite/CICS displays the requested list of files and messages.

3. In the **Cmd** field, next to the file or message you want to work with, type one of the codes described below. If you need help understanding the field information displayed on this panel, see “Messages and files in error field descriptions” on page 185.

If you issue a command in the **Cmd** field for a control ID entry, the command may be issued against **all** files associated with that control ID. If you issue a command in the **Cmd** field for a file entry, the command affects only that entry.

Control ID entries contain an 8-character alphanumeric string; the first character, S (for single receive) or C (for continuous receive) is followed by a unique 7-digit number assigned by Expedite/CICS. Control IDs reference control information only; they do not indicate data received.

Command:	Description:
V	<p>Look at a file or message as described below. 79 characters per line are displayed.</p> <p>Failed send requests SE-HLxxx: Failed send data is not kept when synchronous processing is used, so the data cannot be viewed. When a send request using asynchronous processing fails, Expedite/CICS stores the data in the send data (EXPSDAT) file where it is marked in error and held for the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel until released or purged.</p> <p>Failed receive requests RE-HLxxx: When an error occurs and data can not be delivered, Expedite/CICS stores it in the receive data (EXPRDAT) file where it is marked as being in error and held for the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel until released or purged.</p>
R	<p>Release a message or file as described below.</p> <p>Failed send requests SE-HLxxx: After an unrecoverable error occurs from an asynchronous send request, Expedite/CICS will release and attempt to resend the file or message to Information Exchange. If a synchronous send request failed, the send must be manually reissued.</p> <p>Failed receive requests RE-HLxxx: Expedite/CICS will release and attempt to recover the data to the destination specified in the issued receive command. If the release is successful, the status changes to RECEIVED; if an error occurs again, the error message is displayed and the status remains an error code.</p>
	<p>NOTE: You cannot release data associated with a failed batch or ESD receive. If archiving has been enabled for this user ID, this data may be retrieved from the Information Exchange archive by reissuing the receive request or manually retrieving the data from the receive data (EXPRDAT) file.</p>

Command:	Description:
P	<p>Purge a message or file as described below.</p> <p>Failed send requests SE-HLxxx: This action purges send request control or data records associated with a failed send from the Expedite/CICS EXPDSRC and send data (EXPSDAT) files. Because these records are associated only with failed requests, they are not automatically purged by Expedite/CICS when the send retention period set in the user's profile is reached. However, the records are purged by Expedite/CICS automatically after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.</p> <p>Failed receive requests RE-HLxxx: This action purges any receive control and data records associated with the failed receive from the Expedite/CICS EXPDSRC and receive data (EXPRDAT) files. Because these records are associated with failed requests only, they are not automatically purged by Expedite/CICS when the receive retention period set in the user's profile is reached. However, the records are purged by Expedite/CICS automatically after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.</p>
H	Send and receive files with an error status cannot be held, so this is not a valid option.

The following table shows which command you can use depending on the status of the file or message.

File Status	Valid commands			
	View	Release	Hold	Purge
SE-HLxxx	X	X*		X
RE-HLxxx	X	X		X
RECEIVED				X
RELEASED				X
PURGED				



NOTE: * Valid for asynchronous send requests only.

- When you finish working with files and messages, press PF3. Expedite/CICS displays the Expedite/CICS System Administration Selection menu.

Messages and files in error field descriptions

The descriptions below explain the Messages and Files in Error panel fields.

Status

The status displayed is valid at the time of your request; to refresh the status for release or hold actions, you must leave the panel and reselect it.

This status:	Indicates:
SE-HLxxx	<p>Error xxx occurred while processing send data and the send request failed. Expedite/CICS writes a message to the log destination and internal trace; for example, HI508 UNABLE TO ACCESS SEND CONTROL RECORD.</p> <p>For asynchronous send processing, Expedite/CICS retries an issued command that produced a recoverable error. A list of these errors is provided in <i>Expedite/CICS Messages</i>. For unrecoverable errors, the data is marked in error and held in the send data (EXPSDAT) file for the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. The message can be released and sent to Information Exchange.</p> <p>For synchronous send processing errors, the data is purged from the send data (EXPSDAT) file and the control record is marked in error and kept. The user must resend the file.</p>
RE-HLxxx	<p>Error xxx occurred while processing receive data and the receive request failed. Expedite/CICS writes a message to the log destination and internal trace; for example, HI902 VSAM DATASET NOT IN FILE CONTROL TABLE.</p> <p>Data received before the error occurred is marked in error and held in the receive data (EXPRDAT) file for the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel. This data can be released and delivered to the receive destination.</p> <p>If data was passed to a user receive program and processing failed in that program, the HLxxx error displayed could be a user return code returned to Expedite/CICS in the COMMAREA. For more information, refer to <i>Expedite/CICS Messages</i> or <i>Customizing and Developing Applications with Expedite/CICS</i>.</p>
RECEIVED	Expedite/CICS delivered all receive data to the specified destination or program and completed processing.
RELEASED	Expedite/CICS released a message or file that was held due to an asynchronous send request error or receive request error. The message or file is in the process of being sent to Information Exchange or delivered to the receive destination.
PURGED	Expedite/CICS purged the data and control records associated with the failed send or receive request. Data and control records associated with successful send and receive requests are automatically purged by the activity monitor when the retention period specified in the user's profile is reached. This does not apply to records with status SE-HLxxx or RE-HLxxx; these data and control records are purged by Expedite/CICS after the number of days specified in the Not-Sent Not-Received Retention field on the Define System Options panel, unless the user purges them sooner. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.

Source/Destination or Control ID

Contains either a file entry or a control ID entry.

File entries refer to actual items of mail being sent or received. There is one such file entry for each file or EDI interchange send request issued to Information Exchange and for each item of mail received from Information Exchange.

Control ID entries contain an 8-character alphanumeric string. The first character, S (for single receive) or C (for continuous receive), is followed by a unique 7-digit number assigned by Expedite/CICS. Control IDs reference control information only; they do not indicate data received.

For send requests, the field contains one of the following:

- Account and user ID (with system ID, if appropriate)
- Alias table type, table name, and alias name
- Distribution list name

For receive requests, the field contains the Information Exchange account ID and user ID of the sender.

Message Class

The user class of the message.

- For control ID entries, this is the user class specified in a receive command.
- For file entries, this is the user class of a file or message sent or received.
- When no user class is assigned to the message, all zeros are displayed in this field.

File Type

Indicates the file format of a send or receive request file.

This code:	Indicates records are in:
EDI	X12, UCS, EDIFACT, or UN/TDI format
EDIFACT	EDIFACT format
CRLF	CRLF format
UN/TDI	UN/TDI format
UCS	UCS format
X12	X12 format
LL	LL format
OTHER	Some other format

Date

The date that the file or message was last processed by Expedite/CICS, including those files or messages that were held and then released. The format is YYYYMMDD (Year, Month, Day); for example, 19981215 corresponds to December 15, 1998.

Time

The time of day that the file or message was last processed, including those files and messages that were held and then released. The format is HHMMSS (Hours, Minutes, Seconds); for example, 132534 corresponds to 1:25 and 34 seconds in the afternoon.

Working with libraries

This chapter describes the tasks that can be performed with Expedite/CICS libraries and the authority required for those tasks.

The following major topics are presented:

Working with the Library Selection Menu	189
Adding a library	190
Deleting a library	193
Changing library information	194
Listing libraries	197
Listing library members	200
Adding or replacing a library member	205
Getting a library member	208
Deleting a library member	211
Searching library members	212
Viewing in-process PUTmember requests	216
Viewing completed PUTmember requests	216

Expedite/CICS provides the same library functions as Information Exchange. Information Exchange libraries can be used to store data for an extended period of time. Unlike messages in your mailbox, information in a library is not deleted automatically after a certain amount of time or after the information has been received. Library data is stored in units called library members. Each library member can contain millions of characters, subject to the same size constraints as messages.

If you are a general user, you can create and work with only your own libraries. An Information Exchange service administrator can create and work with libraries for other users, so the designated owner of a library is not necessarily the user who added the library and set the library characteristics. The following types of library accesses are provided.

Library type:	Is accessible:
Private	Only by the owner of the library
Organization	By all users in the owner's account
Global	By all Information Exchange users
List	Only by a distribution list of users

The following table shows the major library tasks discussed in this chapter and indicates the library access authority you must have to perform the task.

This library task:	Requires this access:
Adding a library	None
Deleting a library	Write
Changing library information	Write
Listing libraries	Read
Listing library members	Read
Adding or replacing a library member	Write
Getting a library member	Read
Deleting a library member	Write
Searching library members	Read
Viewing in-process PUTmembers	None
Viewing completed PUTmembers	None

General notes about library access and commands

- Expedite/CICS allows any user to issue any library command and forwards it to Information Exchange where user authorization is checked. If a user does not have authorization for a given task, an error message is displayed on the Display Application panel or, for asynchronous command processing, the error message is returned to the user's mailbox.
- Read access allows you to view library member information, and to view, search, and get library member text.

- Write access allows you to add, replace, and delete library members. This access is for library owners, a user to whom a library owner has granted write access, or an Information Exchange service administrator. Users who have write access also have read access.
- Only the owner of a library or an Information Exchange service administrator can change library information or delete a library.

Working with the Library Selection Menu

To work with library options, begin on the Main Selection Menu.

Select Option 3, **Work with libraries and members**.

Expedite/CICS displays the Library Selection Menu.

```

EXPLMS           Expedite/CICS Library Selection Menu

Account          ACCT
Userid           USERID

Select the desired function:

      1  ADD           Add a library
      2  DElete       Delete a library
      3  CHAnge       Change library information
      4  LIBrary      List libraries
      5  MEMbers      List or view members in a library
      6  PUTmember    Put or replace a library member
      7  GETmember    Get a library member
      8  DLTmember    Delete a library member
      9  SEArch       Search a library
      P  PROcess      View list of put members/send files in process
      V  View         View list of completed put members/send files

HI325 ENTER FUNCTION NUMBER, FIRST 3 LETTERS, OR #.# ON THE COMMAND LINE.

Command ==>
PF1=Help  PF3=End

```



NOTE: Because performing the library tasks listed below can be time consuming, Expedite/CICS and Information Exchange perform these tasks asynchronously.

- Add or replace a library member
- Delete a library
- Delete a library member

Adding a library

To add a library, begin on the Library Selection Menu.

1. Select Option 1, **Add a library**.
Expedite/CICS displays the Add a Library panel with the account ID, user ID, owning account, and owning user ID fields already filled in.

```

EXPMLDF                               Add a Library

      Fill in the fields below and press PF5 to add the library.

      Account.....  ACCT
      Userid.....   USERID
      Owing Account.... < ACCT      >
      Owing Userid..... < USERID   >
      Library.....   < _____ >
      Description (Optional)
      < _____ >

      Authority
      ( P = Private, O = Owner's account, G = Any user, L = List of users )
      Read.....     < _ > If L, type the list name .....< _____ >
      Write.....    < _ > If L, type the list name .....< _____ >
      Searchable? (Y/N) ..< _ > Allow support to view/delete (Y/N).< _ >

      Is owner willing to pay for retrieval and view? (Y/N) ..... < _ >

      HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

      Command ==>
      PF1=Help  PF5=Add Library  PF12=Cancel
    
```

2. If you own the library, proceed to step 3. If you are an Information Exchange service administrator acting on behalf of another user, proceed as follows:
 - a. In the **Owning Account** field, type the account ID of the user that will own the library.
 - b. In the **Owning Userid** field, type the user ID of the user you that will own the library.
3. In the **Library** field, type the name of the library you want to define (up to 8 characters).



NOTE: Library names must be unique within an account.

4. Type field entries as appropriate. If you need help, see “Add a Library field descriptions” on page 191.
5. Press Enter to validate field entries.
Expedite/CICS refreshes the display; unless an error message is displayed, all entries were validated.

6. When you finish entering data, do one of the following:
 - To add the library, press PF5.
Expedite/CICS displays a message indicating the request was submitted to Information Exchange. Because library member deletion can take a long time, the task is processed asynchronously by Information Exchange.
 - To cancel and return to the Library Selection Menu, press PF12.

Add a Library field descriptions

Use the following field descriptions as needed.

Description

Information about the library which, when displayed on other library panels, indicates the library's purpose or content. You may enter up to 79 characters.

Read

Specifies who has authority to view library and member information and to view, search, and get library members text.

This code:	Indicates read access for:
P	All users in the owning account
O	Only the owner of the library
G	All Information Exchange users
L	A distribution list of users

If L, type the list name

When **L** is entered in the **Read** field to specify a distribution list, type the name of the list in this field. You may add the distribution list after you add the library.

Write

Specifies who has authority to add, replace, and delete library members.

This code:	Indicates write access for:
P	All users in the owning account
O	Only the owner of the library
G	All Information Exchange users
L	A distribution list of users



NOTE: Write access does not give a user authority to change information on the Information about a Library panel or to delete a library. That authority is limited to the library owner or an Information Exchange service administrator.

If L, type the list name

When **L** is entered in the **Write** field to specify a distribution list, type the name of the list in this field. You may add the distribution list after you add the library.

Searchable?

Specifies whether or not the library is searchable. Once this value is set, it may not be changed. Type **Y** or **N**.

Allow support to view/delete

Specifies whether or not support personnel can delete libraries or view, get, search, and delete the text of library members. Type **Y** or **N**.



NOTE: Support personnel cannot change this field value.

Is owner willing to pay for retrieval and view?

Specifies whether or not the owner is willing to pay for others to get members or view the text of library members. Type **Y** or **N**.



NOTE: If this option is set to **N**, the receiver must also agree to pay the charges for retrieving and viewing this library.

Deleting a library

When you delete a library, you delete all its members. To perform this task you must be the library owner or an Information Exchange service administrator. To delete a library, begin on the Library Selection Menu.

1. Select Option 2, **Delete a library**.

Expedite/CICS displays the Delete a Library panel with the account ID, user ID, and owning account fields already filled in.

```

EXPMLDL                                Delete a Library

Fill in the fields below and press enter.

Account ..... ACCT
Userid ..... USERID
Owning Account..... < ACCT25 >
Library..... < PRICES >

Type Y to confirm the deletion < _ >
or press PF12 to cancel.

Command ==>
PF1=Help PF12=Cancel

```

2. If you own the library, proceed to step 3. If you are an Information Exchange service administrator acting on behalf of another user, in the **Owning account** field, type the account ID of the library owner.
3. In the **Library** field, type the name of the library you want to delete.
4. Do one of the following:
 - To delete the library, type **Y** in the confirmation field, and press Enter. Expedite/CICS displays a message indicating the request was submitted to Information Exchange. Because deleting a library can take a long time, the task is processed asynchronously by Information Exchange.
 - To cancel the delete request and stay on this panel, type **N**, and press Enter.
 - To cancel the delete request and return to the Library Selection Menu, press PF12.

Changing library information

Although any user with read access may view library information, only the library owner or an Information Exchange service administrator can change information.

To change library information, begin on the Library Selection Menu.

1. Select Option 3, **Change library information**.

Expedite/CICS displays the Change Library Information panel with the account ID and user ID fields already filled in.

```

EXPMLCH                      Change Library Information

Account / Userid ..... ACCT      USERID
Owning Account / Library ..... < _____ > < _____ >

Fill in the account and library and press enter to view the library,
PF5 to change library information.

Description (Optional)
< _____ >

Authority
( P = Private, O = Owner's account, G = Any user, L = List of users )
Read..... < _ >   If L, type the list name < _____ >
Write..... < _ >   If L, type the list name < _____ >
Searchable? (Y/N)..... < _ >   Library owner's user ID < _____ >
Allow support to view/delete (Y/N) < _ >
Is owner willing to pay for retrieval and view? (Y/N)..... < _ >

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF5=Change Library  PF12=Cancel
    
```

2. If you own the library, proceed to step 3. If you are an Information Exchange service administrator acting on behalf of another user or are the owner of the library to be changed, proceed as follows:

- a. In the **Owning account** field, type the account ID of the library owner.
- b. In the **Library** field, type the name of the library you want to change.
- c. Press Enter. Expedite/CICS displays the existing library information.

3. Type over the library information field entries as needed. If you need help, see “Change Library Information field descriptions” on page 195.

4. Press Enter to validate field entries.

Expedite/CICS refreshes the display; unless an error message is displayed, all entries were validated.

5. When you finish entering data, do one of the following:

- To change the library information, press PF5.
- To cancel and return to the Library Selection Menu, press PF12.

Change Library Information field descriptions

Use the following field descriptions as needed.

Description

Information about the library which, when displayed on other library panels, indicates the library's purpose or content. You may enter up to 79 characters.

Read

Specifies who has authority to view library and member information, view the text of library members, search library members, and get library members.

This code:	Indicates read access for:
P	All users in the owning account
O	Only the owner of the library
G	All Information Exchange users
L	A distribution list of users

If L, type the list name

If L is entered in the **Read** field to specify a distribution list, type the name of the list in this field. You may add the distribution list after you add the library.

Write

Specifies who has authority to add, replace, and delete library members.

This code:	Indicates write access for:
P	All users in the owning account
O	Only the owner of the library
G	All Information Exchange users
L	A distribution list of users



NOTE: Write access does not give a user authority to change information on the Information about a Library panel or to delete a library. That authority is limited to the library owner or an Information Exchange service administrator.

If L, type the list name

If L is entered in the **Write** field to specify a distribution list, type the name of the list in this field. You may add the distribution list after you add the library.

Searchable?

Specifies whether or not the library is searchable; once this value has been set, it may not be changed. Type **Y** or **N**.

Library owner's user ID (protected; for information only)

The user ID of the library's owner.

Allow support to view/delete

Specify whether support personnel can delete libraries or view, get, search, and delete the text of library members. Type **Y** or **N**.



NOTE: Support personnel cannot change this field value.

Is owner willing to pay for retrieval and view?

Specifies whether the owner is willing to pay for others to get members or view the text of library members. Type **Y** or **N**.



NOTE: If this option is set to **N**, the receiver must also agree to pay the charges for retrieving and viewing this library.

Listing libraries

You can view a list of existing libraries, information about a library, or a list of the library members in a library. The tasks you can perform on this panel require read access to the library. To work with a list of libraries, begin on the Library Selection Menu.

1. Select Option 4, **List libraries**.

Expedite/CICS displays the List of Libraries panel with your account ID and user ID already filled in.

```

EXPMLL1                               List of Libraries                               Item 000001 of 000007

Account / Userid ..... ACCT25          USERID
Owning account ..... < ACCT25 >
List Format..... < C >                (A=Access List, C=Complete)

Type one of these codes next to each library that you want to act on:
      M to look at a list of library Members,
      or S to See additional information about a library
Start the list at account/library: < _____ > < _____ > and press enter.

Code Account Library Description (truncated to a length of 42) Read Write
-   ACCT25 DOCS   Program documentation.           O   O
-   ACCT25 EOMS  Not authorized to view library information P   P
-   ACCT25 PRICES Prices of programs.           O   O
-   ACCT25 PROGS New programs.                 G   G
-   ACCT25 QUARTERS Not authorized to view library information P   P
-   ACCT25 FILE1 Not authorized to view library information P   P
-   ACCT25 FILE2 Not authorized to view library information P   P

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel

```



NOTE: The **Read** and **Write** fields above indicate the access rights for each library. For more information, see “Read” on page 191 and “Write” on page 191.

2. To limit the number of libraries listed, in the **Owning account** field, type the ID of the account that owns the library or libraries. This field defaults to blank (look at all libraries on the system).
3. In the **List format** field, specify whether you want to include only libraries you can access or all libraries defined on the system. To look at all libraries:
 - On the system
 - Leave the **Owning account** field blank.
 - In the **List format** field, type **C** (complete).
 - To which the user has access
 - Leave the **Owning account** field blank.
 - In the **List format** field, type **A** (access list).

- In an account
 - In the **Owning account** field, type the account ID.
 - In the **List format** field, type **C** (complete).
 - In an account to which the user has access
 - In the **Owning account** field, type the account ID.
 - In the **List format** field, type **A** (access list).
4. To start the list at a specific account and library, enter an account ID and library name in the **Start the list at account/library** fields.

If you specify:	Expedite/CICS will:
Only an account ID	Start the list at the first library in the account. If the account you specified does not exist, Expedite/CICS starts the list with the first library in the next account in alphanumeric order. If the account you specified is beyond the end of the list, the end of the list (with an advisory message) is displayed.
Both an account ID and a library name	Start the list at the specified account and library. If the account and library do not exist, the list starts at the next entry in the list in alphanumeric order. If the account and library are beyond the end of the list, either the next library name in alphanumeric order or at the end of the list (with an advisory message) is displayed.
Only the library name	Search for an exact match and starts the list at the first occurrence of the specified library. If the library does not exist, an error message is displayed.



NOTE: Because there can be multiple occurrences of a library name (for different accounts), the library name remains displayed. To start the list with the next occurrence of that library, press Enter again.

5. Press Enter.
Expedite/CICS refreshes the list and displays the following information:
- The account that owns the library
 - The library name
 - A short description of the library
 - The library read access (P, O, G, or L)
 - The library write access (P, O, G, or L)

6. Under **Code**, specify an action:
- | | |
|------------|--|
| This code: | Indicates you want to: |
| M | Work with a list of library members (see “Listing library members” on page 200). |
| S | View additional information about a library (see “Viewing information about a library” on page 199). |

7. When you finish typing action codes, press Enter.
Expedite/CICS performs the tasks in the order they appear on the panel.

8. When you finish with each panel, press PF3.
Expedite/CICS displays the appropriate panel for the next library you marked or, after the last marked task, displays the List of Libraries panel.

Viewing information about a library

When you type **S** in the **Code** field on the List of Libraries panel, the Information about a Library panel is displayed. The information displayed is for viewing only.

```

EXPMLL2                Information about a Library

      Account / Userid ..... ACCT25      / USER04
      Owing account / Library..... ACCT25      / PRICES

Description
THIS LIBRARY CONTAINS THE PRICES OF PROGRAMS.
Creation date - time..... 04/01/94 - 09:42:13
Library owner's user ID..... USER04
Last changed date - time..... 04/04/94 - 11:13:47
Last user to change..... ACCT25      - USER04
Number of members ..... 000000004
Read authority - read access list..... L - DISTLST1
Write authority - write access list..... L - DISTLST2
Searchable? - Allow support to view/delete members?. Y - NA
Is owner willing to pay for retrieval and view?.... Y

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel

```

For more information about the fields on this panel, see “Add a Library field descriptions” on page 191.

To return to the List of Libraries panel, press PF12.



NOTE: In the **Allow support to view/delete members?** field, NA indicates information that is not available to Expedite/CICS. This information may be viewed using Information Exchange Administration Services.

Listing library members

From the List of Library Members panel, you can:

- Retrieve a library member into a user's mailbox
- See additional information about a library member
- View the text of a library member

Each of the above tasks requires read access to the library. To work with a list of library members, do one of the following:

- On the List of Libraries panel, in the **Code** field, type **M** next to the library you want to work with.
- On the Library Selection Menu, select Option 5, **List or view members in a library**.

Expedite/CICS displays the List of Library Members panel with the account ID and user ID fields already filled in. If you selected this option from the List of Libraries panel, the owning account, library name, and a list of all members in the previously selected library would also be displayed.

```

EXPMBR1                List of Library Members                Item 000001 of 000008

Account / Userid ..... ACCT25                USER04
Owning account / Library..... < ACCT25 > < PRICES__ >

Type one of these codes next to each member that you want to act on:
      R to Retrieve the member into a user's mailbox,
      S to See additional information about a member,
      or V to View the text of the member (View is BILLABLE, charges
          are based on pages viewed) and press enter.
Start at member name < _____ >

Code  Member      Description (truncated to a length of 60)
--    -
--    APRIL       Price changes
--    MAY         Price changes
--    JUNE        Price changes
--    CORRECTS    Corrections to price schedule
--    JANUARY     Prices
--    JULY        Price schedule
--    OCTOBER     Current price list

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel

```

The member name and the first 60 characters of the member description are displayed for each library member.

1. If you accessed this panel from the Library Selection Menu, in the **Owning account / Library** fields, type the following:
 - a. The account ID of the library owner
 - b. The name of the library that contains the members you want to list

If you access this panel from the List of Libraries panel, these fields are already filled in and are protected.

2. Next to **Start at member name**, type the member name at which you want the list to start. Leave this field blank to start the list with the first library member.



NOTE: If necessary, this step can be repeated after the list is displayed. The list starts at the member you specify or, if the member you specify is not on the list, with the next member in alphanumeric order. If the member is beyond the end of the list, the end of the list (with an advisory message) is displayed.

Press Enter.

Expedite/CICS displays the specified list of library members. If there are more library members than can be shown on one panel, use F8 and F7 to scroll forward and backward.

3. Under **Code**, for each library member you want to work with, type an action code:

This code: Indicates this task:

- | | |
|---|---|
| R | Retrieve a library member into a user's mailbox (see "Getting a library member" on page 208). |
| S | See additional information about a library member (see "Viewing library member information" on page 202). |
| V | View the text of a library member (see "Viewing the text of a library member" on page 203). |



NOTE: Each time you view the text of a library member, you incur Information Exchange charges based on the character count for each page viewed. If you exit and reenter the Display Library Member Text panel, you incur the charges again because Expedite/CICS reissues the command to Information Exchange to get the member.

4. When you finish typing action codes, press Enter. Expedite/CICS performs the tasks in the order they appear on the panel.
5. When you finish with each panel, press PF3. Expedite/CICS displays an appropriate panel for the next marked library member or, after the last marked task, displays the List of Library Members panel.

Viewing library member information

When you type **S** in the **Code** field on either the List of Library Members panel or the Search Library Members panel, the Information about a Library Member panel is displayed. The information displayed is for viewing only. To return to the Search Library Members panel, press PF12.



NOTE: **Member size** indicates the number of characters in the library member.

```

EXPMBR2                Information about a Library Member

Account / Userid ..... ACCT25   / USER04
Owning account / Library ..... ACCT25   / PRICES
Member ..... JULY

Description
THIS MEMBER CONTAINS THE PRICE CHANGES FOR JULY
Member size..... 00008218
Creation date - time..... 93/02/04 - 11:38:02
Created by..... ACCT25   / USER04
Replacement date - time..... 93/07/04 - 09:11:24
Replaced by..... ACCT26   / USER05

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ===>
PF1=Help  PF12=Cancel
    
```

Viewing the text of a library member

When you type **V** in the **Code** field on either the List of Library Members panel or the Search Library Members panel, the Display Format Selection panel is displayed to allow you to specify in which format the library member data should be displayed. This panel might be bypassed depending on how the data was stored.

```
EXPMBR3                               Display Format Selection

Account / Userid ..... ACCT25   / USER04
Owning account / Library..... ACCT25   / USER4LIB
Member..... 48BGMFIL

Type Y to format data one record per line ..... < _ >
(default is wrapped at 79 characters)

Formatted data record length is    00079 characters, and
total character count per page is 001106 characters.

Note: Billable charges are based upon characters retrieved per
page. Billable charges may be reduced if data is wrapped.

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel
```

When the Display Format Selection panel is displayed, proceed as follows:

1. In the **Type Y to format...** field, do one of the following:
 - To minimize cost, leave the format field blank.
 - To format data at one record per line, type **Y**.

2. Press Enter.
Expedite/CICS displays the Display Library Member Text panel.

```
EXPMBRW                Display Library Member Text        Page: 00001 of 00001

Owning account / Library..... USER04    / PRICES
Member..... JULY                This is a BILLABLE function

Line 1 of message text.
Line 2 of message text.
Line 3 of message text.
Line 4 of message text.
Line 5 of message text.
Line 6 of message text.
Line 7 of message text.
Line 8 of message text.
Line 9 of message text.
Line 10 of message text.
Line 11 of message text.
Line 12 of message text.

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help PF12=Cancel
```

3. When you finish viewing a library member, press PF12. If you marked more than one member on the List of Library Members panel, the panel for the next task is displayed; otherwise, you are returned to the List of Library Members panel.

Adding or replacing a library member

To add or replace a library member, you must have write access to the library.



NOTE: Each time you add or replace a library member, you incur Information Exchange charges. Consult an Information Exchange marketing representative for more information about charges.

To add or replace a library member, begin on the Library Selection Menu.

1. Select Option 6, **Put or replace a library member.**
 Expedite/CICS displays the Add or Replace a Library Member panel with the account ID, user ID, and owning account fields already filled in.

```

EXPMPUT                      Add or Replace a Library Member

Fill in the fields below and press PF5 to add or replace the member.

Account.. ACCT      Owing Account / Library < ACCT25  > < _____ >
Userid... USERID  Member..... < _____ >

From:
File name ..... < _____ >
File management..... < _ >      (TS, TD, VS=VSAM)
File type..... < _ >           (A=CRLF, B=LL, O=Other)
File record length... < _____ > (File type = O only)

Options:
Replace member..... < _ >      (Y=Yes, N=No)
User class..... < _____ > (Optional)
Acknowledgment..... < _ >      (Blank, A, D or E)
File description.....

< _____ >

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF5=Add or Replace Member  PF12=Cancel
    
```

2. On the **Owing account/Library** line, type the account ID of the library owner in the first field, and type the name of the library in the second field.
3. In the **Member** field, type the member name. Member names must be unique within a library.
4. In the **File name** field, type the name of the CICS storage facility from which data will be sent. If you are sending from a:
 - Temporary storage queue (TSQ), enter the TSQ name.
 - Transient data queue (TDQ), enter the TDQ name. This name must be defined in the CICS destination control table (DCT) and, if it is an extrapartition data set, it must also be entered in the CICS startup JCL.
 - VSAM file, enter the VSAM data set name; this data set name must be defined in the CICS file control table (FCT).

5. Next to **File management**, enter a code that tells Expedite/CICS the type of destination that holds the data.

This code: Indicates this kind of file management:

TS	Temporary storage
TD	Transient data
VS	VSAM (ESDS only)

6. Next to **File type**, enter a code that indicates the format of the data records or if you want record delimiters to be added.

This code: Specifies this file format:

A	Carriage return, line feed (CRLF) format. Expedite/CICS delimits each record from the file to be sent by CRLF characters.
B	Logical length (LL) format. Expedite/CICS prefixes each record from the file to be sent by LL characters.
O	Other data type. Use this option to send the data without additional formatting; that is, you do not want delimiters added.



NOTE: A **File type** of **E** (for EDI data) is not supported for the **Put or replace a library member** option, because data is not being sent to an EDI destination but to the *SYSTEM* *LIBRARY. To add EDI data to a library member, you must format the data and use option **O** to send it as-is.

7. Next to **File record length**, type the record length of the member you are adding or replacing. Use this field only if the value in the **File type** field is **O** (Other). Specifying the file record length allows the data to be viewed in records of the specified length; if a value is not specified, the text is displayed in lines of 79 bytes.
8. Next to **Replace member**, specify what you want Information Exchange to do if the specified member name already exists in the library.



NOTE: Because this processing is asynchronous, if the member exists, Expedite/CICS will indicate the member has been sent but you will later get a system error message in your Information Exchange mailbox indicating the member already exists.

9. Next to **User class**, you may enter an alphanumeric name of up to eight characters that describes the kind of information that is contained in the file. User class defaults to blanks. The value in **User class** must:

- Contain no more than eight characters
- Be alphanumeric and left-justified

10. Next to **Acknowledgment**, specify the type of Information Exchange acknowledgment(s) that will be sent to your Information Exchange mailbox for the send request. You have the following options:

This code: Specifies:

A Purge acknowledgment; created and placed in your mailbox when the member is deleted from the library.

D Delivery acknowledgment; created and placed in your mailbox when Information Exchange delivers the file to the system library.

E Purge or delivery acknowledgment; created and placed in your mailbox when the file is received into or is deleted from the system library.

blank No acknowledgment.

11. Under **File Description**, you may type a description of 1–79 characters to identify the library member.
12. To validate your field entries, press Enter.
13. Do one of the following:
 - To add or replace the library member, press F5. Information Exchange sends the library member to Account/Userid, *SYSTEM* *LIBRARY.
 - To cancel and return to the List of Library Members panel, press PF12.



NOTE: You can monitor the status of the request as described in “Viewing in-process PUTmember requests” on page 216 and “Viewing completed PUTmember requests” on page 216.

Getting a library member

You can retrieve a library member into one or more mailboxes. When the library member arrives in your mailbox, you must issue a receive request to receive the member to Expedite/CICS. This task requires read access to the library. To get a library member, do one of the following:

- On the List of Library Members panel or the Search Library Members panel, in the **Code** field, type **R**.
- On the Library Selection Menu, select Option 7, **Get a library member**.

Expedite/CICS displays the Get a Library Member panel with the account ID, user ID, and owning account fields already filled in. If you select this option from the either List of Library Members panel or the Search Library Members panel, the library name and library member name are also be displayed.

```

EXPMGET                               Get a Library Member

Account / Userid ..... ACCT          USERID
Owning account / Library ..... < ACCT    > < _____ >
Member..... < _____ >

Fill in the fields and press PF5 to place the member in mailbox(es)

Receiver's information (Fill in the fields on one line only.)
Sys ID - account ID - userid..... < ___ > < _____ > < _____ >
List name..... < _____ >
Alias type - table ID - alias name < _ > < ___ > < _____ >

Message charge..... < 3 > (default of 3 = library owner pays
                          if agreed, otherwise receiver pays)

Message user class..... < _____ > Message sequence..... < _____ >
Message name..... < _____ > Retention per. (Max 180) < 30 >
Acknowledgment..... < _ > (Blank, R, or A - F)
HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF5=Get   PF12=Cancel
    
```

1. If you accessed this panel from the Library Selection Menu panel, do the following:
 - a. On the **Owning account/Library** line, type the account ID of the library owner in the first field, and type the name of the library in the second field.
 - b. In the **Member** field, type the name of the library member.

If you accessed this panel from either the List of Library Members panel or the Search Library Members panel, these fields are already filled in and are protected.

2. Under **Receiver's information**, specify the user, alias, or list of users for whom you are getting the member. Complete these fields as you would the corresponding fields on the receive panels; if you need help, see "Receive request field descriptions" on page 43.

If you specify:

- An Account/Userid: when the command is sent to Information Exchange, Information Exchange either verifies the Account/Userid exists or returns an error message to the Display Application.
- An alias name: when the command is sent to Information Exchange, Information Exchange either verifies that the alias exists and that you have access to the alias table or returns an error message to the Display Application.
- A list name: when the command is sent to Information Exchange, Information Exchange either verifies that the list exists and you have access to the list or returns an error message to the Display Application.

3. Next to **Message charge**, specify who pays to retrieve the text of the member.



NOTE: Charges are incurred when the member is received or deleted from the receiver's mailbox.

This code:	Indicates:
1	The receiver pays the receive charge.
3	The receiver may pay the receive charge. If the receiver does not agree to pay, the sender pays the receive charge.
5	The sender may pay the receive charge. If the sender does not agree to pay, the receiver pays the receive charge.
6	The sender pays the receive charge.



NOTES:

1. If the library owner agreed to pay for retrieval, this field defaults to **6**. Otherwise, it defaults to **3**.
 2. Payment levels between owner and receiver must be a valid combination; if they are not, Expedite/CICS displays HI652 ACCESS NOT AUTHORIZED/NO AUTHORITY FOR SEND. See *Information Exchange Message Charges* for more information.
4. Next to **Message user class**, you may specify the kind of data you are retrieving. For more information, see "Message Class" on page 94.
 5. Next to **Message sequence**, you may type a message sequence number.
 6. Next to **Message name**, you may type a name that is given to a message or group of messages.
 7. Next to **Retention**, specify the number of days (0–180) you want Information Exchange to store retrieved data in a recipient's mailbox. After the specified number of days passes, data not received is purged by Information Exchange. A value of zero is overridden by the Information Exchange default setting of 30 days.

8. Next to **Acknowledgment**, specify the type of acknowledgment for a retrieved file that you want placed in your Information Exchange mailbox or in the library owner's mailbox if the owner has agreed to pay charges. Your options include:

- No acknowledgment; leave the field blank
- A single acknowledgment

This code: Specifies a single acknowledgment will be created and placed in your mailbox:

R When the library member arrives in the Information Exchange mailbox.

A When Information Exchange purges the library member from the recipient mailbox. If a recipient does not receive a library member within the specified retention period, Information Exchange purges the data. If this occurs, you might need to retrieve the library member again.

D When Information Exchange delivers the library member to the recipient.

- A combination of acknowledgments

This code: Specifies a combination of acknowledgments will be created and placed in your mailbox:

B When the library member is received in the Information Exchange mailbox and when Information Exchange delivers the library member to its destination.

C When the library member is received in the Information Exchange mailbox and if Information Exchange purges the library member after the specified retention period.

E When Information Exchange either delivers the library member to the recipient or purges the library member after the specified retention period.

F When the library member is received in the Information Exchange mailbox, and when Information Exchange either delivers the library member to the recipient or purges the file after the specified retention period. This is a combination of B, C, and E.

9. When you have completed your field entries, do one of the following:

- To get the library member, press F5.
- To cancel and return to the List of Library Members panel, press PF12.

Deleting a library member

You can delete a library member from a library. This task requires write access to the library. To delete a library member, begin on the Library Selection Menu.

1. Select Option 8, **Delete a library member**. Expedite/CICS displays the Delete a Library Member panel with the account ID, user ID, and owning account fields already filled in.

```

EXPMDLM                               Delete a Library Member

      Fill in the fields below and press enter.

                Account ..... ACCT
                Userid ..... USERID
                Owing Account..... < ACCT      >
                Library..... < _____ >
                Member..... < _____ >

      Type Y to confirm the deletion < _ >
      or press PF12 to cancel.

HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel

```

2. In the **Owning account** field, type the account ID of the library owner.
3. In the **Library** field, type the library name.
4. In the **Member** field, type the member name.
5. Do one of the following:
 - To delete the library, type Y in the confirmation field, and press Enter. Expedite/CICS displays a message indicating the request was submitted to Information Exchange. Because deleting a library member can take some time, Information Exchange processes the task asynchronously.
 - To cancel and stay on this panel, type N, and press Enter.
 - To cancel and return to the Library Selection Menu, press PF12.
6. Press Enter. A confirmation message is displayed.

Searching library members

If a library is defined as searchable, you can search the members for specific phrases and keywords. This task requires read access to the library. You can perform the following tasks:

- Specify the libraries to search and the search criteria.
- See how many members meet the search criteria and then get a library member, see additional information, or view the text of a library member.

To search library members, begin on the Library Selection Menu.

1. Select Option 9, **Search a library**.

Expedite/CICS displays the Search Library Members panel with the account ID and user ID fields already filled in.

```

EXPMSCA                               Search Library Members

Account / Userid ..... < ACCT25   > < USER04 >
Owning Account ..... < ACCT26   >

Search Library < _____ > (Leave blank to search all libraries)

Fill in no more than one line of fields below.
< _____ > AND < _____ > AND < _____ >
< _____ > OR  < _____ > OR  < _____ >
< _____ > THRU < _____ >

OR, type your own search string.
< _____ >
< _____ >
< _____ >

When you finish filling out the panel press Enter.
HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ==>
PF1=Help  PF12=Cancel
    
```

2. In the **Owning account** field, type the account ID of the library owner.
3. In the **Search Library** field, type the name of the library you want to search; to search all libraries, leave this field blank.
4. Do one of the following:
 - Under **Fill in no more than one line...**, type your search criteria on only one line of fields, as described below.
 - Up to three **AND** strings: Information Exchange searches for library members containing all the specified strings. When you use more **AND** logic, fewer library members will meet your criteria, and the resulting list will be smaller.
 - Up to three **OR** strings: Information Exchange searches for library members that contain one or more of the specified strings. When you use more **OR** logic, fewer library members will meet your criteria, and the resulting list will be smaller.

- Up to two **THRU** strings: Information Exchange searches for library members that contain the range of specified strings. For example, if you specify **JAMES THRU JONES**, Information Exchange searches for members containing keywords from JAMES through JONES (inclusive).



NOTE: If you type a string of letters followed by an asterisk, Information Exchange searches the libraries for members that contain any words starting with that string. For example, if you type **PRI***, the search is for members that contain any words beginning with PRI.

- Under **OR, type your own search string**, type the words you want Information Exchange to search for, separated by logical operators and grouping symbols as described below:

Logical operator	Explanation
&	Logical <i>and</i> operator.
or ! or	Logical <i>or</i> operator.
(or [or {	Beginning of a logical expression.
) or] or }	End of a logical expression.
- or -	Indicate a range operator. If the word to the right of the operator is earlier in alphanumeric order than the word to the left of the operator, the result is null.
*	Word truncation or abbreviation; used with ranges.
¬ or ~	Logical <i>not</i> operator.

For example, if you type **(JAMES&¬JONES)|JOHNS***, you will find members containing the word James (but not the word Jones) or members beginning with Johns.



NOTES:

- Search words may be 2 to 12 characters long. Single characters are ignored and words longer than 12 characters are truncated.
 - Search words may contain alphanumeric characters plus the following special characters: # % \$ @. During the search, invalid special characters are ignored.
 - Words are delimited by a blank.
 - When Information Exchange creates a searchable library, it creates a glossary entry for each unique word in the member text. All alphabetic characters are shifted into uppercase. The following words are **not** placed in the glossary: AN, AT, IF, IN, IT, OF, ON, OR, TO, AND, BUT, NOT, and THE.
5. Press Enter.
Expedite/CICS displays a message to indicate one of the following:
- No matches were found for your search criteria.
 - More than 1000 matches were found; you must change your search criteria to limit the search.
 - At least one match, and less than 1000 matches, was found.

If any matches are found, Expedite/CICS displays the second Search Library Members panel with the account ID, user ID, and owning account ID already filled in.

```

EXPMSCB                Search Library Members                Item 000001 of 000008

Account / Userid ..... ACCT25 / USER04
Owning account ..... ACCT26

Type one of these codes next to each member that you want to act on:
    R to Retrieve the member into your mailbox,
    S to See additional information about a member,
    or V to View the text of the member (View is BILLABLE, charges
        are based on pages viewed) and press enter.
Start on library and member < _____ > < _____ > and press enter.

Code  Library   Member  Member description (truncated to a length of 53)
-   LIB1      MEMB1   Description of member one.
-   LIB1      MEMB2   Description of member two.
-   LIB1      MEMB3   Description of member three.
-   LIB1      MEMB4   Description of member four.
-   LIB2      AUGMEMB Description of August member.
HI306 ENTER FIELD INFORMATION AND PRESS ENTER OR A FUNCTION KEY.

Command ===>
PF1=Help  PF12=Cancel
    
```

This panel shows you the following information about the members:

- The name of the library to which the member belongs
- The member name
- The first 53 characters of the member description, if one was provided when the member was created

6. Next to **Start at member name**, type the member name at which you want the list to start. Leave this field blank to start the list with the first library member.

If you specify: Expedite/CICS will:

Only a library Display the list starting with the first member in that library. If the library you specified is not found, the list starts at the first member in the next library in alphanumeric order. If the library is beyond the end of the list, the end of the list (with an advisory message) is displayed.

Both library and member name Display the list starting at the library and member you specified. If the library and member are not found, the list starts at the next entry in alphanumeric order. If the library and member are beyond the end of the list, the next greater library member name or the end of the list (with an advisory message) is displayed.

Only the member name Search for an exact match. If the member you specified is found, Expedite/CICS starts the list of members with the first occurrence of the member specified. If the member you specified is not found, an advisory message is displayed.



NOTE: Because there can be multiple occurrences of the member name, the member name will remain displayed. To start the list with the next occurrence of that member name, press Enter again.

- Under **Code**, for each library member you want to work with, specify an action to take.

This code: Specifies this task:

S See additional information about a member (see “Viewing library member information” on page 202).

V View the text of a member (see “Viewing the text of a library member” on page 203).



NOTE: Each time you view the text of a library member, you incur Information Exchange charges based on the character count for each page viewed. If you exit and then reenter the Display Library Member Text panel, you incur the same charges again because Expedite/CICS reissues the command to Information Exchange to get the member.

R Retrieve a member into a user’s mailbox.
Expedite/CICS displays the Get a Library Member panel (see “Getting a library member” on page 208).

- When you finish marking members, press Enter.
Expedite/CICS performs the tasks for the members, one at a time, in the order they appear on the panel.
- When you finish with each panel, press PF3.
Expedite/CICS displays the appropriate panel for the next member you marked.

When all tasks are completed, Expedite/CICS displays the Search Library Members panel again. You may then scroll the list of members or press PF12 to return to the Library Selection Menu.

Viewing in-process PUTmember requests

You can check the status of library members in the process of being sent to Information Exchange for adding to a library. If you are a service administrator, you can check the status of library members for all users on your system. If you are a general user, you may check the status of your files and messages only.

To view the status of your library members, on the Library Selection Menu, select Option P, **View list of put members/send files in process.**

Expedite/CICS displays the List of Sends in Process panel. ALL messages and files are displayed; you can identify a put-member request by its destination, *SYSTEM* *LIBRARY.



NOTE: The rest of this procedure is the same as the procedure described under “Viewing a list of in-process messages and files” on page 91. See that topic if you need help.

Viewing completed PUTmember requests

You can view the status of library members that were successfully sent to Information Exchange to be added to a library or view requests that resulted in an error. If you are a service administrator, you can look at the list of library members for all users on your system. If you are a general user, you can look only at the list of library members you sent.

To view the status of your library members, on the Library Selection Menu, select Option V, **View list of completed put members/send files.**

Expedite/CICS displays the List of Completed Sends panel. All messages and files are displayed; you can identify a put-member request by its destination, *SYSTEM* *LIBRARY.



NOTES:

1. The rest of this procedure is the same as the procedure described under “Viewing a list of completed messages and files” on page 96. See that topic if you need help.
2. Because put-member processing is asynchronous, if you issued the command with the **Replace member** field set to **N** and the member already exists on Information Exchange, Expedite/CICS will indicate the member has been sent but Information Exchange will put a system message in your mailbox indicating that the member already exists.

Working with pass-through commands

This chapter explains how to use Information Exchange commands that may not be supported by the Display Application or command processor.

The following major topics are presented:

Archive Retrieve (SDIARTV) pass-through command	221
Cancel (SDICNCL) pass-through command	223
Load Test Message (SDILTST) pass-through command	227
Message Inquiry (SDIINQM) pass-through command	228
Session Trace Browse (SDITRLB) pass-through command	229
Session Trace Retrieve (SDITRLR) pass-through command	231

You can use **Pass-through** commands to test Information Exchange commands you want to use, which may or may not be supported by the Display Application or command processor. The following commands can not be tested using this option:

- Send message (for sending files and messages)
- Receive message (for receiving files and messages)
- Session start and session end

Most supported Information Exchange commands can be issued to Information Exchange either from one of the other Display Application panels or from the Pass-through panel. The list below shows commands that can be issued from the Pass-through panel but not from any other Display Application panel.

- The Alias Inquiry (SDIINQA) and Define Alias (SDIDALS) commands are supported by the command processor and can be issued from the Display Application. Because this was not true in earlier Expedite/CICS versions, provision has been made so these commands can still be issued using the **Pass-through** option. Existing applications that use them this way are not affected.

- The Expedite/CICS command processor does no field validation, but simply concatenates the command-processor supplied fields with the panel input and forwards the resultant command to Information Exchange. Information Exchange validates the command and, if an error is detected, does one of the following:

- Places a system error message in your mailbox. For immediate-response commands, an error may also be indicated in the response.

You can use the procedure described in “Querying the Information Exchange mailbox” on page 69 to determine if you have any system error messages in your mailbox.

- If an error occurs in the command input that makes it impossible for Information Exchange to place a system error message in your mailbox, an SDIERR is returned and displayed on your Display Application panel. The response can also be viewed in the Expedite/CICS trace if the Trace Commands flag was set to Y. For more information, “Starting or stopping the internal trace” on page 176. For details about the response format, refer to the *Information Exchange Interface Programming Guide* or *Customizing and Developing Applications with Expedite/CICS*.

The format for each command discussed in this chapter is provided with the command description; you can also refer to the following:

- The *Information Exchange Interface Programming Guide* contains the format for commands that can be issued from the Pass-through Command panel. If using this source, remember that Expedite/CICS supplies the first four fields.
- *Customizing and Developing Applications with Expedite/CICS* contains the format of all commands that can be issued to the Expedite/CICS command processor.

If a non-command-processor-supported command is issued from a user program, a temporary storage queue (TSQ) must be used to pass the remaining command field values to Expedite/CICS. If issuing the command from the Pass-through Command panel, the command field values are supplied on the Information Exchange Pass-through Command panel.

2. Enter the rest of the Information Exchange command in the correct format, starting at the beginning of the first blank line on the panel.

In the Pass-through Command panel above, 0000051 is an example of the part of a command that would follow the **Sesskey** field information (field four of an Information Exchange command). Proceed as follows:

- a. Next to **IE command**, type the name of the pass-through command that you want to use.
- b. In column one of the first blank line, type the rest of the command.
 - Provide the exact number of characters expected by Information Exchange.
 - Use blanks to pad unfilled fields.
- c. Do one of the following:
 - To cancel and return to the Main Selection Menu, press PF12.
 - To issue the command and stay on this panel, press PF4.
- d. Check your Information Exchange mailbox for system error messages as needed. For more information, see “Querying the Information Exchange mailbox” on page 69.

After a pass-through command is issued, Expedite/CICS displays one of the following:

- If the command requires a response, the Information Exchange response is displayed; this response might be truncated if it is longer than the panel width. It is recommended that commands that result in truncated messages be issued from a user program.
- If the command does not require a response, this message is displayed: HI283 INFORMATION EXCHANGE COMMAND HAS BEEN ISSUED.

For more information on issuing commands to the command processor, refer to *Customizing and Developing Applications with Expedite/CICS*, which lists the commands, the command responses, and the pass-through values that should be used with them.

Archive Retrieve (SDIARTV) pass-through command

The Information Exchange archive facility enables you to keep a copy of each item you receive. If an error occurs when you process received data, you can retrieve the archived copy into your mailbox and begin again. To determine whether mail you receive is archived, log on to Information Exchange and use Information Exchange Administration Services to view your Information Exchange user profile. If the value in the **Forced archiving** field is **Y**, the items you receive are archived. How long the items you receive are archived is determined by the value in the **Number of days** field adjacent to **Forced archiving** in your Information Exchange profile, as explained in the *Information Exchange Administration Services User's Guide*.

Messages are archived in archive groups, categorized by session access key. By default, new archive groups are created with each new session start. The Receive message (Program Interface) command also allows you to define archive message groups in the **Arcrefid** field. If **Arcrefid** is specified, messages received as a result of the command are archived using this reference ID, rather than by session access key.

You can use the Information Exchange Administration Services online interface to retrieve both archived message groups and specific messages from an archived message group. For more information on using Information Exchange to retrieve and receive archived data, refer to the *Information Exchange Administration Services User's Guide*.

When using the Archive Retrieve command in Expedite/CICS, you can only retrieve an archive message group. For more flexibility using this command, use Information Exchange Administrative Services. The Expedite/CICS option is described below.

Before you can work with archived data, you must retrieve it by moving it into your Information Exchange mailbox with the Information Exchange Archive Retrieve command. This command retrieves an entire group of archived messages by using an archive reference ID that is allocated to each group of archived messages and comes from one of the following:

- Session access key
- Archive reference ID specified on the receive message command

If you do not know an archive reference ID, you can find it by using Information Exchange Administration Services. If you do not have access to Information Exchange Administration Services, ask your service administrator for a list of archive reference IDs.

When an Archive Retrieve command has been issued and processed by Information Exchange, a response is returned and displayed on the Pass-through Command panel. The response can also be viewed in the Expedite/CICS trace file if the **Trace Commands** field is set to **Y**. For more information about trace options, see “Starting or stopping the internal trace” on page 176. For more information about the response format, refer to the *Information Exchange Interface Programming Guide* or *Customizing and Developing Applications with Expedite/CICS*.

To issue the Archive Retrieve command, type SDIARTV next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDIARTV field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	1	EXPAND	The Expansion indicator field specifies a command-expansion-level indicator that must be 1 . Invalid values default to blank.
2	8	RETRSPC	The value in the Response command name field is placed in the first eight characters of the Archive Retrieve response returned to your user ID. Format: alphanumeric, left-justified, padded on the right with blanks.
10	8	ARCREFID	The Archive reference ID field specifies the archive reference identifier of the data you want to retrieve from short-term archive storage in Information Exchange. Use the Receive Message (SDIRCVM) command to receive them. Format: alphanumeric, left-justified, padded on the right with blanks.

Cancel (SDICNCL) pass-through command

You can use this command to cancel mail that you sent to another user on the same Information Exchange system, if the other user has not yet received it from Information Exchange. You can cancel all the mail you sent to a single user, a list of users, or an alias, or you can cancel specific pieces of mail.



NOTE: Canceling mail can affect send, storage, and delivery charges. Ask your Information Exchange marketing representative for billing information.

The Cancel command does not provide an immediate response. When the request is complete, message HI283 (command issued) is displayed, but this message does not indicate if the command was issued correctly or if it was successful. If the command format was incorrect, system error messages are placed in your mailbox indicating which fields were incorrect.

You can use the procedure described in “Querying the Information Exchange mailbox” on page 69 to determine if you have any system error messages in your mailbox.



NOTES: Alternative methods for canceling messages include the following:

- Logging on to Information Exchange Administration Services; then delete the mail from the user’s mailbox.
- Contacting your local support group.

To issue the Cancel command, type SDICNCL next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDICNCL field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	8	DESTACCT	The Destination account ID field is a required field which, along with DESTUID and DESTTYPE, defines the destinations of the messages to be canceled. DESTACCT contains either a destination account ID (if DESTTYPE equals D) or the name of a list (if DESTTYPE equals L). Format: alphanumeric, left-justified, padded on the right with blanks.
9	8	DESTUID	If DESTTYPE contains D , this field contains the destination user ID. If DESTTYPE equals L , this field is ignored. Format: alphanumeric, left-justified, padded on the right with blanks.
 <p>NOTE: If the DTBLTYP and DTBLID fields in Information Exchange contain values for an alias table name, DESTACCT is combined with DESTUID to form the alias name (up to 16 characters).</p>			

Column	Size	Field name	Field description
17	1	DESTTYPE	<p>The Destination type field is a required field that specifies the type of reference in the DESTACCT and DESTUID fields.</p> <p>D DESTACCT and DESTUID together name a single user, alias name, or alias table.</p> <p>L DESTACCT names a distribution list.</p>
18	1	MSGCLASS	<p>The Message delivery class field is a required field that specifies the class of delivery service of the messages to be canceled.</p> <p>blank Normal delivery.</p> <p>P High priority.</p>
19	8	MSGNAME	<p>The Message name field is optional; if not blank, the value must match the message name on the first or only message of any group to be canceled.</p> <p>Format: alphanumeric, left-justified, padded on the right with blanks.</p>
27	5	MSGSEQN	<p>The Message sequence number field is optional; if not blank, the value must match the input message sequence number on the first or only message of any group to be canceled.</p> <p>Format: alphanumeric, left-justified, padded on the right with blanks.</p>
32	8	MSGUCLS	<p>The User message class field is optional; if not blank, the value must match the user classification field on the first or only message of any group to be canceled.</p> <p>Format: alphanumeric, left-justified, padded on the right with blanks.</p>
<p> NOTE: If MSGNAME, MSGSEQN, and MSGUCLS are blank, then mail items with any user class, message name, and message sequence number may be deleted; in other words, to cancel all mail items sent to other users, leave these fields blank.</p>			
40	6	SUBDSTA	<p>The Submit start date field is optional. It specifies the start date of a time range. For a message group to be cancelled, the submit time of the first or only message of a group must fall within this range. If blank, the value defaults to 000102.</p> <p>Format: numeric (YYMMDD), right-justified, padded on the left with zeros.</p>

Column	Size	Field name	Field description
46	6	SUBTSTA	<p>The Submit start time field is optional. It specifies the start time of a time range in which the submit time of the first or only message of a group to be canceled must fall. If blank, the value defaults to 000000.</p> <p>Format: numeric (HHMMSS), right-justified, padded on the left with zeros.</p>
52	6	SUBDEND	<p>The Submit end date field specifies the end date of a time range in which the submit time of the first or only message of a group to be canceled must fall. If blank, this field defaults to 420916.</p> <p>Format: numeric (YYMMDD), right-justified, padded on the left with zeros.</p>
58	6	SUBTEND	<p>The Submit end time field specifies the end time of a time range in which the submit time of the first or only message of a group to be canceled must fall. If blank, this field defaults to 240000.</p> <p>Format: numeric (HHMMSS), right-justified, padded on the left with zeros.</p>
64	1	MSGTZONE	<p>The Time and date zone field specifies the reference time zone for SUBDSTA, SUBTSTA, SUBDEND, and SUBTEND fields. If blank, the value defaults to G.</p> <p>This value: Indicates that date and time are:</p> <p>L The sender's local time as stated in the Session Start command.</p> <p>G Referenced to Greenwich mean time.</p>
65	1	MSGRCPTS	<p>The Acknowledgment request field is an optional field used to request that Information Exchange send an acknowledgment message to your user ID each time Information Exchange cancels a message group.</p> <p>This value: Indicates that Information Exchange:</p> <p>blank Does not create an acknowledgment.</p> <p>H Include only header information from the first or only message in a canceled message group in acknowledgment messages.</p> <p>T Include both header and text information from the first or only message in a canceled message group in acknowledgment messages.</p>
66	1	EXPAND	<p>The Expansion indicator field specifies a command-expansion-level indicator that must be 1 or 2. A value of 2 supports the century indicator fields. Invalid values default to 1.</p>

Column	Size	Field name	Field description
67	1	DTBLTYP	The Alias table type field specifies the table type of an alias table if DESTTYPE is D . Combined with DTBLID, this field identifies the alias table that can be used to resolve the alias name created by combining the DESTACCT and DESTUID fields. To cancel mail sent to an alias, specify the alias table type (G , O , or P). If you are not using an alias table, leave this field blank.
68	3	DTBLID	The Alias table ID field specifies the table name of an alias table if DESTTYPE is D . Combined with DTBLTYP, this field identifies the alias table that can be used to resolve the alias name created by combining the DESTACCT and DESTUID fields. If you are not using an alias table, leave this field blank. Format: alphanumeric, left-justified, padded on the right with blanks.
71	1	SUBCSTA	The Submit century start field is valid only when the EXPAND field contains 2 . Use this field to select the century for the Submit start date field. This value: Indicates that the year is: 0 A 19xx year. 1 A 20xx year.
72	1	SUBCEND	The Submit century end field is valid only when the EXPAND field contains 2 . Use this field to select the century for the Submit end date field. This value: Indicates that the year is: 0 A 19xx year. 1 A 20xx year.

Load Test Message (SDILTST) pass-through command

Information Exchange maintains a group of test messages you can use to test your system. You can use this command to move these messages into your Information Exchange mailbox so you can receive them. The test messages you can request include the following:

Test message:	Will test:
0	Numerics 0 - 9
1	Upper case alphabet characters
2	Lower case alphabet characters
3	Numerics 0 - 9 and upper and lower case alphabet characters
4	Special characters
5	All 256 EBCDIC characters in ascending sequence

Requested test messages are placed in your mailbox from ID *SYSTEM* *TSTMSG* with a blank user class.

The Load Test message command does not produce an immediate response. When the request is complete, message HI283 (command issued) is displayed, but this message does not indicate if the command was issued correctly or if it was successful. If the command format was incorrect, system error message(s) are placed in your mailbox indicating which fields are incorrect.

You can use the procedure described in “Querying the Information Exchange mailbox” on page 69 to determine if you have any system error messages in your mailbox.

To issue the Load Test Message command, type SDILTST next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDILTST field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	3	LOMSGNO	The Low message number field is required and specifies the first test message number in the series of test messages you are requesting. If LOMSGNO is the same as HIMSGNO, only one message will be sent. The recommended value is zero. Format: numeric, right-justified, padded on the left with zeros.
4	3	HIMSGNO	The High message number field is required and specifies the first test message number in the series of test messages you are requesting. HIMSGNO must be greater than or equal to LOMSGNO. If HIMSGNO is the same as LOMSGNO, only one message is sent. The recommended value is 5. Format: numeric, right-justified, padded on the left with zeros.

Column	Size	Field name	Field description
7	1	EXPAND	The Expansion indicator field specifies a command-expansion-level indicator that must be 1 . Invalid values default to blank.

Message Inquiry (SDIINQM) pass-through command

You can use the Message Inquiry command to request a report from Information Exchange that includes the following information:

- Age of the oldest data message sent to you by another user
- Amount of user message data available, measured in terms of the value set in the **Data transmission size** field on the Define System Options panel by the service administrator
- Age of the oldest Information Exchange system message
- Number of Information Exchange system messages available
- Total message data available (system messages plus data messages)
- Maximum storage needed to store the largest single message or message group

When the Message Inquiry command is processed by Information Exchange, a response is returned and displayed on the Pass-through Command panel. Due to the panel size limitation, not all of the response can be displayed but the full response can be seen in an Expedite/CICS trace if the **Trace Command** field is set to **Y**.

- For more information about trace options, see “Starting or stopping the internal trace” on page 176.
- For details about error response format, refer to the *Information Exchange Interface Programming Guide* or *Customizing and Developing Applications with Expedite/CICS*.

To issue the Message Inquiry command, type SDIINQM next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDIINQM field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	8	INQMTRID	The value in the Inquiry response command code field is placed in the first eight characters of the Message Inquiry response. Format: alphanumeric, left-justified, padded on the right with blanks.
9	1	EXPAND	The Expansion indicator field specifies a command-expansion-level indicator that must be 1 . Invalid values default to blank.

Session Trace Browse (SDITRLB) pass-through command

You can use this command to browse the contents of your session trace data. Information Exchange's response to this command is the Session Trace Browse response, which contains the session trace records that provide information about the status of your session.

When the Session Trace Browse command is processed by Information Exchange, a response is returned and displayed on the Pass-through Command panel. Due to the panel size limitation, not all of the response can be displayed on the panel, but the full response can be seen in an Expedite/CICS trace if the **Trace Command** field is set to **Y**.

- For more information about trace options, see “Starting or stopping the internal trace” on page 176.
- For details about error response format, refer to the *Information Exchange Interface Programming Guide* or *Customizing and Developing Applications with Expedite/CICS*.

To issue the Session Trace Browse command, type SDITRLB next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDITRLB field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	1	EXPAND	The Expansion indicator field specifies a command-expansion-level indicator that must be 1 . Invalid values default to blank.
2	8	RETRSPC	The value in the Response command name field is placed in the first eight characters of the Archive Retrieve response returned to your user ID. Format: alphanumeric, left-justified, padded on the right with blanks.
10	1	RECTYPES	The Record type field specifies the type of session trace records Information Exchange returns. This value: Indicates: T Both session trace and session trace receive records. Valid subsets of T are: S Session trace records (TS) R Session trace receive records (TR) A All record types. This is the default.
11	8	ALTACCT	This field is only for users who have authority to retrieve records from other accounts. If you are not authorized, this field defaults to blank and only your account records are retrieved.

Column	Size	Field name	Field description
19	8	ALTUSRID	This field is for service administrators only. Information Exchange ignores input from other users. If you leave this field blank, Information Exchange extracts only your own session trace records. To extract records for another user within the same account, enter that user's user ID. To extract records for all users in the account, enter a question mark (?). If you are not authorized, this field defaults to blank and only your account records are retrieved.
27	1	TIMEZONE	The Time zone field indicates the time zone for the dates in the DATEFROM and DATETO fields. Enter either L (for your local time zone) or G (for Greenwich mean time). L is the default.
28	7	DATEFROM	Information Exchange extracts only session trace records representing events on or after the date you enter in this field. Enter the date as CYYMMDD, where C is the century (0=19, 1=20), YY is the low-order year, MM is the month, and DD is the day of the month. For example, 0940502 represents May 2, 1994. The default is 0500101 (January 1, 1950). If a year prior to 1950 is entered, a warning message is generated and the default is applied.
34	7	DATETO	Information Exchange extracts only session trace records representing events on or before the date you enter in this field. Enter the date as CYYMMDD, where C is the century (0 = 19, 1 = 20), YY is the low-order year, MM is the month, and DD is the day of the month. For example, 1010502 represents May 2, 2001. The default is 1991231 (December 31, 2099).
41	25	LOCATOR	The Locator field can be used when Information Exchange is prevented from sending all available session trace records in one block by the value in the MAXMSGSZ field on the Session Start command. After an initial Session Trace Browse command is sent with blanks in this field, you can browse the remaining records by sending subsequent Session Trace Browse commands and entering the CHAINRESP value from the previous Session Trace Browse response in this field. You can repeat this action until you receive a Session Trace Browse response with a series of 9s displayed in the CHAINRESP field.

Session Trace Retrieve (SDITRLR) pass-through command

You can use this command to download the contents of your session trace file into your Information Exchange mailbox in the form of a message group. When this is complete, you can receive the messages with the Receive Messages command. If the system does not find session trace records that meet your criteria, it places a null (zero length) message in your mailbox.

The requested trace is placed in your mailbox from *SYSTEM* *EVENTS*, with one of the following message user classes:

This value:	Indicates the trace information is for:
#STRACE	All session traces, including both session and receive trace data; generated if RECTYPES is set to T .
#SESSION	Only session trace data; generated if RECTYPES is set to T .
#RECEIVE	Only receive trace data; generated if RECTYPES is set to T .
#EVENTS	All record-tracking information; generated if RECTYPES is set to T .

When a Session Trace Retrieve command has been issued and processed by Information Exchange, a response is returned and displayed on the Pass-through Command panel. The response can also be viewed in the Expedite/CICS trace if the **Trace Command** field is set to **Y**. For more information, see “Starting or stopping the internal trace” on page 176. For details about the response format, refer to the *Information Exchange Interface Programming Guide* or *Customizing and Developing Applications with Expedite/CICS*.

To issue the Session Trace Retrieve command, type SDITRLR next to **IE Command** on the Information Exchange - Pass-through Command panel.

The following table provides the SDITRLR field values that must be entered on the Pass-through Command panel starting at the beginning of the first blank line.

Column	Size	Field name	Field description
1	1	EXPAND	The Expansion indicator field specifies a command-expansion-level indicator that must be 1 . Invalid values default to blank.
2	8	RETRSPC	This field contains the value that is returned in the first eight characters of the Session Trace Retrieve response.
10	1	RECTYPES	This field specifies the type of session trace records Information Exchange returns. The format is a coded value. Code: Indicates: T Both session trace and session trace receive records. The following are valid subsets of T: S Indicates session trace records. R Indicates session trace receive records. A All record types. This is the default.

Column	Size	Field name	Field description
11	8	ALTACCT	This field is only for users who have authority to retrieve records from other accounts. If you are not authorized, this field defaults to blank and only your account records are retrieved.
19	8	ALTUSRID	This field is for service administrators only. Information Exchange ignores input from other users. If you leave this field blank, Information Exchange extracts only your own session trace records. To extract records for another user within the same account, enter that user's user ID. To extract records for all users in the account, enter a question mark (?). If you are not authorized, this field defaults to blank and only your account records are retrieved.
27	1	TIMEZONE	The Time zone field indicates the time zone for the dates in the DATEFROM and DATETO fields. Enter either L (for your local time zone) or G (for Greenwich mean time). L is the default.
28	7	DATEFROM	Information Exchange extracts only session trace records representing events on or after the date you enter in this field. Enter the date as CYYMMDD, where C is the century (0=1900, 1=2000), YY is the low-order year, MM is the month, and DD is the day of the month. For example, 0940502 represents May 2, 1994. The default is 0500101 (January 1, 1950). If a year prior to 1950 is entered, a warning message is generated and the default is applied.
35	7	DATETO	Information Exchange extracts only session trace records representing events on or before the date you enter in this field. Enter the date as CYYMMDD, where C is the century (0 = 1900, 1 = 2000), YY is the low-order year, MM is the month, and DD is the day of the month. For example, 1010502 represents May 2, 2001. The default is 1991231 (December 31, 2099).
42	3	MAXMSGSZ	The Maximum message size field indicates the size of the largest message to be created in the message group. Specifying this option enables checkpoint-level recovery to take commit points while receiving the message group built by Information Exchange. If MAXMSGSZ contains zero or any nonnumeric characters, Information Exchange creates a single message in the message group. The value must be numeric and is multiplied by 1000 to obtain the message size.

Solving problems

This chapter provides guidelines for solving problems in Expedite/CICS. In general, if you have a problem in Expedite/CICS, review the applicable log or trace examples provided in this chapter, then refer to *Expedite/CICS Messages* for additional information.

If you are unable to solve a problem with the information provided in this book, refer to the problem determination section of *Customizing and Developing Applications with Expedite/CICS* for additional problem-solving hints. If the problem persists, contact your local support group.

The following major topics are presented:

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Solving session access key problems

When Information Exchange receives an incorrect session access key from Expedite/CICS, one possible cause is having two sessions with the same user ID on two different interfaces or on two different Expedite/CICS systems, running on another CICS region.

It is possible that a user is not currently logged on but has an active session on another system that is being automatically restarted. If the same user ID starts a session from two systems, the second session overrides the first and Information Exchange proceeds with the later session. This might cause a checkpoint failure because the counters between Expedite/CICS and Information Exchange are not the same. In addition, messages may be delivered to a system other than the one intended. For these reasons, do not share user IDs across systems.

To recover from this event, proceed as follows:

1. Log off or end a session on one of the systems.
2. Perform a session start on the session that is still active.
3. If the problem persists, proceed to “Resetting a user session” on page 144.

Restarting a session

If requested functions do not seem to be working properly during a session, or you are having problems communicating with Information Exchange, proceed as follows:

1. On the User Administration Selection Menu, select the **List user session status** option and reset the user session as described in “Resetting a user session” on page 144.
2. Restart a session as described in “Logging on to Expedite/CICS” on page 27.
3. If the problem persists, do the following:
 - a. Ask an Information Exchange service administrator to reset the user session through Information Exchange.
 - b. Reset the user session through Expedite/CICS as described in “Resetting a user session” on page 144.
 - c. Restart the session in Expedite/CICS.
4. If the problem still persists, proceed as follows:
 - a. Make note of the user profile settings.
 - b. Delete the user profile as described in “Deleting a user profile” on page 142.



NOTE: Service administrators can delete only the profile or can delete the profile, control records, and data records associated with a user ID.
 - c. Recreate the user profile as described in “Adding or changing user session options” on page 128.
 - d. Reissue send and receive requests as needed.

Solving common problems

The following tables describe typical problems that you may encounter and provide general approaches to isolating and solving those problems.

LU 6.2 connection problems

Description:	Resolution:
<p>LU 6.2 connection not working.</p> <p>HI461 error received.</p>	<p>Check the LU 6.2 INIE connection and sessions.</p> <ol style="list-style-type: none"> 1. Check the CICS system log. Default is MSGUSR. 2. Check the CICS messages for security violations; correct definitions as needed. 3. Check the CICS definitions for connection and sessions; make sure that the connection is defined as INIE. 4. Check the VTAM console log for error messages. 5. Check the VTAM definitions; make sure the APPL statement has the PARSESS parameter set to YES. 6. Verify that the CDRSC and CDRM are active; activate as needed. 7. Verify that the CICS APPLID defined to VTAM matches the network definition. 8. Inquire whether Information Exchange is available; if yes and this is a new connection, ask an Information Exchange service administrator to check the following: <ul style="list-style-type: none"> • Service manager definitions for your CICS APPLID • LU 6.2 RELAY definitions for your CICS APPLID 9. Ask network support to check the LU 6.2 RELAY for error messages.
<p>HI462 error received.</p>	<p>Failure is on the network; ask network support to investigate errors for the failing Account/Userid.</p>
<p>Only one SNASVCMG session is active; cannot issue commands; can send but not receive data.</p>	<p>Check VTAM mode table entry and correct as needed.</p>
<p>IINAPPC session active count is only half of the available count; degraded performance; unable to receive data.</p>	<p>Check VTAM mode table entry for IINAPPC and correct as needed.</p>

Description:	Resolution:
Terminal hangs for two minutes when logging on or issuing a command to Information Exchange.	Check for HI461 or HI462 message in EXPL and EXPM destination queues.

TCP/IP connection problems

Description:	Resolution:
TCP/IP connection not working.	Check the EXPT log for specific error messages. If the error indicates a socket failure, refer to the <i>IP CICS Sockets Guide</i> for an explanation of the reason code.
HI461 error received.	<ol style="list-style-type: none"> 1. Check the EXPT log for failure on any EZASOKET command. Refer to the <i>IP CICS Sockets Guide</i> for an explanation of the reason code. 2. Check for messages from the TCP/IP Relay indicating that a TCP/IP Relay command has failed. 3. Check the CICS system log. Default is MSGUSR. 4. Check CICS messages for security violations; correct the definitions as needed. 5. If the reason code indicates the connection was refused or the destination is not available, inquire whether Information Exchange is available. 6. Ask network support to check the TCP/IP RELAY log for error messages.
HI462 error received.	Failure is on the network; ask network support to investigate errors for the failing Account/Userid.
Terminal hangs for two minutes when logging on or issuing a command to Information Exchange.	<ol style="list-style-type: none"> 1. Check for HI461 or HI462 message in the EXPL and EXPM destination queues. 2. Check the EXPT log for failure on any EZASOKET command. Refer to the <i>IP CICS Sockets Guide</i> for explanation of the reason codes.

Session start problems

Description:	Resolution:
Session start response code 2048 or HI350.	Incorrect password; correct or reset password using Information Exchange Administration Services.
Session start response code 4096 or HI351.	Invalid Account/Userid; correct as needed.
HI423 error received.	No user profile exists in Expedite/CICS and the value in Auto create is N (No). Define the user to Expedite/CICS or use a valid Account/Userid.
Terminal hangs for two minutes when logging on to the Display Application.	Check LU 6.2 connection for in-service and acquired indications, as described in "Session start problems" on page 238.
HI462 or HI461 error received on Session start command.	Check LU 6.2 connection for in-service and acquired indications, as described in "Session start problems" on page 238.
HI123 - HI138 error received.	Indicates a problem with the TCP/IP socket calls. Check the EXPT log for the reason code. For a description of the log record layout, see "Exception message layout" on page 264. Refer to the <i>IP CICS Sockets Guide</i> for an explanation of the reason code.
HI139 - HI143 error received.	Indicates a problem communicating with the TCP/IP Relay. Check the EXPT log for the reason code and explanation.
HI900 ASRA in program EXPOISC1, received on Expedite/CICS password panel.	Make sure that all programs are defined as COBOL; particularly in EXPOISC1.



NOTE: For a full list of Information Exchange session start response codes, see *Customizing and Developing Applications with Expedite/CICS*. The user application must check HI001 to determine whether the session started or not.

Receive data problems

Description:	Resolution:
<p>Attempting to receive data with the ESD (Receive PTF) option, but the batch job that is supposed to run and pull the PTF from the VSAM file and put it in a sequential data set does not appear to be executing.</p>	<p>Check that:</p> <ul style="list-style-type: none"> • The IRDR destination queue is defined and was opened and enabled. • The JP records in the EXPDSRC file have the correct STEPLIB data sets listed, and the EXPBPTF1 module was in the load library specified. • Other problems have not been reported, such as a user message class that is not fully qualified.
<p>AICA - Runaway task interval.</p>	<p>Commonly happens if the DTIMEOUT for transaction IMR1 is, set fairly low and/or the data is being received into a program and the program is doing extensive processing, or they are enqueueing on tied-up resources.</p>
<p>Cannot issue receive command; HI9XX error received.</p>	<p>Notify network support.</p>
<p>Cannot issue receive command; HI4XX error received.</p>	<p>Make sure the received command is using correct values.</p>
<p>Cannot issue receive command; HI421 error received.</p>	<p>No active session with Information Exchange; issue a Session start, then reissue the receive command.</p>
<p>Cannot issue receive command; HI423 error received.</p>	<p>No user profile exists in Expedite/CICS and the value in Auto create is N (No). Define the user to Expedite/CICS or use a valid account and user ID.</p>
<p>Cannot issue receive command; HI461 or HI462 error received.</p>	<p>If using SNA communication, check LU 6.2 connection for in-service and acquired indications, as described in Session start problems on page 238.</p> <p>If using TCP/IP communication, check EXPT for TCP/IP Relay error and explanation.</p>
<p>Data received in user destination in wrong format.</p>	<p>The problem may be caused by one or more of the items below.</p> <ul style="list-style-type: none"> • First data record is unrecognized. Check the Retain data header setting; data is most likely an Information Exchange header. • Data record size is incorrect; check the Handle records as and Max record length settings on the receive command. • Initial records are correct but the nth record size is incorrect. Make sure that the Handle records as setting on the receive command is not set to split records when File type is set to O (Other).

Description:	Resolution:
<p>Data received is skewed or broken.</p>	<p>The most common reason is trying to receive OTHER type data with the split option. When Expedite/CICS reaches the end of an Information Exchange segment, it splits the data at that point and continues on to the next record. (It is best to use wrap when receiving OTHER type data).</p>
<p>HI000 message received, but the data was not in the TD Queue specified.</p>	<p>You may have to close the TD Queue before looking at it.</p>
<p>HI900 and HI909 messages when receiving larger messages.</p>	<p>In one instance, the runaway task interval was set very low (in the CICS region). When Expedite/CICS was receiving large messages, the user's system thought there was a runaway task and purged the task, resulting in HI909 and HI900 messages.</p>
<p>HI900 message in EXPOISC2 or EXPTCHD when receiving data. The receive indicator in Information Exchange goes on, and then user gets an HI900. Also noticed some AKCS abends (deadlock timeouts) - possible enqueueing problem.</p>	<p>Make sure that the Expedite/CICS files are defined as non-recoverable.</p>
<p>HI900 message when receiving to a program.</p>	<p>If error logs indicate an ABM3 abend code, the program requested a basic mapping service (BMS) operation from a terminal that does not have BMS support. A dump should tell which BMS request the user's program is requesting.</p>
<p>HI999 message when trying to receive into a DataInterchange program.</p>	<p>This means that DataInterchange and Expedite/CICS are out of sync, and the cleanup procedures for DataInterchange need to take place (EDIS, EDIZ, IDLT, and EDIR).</p>

Description:	Resolution:
<p>While issuing batch receive, the receive indicator goes on in Information Exchange, and EXPORCV1 and EXPORCV2 are getting invoked, but the internal reader (IRDR) is not getting invoked.</p> <p>No data received in user destination; data did not arrive in user's mailbox.</p>	<p>Check the following:</p> <ol style="list-style-type: none"> 1. The BATCHRDR DD statement in CICS startup deck should be: <pre>//BATCHRDR DD SYSOUT=(A,INTRDR)</pre> 2. The TDQ for internal reader has been defined: <pre>CEMT I QUEUE(IRDR) STATUS: RESULTS - OVERTYPE TO MODDataInterchangeFY Que(IRDR) Ext Ena Ope</pre> 3. The PROC named on Display Application batch receive panel should reside in a proclib in their linklist. 4. The CICS log for errors. In one instance, the log indicated an ASRA for EXPORCV2. This module was LNKEDT with AMODE(24) instead of AMODE(31). After correcting this problem, the batch job was triggered. 5. The batch job for problems. In one instance the following was found: <p>In step 2 (PGM=EXPBRCV1) an override problem was found:</p> <pre>//EXPBRCV1.CARD DD * //</pre> <p>SYSIN override error</p> <p>In an earlier statement that executes the batch receive program, the statement was: <pre>EXPBPTF1 EXEC PGM=EXPBRCV1,REGION=6M</pre> <p>The job referenced EXPBPTF1 instead of EXPBRCV1. The EXPBRCV1.CARD could not refer back to EXPBRCV1, because it did not exist.</p> </p> <p>Check payment levels with trading partner.</p>

Description:	Resolution:
<p>No data received in user destination; data is in user's mailbox but is not being received.</p>	<ol style="list-style-type: none"> 1. Check CICS logs for: <ol style="list-style-type: none"> a. Transaction abends and possible security failure on LU 6.2 session b. TCP/IP sockets interface failure. 2. Check the Expedite/CICS receive queues (in-process and complete) for error messages. 3. Check the Expedite/CICS EXPL, EXPM, and EXPT destination queues for error messages. 4. If using TCP/IP communication, check to make sure the listener task is running. If it is not running, you can start the listener in native CICS by typing LSTN. 5. Verify that a receive is outstanding: <ol style="list-style-type: none"> a. Check receive counts on user status panel. b. Check receive count on session inquiry panel. c. Check Information Exchange Administration Services trace facility for receive command. 6. Check Information Exchange Administration Services mailbox for receive indicator on. 7. If using SNA communication, check the use count in EXPOISC2; it should not be zero. <p>If the use count is zero, check the CICS system log for errors. Information Exchange may be unable to start transaction ISC2 on your CICS region due to an authorization failure. Transaction ISC2 may be deferred on an external security manager.</p> <p>If using TCP/IP communication, check the use count in EXPOTISC. It should not be zero.</p> <p>If the use count is zero, check the EXPT log for errors. Information Exchange may have encountered an error trying to connect to the Expedite/CICS listener.</p> 8. Check the VTAM log for session failures (for SNA communication) or the EXPT log for TCP/IP errors. 9. Check for Journal buffers larger than the transmission size entered on the Define System Options panel. 10. Check that Account/Userid is not in use by another Information Exchange interface. 11. Check the Information Exchange mailbox for system error messages.

Description:	Resolution:
Not receiving all data into a VSAM file.	Make sure that the file is initialized with a dummy record.
Taking a long time to receive.	Check the RUSIZE. It should be at least 1024 (3840 may be better).
Unable to receive after upgrading from Expedite/CICS V1R3 to V4.	With V4, the maximum transmission size is 26000. With V1R3, the maximum transmission size was 12000. Either change the transmission size on the System Options panel in Expedite/CICS or change the program to accommodate the larger transmission size.
Unable to receive.	<p>Check the Expedite/CICS trace. If it shows the HI908 message, which means 'no space,' a reorg procedure should be set up for the files.</p> <p>The EXPRDAT file may fill up quickly depending on the size of the file you are receiving.</p>
Unable to receive. The receive indicator in Information Exchange goes on, EXPOISC2 is being invoked, EXPOIMR1 is invoked and IMR1 seems to use a lot of CPU time, but no data is received.	Check to see if there are any additional programs in the PLT besides EXPOSTRT that may be causing problems.
Unable to receive. The receive indicator in Information Exchange goes on, EXPOISC2 is being invoked, but EXPOIMR1 is not being invoked.	Check to see if there are any additional programs in the PLT besides EXPOSTRT, such as a user exit, that may be causing problems.
Unable to receive. The receive indicator in Information Exchange goes on, but no data is received and no checkpointing is done. Can receive some types of data, and can send/receive with other user IDs.	Check CICS log for error messages. If there is an abend in module DFHFCJL (the file control journal module), the BUFSIZE for the DFHJCT system initialization table entry may be too small. This BUFSIZE value must be greater than the largest transmission (block) size that you will receive plus some padding for journal. The default Expedite/CICS transmission size is 26000.

Description:	Resolution:
<p>Unable to receive, although the Information Exchange receive indicator goes on.</p> <p>User stopped all of the continuous receives in Expedite/CICS, but when the region came up the next day, continuous receives were started. Why?</p> <p>When a receive is issued for a mailbox that is empty, and the receive is for a program, Expedite/CICS returns the TSQ name in the COMMAREA, and the TSQ is empty.</p>	<p>If using SNA communication,</p> <ul style="list-style-type: none"> • Check the use count of EXPOISC2. If it is 0, it is not getting invoked. • Check the ISC2 transaction definition for the TRANSec value. <p>In one instance, the value was 09, which prevented the remote system (Information Exchange Front End) from starting the transaction.</p> <p>If using TCP/IP communication,</p> <ul style="list-style-type: none"> • Check to make sure the listener task is running. If it is not running, you can start the listener in native CICS by typing LSTN. • Check the EXPT log for errors. <p>The user had transaction EDIR from SEQINPUT for CICS, which triggered the session start up each time CICS was brought up.</p> <p>The user's program needs to check byte 39 of the receive long header (MSGGRPIN - Message Grouping Indicator) to see if it is an E (for enddata).</p>

Send data problems

Description:	Resolution:
Batch send problems.	Check the following: <ul style="list-style-type: none"> • EXPDPTF file is allocated and opened. • Batch send monitor interval is set to something other than zero. • If a data exception program check interrupt occurs, make sure that the EXPDPTF file has a record containing 37 zeros and a record containing 37 nines.
Data was sent but did not arrive in the destination mailbox.	Proceed as follows: <ol style="list-style-type: none"> 1. Check the message status in Expedite/CICS send queues for both in-process and complete send requests. 2. Check Expedite/CICS EXPL and EXPM destinations for error messages. 3. Check the audit trail for sent messages on Information Exchange Administration Services. 4. Check the sending mailbox for *SYSTEM* *ERRMSG* messages. 5. Check the user application (log) to verify the message was actually passed to Expedite/CICS and HI000 was returned from Expedite/CICS.
Deadly embrace on send side.	Make sure the Expedite/CICS files are defined as non-recoverable.
HI421 error received.	Session with Information Exchange might be inactive; issue Session start if needed.
HI423 error received.	No user profile exists in Expedite/CICS and the value in Auto create is N (No). Define the user to Expedite/CICS or use a valid account and user ID.
HI432 - HI434 error received.	Check Expedite/CICS translate table and Information Exchange alias table entries; correct the table or the user ID, and then reissue the send request.
HI444, HI445, or HI48X error received.	Check the EDI header and trailer for errors; the Expedite/CICS error message will point to the starting or ending records where the error occurred. Make sure that the Expedite/CICS translate table entry is valid. Correct the data or the table, and then reissue the send request beginning with the interchange in error and including all subsequent interchanges.

Description:	Resolution:
HI500, HI504, HI505, or HI509 error received.	Expedite/CICS and Information Exchange are either out of synchronization or the session access key does not match. Issue a Session start command, then reissue the send request.
HI461 or HI462 error received.	Check LU 6.2 connection for in-service and acquired indications, as described in Session start problems on page 238.
HI123 - HI138 error received.	Indicates a problem with the TCP/IP socket calls. Check the EXPT log for the reason code. For a description of the log record layout, see "Exception message layout" on page 264. Refer to the <i>IP CICS Sockets Guide</i> for an explanation of the reason code.
HI139 - HI143 error received.	Indicates a problem with the TCP/IP socket calls. Check the EXPT log for the reason code. For a description of the log record layout, see "Exception message layout" on page 264. Refer to the <i>IP CICS Sockets Guide</i> for an explanation of the reason code.
HI507 message when trying to send.	<p>Check the following:</p> <ul style="list-style-type: none"> • Make sure the Expedite/CICS files are defined as non-recoverable. • Make sure that the EXPSDAT file is defined correctly. The EXPSDAT file must contain a record containing approximately sixty entries of the number 9.
Issuing batch send and getting the 'elapsed time has passed, please check your CICS region' message.	Either the EXPS interval time is set to 0 (as defined on the System Options panel), or program EXPOSTRT is not in the PLT.
Looping of restart, reset and HI467. If users send new data from DataInterchange (DI), everything is ok. If they pull a file out of the STORE and resend it (which is a normal process for DI), it hangs with the file in ACTIVE status and the user's session starts looping with restart restart reset.	<p>Make sure that the value in the MSGRCPTS field of the send message is valid.</p> <p>In DataInterchange, there are several profiles. When sending the original files, the field may be filled in correctly. However, when using the STORE procedure, if the field is blank, the requestor profile is used and that profile may insert an invalid value, such as inserting a 'Y' where an 'F' is expected.</p>

Description:	Resolution:
Send is stuck in ACTIVE status. IDLT did not work and normal PD has been checked.	Disable IST1 transaction and do an IDLT. This should cause the ACTIVE send to be changed to a NORMAL status. Purge the failing NORMAL send and reenable transaction IST1. Restart the session and the sends should flow fine.
Sending is very slow when sending many small files from several user IDs.	EXPDSRC may be defined with the CI size too large. If several Information Exchange users are active simultaneously, each sending/receiving user performs a CI lock. If the CI size is very large, a significant portion of the data is locked, thus causing the other sending/receiving transactions to wait. Reducing the CI size of EXPDSRC to the record size may improve throughput.
Unable to send. Files are staying in the NORMAL status and not going to the ACTIVE status.	If a user is running asynchronously, the EXPOIST1 program should start via transaction IST1. If this program is enabled but is not starting, change the user profile to run synchronously, which will invoke EXPOIST1. Also make sure there are no security violations related to IST1.

Compression problems

Description:	Resolution:
Abend APDA received.	Check that the Comm-Press programs are defined as assembler programs in the PPT.
HI968 error received.	Check that the LKUPTBLC program is properly defined in the PPT and that the load library where the module resides is in your CICS start up JCL.
HI969 error received.	Check that the COMPCICS program is properly defined in the PPT and that the load library where the module resides is in your CICS start up JCL.
'Unable to load decompression program' message in the log.	Check that the DCMPCICS program is properly defined in the PPT and that the load library where the module resides is in your CICS startup JCL.
HI436, HI439 and HI449 messages.	These messages result from unexpected return codes from one of the Comm-Press modules. The return code is written to the log. Refer to the documentation provided by Comm-Press Inc. for a description of their return codes.

Miscellaneous problems

Description:	Resolution:
Abend APCY .	Make sure that COBOL2=YES is not specified in the SIT.
Continuous HI467 messages and restarts (appears to be looping).	Check setting for the Activity monitor interval (EXPR). If it is set too low, it could cause this problem.
<p>Received one of the following errors:</p> <p>HI900 SEVERE ABEND IN PROGRAM EXPOSTRT on startup</p> <p>HI901 while trying to log on</p> <p>HI926 ERROR READING EXCEPTION DESTINATION TDQUEUE NAME.</p>	Make sure that the EXPDSRC and EXPDERR files are opened and enabled.
Trying to send the Expedite/CICS trace to GXS.	Use the Send file option and make sure the file is sent as LL-type data. Trace files include EXPDTRCA, EXPDTRCB, EXPL, EXPM, and, if using TCP/IP communication, EXPT.
TSQs filling up.	TSQs should not be defined as recoverable. If they are, they could fill up and cause problems. In addition, they are not deleted on warm start.

Using Expedite/CICS problem determination facilities

The Expedite/CICS trace facility provides the following trace destinations for problem determination:

- Internal trace TSQ, EXPDTRCA and EXPDTRCB (below)
- Log destination TDQ, EXPL (page 266)
- Exception reporting TDQ, EXPM (page 266)
- TCP/IP error TDQ, EXPT (page 267)

Various information can be written to each trace destination; however, exception messages are always written to the trace destinations in use. This chapter provides reference information about how the trace destinations are defined and used; for information about how to set the trace options, see “Starting or stopping the internal trace” on page 176. Example trace messages are provided in “Sample trace messages” on page 253.

When developing and testing Expedite/CICS applications, the trace function is useful for tracing Expedite/CICS commands and responses to and from:

- User written applications
- The Display Application
- The Expedite/CICS Command Processor
- TCP/IP Relay
- Information Exchange

Message flow between the systems is traced and severe errors are identified.



NOTE: You might also find it helpful to use Information Exchange problem determination aids such as viewing mailboxes, audit information, and session trace information. For more information, refer to the *Information Exchange Administration Services User's Guide*.

Internal trace queues

Two internal trace TSQs, EXPDTRCA and EXPDTRCB, are used for problem determination and resolution. These TSQs can contain the following information:

- Expedite/CICS commands sent to the command processor and returned responses
- Expedite/CICS commands sent to Information Exchange and returned responses
- Data sent to and received from Information Exchange
- Error messages (severity 08 and above)
- Informational messages

The information written to the internal trace is determined by options set on the **Trace Options** panel, as described in “Starting or stopping the internal trace” on page 176.

You do not need to define these TSQs; they are dynamically created as needed. Data is written into EXPDTRCA up to the number of records specified in the **Switch trace table at record** field on the **Trace Options** panel. Expedite/CICS then switches to EXPDTRCB, deleting any data already in EXPDTRCB and continues to write the data, switching back to EXPDTRCA when the number of records specified in the **Switch trace table at record** field is reached. These TSQs can be viewed from native CICS by issuing the command CEBR EXPDTRCA or CEBR EXPDTRCB.

The trace will switch between EXPDTRCA and EXPDTRCB to conserve temporary storage. However, if the value in the **Switch trace table at record** field on the Trace Options panel is set to zero, no switching is done. Example trace messages are provided in “Sample trace messages” on page 253.

Trace elements

This section describes the kinds of information which may be written to the trace.

Expedite/CICS and Information Exchange commands and responses

These include commands that you send to the Expedite/CICS command processor when requesting a given function, the responses from the command processor, and all commands and data sent to and received from Information Exchange. You can control which commands are written by setting options on the **Trace Options** panel, as explained in “Starting or stopping the internal trace” on page 176.

Command and response formats are provided for:

- Expedite/CICS in *Customizing and Developing Applications with Expedite/CICS*
- Information Exchange in the *Information Exchange Interface Programming Guide*

Informational messages

The informational messages produced by Expedite/CICS are listed below.

INITIAL EXPEDITE/CICS STARTUP

Explanation: Written when Expedite/CICS is first started or after links to Information Exchange have been lost and Expedite/CICS needs to reacquire the connections and restart or reset user sessions, if necessary.

****acct userid* AUTOMATICALLY STARTED ***

Explanation: The activity monitor automatically started the Information Exchange session of the specified Account/Userid. This will occur for users with user profiles that have the value in the **Auto logon** field set to Y (Yes), or for users who previously had an active session with Information Exchange.

CLEANUP KICKED OFF FOR ==>*acct userid*

Explanation: The activity monitor determined that clean up was necessary for this user ID and restarted the user's Information Exchange session.

THIS RECORD BEING BACKED OUT BY CLEANUP

Explanation: Written when uncommitted receive request data is being backed out of Expedite/CICS.

CLEANUP IS ALREADY ACTIVE FOR THIS USER

Explanation: The current call to the cleanup module is being terminated because the routine is already active.

SESSION RESTART FOR ==>*acct userid*

Explanation: Written when Expedite/CICS determined that a restart was necessary while processing a send or receive request.

ACTIVITY MONITOR IS BEING STARTED

Explanation: The activity monitor is starting; it will monitor session activity and perform session restarts as needed.

STOPPAGE OF RECEIVE DETECTED, RESTARTING USER

Explanation: The activity monitor detected a user receive processing error. Expedite/CICS will try to restart the user session and get the receive working again.

RECORD BEING DELETED BY THE ACTIVITY MONITOR

Explanation: The activity monitor is purging control records associated with successfully completed send and receive requests that have met the expiration date. This is controlled by the values set in the **Send file retention** and **Receive retention** fields of a user profile. After four months, the activity monitor purges control and data records associated with requests with status: E-HIxxx, COMPLETE, and HELD. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.

ACTIVITY MONITOR TERMINATING, MULTIPLE COPIES ARE EXECUTING

Explanation: Because the activity monitor is running, this iteration of the activity monitor is being terminated.

INITIATING SEND FUNCTION FOR =====> acct userid TO acct1 userid1

Explanation: A send request was issued by *acct userid* to send to *acct1 userid1* and Expedite/CICS is initiating the send.

NO MORE DATA TO SEND FOR =====> acct userid

Explanation: The send function completed for the specified *acct userid* or Expedite/CICS determined there was no more data to send.

SEND ALREADY ACTIVE FOR =====> acct userid

Explanation: The send function is currently running; the send request just issued is being queued for sending to Information Exchange.

Error messages

The general format of error messages is:

<xxxx><account userid><program><HIxxx>< error text.....>

This value:	Indicates the:
xxxx	Transaction ID associated with the problem
account	Account associated with the problem

This value:	Indicates the:
userid	User ID associated with the problem
program	Name of the program associated with the problem
HIxxx	Expedite/CICS error message
error text	Text associated with the error

The detailed format of these error messages can be found in *Expedite/CICS Messages*. The format for SDIERR can be found in *Customizing and Developing Applications with Expedite/CICS* or in the *Information Exchange Interface Programming Guide*.

Only Expedite/CICS error messages of severity 08 or above are written to the trace destinations. Display Application panel dialogue messages are not written, no matter how severe, because error messages are written primarily to notify users or systems support personnel of exception errors that may require their attention. If a problem occurs while using the Display Application, a user is notified immediately on the panel and the mistake can be immediately corrected.

Although the main destination for writing exception messages is the exception reporting TDQ (EXPM), these error messages are also written to log TDQ (EXPL) and to the internal trace TSQs (EXPDTRCA and EXPDTRCB) if any of the trace options is set to **Y**.

Another type of error message sent from Information Exchange to Expedite/CICS, SDIERR may be traced through the Command, Send or Receive options depending on the command to which Information Exchange is responding. Expedite/CICS processes the SDIERR and returns an appropriate error message if necessary.

Sample trace messages

This topic provides sample trace information. In the sample trace, Expedite/CICS trace options were set as shown on the Trace Options panel illustration below.



NOTES:

1. For help with interpreting the trace samples, see “Send file request trace sample” on page 257.
2. Formats for Expedite/CICS commands are provided in *Customizing and Developing Applications with Expedite/CICS*. Formats for Information Exchange commands are provided in the *Information Exchange Interface Programming Guide*.

```

EXPMTR1                               Trace Options

Enter Y (yes) or N (no) in the fields

Purge
Purge trace.. < N >

Trace                                TCP/IP Trace Options
Commands..... < Y >                   Start up Parm..... < N >
Send..... < Y >                         TCP/IP Send..... < N >
Receive..... < Y >                       TCP/IP Receive..... < N >
Data..... < N >

Switch trace table at record.... < 20000 > (00100 - 32760)
                                           (00000 - no switching)

Write Trace to Log EXPLOG1

Log Trace.... < Y >                     (Activate trace for EXPL destination)

HI305 ENTER FIELD INFORMATION AND PRESS PF3(END) TO SAVE CHANGES.

Command ==>
PF1=Help   PF3=End   PF12=Cancel

```

The sample below shows the information that is written to the trace queues (EXPDTRCA/B) and to EXPL if you use TCP /IP communication and have the **TCP/IP Start up Parms** trace option set to **Y** (Yes).

```

Command or Message
0000003  EXPOPARM 12:50:04 COMMUNICATION PARAMETER IS TCP
0000003  EXPOPARM 12:50:04 MAXSOC 0050 CONVERTED TO BINARY ==> ..
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 1 IS 3. OCTET IS NUMERIC: 164
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 2 IS 3. OCTET IS NUMERIC: 120
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 3 IS 3. OCTET IS NUMERIC: 107
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 4 IS 2. OCTET IS NUMERIC: 35
0000003  EXPOPARM 12:50:04 IP ADDR 164.120.107.35 IS NOW BINARY ==>u.,.
0000003  EXPOPARM 12:50:04 PORT NUMBER 01900 CONVERTED TO BINARY ==> .%
0000003  EXPOPARM 12:50:04 ACTIVITY TIMEOUT VALUE IS: 01500
0000003  EXPOPARM 12:50:04 RECEIVE TIMEOUT VALUE IS: 01000
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 1 IS 3. OCTET IS NUMERIC: 164
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 2 IS 3. OCTET IS NUMERIC: 120
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 3 IS 3. OCTET IS NUMERIC: 107
0000003  EXPOPARM 12:50:04 LENGTH OF OCTET 4 IS 2. OCTET IS NUMERIC: 35
0000003  EXPOPARM 12:50:04 IP ADDR 164.120.107.35 IS NOW BINARY ==>u.,.
0000003  EXPOPARM 12:50:04 PORT NUMBER 01521 CONVERTED TO BINARY ==> .1
0000003  EXPOPARM 12:50:04 SEND SESSIONS 010 CONVERTED TO BINARY ==> ..
0000003  EXPOPARM 12:50:04 RECV SESSIONS 004 CONVERTED TO BINARY ==> ..
0000003  EXPOPARM 12:50:04 Expedite/CICS COMMUNICATING VIA TCP

```

CICS starts the Expedite/CICS startup program during system initialization and writes the following message to EXPL:

```
*** EXPOSTRT {exps} HAS BEEN STARTED BY PLT ***
```

The startup program calls the activity monitor which starts each user ID that previously had an active session or has **Auto logon** set to **Y** in the user profile. In the sample below, an inquiry is issued for the SYSTEM DEFAULT user ID. The SDIERR messages are returned from Information Exchange because this user ID is a dummy Expedite/CICS ID and is not a valid Information Exchange Account/Userid. This inquiry is used by Expedite/CICS to determine if the links to Information Exchange have been acquired. If there is no response from Information Exchange for the session inquiry, Expedite/CICS tries to establish the links.

```

Command or Message
0000033  02/28/98 09:32:31 Initial startup for Expedite/CICS
0000033  pgmname 09:32:32 0          SDIINQS SYSTEM DEFAULT  SDIINQSRL1
0000033  pgmname 09:32:32 SDIINQS SYSTEM DEFAULT DEFAULT SDIINQSRL1
0000033  pgmname 09:32:32 SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE: 00004SDIINQS
          SYSTEM DEFAULT DEFAULT SDIINQSRL1
0000033  pgmname 09:32:32 HI00104SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE:
          00004SDIINQS SYSTEM DEFAULT DEFAULT SDIINQSRL1

```

Restarting a user's session with Information Exchange

The following examples show an internal trace for a user just after CICS startup, as Expedite/CICS restarts the user's session with Information Exchange including functions that were active when the CICS system was shut down.

Commands beginning with a numeric value indicate a command issued to the Expedite/CICS command processor either by a user program or by Expedite/CICS programs, such as the Display Application. In the sample below, the Expedite/CICS Session Inquiry command is issued to the command processor. Data found in this trace can be mapped back to the **Session Inquiry** command.

```
Command or Message
0000033 02/28/98 09:32:32 *** ACCT  USER09  AUTOMATICALLY STARTED **
0000034 pgmname 09:32:32 0          SDIINQS ACCT  USER09    SDIINQSRL1
```

Commands beginning with SDI* are Information Exchange commands. Expedite/CICS converts Expedite/CICS commands into Information Exchange commands, and then issues them to Information Exchange. In the sample below, a session inquiry command is issued to Information Exchange, and Information Exchange returns the session inquiry response. Data found in this trace can be mapped back to the indicated commands.

```
Command or Message
0000034 pgmname 09:32:32 SDIINQS ACCT  USER09 SSTEDU2DSDIINQSRL1
0000034 pgmname 09:32:32 SDIINQSACCT  USER09
          SSTEDU2DL94022809323294022807465001454200000200000000001124 000002000000200
```

The sample below shows the response format returned by the Expedite/CICS command processor to the program that issued the Expedite/CICS command SDIINQS.

```
Command or Message
0000034 pgmname 09:32:32 HI00104SDIINQSACCT  USER09
          SSTEDU2DL94022809323294022807465001454200000200000000001124 0000020
```

Session start and response trace sample

Before the activity monitor starts a new session with Information Exchange, it performs a cleanup to reset the user ID on Expedite/CICS to the last commit. The session start command sent to Information Exchange and the session start responses from Information Exchange are also displayed.

```
Command or Message
0000034 pgmname 09:32:33 CLEANUP KICKED OFF FOR ==>> ACCT  USER09  RESET
0000034 pgmname 09:32:33 SDISSTA ACCT  USER09  SDISSTAREXPICICST4.50G2600000001SDICMIT
          RESETSES0000000000W
0000034 pgmname 09:32:33 SDISSTARACCT  USER09  SSTF78M400000000000000003260000402
```

Expedite/CICS then moves on to the session of the next user ID which has an Expedite/CICS profile.

```
Command or Message
0000033 02/28/98 09:32:33 *** ACCT  USER001  AUTOMATICALLY STARTED ***
0000035 pgmname 09:32:33 0          SDIINQS ACCT  USER001    SDIINQSRL1
0000035 pgmname 09:32:33 SDIINQS ACCT  USER001  SSTD7UQISDIINQSRL1
0000035 pgmname 09:32:33 SDIINQSACCT  USER001
          SSTD7UQIL9402280932339402280432090050000000000000004959 000000000000000
0000035 pgmname 09:32:33 HI00104SDIINQSACCT  USER001
          SSTD7UQIL9402280932339402280432090050000000000000000004959 00000000
```

When a session start is issued, it starts the asynchronous send transaction to see if there is any send data to be sent. The trace indicates that there was no more data to send.

```
Command or Message
0000036 pgmname 09:32:33 NO MORE DATA TO SEND FOR =====> ACCT USER001
```

Next, a cleanup, a session start, and a start of the asynchronous send transaction are issued for this user ID.

```
Command or Message
0000035 pgmname 09:32:33 CLEANUP KICKED OFF FOR =====> ACCT USER001 RESET
0000035 pgmname 09:32:33 SDISSTA ACCT USER001 USER001 SDISSTAREXPICST4.50G2600000001SDICMIT
RESETSSES0000000000W
0000035 pgmname 09:32:34 SDISSTARACCT USER001 SSTF78WL0000000000000003260000402
0000037 pgmname 09:32:34 NO MORE DATA TO SEND FOR =====> ACCT USER001
```

In the sample below, a user ID starts a new session with Information Exchange using Expedite/CICS with TCP/IP communication (EXPCICST). No session inquiry is performed, as indicated by the omission of a session inquiry. The session start could be generated by logging on to the Expedite/CICS Display Application or by issuing a session start from a user program interface. When SNA communication is used, EXPCICSS is displayed instead of EXPCICST.

```
Command or Message
0000043 pgmname 09:32:44 0 SDISSTA ACCT USER2 USER2
0000043 pgmname 09:32:44 CLEANUP KICKED OFF FOR =====> ACCT USER2 RESET
0000043 pgmname 09:32:45 SDISSTA ACCT USER2 USER2 SDISTAREXPICST4.50G2600 000001SDICMIT
RESETSSES0000000000W
0000043 pgmname 09:32:45 SDISSTARACCT USER2 SSTF8C3100000000000003260000402
0000043 pgmname 09:32:45 HI00100SDISSTARACCT USER2 SSTF8C3100000000000003260000402
0000044 pgmname 09:32:45 NO MORE DATA TO SEND FOR =====> ACCT USER2
```

Common Expedite/CICS functions trace sample

The following examples show traces of common functions being performed in Expedite/CICS.

In the sample below, the PROCESSQ command is issued by an Expedite/CICS user through the Expedite/CICS Display Application while viewing in-process or completed messages for send and receive requests.

```

Command or Message
0000119 pgmname 09:49:53 OS@#00017 PROCESSQACCT USER09 ACCT USER09 SC
0000119 pgmname 09:49:53 HI000
0000124 pgmname 09:50:08 OS@#00018 PROCESSQACCT USER09 ACCT USER09 RC
0000124 pgmname 09:50:08 HI000

```

In the sample below, the message queue query command is issued to query the Information Exchange mailbox. The HI675 code indicates that all data was returned.

```

Command or Message
0000371 pgmname 10:21:36 4S@#00129 SDIQUMS ACCT USER2 1
0000371 pgmname 10:21:36 SDIQUMS ACCT USER2 SSTF8C311SDIQUMSR10000000000000000000
0000371 pgmname 10:21:36 SDIQUMSRACCT USER2 SSTF8C311001FFFFFFFFFFFFFFFFFFFF0009D0A8E31EF460374DF4F2
*SYSTEM**ERRMSG*
0000371 pgmname 10:21:36 HI675000000079HI675 END OF DATA

```

Send file request trace sample

In the sample below, the Expedite/CICS send file command issued to the command processor and the response received from the command processor are shown.

```

Command or Message
0000223 pgmname 10:14:29 0VSAMFL2 VSBN EXPSNDF ACCT USER2 ACCT3 USER3 DVSAM2 N30
: :
: :
: :
0000223 pgmname 10:14:31 HI00000

```

Trace interpretation: Beginning with the first character after the time (10:14:29), you can interpret the trace as described below.

This text:	Indicates the:
0	Command directly supported by the command processor
VSAMFL2	Name of the file being sent
VS	File type
B	Data type
N	File disposition
EXPSNDF	Send file command
ACCT	Sender's account ID

Information Exchange is sending data to Expedite/CICS and data is being received. Each segment can contain up to 26000 bytes, the maximum transmission size specified on the Define System Options panel. Information Exchange sends a commit (SDICMIT) indicating the end of the message. Expedite/CICS returns a commit response (SDICRSP).

```

Command or Message
0000327 pgmname 10:20:08 C0000007ACCT  USER2  SSTF8C31 00060SACCT1  USER1  D      SVSAM1
        6000590EXPCICST4.5
0000327 pgmname 10:20:08 C0000007ACCT  USER2  SSTF8C31S25875CACCT1  USER1  DA0000061  VSAM1
        6000591EXPCICST4.5
0000327 pgmname 10:20:08 C0000007ACCT  USER2  SSTF8C31E258752IN ALL.00014500 &TEST VSAM VSAM VSAM -
        MMMMMMMMMMMMMMMMMMMMMMMMM
0000327 pgmname 10:20:08 C0000007ACCT  USER2  SSTF8C31 09050LACCT1  USER1  DA0000061  VSAM1
        6000592EXPCICST4.5
0000327 pgmname 10:20:08 SDICMIT ACCT  USER2  SSTF8C31SDICRSP 00004003
0000328 pgmname 10:20:09 SDICRSP ACCT  USER2  SSTF8C310000500000041

```

Stop continuous receive trace sample

A stop continuous receive is issued through Expedite/CICS to Information Exchange. An HI000 response is returned through the command processor, indicating that the stop continuous receive request was successful. Information Exchange returns an ENDDATA and commit (SDICMIT), indicating it received the stop continuous receive request. Expedite/CICS returns a commit response (SDICRSP).

```

Command or Message
0000348 pgmname 10:20:51 4          SDIRCVM ACCT  USER2      C0000007      VSAM1
0000348 pgmname 10:20:51 SDIRCVM ACCT  USER2  SSTF8C31C0000007ACCT1  USER1  DVSAM1
        C0000007C0000007C0000007E00000
0000348 pgmname 10:20:51 HI00000C0000007
0000349 pgmname 10:20:52 C0000007ACCT  USER2  SSTF8C31 00000E
0000349 pgmname 10:20:52 SDICMIT ACCT  USER2  SSTF8C31SDICRSP 00000003
0000350 pgmname 10:20:52 SDICRSP ACCT  USER2  SSTF8C310000600000001

```

Restart and recovery trace sample

In the following example, the activity monitor resets and restarts one user ID and reissues an associated receive request.

```

Command or Message
0000651 02/28/98 11:02:34 ACTIVITY MONITOR IS STARTING UP
0000651 pgmname 11:02:34 0          SDIINQS SYSTEM DEFAULT  SDIINQSRL1
0000651 pgmname 11:02:34 SDIINQS SYSTEM DEFAULT DEFAULT SDIINQSRL1
0000651 pgmname 11:02:34 SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE: 00004SDIINQS
SYSTEM DEFAULT DEFAULT SDIIN
0000651 pgmname 11:02:34 HI00104SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE:
00004SDIINQS SYSTEM DEFAULT DEFAULT
0000651 pgmname 11:02:34 0          SDIINQS ACCT  USER2    SDIINQSRL1
0000651 pgmname 11:02:34 SDIINQS ACCT  USER2  SSTF8C31SDIINQSRL1
0000651 pgmname 11:02:34 SDIINQSRACCT  USER2  SSTF8C31L94022811023494022809324401295000003400000016002427
00002600002600
0000651 pgmname 11:02:34 HI00104SDIINQSRACCT  USER2
SSTF8C31L94022811023494022809324401295000003400000016002427 0000260
0000651 pgmname 11:02:34 0          SDIINQS ACCT  USER001  SDIINQSRL1
0000651 pgmname 11:02:35 SDIINQS ACCT  USER001 SSTF78WLSDIINQSRL1
0000651 pgmname 11:02:35 SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE: 00008SDIINQS
ACCT  USER001 SSTF78WLSDIIN
0000651 pgmname 11:02:35 HI00104SDIERR THE FOLLOWING COMMAND WAS NOT EXECUTED BECAUSE:
00008SDIINQS ACCT  USER001 SSTF78
0000651 02/28/98 11:02:35 EXPR ACCT  USER001 STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0000651 pgmname 11:02:35 CLEANUP KICKED OFF FOR =====> ACCT  USER001 RESET
0000651 pgmname 11:02:35 SDISSTA ACCT  USER001 USER001  SDISSTAREXPICICST4.50G2600000001SDICMIT
RESETSSES000000000000W
0000651 pgmname 11:02:36 SDISSTARACCT  USER001 ST88AFLZ000000000000000003260000402
0000651 pgmname 11:02:37 4VSAMFL3 VSONYW00080SDIRCVM ACCT  USER001  FILE1
0000651 pgmname 11:02:37 SDIRCVM ACCT  USER001 ST88AFLZC0000048  FILE1
C0000048C0000048C0000048C00000
0000651 pgmname 11:02:37 HI00000C0000048
0000651 pgmname 11:32:37 0          SDIINQS ACCT  USERZZZ  SDIINQSRL1
0000651 pgmname 11:32:37 SDIINQS ACCT  USERZZZ ST86A5M3SDIINQSRL1
0000651 pgmname 11:32:37 SDIINQSRACCT  USERZZZ
ST86A5M3L94022811302379402281047180153310000000000000015331 00000000000000
0000651 pgmname 11:32:37 HI00104SDIINQSRACCT  USERZZZ
ST86A5M3L9402281102369402281047180153310000000000000015331 0000000
0000652 pgmname 11:32:37 NO MORE DATA TO SEND FOR =====> ACCT  USER001

```

Session end request trace sample

The sample below shows the session end request and the response from Information Exchange.

```

Command or Message
0001117 pgmname 19:10:07 0          SDISEND ACCT  USER2
0001117 pgmname 19:10:07 SDISEND ACCT  USER2  SSTD7TX1SDISENDR000001
0001117 pgmname 19:10:08 SDISENDRACCT  USER2  SSTD7TX1000001
0001117 pgmname 19:10:08 HI00000

```

Expedite/CICS error messages

The next few examples show error messages being written when an error is encountered in Expedite/CICS. Error messages are always written to whichever trace destinations are in use. The messages below occurred during system startup when there was a problem connecting to Information Exchange. The activity monitor keeps trying to acquire the connection.

```

Command or Message
0000001 08/18/98 08:12:44 EXPR ACCT  USER2  EXPORST1 HI461 UNABLE TO ESTABLISH A SESSION WITH
INFORMATION EXCHANGE.
0000007 08/18/98 08:13:14 EXPR ACCT  USER2  EXPORST1 HI461 UNABLE TO ESTABLISH A SESSION WITH
INFORMATION EXCHANGE.
0000014 08/18/98 08:13:44 EXPR ACCT  USER2  EXPORST1 HI461 UNABLE TO ESTABLISH A SESSION WITH
INFORMATION EXCHANGE.
0000040 08/18/98 08:14:14 EXPR ACCT  USER2  EXPORST1 HI461 UNABLE TO ESTABLISH A SESSION WITH
INFORMATION EXCHANGE.
0000055 08/18/98 08:14:44 EXPR ACCT  USER2  EXPORST1 HI461 UNABLE TO ESTABLISH A SESSION WITH
INFORMATION EXCHANGE.

```

The problem shown below occurred because program EXPOSEL1 was disabled in CICS.

```

Command or Message
0000078 08/18/98 10:20:10 LGO1 ACCT  USER2  EXPOSEL1 HI916 PROGRAM DISABLED ON CICS TRANSFER
CONTROL.

```

Severe error trace example

The messages below indicate a severe error which invoked the abend routine. The abend routine writes out CICS error information to assist in problem determination. The codes are used by systems support. The following information is provided for severe abends:

- The name of the transaction under which the error occurred
- The account ID and user ID for which the error occurred
- The name of the program in which the error occurred
- A message describing the error
- The last program paragraph name which executed and program text
- The abend code, if applicable
- The last data set name read; this may or may not pertain to the error code
- EIBFN; the last CICS command issued by the task
- EIBRCODE; the CICS response code returned by the last CICS command
- EIBRESP; a number corresponding to the response raised
- EIBRESP2; more detailed information about why the RESP condition occurred

```

Command or Message
0000099 08/18/98 10:26:42 LGO1 ACCT  USER2 EXPOISF1 HI922 TEMPORARY STORAGE QUEUE NOT FOUND.
0000042 08/18/98 10:26:42 LGO1 ACCT  USER2 EXPOISF1  1/3 PGM PARA: 0860A PGM TEXT: ERROR ON TS READ
0000042 08/18/98 10:26:42 LGO1 ACCT  USER2 EXPOISF1  2/3 ABEND:  LAST DSN: EXPDERR EIBFN: 0A04
0000042 08/18/98 10:26:42 LGO1 ACCT  USER2 EXPOISF1  3/3 EIB-RCODE: 020000000000 RESP: 00000044 RESP2:
00000000

```

The messages below indicate that the receive was stopped. The activity monitor attempted to recover but could not. In this case, one option would be to reset the user session as described in "Resetting a user session" on page 144, and then reissue the receive request.

```

Command or Message
0002229 08/19/98 17:50:33 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0002478 08/19/98 18:50:34 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0002704 08/19/98 19:50:35 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0002927 08/19/98 20:50:36 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0003154 08/19/98 21:50:37 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0003381 08/19/98 22:50:38 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0003609 08/19/98 23:50:39 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0003832 08/20/98 00:50:41 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0004059 08/20/98 01:50:41 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0004287 08/20/98 02:50:42 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER
0004514 08/20/98 03:50:43 ACCT01  USER09  STOPPAGE OF RECEIVE DETECTED, RESTARTING USER

```

In the sample below, the receive program was expecting variable length data (LL data type) and did not receive it.

```

Command or Message
0000740 08/21/98 11:55:43 IMRI ACCT  USER2  EXPOIRM3 HI460 INVALID LL DATA FILE RECEIVED.

```

Exception message layout

The following table describes the record layout of Expedite/CICS exception messages.

Field name	Field length
Task Number	7
Separator space	1
Date	8
Separator space	1
Time	8
Separator space	1
Program Name	8
Separator space	1
Return Code	8
Reason Code	8
Reason Message	74

In addition to the above fields, exception messages can also contain:

- The message which indicates that the receive has been stopped
- Abend information

In the sample below, the return code is 1 and the reason code is 61. According to the *IP CICS Sockets Guide*, 61 means that the connection was refused. In this case, the TCP/IP Relay was not up.

```
0000500 200002244 13:06:53 EXPOTISC 0000000100000061FAILURE ON EZASOKET CONNECT CALL
```

In the sample below, the return code is 1 and the reason code is 32. According to the *IP CICS Sockets Guide*, 32 means that the connection is broken. Support personnel can look in the TCP/IP log to determine what happened.

```
0000043 200002244 11:36:01 EXPOTISC 0000000100000032FAILURE ON EZASOKET SEND CALL
```

In the sample below, the return code is 1 and the reason code is 54. According to the *IP CICS Sockets Guide*, 61 means that the connection to the destination host was not available, that is, Information Exchange was not up.

```
0000043 200002244 11:36:01 EXPOTISC 0000000100000054FAILURE ON EZASOKET RECEIVE CALL
```

Log TDQ (EXPL)

Informational and error messages are always written to the Log TDQ. What other information is written to EXPL depends on the values set in the **Log Trace** field and other fields on the **Trace Options** panel.

If the value in the **Log Trace** field is set to **Y**, the first 125 bytes of data written to the internal trace (as specified by the other trace options) is also written to EXPL.

When you need to trace data over a long period of time, using EXPL reduces the amount of temporary storage used for the internal trace TSQs (EXPDTRCA and EXPDTRCB).

Defining EXPL

The EXPL destination is defined in the sample destination control table (DCT) provided with Expedite/CICS, and defaults to the SYSOUT queue as DSCNAME EXPLOG1. Although the name for EXPL is protected, you may use another DSCNAME in the DCT. This DSCNAME is used in the CICS startup JCL to identify the data set to which output is written.

Changing the DSCNAME would allow you to route the output to another data set, but use caution if you use this strategy because that data set might also fill up.

Whatever routing is used, you must provide:

- A DCT definition; all four characters must be entered and the first character may not be a blank
- A data definition (DD) statement in the CICS startup JCL

The EXPL TDQ data format is the same as that shown in “Sample trace messages” on page 253.

Exception reporting TDQ (EXPM)

The exception reporting TDQ alerts systems support personnel to error conditions that interrupt continuous operations and, therefore, might require attention. If you rely on continuous Expedite/CICS operations, the status of this queue should be monitored and the alerts investigated. The following items are written to EXPM:

- Error messages of severity 08 and above.
- Activity monitor error messages. When the activity monitor runs and a problem is detected with an outstanding receive request for a user, Expedite/CICS attempts to restart the user session and process the receive request. When this occurs, Expedite/CICS writes the following informational message to EXPL and also to EXPM: STOPPAGE OF RECEIVE DETECTED. RESTARTING USER.

Defining EXPM

The EXPM destination is defined in the sample destination control table (DCT) provided with Expedite/CICS, and defaults to the SYSOUT queue as DSCNAME EXPALERT. You may specify a different name for EXPM on the System Options panel or a different DSCNAME in the DCT. The DSCNAME is used in the CICS startup JCL to identify the data set to which output is written. If you use a different name for EXPM, you must make a corresponding change in the DCT.

Changing the DSCNAME would allow you to route the output to another data set, but use caution if you use this strategy because that data set might also fill up.

EXPM can be defined as an intrapartition TDQ which triggers a CICS transaction when a record is written that routes message entries to a specified destination, such as a monitored data set, a dedicated terminal, a printer, the console, or a sequential file.

Whatever routing is used, you must provide:

- A DCT definition; all four characters must be entered and the first character may not be a blank.
- A data definition (DD) statement in the CICS startup JCL (for an extrapartition TDQ only).

This TDQ can be routed to whichever destination best suits your installation. If you route to a terminal or printer, EXPM must be defined as an intrapartition TDQ.

The EXPM TDQ data format is the same as that shown in “Expedite/CICS error messages” on page 263. The EXPALERT copybook is also provided to show the layout of the EXPM TDQ.

TCP/IP error reporting TDQ (EXPT)

The EXPT TDQ is provided to alert systems support personnel to TCP/IP error conditions that interrupt continuous operations and, therefore, might require attention. If you rely on continuous Expedite/CICS operations, the status of this queue should be monitored and alerts investigated. TCP/IP error messages of severity 08 and above relating to TCP/IP socket calls and relay commands are written to this TDQ.

Defining EXPT

The EXPT destination is defined in the sample destination control table (DCT) provided with Expedite/CICS, and defaults to the SYSOUT queue as DSCNAME EXPTCPIP. Although the name for EXPT is protected, you may use another DSCNAME in the DCT. This DSCNAME is used in the CICS startup JCL to identify the data set to which output is written.

Changing the DSCNAME would allow you to route the output to another data set, but use caution if you use this strategy because that data set might also fill up.

Whatever routing is used, you must provide:

- A DCT definition; all four characters must be entered and the first character may not be a blank
- A data definition (DD) statement in the CICS startup JCL (for an extrapartition TDQ only)

Understanding automated restart and recovery

Expedite/CICS provides the activity monitor to perform automatic restart and recovery. The activity monitor is a CICS transaction that runs regardless of the processing method used (Display Application, program interface, or batch interface). It runs periodically based upon the interval specified on the Display Application System Options panel.

The activity monitor performs a variety of functions based upon the mode of execution that Expedite/CICS requests. The three modes of execution are initialization, start (or restart) user, and monitor.

The following major topics are presented:

Initializing the system	270
Starting or restarting user sessions	270
Monitoring the system	270
Staying synchronized	271
Understanding restart and recovery options	272

Initializing the system

During CICS system startup, the Expedite/CICS startup program (EXPOSTRT) is started by the program list table (PLT) entry in CICS. If you are using TCP/IP communication, the TCP/IP listener task is also started. The startup program checks for necessary file control entries, such as the SYSTEM DEFAULT user profile record in the EXPDSRC file and two control records in the EXPDERR file, and adds entries as needed. It then starts the batch send transaction (EXPS) and the activity monitor transaction (EXPR) with an execution mode of INITIAL.

Under normal conditions, the activity monitor runs at an interval specified on the System Operations panel. The default is 30 minutes.

For SNA communication, once the activity monitor has been activated, it checks the network connection and active user sessions with Information Exchange. If the connection cannot be acquired, Expedite/CICS repeat the startup process every 30 seconds until the connection and sessions with Information Exchange are established. This is important during connection failures, because Expedite/CICS attempts to recover automatically. Messages that indicate the connection or sessions with Information Exchange cannot be established are written to the log destinations to alert support personnel.

During initialization, the activity monitor automatically starts all user sessions that require activation such as those that previously had an active session, and those with the **Autologon** field set to **Y** in the user profile. For each user being started, the activity monitor starts another execution of the activity monitor, with the execution mode of START and the Account/Userid to be started.

Starting or restarting user sessions

The activity monitor starts or restarts users during CICS startup, or during reinitialization of the system after a connection or session failure. It also invokes start or restart when a recoverable failure occurs during asynchronous send or receive processing. Recoverable failures include when a link or connection fails, or when checkpoint counters get unsynchronized between Expedite/CICS and Information Exchange.

When a user session is restarted, Expedite/CICS determines if an Information Exchange session restart or reset is needed, depending on the status of the previous session. If a restart or reset is needed, Expedite/CICS files are backed out and a restart or reset is performed with Information Exchange.

- A restart begins the user's session at the last commit successfully processed by Information Exchange.
- A reset begins the user's session at the last successfully committed message group.
- After the restart or reset, queued asynchronous send requests are started and outstanding single or continuous receive requests are reissued.

Monitoring the system

The activity monitor performs monitoring tasks at the intervals specified on the **System Options** panel. It checks the connections with Information Exchange and the user session status for all active users. If a problem is found, the activity monitor restarts with the execution mode of INITIALIZE. Otherwise, it checks user sessions to see if data is flowing for active receive requests. If no data flow is detected, the activity monitor queries the Information Exchange

mailbox to determine if data should be flowing for both single and continuous receive requests. The message, STOPPAGE OF RECEIVE DETECTED, RESTARTING USER, is written to the log destinations when a receive is stopped. If the activity monitor determines that data should be flowing for a user session, it rests or restarts the user session, as described under “Starting or restarting user sessions” on page 270.

The only exception to the above is that, because Expedite/CICS is unable to query mailboxes for distribution lists, it cannot determine whether data flow for distribution lists should be occurring.

The activity monitor also purges send and receive control records associated with successfully completed send and receive requests. The purge is done in accordance with the number of days specified in the **Send file retention** and **Receive retention** fields in the user’s profile. After four months, the activity monitor purges send request control records with status of E-HIxxx or HELD as well as receive control records with status E-HIxxx, HELD, or COMPLETE. It also updates the status of batch receives, and changes the status from COMPLETE to RECEIVED or E-HIxxx, after finding the result of the batch receive request in the EXPDPTF data set. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.



CAUTION: It is possible to start the activity monitor from a terminal, rather than from the Expedite/CICS Display Application. When this is done, however, the activity monitor executes in monitor mode and continues functioning during the off-shift hours, purging expired records and updating batch control records, regardless of the time.

Staying synchronized

Expedite/CICS uses group level recovery when sending data to and receiving data from Information Exchange, which means that data is committed at the end of a message group. A message group is one or more Information Exchange messages that contain the object to be sent or received, such as:

- A file, for non-EDI data
- An EDI interchange, for EDI data sent with **File type** of **E**

Group level recovery replaces the message and checkpoint level recovery used in prior releases. Group level recovery improves performance when sending large messages by reducing the number of commits and commit responses exchanged between Expedite/CICS and Information Exchange. A session restart begins the user’s session at the last commit successfully processed by Information Exchange.

Understanding restart and recovery options

The following restart and recovery system options can be modified:

- Activity monitor interval time (page 169)
- EXPM (EXALERT) destination (page 169)

The following restart and recovery options in the user profile should be tailored for each user ID on your system:

- Auto-Logon (page 131)
- Send file retention (page 132)
- Receive file retention (page 132)
- Send Processing, asynchronous or synchronous (page 134)

The following alert destinations are available to monitor the system:

- EXPL destination (page 266)
- EXPM destination (page 266)
- EXPT destination (page 267)
- Internal trace (page 249)

Understanding Expedite/CICS processing

This appendix provides a reference for information about how Expedite/CICS processing works. Information about program interface processing is described in *Customizing and Developing Applications with Expedite/CICS*.

The following major topics are presented:

Understanding Expedite/CICS work files	274
Receive processing	275
Receive error processing	277
Batch-receive processing	278
Send processing	281
Send error processing	285

Understanding Expedite/CICS work files

Because the work files are regularly used by Expedite/CICS and often discussed, it will help you to be familiar with the files listed below.

EXPDPHF	Synchronizes batch and online CICS operations during processing of batch send and batch receive functions and provides temporary storage when sending batch data. For batch send, this file is closed and opened at intervals corresponding to the value set in the Batch monitor interval field, described in "System option details" on page 169.
EXPDSRC	Contains the following: <ul style="list-style-type: none">■ Control records for send and receive commands■ User profile records■ Distribution list records■ Translation records used to resolve EDI addresses■ JCL used to receive Electronic Service Delivery PTFs
EXPDERR	Contains records that define some of the Expedite/CICS system options, such as the activity monitor interval. The PLT program (EXPOSTRT) checks for these records and, if they are not found, creates them.
EXPRDAT	Contains received data records.
EXPSDAT	Contains send data records.
EXPDTST	Tests Expedite/CICS send file and receive file functions. This file is optional and is provided for test purposes only.
EXPHPHP	Contains online help text.
EXPDLKP	Contains the compression lookup table.
EXPDKEY	For TCP/IP use only. Contains the unique identification keys exchanged between Expedite/CICS and Information Exchange at the start of the user's session with Information Exchange using TCP/IP communication. These keys are used to verify the identification of Information Exchange before receiving takes place.
EXPDPRM	For TCP/IP use only. Contains TCP/IP override parameters necessary for successful communication with Information Exchange using the TCP/IP protocol. This file is processed only at CICS startup to determine the communication method to be used by Expedite/CICS. If Expedite/CICS cannot find this file, it will use a default of SNA communication.

Receive processing

All Expedite/CICS receive processing is performed asynchronously as illustrated in Figure 1 and described below.

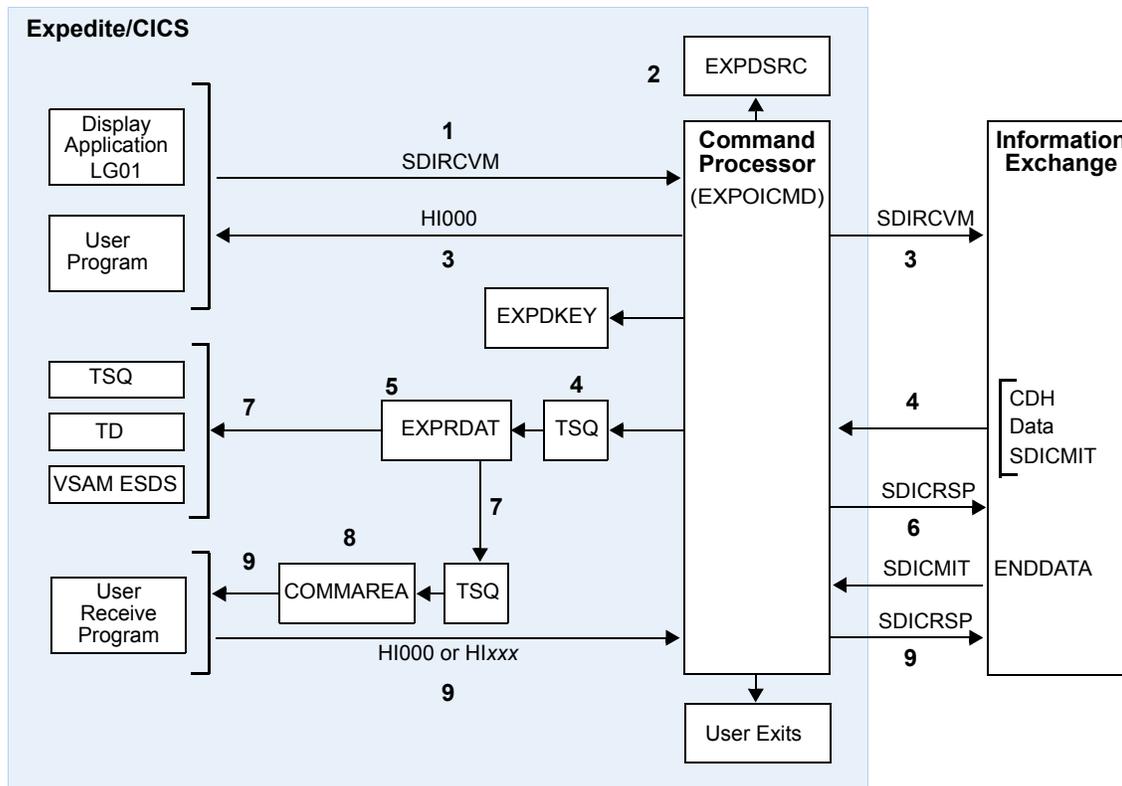


Figure 1. Expedite/CICS asynchronous receive processing

- The receive request is issued from either of the following:
 - Expedite/CICS Display Application
 - User program
- The display application or user program invokes the command processor, EXPOICMD. The command processor:
 - Identifies the command as a receive request
 - Writes a control record to the EXPDSRC VSAM file
- Expedite/CICS sends the Receive Message command, SDIRCVM, to Information Exchange.
- Expedite/CICS returns HI000 to the program that issued the receive request, allowing the program to issue other commands while the data is received.

If you are using TCP/IP communication, Information Exchange and Expedite/CICS exchange saved keys from EXPDKEY to verify each other's identity.

5. Information Exchange sends the first mail item satisfying the receive request criteria from the mailbox to Expedite/CICS, which writes the data to a TSQ. Information Exchange sends a commit at the end of the data.

If you are using TCP/IP communication, Expedite/CICS validates the identity of Information Exchange by exchanging keys found in the EXPDKEY file.

6. Expedite/CICS reads the TSQ and writes the data to the receive data (EXPRDAT) file.
7. When Expedite/CICS has received the complete message into the EXPRDAT file, it sends a commit response to Information Exchange. Information Exchange then deletes the data from the mailbox. Expedite/CICS changes the receive file status from INCOMPLT to COMPLETE.
8. When the receive request specifies the destination to be:
 - a. A TSQ, TDQ or VSAM file, Expedite/CICS:
 - Reads the data from the EXPRDAT file.
 - Decompresses any compressed data.
 - Reblocks and writes the data to the file specified in the receive command.
 - Deletes the data from the EXPRDAT file.
 - b. A user application program, Expedite/CICS:
 - Reads the data from the EXPRDAT file.
 - Decompresses any compressed data.
 - Reblocks and writes the data to a TSQ.
 - Links to the user program specified in the receive command, passing to it the TSQ named in the COMMAREA.
9. The user program:
 - Reads and processes data from the TSQ.
 - Deletes the TSQ and returns a status code to Expedite/CICS.
10. If user program processing is successful, HI000 must be returned to Expedite/CICS. Expedite/CICS then deletes the message from the receive data (EXPRDAT) file and changes the receive file status from COMPLETE to RECEIVED.
11. If user program processing is unsuccessful, HLxxx (where xxx is not 000) should be returned to Expedite/CICS. The recommended return code in this case is HI050.
12. If an error occurs during delivery to the receive destination or, if a non-HI000 code is returned, then Expedite/CICS:
 - Marks the receive file status in EXPDSRC in error.
 - Writes an error message to the log destinations and to any internal trace destinations that are specified.
 - Retains the data in the EXPRDAT file until it is successfully released by the user and delivered, deleted by the user, or deleted by Expedite/CICS after a period of four months.

13. Expedite/CICS can link to the following user exit programs:
 - User information monitor exit for information data collection, if the link to the user exit is enabled.
 - User completion notification exit for notification of receive exceptions, if it was specified in the Receive Message command; this is only invoked if an unrecoverable error occurs while Expedite/CICS is writing or returning data to the receive destination.
14. The receive of this message is now complete and the next mail item in the mailbox that satisfies the receive criteria is processed. When there are no more items to process:
 - For a single receive, the receive control record is marked RECEIVED and a receive-complete message is sent to the user.
 - For a continuous receive, the receive request remains active until you end the request, ready to receive any other items which arrive in the Information Exchange mailbox and which satisfy the receive criteria.

Receive error processing

The Expedite/CICS activity monitor plays an important role in ensuring that errors detected during receive processing are corrected so that data is successfully received, stored, and delivered to the user's receive destination.

If an error occurs while a receive request between Expedite/CICS and Information Exchange is in progress (status is NODATA or INCOMPLT), and before the message or file is written to the Expedite/CICS receive data (EXPRDAT) file, the activity monitor writes a message to the Expedite/CICS exception reporting and log destinations. A session reset or restart is invoked for the user and the receive is restarted from Information Exchange. Information Exchange does not delete the data from the Information Exchange mailbox until it has been successfully received and committed by Expedite/CICS. For more information, see Chapter 12, "Understanding automated restart and recovery."

If an unrecoverable error occurs during delivery of a completed message or file to the user's destination (for example, if the destination file is closed and the mail cannot be delivered), the receive control record is marked in error and an error message is written to the log destinations and to internal trace destinations if they are in use. The control record can be viewed as described in "Working with the system error log" on page 182. The activity monitor will ensure that, for data just received from Information Exchange (status COMPLETE), an attempt is made to pass the data to the user's receive destination.

The file or message marked in error is held in the EXPRDAT file until purged or released by the user, or until it is automatically deleted by the activity monitor (after the number of days specified in the **Not-Sent Not-Received Retention** field on the **Define System Options** panel). If the cause of the failures is corrected, the held mail may be released and delivered. This procedure is described under "Viewing a list of completed receives" on page 64, and more information is provided in Chapter 11, "Solving problems."

Batch-receive processing

Expedite/CICS provides a batch receive feature that allows files to be received into a sequential data set, which is not defined to CICS. This topic provides an overview of how Expedite/CICS processes batch receive requests. For more information about batch receive processing and alternatives, refer to *Customizing and Developing Applications with Expedite/CICS*. The characteristics of batch receive processing are listed below.



NOTES:

1. If you use the Expedite/CICS batch receive function, you should enable archiving. For more information about archiving, refer to the *Information Exchange Administration Services User's Guide*.
2. If you use MVS batch processing often, we recommend that you order Expedite Base/MVS, which is designed primarily for the batch environment and provides additional features.

A batch receive request is processed by Expedite/CICS as explained in “Issuing a single receive” on page 41, and “Issuing a receive to process batch data” on page 77. The general flow of the batch receive process is illustrated in Figure 2, in which the request is issued, and in Figure 3 on page 279, in which the request is processed.

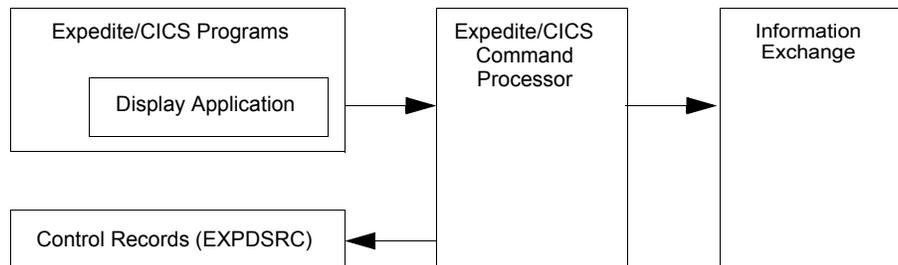


Figure 2. Issuing a batch receive request

The following activities take place:

1. A batch receive request is issued from the Display Application.
2. Expedite/CICS creates a receive control record in EXPDSRC.
3. Expedite/CICS sends the receive request to Information Exchange.
4. Expedite/CICS returns control to the user, displaying a message on the panel.

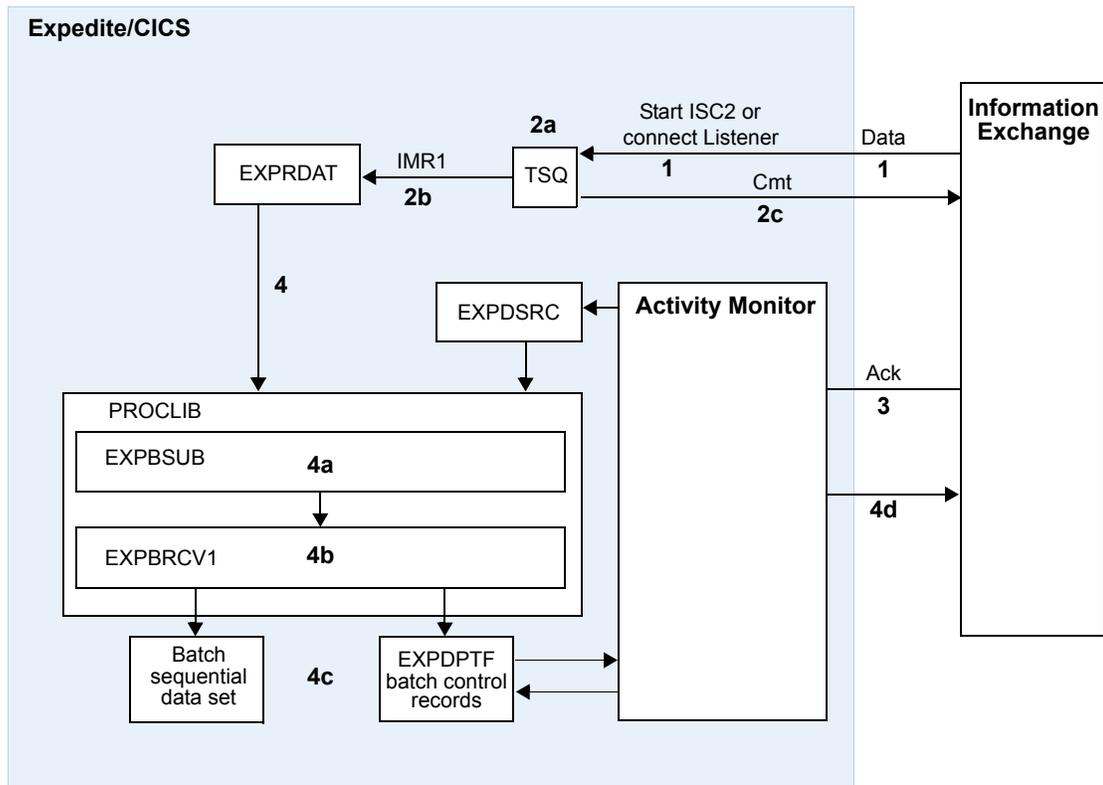


Figure 3. Processing a batch receive request

1. Information Exchange sends data asynchronously to Expedite/CICS, which starts Transaction ISC2 on the CICS region for SNA communication, or connects to the listener for TCP/IP communication.
2. Expedite/CICS:
 - a. Writes received data to a TSQ, then starts Transaction IMR1.
 - b. Writes data to the receive data (EXPRDAT) file.
 - c. Sends a commit response to Information Exchange when all data is received in EXPRDAT and updates the Expedite/CICS receive control record with a status of COMPLETE.
3. Upon receipt of the commit response, Information Exchange:
 - Deletes the data from the mailbox.
 - Generates any acknowledgments requested by sender.
 - Marks the online receive status as COMPLETE.

4. Expedite/CICS prepares and writes JCL to an internal reader. The batch job:
 - a. Calls procedure EXPBSUB to read control records from EXPDSRC and data records from EXPRDAT. A sample EXPBSUB procedure is included with Expedite/CICS which you can customize for your installation.
 - b. Passes control to EXPBRCV1 to open (or create, if necessary) the user's output data set, write the data, and close the data set.
 - c. Updates the batch receive record in the EXPDPTF data set with the result of the receive.
5. The activity monitor reads the status from EXPDPTF and updates the online batch control record with the results of the receive (either RECEIVED or E-HLxxx).
 - If the result was successful, the data records are purged from the EXPRDAT file. The receive retention period is specified in the user's profile. To avoid peak processing times, these deletions do not take place between the times specified on the Define System Options panel.
 - If receive processing is interrupted, the activity monitor resets or restarts receive requests with a status of NODATA, INCOMPLT, or COMPLETE.
 - If an error occurs in the batch job:
 - The batch job updates the batch receive record in the EXPDPTF file to indicate the error.
 - When the Expedite/CICS activity monitor inspects the control record in the EXPDPTF file, it marks the control record in the EXPDSRC file in error. The data is retained in the EXPRDAT file until it is purged by the user or automatically by the activity monitor after four months.

Additional details

- The online batch receive record can be viewed through processing and viewing options on the Receive Selection Menu.
- No links are provided for user information exit or user exception programs.
- Failed Batch receives cannot be released and retried from the Display Application. The data can be retrieved from archive if archive is activated in Information Exchange, and the batch receive request can then be reissued. As a last alternative, you can manually retrieve the data from the receive data (EXPRDAT) file. For more information, refer to *Customizing and Developing Applications with Expedite/CICS*.

Job output

You can view batch job output to determine if the job ran successfully. The return code will be either zero to indicate successful completion or 08 to indicate an error occurred. In MVS, if the job completed successfully, an output report is produced similar to the sample below. If the job failed, the report will indicate that an error occurred, or there will be no report.

```

EXPBRCV1      EXPEDITE/CICS BATCH RECEIVE REPORT      PAGE 1
05/12/97      ATAP  USER02
                BATCH #: 00000007

FROM ACCT FROM USER MSG CLAS DATE/TIME SENT DATE/TIME RCVD NO OF BYTES
ACCT1      USER02   MESS2   98/04/16 14:23:36 05/12/98 14:04:59 8,488

```

Send processing

This topic provides an overview of how Expedite/CICS processes send data requests. For detailed information, refer to *Customizing and Developing Applications with Expedite/CICS*. Send processing may be asynchronous or synchronous depending on the **Process send data** option specified on the **Define User Session Options** panel. See “Process send data” on page 134.

- When processing is asynchronous, control is returned to the user as soon as data to be sent is successfully loaded into the send data (EXPSDAT) file. Then the send data task is started. If a communication failure occurs, the send will be retried until successful. Asynchronous processing enables multi-tasking and maximizes performance because Expedite/CICS can process another file or message into EXPSDAT while a previous file or message is being sent from EXPSDAT to Information Exchange.
- When processing is synchronous, data is sent under the initiating transaction (user transaction or LGO1). Control is not returned to the user until the send process completes and the whole message has been sent to Information Exchange.

Asynchronous send processing

Asynchronous processing for a user session may be specified in the **Process Send Data** field on the **Define User Session Options** panel. The processing occurs as illustrated in Figure 4 and described below.

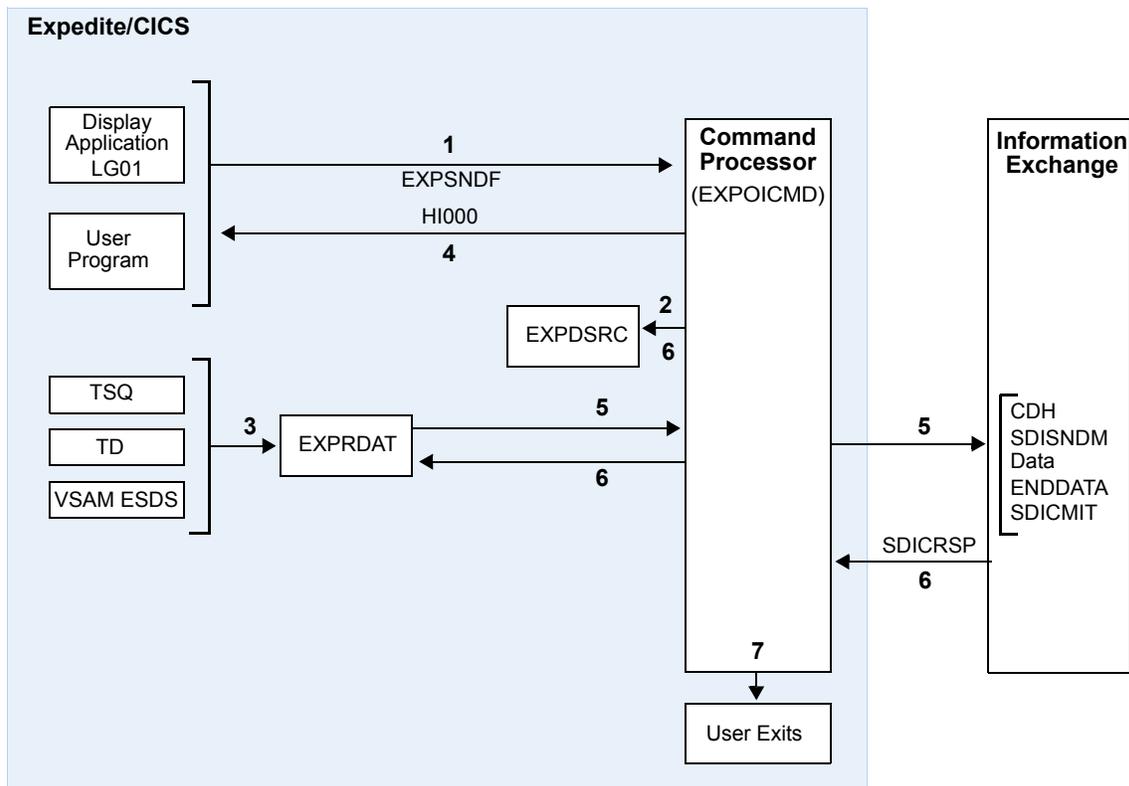


Figure 4. Asynchronous send processing

1. The send request is issued from either of the following:
 - Expedite/CICS Display Application
 - User program
2. The Display Application or user program invokes the command processor (EXPOICMD), which:
 - a. Identifies the command as a send request
 - b. Writes a control record to the EXPDSRC file
3. Expedite/CICS reads the data from the file specified in the send request and writes it to the send data EXPSDAT file.
4. Expedite/CICS passes HI000 to the program that issued the send request, allowing the program to issue other commands while Expedite/CICS sends the message to Information Exchange.
5. Expedite/CICS starts transaction IST1 to:
 - Read the data from the EXPSDAT file.

- Send the data to Information Exchange.
 - When the end of the data is reached, Expedite/CICS attempts to commit the data to Information Exchange.
6. If the commit response from Information Exchange is successful, Expedite/CICS marks the control record in EXPDSRC as SENT and deletes the message from the EXPDAT file.
- If an error occurs while sending the data to Information Exchange:
- For recoverable errors, for example, if the link to Information Exchange is down, Expedite/CICS queues the message and retries the send until successful.
 - For unrecoverable errors, Expedite/CICS:
 - Marks the send control record in EXPDSRC in error.
 - Writes an error message to the log destinations and to internal trace destinations if they are in use.
 - Retains the data in EXPDAT until it is successfully released by the user and sent to Information Exchange, deleted by the user, or deleted by Expedite/CICS after a period of four months.
7. When the data has been sent to Information Exchange, Expedite/CICS can link to the following:
- The user information monitor exit for performance data collection, if the link to the user exit is enabled.
 - The user completion notification exit for notification of completed sends, if the exit is specified in the Send Message command. The return code of the send command is passed to this program.
8. Send processing for this request is now complete.

For information about additional EDI send processing, see “Send EDI processing” on page 290.

Synchronous send processing

Synchronous processing for a user session may be specified in the **Process Send Data** field on the **Define User Session Options** panel. Processing occurs as illustrated in Figure 5 and described below.

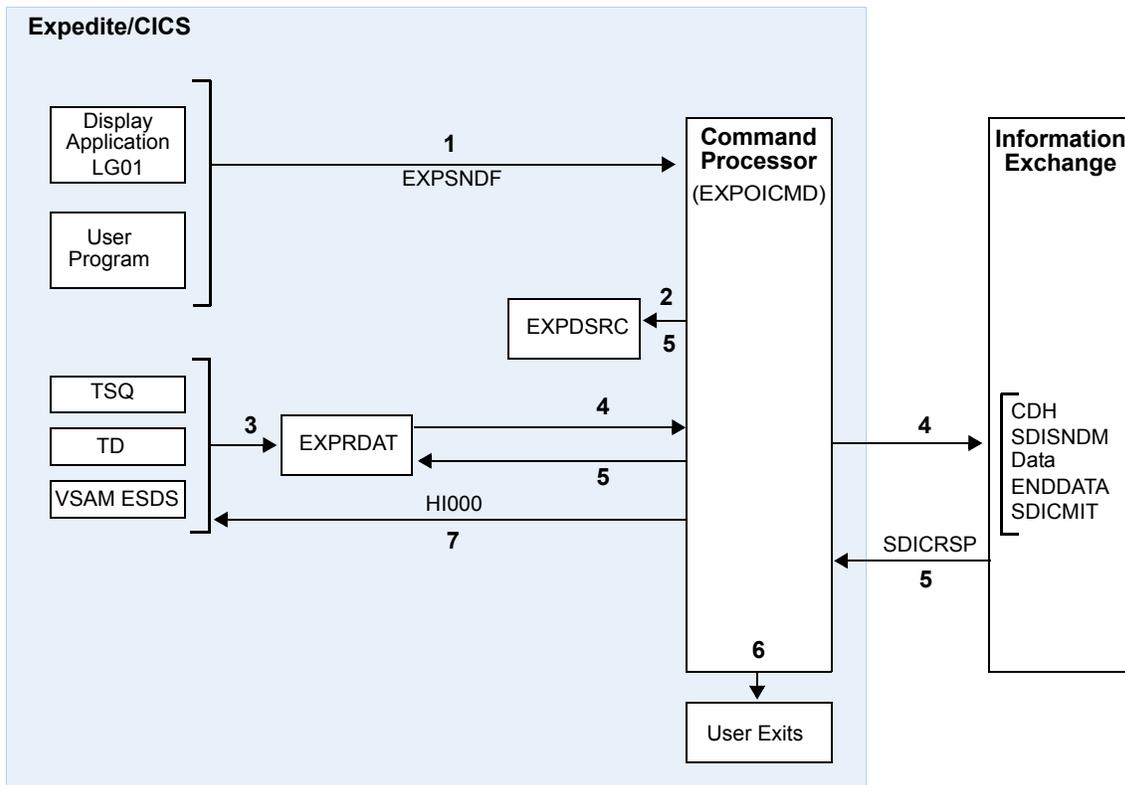


Figure 5. Synchronous send processing

1. The send request is issued from either of the following
 - a. Expedite/CICS Display Application
 - b. User program
2. The Display Application or user program invokes the command processor (EXPOICMD), which:
 - Identifies the command as a send request
 - Writes a control record to the EXPDSRC VSAM file
3. Expedite/CICS reads the data from the file specified in the send request and writes it to the send data (EXPSDAT) file.

4. Expedite/CICS:
 - Reads the data from the EXPSDAT file
 - Sends the data to Information Exchange
 - When the end of the data is reached, Expedite/CICS attempts to commit the data to Information Exchange
5. If the commit response from Information Exchange is successful, Expedite/CICS marks the control record from the EXPDSRC file as SENT and deletes the message from the EXPSDAT file.

If an error occurs while sending the data to Information Exchange, Expedite/CICS:

 - Marks the send control record in EXPDSRC in error
 - Writes an error message to the log destinations and to internal trace destinations if they are in use
 - Deletes the data from the EXPSDAT file
 - Returns HIxxx to the program that issued the send request
6. When the data has been sent to Information Exchange, Expedite/CICS can link to the user completion notification exit for notification of completed sends, if the exit is specified in the **Send Message** command. For synchronous processing, you cannot link to the user monitor information exit.
7. Send processing for this message is now complete. Expedite/CICS passes HI000 to the program that issued the send request.

Send error processing

For both synchronous and asynchronous processing, if an error occurs while loading data into the send data (EXPSDAT) file, control is returned to the user with an appropriate error message and the file is not sent. This process is described below.

Asynchronous processing

If an error occurs after the file is stored in the EXPSDAT file, the data records are retained in EXPSDAT. For recoverable process interruptions (for example, link or connection failures), Expedite/CICS queues the file until it is sent successfully. Process interruptions in this category include:

HI461	Unable to establish a session with Information Exchange.
HI462	Session with Information Exchange has been lost.
HI464	Send checkpoint numbers out of synchronization.
HI467	Unexpected commit response code > 07; refer to Information Exchange error messages.
HI500	An error was incurred when receiving the commit response.
HI509	Unable to send the message to Information Exchange.

Because Expedite/CICS keeps trying the send until successful, no user action is required.

Unrecoverable errors that occur due to Expedite/CICS system problems are marked in error, and the send control and data records remain stored in the send data (EXPSDAT) file until they are purged or released by the user and the send request is reissued. An error message is written to the log destinations and to internal trace destinations if they are in use. For information about manual release of failed send requests, see “Viewing a list of completed messages and files” on page 96.



NOTE: If a send request completed in error and you used the link to the user completion notification exit for notification of completed send requests, the return code will be passed to the exit program.

Any incomplete send, that is not marked as having an unrecoverable error, is restarted during a session start, session restart, or session reset when the user session profile indicates asynchronous processing. For more information on restart and recovery see Chapter 12, “Understanding automated restart and recovery.”

Active, queued, and completed sends (whether in error or successfully sent), can be viewed and purged as described in “Viewing a list of in-process messages and files” on page 91 and “Viewing a list of completed messages and files” on page 96, respectively.

Synchronous processing

If an error occurs while sending data, the file is marked in error and the data records are deleted. An error message is written to the trace destinations, and a return code is sent to the user, who must reissue the send. The error code can be viewed as described in see “Viewing a list of completed messages and files” on page 96.

For more information, see Chapter 11, “Solving problems,” and Chapter 12, “Understanding automated restart and recovery.”

Sending and receiving EDI data

A useful function of Expedite/CICS is the ability to send and receive data formatted for electronic data interchange (EDI), including the X12, UCS, EDIFACT, and UN/TDI standard formats. As explained in “File type” on page 86, sent data is identified as EDI data when you issue a send request and specify a **File type** of **E** (EDI). This chapter provides more information about sending and receiving EDI data with Expedite/CICS.

The following major topics are presented:

Understanding EDI data	288
Sending EDI data	290
Specifying Information Exchange control fields	300
Receiving EDI data	302

Understanding EDI data

Messages and files sent using EDI standard formats are called EDI transactions. Groups of EDI transactions sent to a single destination address are called EDI envelopes. Expedite/CICS uses different envelope definitions to accommodate the types of EDI data that the envelopes contain. For detailed information about envelope definition, see “EDI envelopes” on page 289.

From a single file, Expedite/CICS can transmit multiple EDI envelopes with different addresses, and multiple types of EDI data. This means you can combine X12, UCS, EDIFACT, and UN/TDI data in one file and transmit the file to multiple Information Exchange destinations.

Using Expedite/CICS, you can send EDI data to Information Exchange without specifying an Information Exchange destination in the data because Expedite/CICS uses the EDI translate table to match the EDI destinations contained in the data to the correct Information Exchange destinations. For more information, see “Working with the EDI translate table” on page 159.

Expedite/CICS determines where to send an EDI envelope by examining the contents of the envelope. Where the destination address is located within an EDI envelope is part of the envelope definition and is determined by the type of EDI data being transmitted. For information on where in an envelope Expedite/CICS finds the envelope definition and EDI destination, see “EDI envelopes” on page 289.

To resolve an EDI envelope destination, Expedite/CICS searches the Expedite/CICS translate table. If an entry corresponding to the destination contained in the envelope is found, Expedite/CICS sends the data to the Information Exchange destination in that entry. See “Sending EDI data” on page 290 for more information.

For X12, EDIFACT, and UN/TDI data, an Information Exchange destination can be placed in the data.

- For EDIFACT and UN/TDI data, this is a system ID, account ID, and user ID. For X12 data, this is just account ID and user ID.
- For X12 and EDIFACT data, a special data type qualifier (*ZZ*) can be used to indicate this fact so that, if no entry is found in the translate table, the Information Exchange destination in the EDI data can be used as the Information Exchange destination.
- For UN/TDI data, the *ZZ* qualifier is not used, but a different method is used.

For more information, see “X12 data processing” on page 291, “EDIFACT data processing” on page 292, and “UN/TDI data processing” on page 293.



NOTE: The system ID is optional. The first three characters of the address, starting at the first non-blank character, and continuing up to the first period, slash, or space, are used for the system ID (if present).

Expedite/CICS also enables you to send the same EDI envelope to more than one person at a time. To do this, create a distribution list and send the envelope to the list. For more information, See “Using EDI distribution lists” on page 299.

EDI envelopes

When you send EDI transactions, you can group the EDI transactions for a single destination within a single envelope. The following table describes the EDI envelope definitions for each EDI data type.

This EDI data type:	Defines an EDI envelope as data between and including:
X12	ISA and IEA segments
EDIFACT	UNA (or UNB) and UNZ segments
UN/TDI	SCH (or STX) and END segments
UCS	BG and EG segments

The location of the destination within an EDI envelope is determined by the type of EDI data being translated as shown in the following table. Expedite/CICS determines the EDI destination as described here.

This EDI data type:	Uses segment:	To define the EDI destination:
X12	ISA	Expedite/CICS takes the EDI destination from the interchange receiver ID data element (ISA08) and the EDI qualifier from the interchange ID qualifier element (ISA07).
EDIFACT	UNB	Expedite/CICS takes the EDI destination from component data element 0010 in composite data element S003 (interchange recipient). It takes the EDI qualifier from component data element 0007 in the same composite data element (S003).
UN/TDI	STX	Expedite/CICS takes the EDI destination from the first subelement of the UNTO data element (recipient code address). If it does not find the recipient code, it uses the second subelement of the UNTO element (recipient clear address) as the Information Exchange account and user ID.
UCS	BG	Expedite/CICS takes the EDI destination from the application receiver's code (BG04) data element.

Sending EDI data

There are different ways that you can send EDI data using Expedite/CICS. The EDI destination field defines where the data is sent, and may contain any of the following:

- An Information Exchange account ID and user ID.
- An alias name that Information Exchange can resolve into an Information Exchange destination by using the Expedite/CICS translate table. This resolved destination may be an Information Exchange:
 - Account and user ID on the local system
 - Account and user ID on another system
 - Alias name to be resolved on a centralized Information Exchange alias table
 - Distribution list

You can use Expedite/CICS to send EDI data as illustrated in Figure 6.

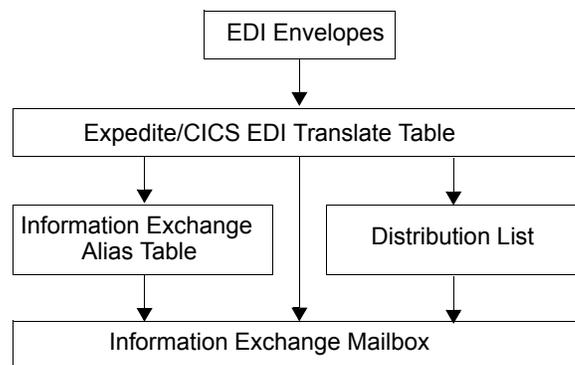


Figure 6. Sending EDI data

When you send EDI data with a **File type** of **E** through the Expedite/CICS Display Application or a user program, Expedite/CICS inspects the EDI envelope and compares the destination information to entries in the EDI translate table. Expedite/CICS uses the EDI data type and the information found in the table to determine the Information Exchange destination.



NOTE: If multiple envelopes exist in a file, Expedite/CICS parses them and sends each envelope as a separate file (interchange). Each interchange is sent to Information Exchange based on the EDI destination in that particular envelope.

Send EDI processing

Expedite/CICS validates and sends one EDI envelope at a time from a multiple-EDI-envelope file. Expedite/CICS inspects information in the EDI header and continues if the header is valid; otherwise, Expedite/CICS returns an error to the invoking application and stops processing the file. You must correct the data and resend the remaining messages in the file from the point where the error occurred.



NOTE: For X12 data, Expedite/CICS continues to process even though an invalid ISA is encountered during the SEND. A message is written to the log and the envelope(s) in error are written to a TS queue. You can then process or delete the queues.

To verify messages already sent and determine where processing should begin, you can view the:

- Completed send requests using the Expedite/CICS Display Application
- Send request audit trails on Information Exchange
- Expedite/CICS information exit information (if used)
- Returned error message in the exception log and trace destinations

The figure below provides an overview of send EDI processing when the **Verify before send** option is set to **Y**.

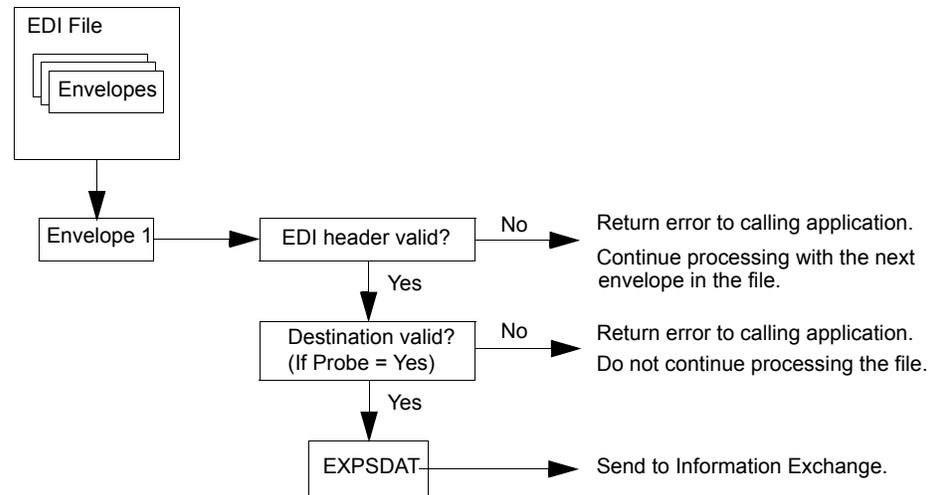


Figure 7. Send EDI processing

X12 data processing

When processing X12 data, Expedite/CICS looks for the beginning of the Interchange Control Header (ISA header). Expedite/CICS must find two items in the ISA header to continue processing:

- The Interchange receiver ID (up to 15 characters)
- The Interchange ID qualifier (up to 2 characters)

The Expedite/CICS command processor first determines the EDI destination in the ISA header must be translated into an Information Exchange address by using the value in the interchange ID qualifier field in the ISA header. If this field contains ZZ, Expedite/CICS searches the translate table for the EDI destination. The EDI destination may contain up to 15 characters. If there is no translate table entry, the Information Exchange destination is assumed to be an Information Exchange account and user ID. If an Information Exchange account and user ID are put in the data, the first 7 bytes are used for the account, and the next 8 bytes are used for the user ID.

If the interchange ID qualifier field contains a value other than ZZ, Expedite/CICS determines the EDI destination by using the translate table. If there is no matching entry in the translate table, Expedite/CICS writes a message to the error log and writes the envelope in error to a TS queue; then Expedite/CICS continues processing the file.



NOTE: When the **Verify before send** options is used to send X12 data, and:

- an invalid destination is found, Expedite/CICS stops processing and writes an error message.
- More than one error is found when processing the file, only one invalid header error message is displayed. Information about the additional errors is written to the error log and any active trace logs.

If the translation is successful, the command processor looks for the end of the current X12 envelope indicated by the IEA trailer and parses the X12 data. Expedite/CICS treats data between the ISA header and the IEA trailer as a complete Information Exchange message. The next ISA header in the file indicates a new message.

UCS data processing

When processing UCS data, Expedite/CICS looks for the BG* header. The BG* header contains the EDI destination of the message that Expedite/CICS needs to translate into an Information Exchange address. The EDI destination may contain up to 12 characters. Expedite/CICS must determine the Information Exchange destination using the translate table; otherwise, an error message is returned.

If the translation is successful, the command processor looks for the end of the current BG* envelope (indicated by the EG* trailer) and parses the UCS data. Expedite/CICS treats the data between the BG* header and the EG* trailer as a complete Information Exchange message. The next BG* header in the file indicates a new message.



NOTE: UCS translations also need an EDI qualifier to translate the EDI destination. This EDI qualifier does not exist in the UCS data stream; if you define a translate table entry for UCS, the EDI qualifier field value must be **01**.

EDIFACT data processing

When processing EDIFACT data, Expedite/CICS looks for a UNA or UNB header. The UNA header is used to identify the characters defined as delimiters and indicators in the rest of the interchange. The UNB header contains two values that the command processor needs to continue processing:

- The Identification code qualifier up to 4 characters
- The Recipient ID, not counting any characters separating the system ID, account ID, and user ID fields

The command processor searches the translate table using both of these values to determine the message destination which consists of the interchange ID qualifier placed in front of the Recipient ID field. If the ID qualifier is ZZ and the command processor cannot find a matching translate table entry, it treats the Recipient ID as an Information Exchange system ID, account ID, and user ID. The first three characters, starting at the first non-blank character, and

continuing up to the first period, slash, or space, are used for the system ID (if present). The next characters found, up to the next period, slash, or space (up to eight characters), are used for the account ID. The next non-blank character begins the user ID (up to eight characters).



NOTE: If you enter two fields, the system assumes you are entering an account ID and a user ID.

If the interchange ID qualifier field contains a value other than ZZ, Expedite/CICS determines the EDI destination by using the translate table. If it does not find an entry in the translate table, Expedite/CICS stops processing and returns an error message.

If the translation is successful, the command processor looks for the end of the current EDIFACT envelope (indicated by a UNZ trailer) and parses the EDIFACT data. Expedite/CICS treats the data between a UNA or UNB header and a UNZ trailer as a complete Information Exchange message. The next UNA or UNB header in the file indicates a new message.

UN/TDI data processing

When processing UN/TDI data, Expedite/CICS looks for the beginning of the SCH or the STX header. The SCH header is used to identify the characters defined as delimiters and indicators in the rest of the interchange. The STX header contains the Transmission Recipient ID which determines the EDI destination of the file. The EDI destination may contain up to 35 characters, excluding any characters separating the system ID, account ID, and user ID fields.



NOTE: Because there is no EDI qualifier field in the UN/TDI header, the EDI qualifier field in the translate table should be left blank.

If you enter two fields, the system assumes you are entering an account ID and a user ID.

For UN/TDI data, the EDI destination (list, alias, Information Exchange system ID, account ID, and user ID) should be entered in the STX segment as illustrated in Figure 8. In this figure, Fields A and B together make up the Transmission Recipient field, which is also known as the UNTO data element. A and B may be referred to as the First subelement and Second subelement, respectively, of the UNTO data element. The command processor must find a value in one of these fields in the Transmission Recipient data element before it can continue processing.



`STX=ECEA:1+account.userid+list/alias:sys.account.userid+920604...`

Figure 8. UN/TDI STX segment

Depending on the addressing method used, only one of the two fields, A or B, is used as the destination.

- If the sys.account.userid field is used, Expedite/CICS sends the message to this Information Exchange address. The first three characters, starting at the first non-blank character, up to the first period, slash, or space, are used for the system ID (if present). Starting with the next character, up to the next period, slash, or space (up to eight characters), are used for the account ID, and starting with the next non-blank character (up to eight characters) are used for the user ID.
- If the list/alias field contains a list name or alias name, Expedite/CICS searches the translate table. A found entry is converted into an Information Exchange destination that will be an Information Exchange Account/Userid, an Information Exchange alias, or a distribution list.

If Expedite/CICS finds that the value identified in the recipient ID in the translate table is a list name, the command processor attempts to upload the list name. If the command processor cannot find the list name, it assumes the list is a permanent distribution list on Information Exchange and sends the data to the list specified in the translate table.

- If both fields A and B are filled, A is used.

If the translation is successful, the command processor looks for the end of the current UN/TDI envelope (indicated by an END trailer) and parses the UN/TDI data. Expedite/CICS treats the data between the SCH or STX header and the END trailer as a complete Information Exchange message. The next SCH or STX header in the file indicates a new message.

Using the Expedite/CICS translate table

Expedite/CICS uses a translate table to convert EDI destination addresses to Information Exchange destination addresses. EDI files that you send are checked against the translate table to determine if a corresponding entry exists; if so, the destination address is translated according to the table entry. Figure 9 illustrates using Expedite/CICS to send EDI data where the Information Exchange address is resolved using the translate table.

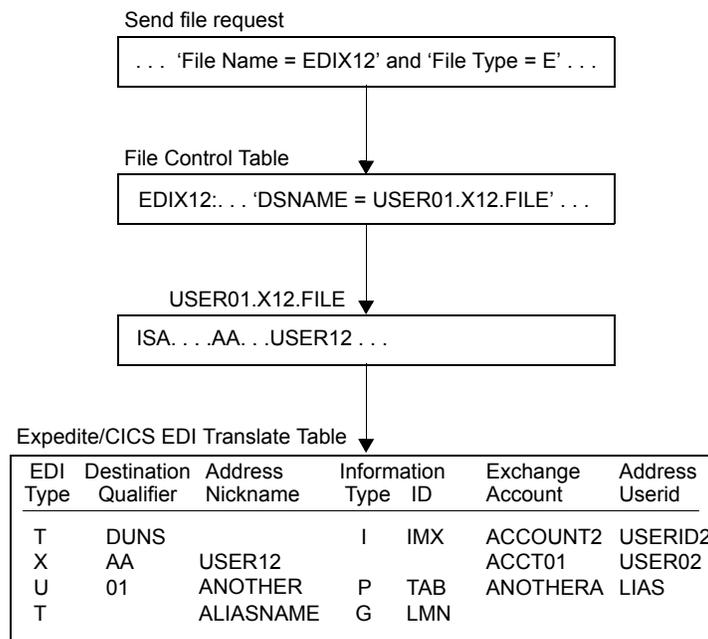


Figure 9. EDI translate table

Expedite/CICS sends the X12 data in the example above to Information Exchange Account/Userid, ACCT01 USER02.

Translate table entries are used to resolve destinations for specific EDI data types, EDI qualifiers and address nickname from the EDI data. A variable default may be set for any of these fields by leaving the EDI translate table entry blank. A blank entry equates to any value for this field. The translate table is searched for an entry that matches the EDI destination information in the EDI data; if found, that entry is used. Default entries are searched only if there are no matching

complete entries. Default entries are searched in order according to the number of blank (default) fields; that is, default entries with one blank field are searched before default entries with two blank fields, and so on.

The following table shows the EDI and Information Exchange components which are defined in the table and used in conversion routines.

EDI address components	
Type	Data type
Qualifier	Conversion algorithm
Nickname	EDI destination
Information Exchange address components	
Type	Alias table type
ID	Alias table name
Account	Account ID
Userid	User ID



NOTE: The account ID and user ID fields can be used together to specify an alias name. The alias table type and table ID fields can be used to specify an intersystem identifier. The account ID and user ID fields must be blank if you want to reference a distribution list.

By using the translate table, an EDI destination can be resolved into an Information Exchange Account/Userid or into an Information Exchange alias that must, in turn, be resolved to an Account/Userid using centralized Information Exchange alias tables, or a distribution list. This is true for **all** EDI data types. The differences between how different EDI data types are processed determine whether the data can indicate a destination that is a list or a real Account/Userid.

For procedural details about using the translate table, refer to “Working with the EDI translate table” on page 159.

Using centralized Information Exchange alias tables

As an alternative to using the EDI translate table to resolve the EDI destination into an Information Exchange Account/Userid, you can use centralized Information Exchange alias tables to achieve this resolution. You might prefer to do this if you have several Expedite/CICS systems and find it time-consuming to maintain a translate table on each of these systems. The Information Exchange alias tables are permanent tables that reside within Information Exchange. You can make them available to all Information Exchange users (global alias tables), only members of a particular account (organization alias tables), or a single user (private alias tables).

To create such a table, you must use Information Exchange Administration Services. For more information, refer to the *Information Exchange Administration Services User's Guide*.

To send EDI data to a destination defined in an Information Exchange centralized alias table, follow these steps:

1. Add the target EDI destination to a centralized alias table using Information Exchange Administration Services.

2. Make a translate table alias entry, by typing a nickname that corresponds to an EDI destination in the data. You may do this in one of two ways:
 - For an alias entry where the EDI destination is the alias name forwarded to Information Exchange:
 - In the **Type** field, type: G (global), O (organizational), or P (private).
 - In the **ID** field, type: the name of the Information Exchange alias table to be used.
 - Leave the **Account** and **Userid** fields blank.
 - For an alias entry where the account and user ID fields together form the alias name forwarded to Information Exchange:
 - In the **Type** field, type: G (global), O (organizational), or P (private).
 - In the **ID** field, type: the name of the Information Exchange alias table to be used.
 - In the **Account** and **Userid** fields, type: the Information Exchange alias name. Start in the **Account** field and continue in the **Userid** field.
3. To send EDI data, specify a **File type** of **E** in one of the following fields:
 - In the **File type** field on the **Send File Request** panel.
 - In the **SF-DTYPE** field in a user program.

Figure 10 shows an example of how to send X12 data to an alias name which is resolved using Information Exchange centralized alias tables.

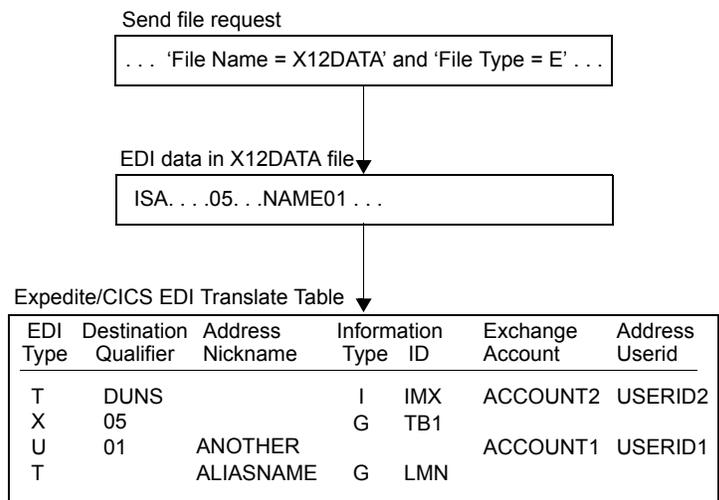


Figure 10. Using centralized Information Exchange alias tables

Expedite/CICS sends the data in the example above to an Information Exchange destination which is an Information Exchange alias; the alias table is GTB1 and the alias name is NAME01. The Information Exchange alias table entry for NAME01 resolves the EDI destination to an Information Exchange Account/Userid (plus system ID, if appropriate).

Bypassing the translate tables

If you need to send only EDIFACT, X12, or UN/TDI data to an Information Exchange destination, you can bypass the tables and send the EDI data directly to an Information Exchange Account/Userid.



NOTE: No bypass procedure exists for UCS data; the EDI destination for UCS data must be resolved by the EDI translate table.

Bypass procedure for EDIFACT or X12 data

To send EDIFACT or X12 data to an Information Exchange destination contained within the EDI data, proceed as described below.

1. Enter **ZZ** in the qualifier.
2. Enter the address as follows:
 - For X12 data, enter the Information Exchange account ID as the first seven characters, and the user ID as the next eight characters.
 - For EDIFACT data, separate the system ID, account ID, and user ID with a period (.), slash (/), or one or more blank spaces.



NOTE: If you do not use a system ID, just enter the account ID and the user ID. Do not enter a period or blank before the account ID.

3. Make sure that there is no EDI translate table entry matching the criteria in the data.
4. To send EDI data, specify a **File type** of **E** in one of the following fields:
 - In the **File type** field on the **Send File Request** panel.
 - In the **SF-DTYPE** field in a user program.



NOTE: When you use a ZZ qualifier, Expedite/CICS tries to resolve the destination by searching the tables. When the destination is not found in the tables, the data is sent to the Information Exchange account and user ID specified. Figure 11 shows an example of how to send EDIFACT data to an Information Exchange Account/Userid, where the address is in the EDIFACT data and does not need to be resolved by the translate table.

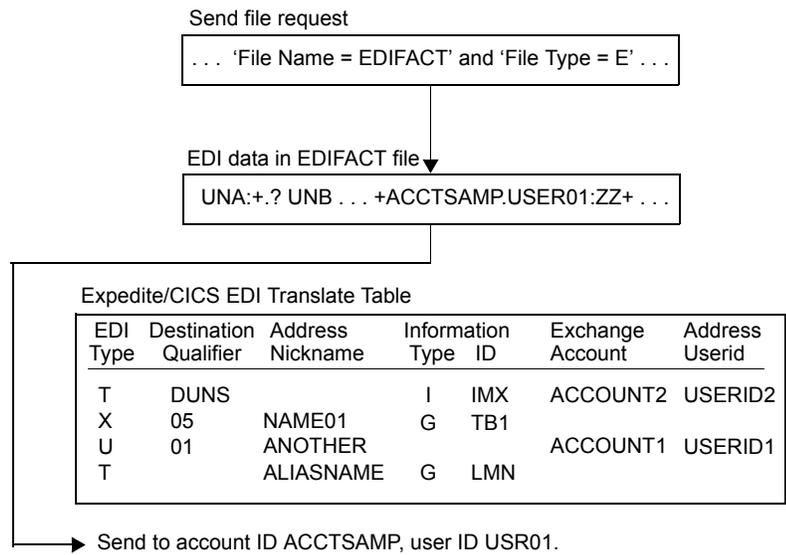


Figure 11. Bypassing the EDI translate table

No matching translate table was found. Because a ZZ qualifier is used, Expedite/CICS assumes the EDI destination to be a real Information Exchange account ID and user ID.

Bypass procedure for UN/TDI data

To send UN/TDI data to an Information Exchange destination contained in the EDI data, proceed as described below.

1. Do not specify the first subelement of the UNTO data element (UNTO:1 recipient code).
2. Place the Information Exchange system ID, account ID, and user ID in the second subelement of the UNTO data element (UNTO:2 recipient clear). Separate the System ID, account ID or user ID with a period (.), slash (/), or with one or more blank spaces.



NOTE: If you do not use a system ID, just enter the account ID and the user ID. Do not enter a period or blank before the account ID.

3. To send EDI data, specify a **File type** of **E** in one of the following fields:
 - In the **File type** field on the **Send File Request** panel.
 - In the **SF-DTYPE** field in a user program.

Using EDI distribution lists

All types of EDI data can be sent to a distribution list. Proceed as follows:

1. Define a distribution list using Expedite/CICS or Information Exchange Administration Services.
2. Create an EDI translate table entry that matches the criteria in the data, and references a list.
3. Specify a **File type** of **E** in one of the following fields:
 - In the **File type** field of the **Send File Request** panel.
 - In the **SF-DTYPE** field of a user program.

Figure 12 shows an example of how to send UN/TDI data to an Information Exchange distribution list.

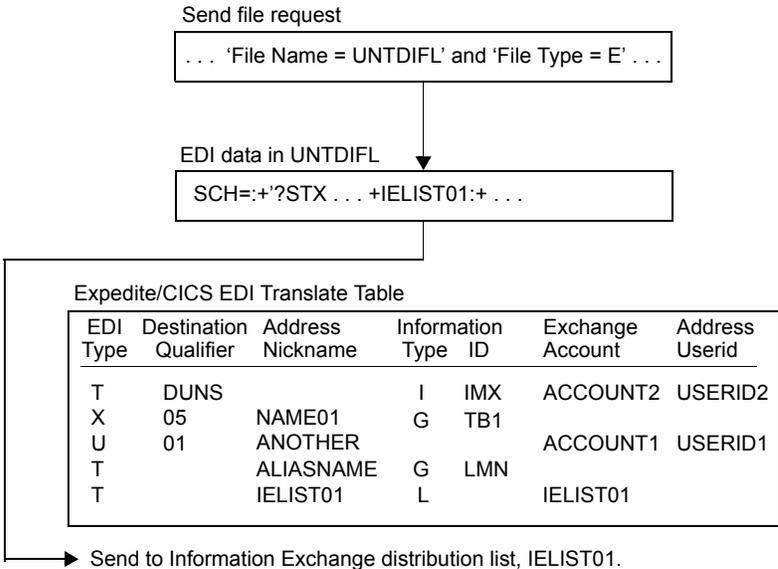


Figure 12. Sending EDI data to a distribution list

In the UN/TDI data, the value IELIST01 is in the first subelement of the UNTO data element (UNTO:1). Expedite/CICS tries to resolve this into an Information Exchange Account/Userid, an Information Exchange alias, or a list using the translate table. An entry is found which references the IELIST01 value, and it points to a list name (**Type** of **L**), and the list name is IELIST01, which is specified in the **Account** field.

Specifying Information Exchange control fields

You can specify the Information Exchange Message name and Message sequence number control fields when you issue the send request from a user program.

When sending EDI data, if you do not specify these fields in the send request from a user program, or through the Display Application, the fields are generated from the EDI data as described below.

Message name assignment

If you do not provide the message name, Expedite/CICS generates the Information Exchange message name based on the type of EDI data transmitted as described in the table below.

This EDI data type:	Generates the message name in this way:
EDIFACT	Expedite/CICS takes the message name from data element 0020 (Interchange Control Reference) of the EDI data. If the element exceeds eight bytes, Expedite/CICS uses the first eight bytes. If the element is shorter than eight bytes, Expedite/CICS places it in the message name field (left-justified and padded with blanks).
UCS	Expedite/CICS takes the message name from the interchange control number. Because the UCS interchange control number has a maximum length of five bytes, Expedite/CICS places the interchange control number in the message name field (left-justified and padded with blanks).
UN/TDI	Expedite/CICS takes the message name from the sender's reference field (SNRF) of the EDI data. If the SNRF exceeds eight bytes, Expedite/CICS uses the first eight bytes. If the SNRF is shorter than eight bytes, Expedite/CICS places it in the message name field (left-justified and padded with blanks).
X12	Expedite/CICS takes the message name from the last eight bytes of the interchange control number of the X12 data.



NOTE: These fields are not displayed on the Display Application panel but are copied to the Information Exchange audit records. The field contents are returned in Information Exchange acknowledgments and can be viewed or retrieved using Information Exchange Administration Services.

If the message name field is left blank in the EDI data, Expedite/CICS leaves the field blank.

Message sequence number assignment

If you do not provide the message sequence number parameter, Expedite/CICS generates the Information Exchange message sequence number as described in the table below.

This EDI data type:	Generates this message sequence number in this way:
EDIFACT	Expedite/CICS takes the message sequence number from data element 0022 (Recipient Reference). If the element is longer than five bytes, Expedite/CICS uses the first five bytes. If the element is shorter than five bytes, Expedite/CICS places it in the message sequence number field, left justified and padded with blanks.
UN/TDI	Expedite/CICS takes the message sequence number from the Recipient Reference field (RCRF:1). If the element is longer than five bytes, Expedite/CICS uses the first five bytes. If the element is shorter than five bytes, Expedite/CICS places it in the message sequence number field, left justified and padded with blanks.
X12	Expedite/CICS places a value of 00001 in this field if there is only one X12 envelope in the file. If the file contains more than one X12 envelope, the value increments by one for each envelope. This is explained in more detail below.
UCS	Expedite/CICS places a value of 00001 in this field if there is only one UCS envelope in the file. If the file contains more than one UCS envelope, the value increments by one for each envelope. This is explained in more detail below.



NOTE: These fields are not displayed on the Display Application panel but are copied to the Information Exchange audit records. The field contents are returned in Information Exchange acknowledgments and can be viewed or retrieved using Information Exchange Administration Services.

For EDIFACT and UN/TDI: If the message sequence number field is left blank in the EDI data, Expedite/CICS leaves the field blank.

For X12 and UCS: Expedite/CICS counts each EDI envelope transmitted from a single data file. It places the count in the message sequence number of each Information Exchange message corresponding to an EDI envelope. Expedite/CICS formats the message sequence number as a series of numeric characters ranging from 00001 to 99999. Therefore, three EDI envelopes sent from a single file would have the following message sequence number values:

- 00001 for the first EDI envelope in the file
- 00002 for the second EDI envelope in the file
- 00003 for the last EDI envelope in the file

Each time you use Expedite/CICS for a new file that contains EDI envelopes, or when the count reaches 99999, the message sequence number counter resets to 00001.

Message user class assignment

When sending EDI data, if you do not specify a value for the **Message user class** field, Expedite/CICS generates it from the EDI data. The following tables describe how this is accomplished for the different types of EDI data.

EDIFACT and UN/TDI data

For EDIFACT and UN/TDI data, Expedite/CICS takes the class from the Application reference field (APRF) of the EDI data. If the APRF is longer than eight bytes, the first eight bytes are used. If the APRF is shorter than eight bytes, Expedite/CICS places the APRF in the Message User Class field, left-justified and padded with blanks. If the APRF is not present, Expedite/CICS sets the Message User Class parameter as follows:

This EDI data type:	Defaults to this class:
EDIFACT	#EE
UN/TDI	#EU

X12 and UCS data

For X12 and UCS data, Expedite/CICS sets the Message User Class parameter as follows:

This EDI data type:	Defaults to this class:
X12	#E2
UCS	#EC

Receiving EDI data

When you want to receive specific items of mail from your mailbox, you can use any combination of the source (Account/Userid, alias, list) and user class fields as selection criteria, as explained in Chapter 3, "Working with receive options." If you want to receive only EDI data from your mailbox, you can use the Receive EDI parameter which, when set to **Y**, instructs Information Exchange to send to Expedite/CICS only data which has a CDH indicating that it is EDI data.

If the person sending you data uses the Expedite/CICS default user classes, you can use the Information Exchange wild card receive feature to simplify receipt. For example, by specifying **#E?** as the user class in the receive request, you ask Information Exchange to return only files that have a user class beginning with **#E**. This includes all files sent with the default EDI user classes.

Receive EDI processing

Use any of the following methods to request EDI processing for mail being received.

- Set the **File type** field to **E**. If issuing the request from a user program, enter this value in the **RM-DTYPE** field.
- If the data has been sent as EDI data and the CDH indicates it is EDI, set the **Retain header field** to **E** or **F**. If issuing the request from a user program, enter this value in the **RM-CNTL** field.

Default processing for data received as EDI data is as follows:

- For EDIFACT and UN/TDI, the data is written in 80-byte records.
- For X12 and UCS, the data is split by EDI segment for writing.

Values in the **Handle records as** and **Max record length** fields in the receive request and values in the **Record format** and **Record length** fields in the CDH (if used) may further affect how the data is written to the receive destination. For more information, see “Receive processing options and considerations” on page 48.



NOTE: Expedite/CICS send processing places a single EDI envelope in an Information Exchange message group. The receive processing module expects each EDI envelope to be contained in a separate Information Exchange message group. If you receive a file which contains multiple EDI envelopes, the results are unreliable. For example, the records may not split correctly.

Using data compression

Compression reduces the size of files transmitted through Information Exchange. Significant savings in network charges and transmission time are possible when using data compression.

Expedite/CICS provides data compression through the Comm-Press product. This product is required only if performing data compression or decompression. Both the sender and receiver of compressed data must have the Comm-Press product installed in order to compress and decompress the data.

The Comm-Press product may not be available in all countries. In the United States, contact your network marketing representative for Comm-Press product ordering information.

When using data compression, some Expedite/CICS send and receive parameters are affected, as described in the following sections.

Understanding the Comm-Press programs and files used with Expedite/CICS

The following programs are provided when you order the Comm-Press product. Please refer to the Program Directory for your version of the Comm-Press product for instructions on defining these resources to CICS.

COMPCICS	This is the compression program. Expedite/CICS calls this program when data compression is requested in the Send File command. This program reads the file specified in the Send File command and places the compressed data in a temporary storage queue. Expedite/CICS then takes this compressed data, modifies the CDH to reflect that the data is compressed, indicates what type of data it is, and sends it to Information Exchange.
LKUPTBLC	This is the lookup table program. This program is only called if the Compress option is set to T . This means that data will only be compressed if the sender and receiver of the data are found in the Lookup table and the compression parameter in that table entry is set to Y . The format of the table is described later in this section.
DCMPCICS	This is the decompression program. When Expedite/CICS detects that the data being received is compressed (by looking at the CDH), it calls the DCMPCICS program to decompress the data. Expedite/CICS passes the name of a temporary storage queue holding this data to the decompression program. It also passes other values based on the values contained in the CDH and the values specified in the receive command. DCMPCICS writes the decompressed data to the destination requested in the receive command.

Specifying input files for data compression

Any file management options supported by Expedite/CICS can be specified in the send command when the **Compress** option is set to **T** or **Y**.



NOTE: The Comm-Press product does not support a **File Type** of **B** (insert logical length delimiters).

The COMPCICS program writes the data to a CICS transient storage queue. The length of the records in the queue is determined by the transmission size specified in the Define System Options Panel of the Display Application. The size of the compressed data is limited by the size of this queue.

After compression, Expedite/CICS also updates the CDH for this file as follows:

- For both EDI and non-EDI data, the following fields are set:

COMPSOFT	Software used for compression (COMM-PRESS).
COMPSVER	Version of compression software used.
COMFNAME	Compressed file name. This is the name of the TSQ where the compression program wrote the compressed data.
- For non-EDI data, Expedite/CICS sets the data type (CTYPE) to **2** (binary) and the delimiter (DELIMIT) to **4** (None).
- No other fields are set for EDI data.

Specifying output files from the decompression program

There are no parameters in the receive command to specify data decompression. Expedite/CICS automatically decompresses the data based on the CDH of the data being received.

Expedite/CICS searches for the presence of “COMM-PRESS” in the CDH. It then reads the compressed data records from the EXPRDAT file, builds a TSQ, and passes this queue to the decompression program. Expedite/CICS also checks the CDH to see if this is EDI or non-EDI data and passes this information, along with the maximum record length specified, to the decompression program. DCMPCICS then writes the decompressed data to the destination requested in the receive command. Any current File Management type supported by Expedite/CICS can be specified when receiving data.

If writing to a temporary storage queue, a user receive program, or a transient data queue, the decompressed data must fit in one queue. Otherwise, DCMPCICS cannot decompress the data and a non-zero return code is returned to Expedite/CICS which in turn writes a message to the log. The compressed data is held in the receive (EXPRDAT) file.

If receiving compressed data, and compression/decompression support is not installed, the data is delivered uncompressed and a message is written to the log and to the trace (if trace options are set).



NOTE: If the fields are not properly set in the CDH, decompression will either not take place or the results will be unpredictable.

Other considerations when receiving compressed data

Because the decompression program reads the CDH to determine if it is receiving EDI or non-EDI data, it ignores the **File type** parameter (if specified) in the receive command. For non-EDI data, DCMPCICS determines if CRLF was specified during compression or if the file should be treated with a type of **O** (no record delimiters).

If the **Handle records as** field value is set to **S**, and you are receiving EDI compressed data, the data is handled as follows:

- If the **Max record length** field value is **0**, data will be decompressed following these rules:
 - For EDIFACT and UN/TDI data, the data is written into 80-byte records.
 - For X12 and UCS, the data is written split by segments.
- If the **Max record length** field value is greater than **0**, the results are unpredictable because this option is not supported by the Comm-Press product.
- If receiving non-EDI data and CRLF was specified on the send command, DCMPCICS will remove the CRLF delimiters. It will start each record on column one.

Using the Lookup Table (EXPDLKP)

The compression lookup table indicates whether compression should be specified for a particular sender/receiver pair. It is only used when the **Compress** option is set to **T**, so you do not need to create it if you will not be using this feature.

The EXPDLKP file is a VSAM ESDS which must be defined to CICS using the instructions provided in the Program Directory for the version of the Comm-Press product you are using.

When the **Compress** option is set to **T** in the send command, Expedite/CICS calls program LKUPTBLC, passing the sender and receiver to this program. LKUPTBLC will search the EXPDLKP table for this sender receiver pair. If found, it checks if compression is to be performed between this pair. A return code is passed to Expedite/CICS to indicate the results of the search.

The records can be defined to the EXPDLKP file when the file is initialized, or you can add more records later using IDCAMS.

Each entry in the file must have the following format:

```
sender(sender) receiver(receiver) compress(y|n);
```

sender	Indicates the account and user ID or EDI source of a sender.
receiver	Indicates the account and user ID, alias or aliasname, listname or EDI destination of a receiver.
compress	Indicates whether compression should be performed for this sender/receiver pair.
	Y Compress the data for this sender/receiver pair.
	N Do not compress the data for this sender/receiver pair.

The following are examples of entries in a compression lookup table:

```
SENDER(acct1 user01) RECEIVER(acct1 user02) COMPRESS(y);
SENDER(acct1 user01) RECEIVER(alias1 alias2) COMPRESS(y);
SENDER(acct1 user01) RECEIVER(acct1 user03) COMPRESS(n);
SENDER(acct1 user01) RECEIVER(listname02) COMPRESS(y);
```

When sending non-EDI data, the sender's Expedite/CICS account and user ID are used as input to the search. For the receiver, it is what was specified in the send command for ACCT/USERID, list name, or alias name.

When sending EDI data, the sender and receiver are taken exactly as they are specified in the header, so the entries in the table must match exactly what appears in the appropriate field of the EDI header. The Expedite tables are not used to resolve any of the origin or destinations prior to calling the LKUPTBLC program.

A **Compress** option of **T** and the EXPDLKP file allow you to control which data gets compressed, based on the receiver. The EXPDLKP file can be modified when your CICS region is not running.



NOTE: You can also modify it with CICS running if you do not add the name of the file to your CICS startup procedure and close the file using one of the CICS supplied transactions (CEMT). Of course, you must be sure that Expedite/CICS is not trying to access this file.



Glossary

This glossary defines words as they are used in this book. If you are looking for a term and cannot find it here, see the *Dictionary of Computing* for additional definitions.

This glossary includes terms and definitions from:

- *The American National Dictionary for Information Systems*, ANSI x3.172-1990, copyright 1990 by the American National Standards Institute (ANSI). Copies may be purchased from the American Standards Institute, 11 West 42 Street, New York, New York 10036. Definitions from this dictionary are identified by the symbol (A) after the definition.
- *The Information Technology Vocabulary*, developed by Subcommittee 1, Joint Technical Committee 1, of the International Organization for Standardization and the International Electrotechnical Commission (ISO/IEC JTC1/SC1). Definitions from published parts of this vocabulary are identified by the symbol (I) after the definition.

A

abend. Abnormal end of task, as in “the session abends.”

account ID. A name that identifies an account to Information Exchange.

account name. A name that identifies an account to a program, device, or system.

acknowledgment. A response from Information Exchange that lets you know whether your messages were delivered, received, purged, or various combinations of these three options.

address. (1) A unique code assigned to a user connected to a network. (2) The location in a computer where data is stored.

advanced interactive executive (AIX). An operating system that serves as an interface between users and Information Exchange.

AIX. Advanced Interactive Executive.

alias. A nickname used in place of an account and user ID (Information Exchange address). Alias names are maintained in alias tables, which you can define as described in the *Information Exchange Administration Services User's Guide*.

alias table. A nickname file in Information Exchange that defines a table type, table ID, and alias name.

American National Standard 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. (A)

American National Standards Institute (ANSI). An organization for the purpose of establishing industry standards.

ANSI. American National Standards Institute.

archive. A place to store the messages that users receive from Information Exchange for a specified period of time.

ASCII. American National Standard Code for Information Interchange.

asynchronous. A protocol that permits a communication device to operate in an unsynchronized and unpredictable manner, much like a human conversation; used for modems and low-speed ASCII terminals (PCs).

audit trail. A way of tracking and verifying basic information about the status of messages.

C

carriage-return and line-feed characters (CRLF). A formatting control that moves the printing or display point to the first position of the next line.

CDH. Common data header.

centralized alias table. Permanent tables that reside within Information Exchange and contain a centralized list of EDI destinations paired with Information Exchange destinations. Expedite CICS searches this table for an EDI destination and then uses the corresponding Information Exchange destination as the actual address.

CICS. Customer Information Control System

CICS/ESA. Customer Information Control System for Multiple Virtual Storage which operates on a host system such as a System/370 or Ssystem/390 processor.

CICS/MVS. Customer Information Control System for Multiple Virtual Storage which controls online communication between terminal users and a data base.

command. A request to run a particular program or function.

command line. The line on an interface panel where a user types commands.

commit. The point at which a message is delivered, canceled, or purged. When a session fails, all uncommitted messages are lost.

common data header (CDH). The first message in a group of messages, the common data header uses standard formats to provide information about the messages that follow the CDH.

compression. The process of eliminating gaps, empty fields, redundancies, and unnecessary data to shorten the length of files.

CRLF. Carriage-return and line-feed characters.

Customer Information Control System (CICS). A program that enables transactions entered at remote terminals to be processed at the same time.

D

data definition. (1) A program statement that describes the features of, specifies relationships for, or establishes context of data. (2) Information that describes the contents and characteristics of a field, record, or file. A data definition can include such things as field names, lengths, locations, and data types.

data set. The major unit of data storage and retrieval consisting of a collection of data in a prescribed arrangement and described by control information.

DCT. Destination control table.

DD. Data definition

decompression. The process of expanding data to the length that preceded data compression.

default. The value an application program uses automatically unless you specify a different value.

delivery acknowledgment. An acknowledgment generated by Information Exchange when a destination user receives a message from the Information Exchange mailbox.

destination. The final Information Exchange address to which a message is to be delivered.

destination control table (DCT). The CICS table defining the transient data destinations.

distribution list. A list of the addresses of users with whom a certain user communicates. It is used to send the same message to several people without having to send individual messages.

DLBL. Disk label name.

E

EDI. Electronic data interchange.

EDI destination table. A list of EDI destinations paired with Information Exchange destinations used by Expedite CICS.

EDIFACT. An electronic data interchange standard developed by the United Nations Economic Commission for Europe.

EDI qualifier table. A list of types of EDI data (X12, UCS, EDIFACT, or UN/TDI) paired with the ID qualifier for a particular type of data (for example, 01 for an X12 DUNS number).

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 electronic data interchange standard for administration, commerce, and transportation.

Electronic Service Delivery. An electronic means of receiving service information and fixes, which otherwise would be obtained through slower distribution methods.

envelope. Information Exchange's electronic file that contains the text of a message, together with a message header.

ESD. Electronic Service Delivery

ESO. Extended Security Option.

Extended Security Option. An option that provides additional password and Information Exchange mailbox security.

F

FCT. File control table.

file control table (FCT). A CICS table defining the processing of VSAM files.

G

global alias. An alias name that can be used on a particular system.

global alias table. (1) A system-wide alias table. (2) An alternative name table set up within a system.

H

header. 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, and priority level for the message.

I

ibm0rely. The LU name of the Information Exchange Common Front End in the United States.

Information Exchange. (1) A communication service that permits users to send and receive information electronically. (2) A continuously running CICS application on the network that stores and forward information to trading partners.

Information Exchange Administration Services. An online, panel-driven product an Information Exchange service administrator uses to perform administrative tasks for Information Exchange.

Information Exchange service administrator. The person who coordinates the use of Information Exchange within a company.

J

JCL. Job Control Language

job card. The job control statement that identifies the beginning of a job. It contains such information as the name of the job, account number, and class and priority assigned to the job.

Job Control Language. A set of statements that identifies a job to the system and describes the requirements of the job.

L

leased lines. A connection between systems or devices that does not have to be made by dialing.

library. A place to store information for an extended period of time. A library consists of a collection of files called library members.

logical unit (LU) 6.2. A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (a) a peer relationship between session partners, (b) efficient utilization of a session for multiple transactions, (c) comprehensive end-to-end error processing, and (d) a generic application program interface (API) consisting of structured verbs that are mapped into a product implementation.

LU 6.2. Logical unit 6.2.

M

mailbox. A temporary storage area for electronic mail from which data is retrieved by the intended recipient.

member. A file 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. Response from Information Exchange that lets a user know whether or not sent data was delivered, received, or purged.

message class. A category agreed upon among trading partners that is used to group mail.

message group. A collection of messages that is treated as a single entity. A file of records to be printed as a single report is an example of a message group.

message segment. An Information Exchange message may be split into smaller components for transmission called Information Exchange message segments. An Information Exchange message segment consists of Information Exchange headers and data.

multiple virtual storage (MVS). An IBM licensed program, which is a software operating system that controls the execution of programs.

MVS. Multiple virtual storage.

N

NCP. Network control program.

Network control program (NCP). An IBM licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network capability.

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.

P

parameter. (1) A variable that is given a constant value for a specified application and that may denote the application. (I) (A) (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) Data passed between programs or procedures.

PCT. Program control table.

PF key. Program function key.

PLT. Program list table.

PPT. Processing program table.

private alias. (1) An alias that can be used only by the user that created it. (2) An alias table set up for an individual user.

private alias table. An alias table set up for an individual user.

processing program table (PPT) . A table defining all application programs valid for processing under CICS. It also keeps track of whether or not an application program is in main storage.

profile type. A category of users who all have the same level of authority for using Information Exchange functions.

Program control table. A CICS table defining all transactions that may be processed by the CICS system.

program function (PF) key. A key on a terminal keyboard that gives the system a signal to perform a particular command.

program list table. A CICS table that contains a list of programs that are to be executed during CICS startup or during a controlled shutdown.

program temporary fix (PTF). A temporary solution or by-pass of a problem resulting from a defect in a current unaltered version of the program.

PTF. Program temporary fix.

purge acknowledgment. The acknowledgment generated by Information Exchange when a message reaches the storage time limit and is purged from the receiver's mailbox.

Q

qualifier table. A list of types of EDI data (X12, UCS, EDIFACT, or UN/TDI) paired with the ID qualifier for a particular type of data (for example, 01 for an X12 DUNS number).

R

receipt acknowledgment. The acknowledgment generated by Information Exchange when a message reaches the receiver's mailbox after a successful Expedite CICS session.

receive-side charges. The charges users incur when they receive messages through Information Exchange.

recovery level. The point from which a session needs to be restarted after a failure. Information Exchange has five levels of restart and recovery: checkpoint-, message-, session-, stream-, and group-level.

S

send-side charges. The charges users incur when they send messages through Information Exchange

service administrator. A person in your organization who has authority to perform various administrative tasks, such as setting system defaults and acting on behalf of other users when appropriate. In your operating environment, there may be Information Exchange service administrators and Expedite/CICS service administrators. Typically, a person might have authority to perform both functions but not necessarily. Service administrators are often your primary contact for various network support groups; for example, Customer Assistance.

ServiceLink. An electronic means of receiving service information and fixes, which otherwise would be obtained through slower distribution methods. Through ServiceLink, you can access service information online, instead of calling the support center.

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.

syntax. The rules for constructing a command.

T

TCP/IP. Transmission Control Protocol/Internet Protocol.

TDQ. Transient data queue.

Temporary storage queue. A storage location reserved for intermediate results.

trading partners. The business associates with whom users exchange information electronically.

transient data queue. A storage location reserved for intermediate results. Expedite/CICS allows intrapartition or extrapartition TDQs, which must be defined in the CICS destination control table.

Transmission Control Protocol/Internet Protocol (TCP/IP). A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

TSQ. Temporary storage queue.

U

UCS. Uniform Communication Standard.

Uniform Communication Standard (UCS). A standard EDI format used in the grocery industry.

UN/TDI. United Nations Trade Data Interchange.

United Nations Trade Data Interchange (UN/TDI). An electronic data interchange standard for administration, commerce, and transportation fields developed by the United Nations Economic Commission for Europe.

user class. A category used to group mail; agreed on among trading partners.

user group. A set of users within an account who can communicate with one another.

user ID. User identification.

user identification. (1) A string of characters that uniquely identifies a user to a system. (2) A name that identifies a user to Information Exchange within an account.

user message class. A category agreed upon among trading partners that is used to group mail.

user profile. (1) In computer security, a description of a user that includes such information as user ID, name, password, access authority, and other attributes obtained at logon. (2) In Information Exchange, a user profile is a list of the characteristics of how a user works with Information Exchange. (3) In Expedite/CICS, a user profile describes how a user operates within Expedite/CICS and communicates with Information Exchange from Expedite/CICS.

V

Virtual Storage Access Method (VSAM). An IBM access method for direct or sequential processing of fixed and variable length records on disk devices.

VSAM. Virtual Storage Access Method.

Virtual Telecommunications Access Method (VTAM). A set of programs that maintain control of the communications between terminals and application programs running under MVS and OS/390 operating systems.

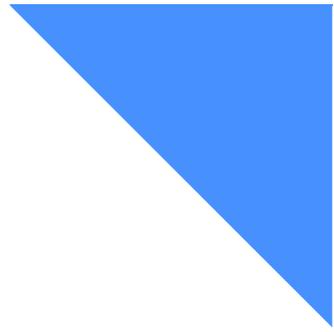
VTAM. Virtual Telecommunications Access Method.

W

wildcard character. A synonym for pattern-matching character.

X

X12. An electronic data interchange standard that defines a specially-formatted EDI data stream, approved by the American National Standards Institute (ANSI).



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